

The eCon Planning Suite:

Guide to the Data-Driven Planning Toolkit in CPD Maps

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INTRODUCTION

In May 2012 HUD launched the eCon Planning Suite, which integrates an expanded planning database and an online data mapping tool: CPD Maps, a web-based service of the Community Planning & Development department (CPD) of the U.S. Department of Housing and Urban Development (HUD). This *Guide to the Data-Driven Planning Toolkit in CPD Maps* describes a user-friendly, intuitive Toolkit available for use by community development staff, stakeholders in the Consolidated Plan process, and others. The Toolkit will assist users with interpretation of housing, economic, and demographic data as an objective framework to help all stakeholders in the Consolidated Plan process identify and address priorities and better target place-based investments.

HUD regulations specify that Consolidated Plan priorities and strategies should be responsive to the social and economic conditions present in a jurisdiction as evidenced by an analysis of available data. To assist grantees in designing their Consolidated Plans, this Guide walks users through the use of the Planning Toolkit. It explores the Data-Driven Planning widget, a CPD Maps tool that provides detailed comparisons of housing and economic data between multiple geographic areas of interest.

CPD Maps makes available a wide variety of data about grantee jurisdictions through the use of the "Reports" function. Additionally, the reports function provides a limited comparison capability that enables users to generate a report that compare the target area with one reference area. Building upon this, the Data-Driven Planning Toolkit helps community development staff and other users access even more of the capacities of CPD Maps. The Toolkit identifies and analyzes patterns within a "target geography" or "target jurisdiction" (e.g., a neighborhood, city, county, etc.) and compares them with the nation and up to two additional "reference geographies,"—selected geographic areas such as nearby cities, the entire state, a metro area that takes in parts of several states, the region, etc.).

The Data-Driven Planning Toolkit helps grantees to assess a wide variety of questions about the housing, social, and economic needs in their jurisdiction through the use of a set of spreadsheets with embedded formulas. The Toolkit accomplishes these comparisons by highlighting the incidence of housing and economic problems that are higher or lower than the target geography. For example, suppose analysis determines that 25% of the households in the target area live in overcrowded conditions—how do grantees interpret this figure? Is this percentage disproportionally high, or is it consistent with the national average? How does it compare with nearby cities? Similarly, how can users identify important comparisons relating to cost burden or substandard housing? Is a jurisdiction located in a high-cost market where the cost burden may be harder or more costly to address? The Data-Driven Planning Toolkit enables grantees to examine these questions by sorting quickly through a vast amount of data in the form of percentages and numbers of households, in order to identify significant housing and economic development issues by comparing data across multiple geographical areas.

This manual, *Guide to the Data-Driven Planning Toolkit in CPD Maps,* explains how to interpret a broad range of data and shows how data analysis can be applied to the planning process. The Toolkit's data comes from the eCon Planning Suite database.

Using the Toolkit to design data-driven Consolidated Plan priorities and strategies can benefit communities in a number of ways, including the following:

- By identifying which housing and economic problems are most prevalent within the jurisdiction.
- By providing data assessment tools for conducting the needs assessment and market analysis requirements of the Consolidated Plan.
- By displaying the geographic relationships among the most severe problems, so grantees can allocate limited resources and set appropriate goals to address priority needs.

This Guide first provides basic instructions for downloading the Data-Driven Planning Toolkit, and then walks the user through the Toolkit's basic features for both the Housing Tool and the Economic Development Tool.

Note: This Guide uses the terminology "target geography" and "target jurisdiction" to refer to the geographic area being studied. The Guide uses the term "reference geography" to refer to the area being used for comparisons with the target geography. The "target geography" term is generally used when referring to geographic areas that are a subset of the planning jurisdiction. For example, a target geography may be a city within the planning jurisdiction. When referring to the planning jurisdiction as a whole the term "target jurisdiction" is used. The Toolkit spreadsheets use the term "target jurisdiction" exclusively, but it is important to remember that the target geography need not always correspond to the planning jurisdiction as a whole.



THE DATA-DRIVEN PLANNING TOOLKIT

The Data-Driven Planning Toolkit helps HUD grantees develop useful and compliant Consolidated Plans. This section provides an overview of the basic structure of the Toolkit. It then explains how to begin using the Toolkit, including selecting geographies and retrieving the data.

OVERVIEW OF THE BASIC MODEL

The Data-Driven Planning Toolkit uses a three-stage method to help users understand the nature of their jurisdiction's problems and how to develop strategies to address them. The three stages of the Data-Driven Planning process take grantees from identifying issues within the target area, to characterizing those issues, to graphically displaying the location or concentration of specific issues.

"Stage 1: Issue Identification" provides an overview of the jurisdiction's conditions relating to housing and economic development. Issue Identification also provides data on demographic and economic conditions that may affect how the issues are addressed, or identify additional issues of interest. These data are pulled into the Issue Identification spreadsheet and compared to selected "Reference Geographies," noting any substantial differences between them and the selected "Target Jurisdiction."

"Stage 2: Issue Characterization" explores the issues of interest identified in Stage 1 in greater detail. The Issue Characterization spreadsheet includes additional data on housing problems and economic development conditions, as well as selected demographic descriptors. As in Stage 1, these data are compared to other geographies to illustrate how the jurisdiction looks relative to other housing markets and the nation. Drilling down into issues of interest provides a fuller picture of the nature of problems identified in Stage 1. For example, the Issue Characterization stage might examine whether a certain problem is more prevalent among owners or renters and which income levels are most affected.

"Stage 3: Issue Location" utilizes the capabilities of the Map Query widget in CPD Maps to help portray how identified issues are distributed geographically within a jurisdiction. This stage informs grantees' use of the Map Query widget in CPD maps, which locates certain conditions at various geographic levels. For example, if a county-level analysis identifies three separate issues of concern, locating tracts where those issues are present will indicate if the issues are geographically isolated from one another or clustered together within the county.

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GETTING STARTED WITH THE TOOLKIT

The Data-Driven Planning Toolkit is accessed through the through the "Data Toolkit" widget, found at: <u>http://egis.hud.gov/cpdmaps/</u>.

Before getting started with the Data Toolkit widget, users should familiarize themselves with the basic operation of the CPD Maps website. First, review the *Desk Guide for CPD Maps*, available at https://www.onecpd.info/resource/2405/cpd-maps-desk-guide. It is particularly important to understand the section labeled "Accessing CPD Maps" as well as the "Layer Widget" and "Map Query Widget" headings under the section titled "Navigating CPD Maps and Functionality" (these headings can be found within the Desk Guide's Table of Contents.) Accessing CPD Maps covers the skills necessary to select a grantee jurisdiction, zoom and pan the map display and customize basic display options. The Navigating CPD Maps and Functionality sections explains how to use the CPD Maps Layer and Map Query widgets to map the distribution of both housing and economic development data at the desired geographic scale. After developing a basic understanding of how CPD Maps works, grantees can begin using the Data-Driven Planning Toolkit to better understand their jurisdiction's housing problems, economic development issues, and demographic conditions.

TARGET AND REFERENCE GEOGRAPHIES

The first step for using the Data-Driven Planning Toolkit is to identify the **target geography** for analysis. The target geography can be any type of geography available in the Data Toolkit—including census tract, place, county subdivision, county, state and nation, as well as a custom-defined geographic area. For example, users may select their grantee jurisdiction as the target geography of interest. Alternatively, they may select a series of census tracts to represent a neighborhood, or a group of counties to represent a metro area as the target geography. As described throughout this Guide, grantees will use the tool to analyze and compare the target geography to **reference geographies** in order to identify relative differences and highlight needs.

In most cases, it is useful to choose a reference geography that contains the target geography. For example, a local entitlement grantee may find it useful to select both the state and the county in which the grantee is located as reference geographies. Comparisons between a target geography and nearby reference geographies can also be instructive. For example, comparisons of a target geography to nearby cities or counties with a similar housing market—or for state-level planning purposes, another state with a comparable housing market—may be important when studying regional housing issues.

State grantees may wish to examine jurisdictions within their state by selecting, for example, a particular county or group of counties as the target geography, and comparing it with several other counties. For example, counties could be aggregated into regional groups that approximate urban and rural geographies. This approach would allow states to examine how data patterns vary throughout the state to determine where certain types of need may be greatest. See the section on Selecting Geographies and Getting the Data, below, for additional suggestions on how to combine and select geographies for comparison.

What reference geographies are good to use for comparison? If a neighborhood is the target area, the grantee jurisdiction as a whole may make an appropriate comparison. Other possibilities for reference



areas include surrounding neighborhoods, jurisdictions, the county, or the state. To select a reference geography that shares a certain trait or characteristic with the target area, use the Map Query tool in CPD Maps by setting criteria to select areas with similar housing or economic characteristics. For detailed instructions, refer to the Selecting a Grantee or Jurisdiction and Map Query Widget sections of the CPD Maps Desk Guide. Grantees may always revisit this step of the process as they gather additional information about the economic and housing conditions in their jurisdiction in order to change or compare different reference geographies.

Several variables may provide a good starting point for identifying places with similar characteristics to a given target geography, as presented below with rules-of-thumb for their use. It is important to note that a comparable population size alone is not sufficient reason to select a reference geography. Selection criteria should include additional characteristics that the user identifies as being important to their target geography.

Potential topics include:

Median income: The variable "median household income over the past 12 months" can be used to better understand the relative income differences between the two geographies. A good reference geography will be no more than 25% higher or lower than the target jurisdiction's median income.

Tip: To easily identify the values for these variables in the target area, produce a report in CPD Maps to use as a reference when setting threshold levels in Map Query.

Median rent: The variable "median contract rent for renter-occupied units" is particularly important for understanding a housing cost that is generally of greater concern to lower-income populations. A good reference geography will be no more than 10% higher or lower than the target jurisdiction's median rent.

Median home value: The variable "median value for owner-occupied units with a mortgage" provides a good indicator of whether housing values are similar. A good reference geography will be no more than 10% higher or lower than the target jurisdiction's median home value.

Unemployment rate: The unemployment rate is particularly important for planners when looking at economic development issues. A good reference geography should be within one, at most two, percentage points of the target jurisdiction's unemployment rate.

In addition to these economic and housing variables, the user might consider additional characteristics of the comparison geographies, such as population and housing density, total area, and proximity to the target jurisdiction.

As a default, the Data-Driven Planning Toolkit will always include the nation as a whole as a reference geography. The differences between the target jurisdiction and the nation will provide a comparison to national norms. Limiting comparisons to local or regional data can mask important issues if they are widespread in scope. For example, in states hard hit by foreclosures, a vacancy rate of 25% for a jurisdiction may not seem high when compared to statewide or nearby jurisdiction vacancy rates. It would only appear notably higher when compared to the national vacancy rate.



SELECTING GEOGRAPHIES AND GETTING THE DATA

To obtain the data for the Toolkit, the user should construct a list of the geographies for use in CPD Maps. The list will include both the target and comparison geographies of interest. From the Data-Toolkit widget, select each geography separately (refer to Figures 1-3). When the list is complete, download the Toolkit containing the data for each of the selected geographies.

First, launch the Data Toolkit widget from the CPD Maps website. Click on the red "building block" icon titled "Data Toolkit," located at the top of the screen. The Data Toolkit interface will open, as pictured in Figure 1.

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Figure 1. Interface window for the Data Toolkit Planning widget.

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CENTERING THE MAP

To select geographies for the Toolkit, the key is to begin by centering the map on the area that contains the geography of interest. There are two principal ways to center the map on the area of interest—using the Grantee Selection Field search box and the map navigation tools:

- Use the Grantee Selection Field search box. If a geography of interest corresponds to a grantee or jurisdiction boundary, the search box is a quick way to move the map to the desired location. For example, entering a city and state name, a grantee name or an address in the search box presents the user with a list of all the grantee jurisdictions in that area. Users may then double click on the grantee name to quickly center the map on the community of interest. Refer to the CPD Maps Desk Guide for detailed user instructions for the Grantee Selection Field search box.
- Use the map navigation tools. If the geographic areas of interest do not correspond with the jurisdictions available in the Grantee Selection Field search box, use the mouse cursor to pan and the zoom tool located on the top left hand side of the CPD Maps display to center the map manually.

CREATING THE LIST OF GEOGRAPHIES

Once the map is centered on the approximate area of interest, the next step is to open the Data Toolkit widget in CPD Maps to display the widget's dialog box (see Figures 1 and 2). Use the Data Toolkit dialog to select geographies and add them to the list of geographies for the Planning Toolkit to analyze. Users can select either a single geography (a solitary unit of geography such as a single census tract, jurisdiction, or county) or create a custom grouping composed of several geographies.



Figure 2. Selecting a single geography using the Data Toolkit dialog box. The Figure highlights the process of selecting a county jurisdiction using the dialog interface. Circled in red, the geographic level drop-down menu is set to "County" and the entry box labeled "Target Area Name:" (listed after the selection is made) shows "For Merced County." The selected county is highlighted on the map in aqua and marked with a red arrow.

SELECTING A SINGLE GEOGRAPHY

- First, choose the target jurisdiction level from the drop-down menu of the Data Toolkit dialog box. (Figure 2). The drop-down menu, labeled "Geographic level," includes choices for a number of different types of geographic areas. Table 1 provides a detailed explanation of some of these geographic types. In addition to the tract, place, county subdivision, county and state jurisdiction choices, users can also select from different entitlement grantee types, such as CDBG, Emergency Solutions Grants (ESG) Program, etc.
- Next, choose a selection tool. To interact with the map, choose from a number of different selection methods, including "Draw Point," I "Draw Line," and "Draw Polygon," among others. When selecting a single geography, the draw point is method can be used by simply clicking on the map in the location of the desired geography. To learn more advanced selection methods, refer to the <u>Desk Guide for Using CPD Maps</u>.

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Table 1. Sample list of target jurisdiction levels available for selection in the Data Toolkit dialog box. The table shows the basic U.S. Census Bureau geographic types available for selection in CPD Maps. In addition to these, custom geographical areas may be created by selecting multiple geographies, including multiple grantee jurisdictions or groups of tracts, places, counties, etc.

Target Jurisdiction	Definition ¹
Census Tract	Census tracts are small, relatively permanent statistical subdivisions of a county, generally having between 1,500 and 8,000 people, with an optimum size of 4,000 people. Counties with fewer people may have a single census tract.
Place	Places include census designated places (CDPs), consolidated cities, and incorporated places. CDPs are concentrations of population that are identifiable by name but are not legally incorporated. Consolidated cities are units of local government for which the functions of an incorporated place and its county or minor civil division (MCD) are combined. Incorporated places are legally designated places under the laws of their respective states, such as cities, boroughs, towns, and villages. Some exceptions include the towns of New England states that may be considered as MCDs.
County Subdivision	County subdivisions include census subareas, MCDs, and unorganized territories. MCDs also serve as general-purpose local governments that generally can perform the same governmental functions as incorporated places.
County	Counties are the primary legal divisions of most states. In Louisiana, these divisions are known as "parishes." In Alaska, which has no counties, the statistically equivalent entities are the organized boroughs and census areas. In four states (MD, MO, NV, and VA), there are one or more incorporated places; these incorporated places are known as independent cities and are treated as county equivalents.
State	States are the largest governmental divisions of the United States. The District of Columbia is treated as a statistical equivalent of a state for decennial census purposes, as are Puerto Rico and each of the four Island Areas.

- Select a geography by clicking on the map in the location of the place of interest. The selected geography will then be outlined in aqua on the map, and the name of the geography will appear in the list box dialog located below the text "Number of Geographies Selected" as well as in the "Target Area name:" field (Figure 2). Users can customize the dataset name to more clearly define or identify the geography.
- Before proceeding, double check that the selected geography is correct. If the incorrect geography was accidently selected, highlight the "Remove from Area" radio button and click on the incorrectly selected area on the map to remove that selection. Make sure to change the selection method back to "New Selection" before attempting to select a new geography.

¹ https://www.census.gov/geo/www/geo_defn.html

SELECTING CUSTOM GEOGRAPHIES

In addition to selecting a single geographic area for inclusion as either the target or reference jurisdiction, users can select and combine multiple jurisdictions of the same type (e.g., tracts, places, or counties) to create a custom geography. For example, state grantees may want to create several custom groups of counties to represent urban or rural portions of the state.

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Figure 3. Selecting multiple counties to create a custom geographic unit using the Data Toolkit dialog box. The Figure highlights the process of selecting multiple counties using the dialog interface. Circled in red, the Geographic level drop-down menu is set to "County," the selection tool circled is "Draw Line," and a custom entry in the box labeled "Target Area Name:" has been created to represent the group of selected counties, in this case "San Joaquin Valley Counties." The arrows and the "Number of Geographies Selected: 8" field indicate that the custom geography is composed of eight separate counties.

When selecting multiple large geographic features such as counties, it can sometimes be difficult to see the county boundaries in CPD Maps. Switching the background basemap from the default "Streets" to "Light Grey Canvas" using the Basemap widget in the upper right-hand corner of the widget bar can make the selection process easier when working at large zoom levels (Figure 3).

The process of selecting multiple jurisdictions for use as a custom geography is similar to that of selecting a single geography, but with a few important differences:

- Custom geographies can only consist of geographic features of the same type (e.g., tracts, places, or counties). Altering the target jurisdiction drop-down choice will clear all previously selected geographies on the map. For example, if a custom geography is composed of tracts and the user wishes to add an entire county, the user would need to define the county by selecting all the tracts in the county.
- To select multiple geographic features, click on multiple points on the map to select more than one geography of the same type. The advanced selection tools provide a means to select

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many geographic features simultaneously. To learn more about the available advanced selection methods, refer to the <u>CPD Maps Desk Guide</u> for detailed instructions. Selected geographic features will be outlined in aqua on the map, and the names will appear in the list box dialog located below the label "Number of Targets Selected" (Figure 3).

- Use the selection method "Add to Area" to add geographies to an existing selection. Use the "Remove from Area" option to remove any incorrectly selected geographies, as described previously. Be sure to change the selection method back to "Add to Area" before trying to add more geographies to the custom area.
- A custom geography can be assigned a custom dataset name. Once the selections have been made, users can type a name into the "Target Area Name:" field, which will subsequently be used to refer to the custom group of geographies (Figure 3).
- Before proceeding, double check that the selected custom geography is correct. If an error is discovered, highlight the Remove from Area option and click on the incorrectly selected area on the map to remove that selection. Again, make sure to change back to New Area before attempting to select a new geography.



ADDING SELECTED GEOGRAPHIES TO THE LIST

After selecting a single or a custom-assembled geography, the next step is to add it to the list of geographies to be included in the Toolkit. Once satisfied with the geographic selection, click on the "Add" button (see Figures 2 and 3). The Data Toolkit dialog box now displays the geographic selection's name in a list of geographies to be included in the Toolkit (Figure 4). Once the selection is displayed in the list on the screen as shown in Figure 4, it is saved for use in the Toolkit.



Figure 4. Compiling the list of target and reference geographies using the Data Toolkit dialog box. The Figure highlights the process of adding jurisdictions to the list to be included in the Data-Driven Planning Toolkit. The "Add Another" button, circled in red, allows the user to return to the selection screen (Figure 2). The "Remove" button allows the user to delete a highlighted jurisdiction in the list [in this case "For Merced (Place)"]. The "Select Toolkit Type:" drop-down menu is set to "Housing."

Click on the "Add Another " button (Figure 4) to return to the selection dialog screen in the Data Toolkit dialog box (Figure 2). If the next selection is at a different geographic level (for instance, a county instead of a state) be sure to change the "Geographic Level" drop-down menu to correspond to the desired type of geography. Also, as mentioned earlier, make certain to choose "New Area" to begin the process of selecting a new geographic feature set.

Up to 14 geographies can be added to the list. Once all of the target and reference geographies have been selected, check the displayed list for accuracy (Figure 4). To remove a geography from the list, click on its entry on the list and then click the "Remove " button in the Data Toolkit dialog box (Figure 4).

Once users have completed selecting geographies for the Toolkit, select either the Housing or Economic Development Toolkit from the Select Toolkit Type dropdown menu (Figure 4). Next, click "Finish" and a dialog box will appear prompting the user to save the Toolkit file. The Toolkit file is an Excel .xlsx file with a series of spreadsheets. The name of the Toolkit file begins with the year, month, and date the file was created. Rename the file to allow for its easy identification for further use.

Tip: The report is downloaded as a popup. To download the report, pop-up blockers must be set to allow pop-ups from CPD Maps. Some browsers reload after turning off the pop-up blocker so make sure the blocker is turned off prior to clicking the finish button to ensure the selection is not lost.

Note: When using a custom geography, certain data are unavailable in the Toolkit. This issue is discussed in more detail in the Housing Tool and Economic Development Tool sections of this Guide. Variables that cannot be statistically combined—including "Median Household Income," "Median Contract Rent," "Median Owner Value," "Median Value for owner-occupied units with a mortgage," "Median Age of structure for renter-occupied units" and "Population 5 years and over that speak English 'not at all'"—will display a zero value in the downloaded tool. Comparisons between custom geography and other jurisdictions should be avoided for these six variables.



SETTING UP THE PLANNING TOOLKIT

Once the Toolkit is downloaded with the data for the selected areas, users can easily begin setting up the basic comparisons, as outlined below.

SETTING THE TARGET GEOGRAPHY

The first step after opening the tool is to select the desired target geography from the drop-down list titled "Target Jurisdiction" in the "Control Panel" tab, shown in Figure 5. The drop-down menu lists all the geographies selected in CPD Maps. While using the Toolkit, return to this tab to change the target geography at any time. Additional controls on this tab are discussed in the "Results Criteria" section below in this Guide.

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6 7 8 9 9 0 1 1 2 3 3					higher in the by seli There propo compa target	r, higher, much higher, o table to the right. You c acting the "active values are two types of compa rtional (e.g., is the targe arison is absolute (e.g., i and the comparison?). Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI	r lower than the an toggle betwee " at the top of f risons: ratio and t twice the size how many perce (ratio) (ratio) (difference) (ratio) (difference)	e comparison een your cust he table. I difference. af the compa- entage points Active V Slightly Higher 1.25 1.50 5% 1.25 5%	jurisdiction om criteria For ratios, t arison?). Fo difference /alues: Higher 1.50 2.00 10% 1.50	n. Enter custo and the defa he compariso r differences is there bety Default Much Higher 2.00 3.00 20% 2.00	m criteria ult criteria on is , the ween the <u>Lower</u> 0.75 0.75 -5% 0.75 -5%
6 7 8 9 9 9 0 1 1 2 3 3 4					higher in the by selu There propo compa target	r, higher, much higher, o table to the right. You c acting the "active values are two types of compa rtional (e.g., is the targe rrison is absolute (e.g., i and the comparison?). Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI Pop 65+ Dovert2	r lower than the an toggle betwee " at the top of t risons: ratio and t twice the size low many perce (ratio) (ratio) (difference) (difference) (difference)	e comparison een your cust he table. I difference. af the compa- entage points Active V Slightly Higher 1.25 1.50 5% 5% 5%	jurisdiction om criteria For ratios, t arison?). Fo difference /alues: Higher 1.50 1.50 1.0% 1.50	n. Enter custo and the defaint he compariso r differences is there betw Default Much Higher 2.00 2.0% 2.00 2.0% 2.00	m criteria ult criteria on is , the veen the <u>Lower</u> 0.75 0.75 -5% 0.75 -5% -5%
6 7 8 9 9 0 0 1 1 2 2 3 4 4 5 5 6					higher in the by selu There propo compa target	r, higher, much higher, o table to the right. You c acting the "active values are two types of compa- ritional (e.g., is the targe arison is absolute (e.g., i and the comparison?). Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI Pop 65+ Pop <18 Dester Poto	r lower than the an toggle betwee " at the top of t risons: ratio and t twice the size how many perce (ratio) (ratio) (difference) (difference) (difference) (difference)	e comparison een your cust he table. d difference. of the compa- entage points Active V Slightly Higher 1.25 1.50 536 1.25 536 536 536	jurisdiction om criteria For ratios, t arison?). Fo difference /alues: Higher 1.50 2.00 10% 1.50 10%	n. Enter custo and the defaint he comparison r differences is there betw Default Much Higher 2.00 3.00 2.0% 2.0% 2.0% 2.0% 2.0% 2.0%	m criteria ult criteria on is , the veen the Lower 0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75
77 88 99 80 11 22 34 5 5 5 7 7					higher in the by seld There propor compa target	r, higher, much higher, o table to the right. You c ecting the "active values are two types of compa- ritional (e.g., is the targe arison is absolute (e.g., i and the comparison?). Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI Pop 65+ Pop <18 Renter Rate	Type (ratio) (ratio) (ratio) (ratio) (ratio) (difference) (difference) (difference) (difference) (difference)	e comparison een your cust he table. d difference. af the compa- entage points Active V Slightly Higher 1.25 1.50 5% 5% 5% 5% 5%	jurisdiction om criteria For ratios, t arison?). Fo difference Values: Higher 1.50 2.00 2.00 10% 1.50 10% 10%	n. Enter custo and the defaint he comparison r differences is there betw Default Much Higher 2.00 3.00 2.0% 2.0% 2.0% 2.0% 2.0% 2.0% 2.0% 2	m criteria ult criteria on is , the veen the Lower 0.75 0.75 0.75 -5% -5% -5% -5%
7788 9901123455778					higher in the by sele There propo compa target	r, higher, much higher, o table to the right. You c ecting the "active values are two types of compa- ritional (e.g., is the targe arison is absolute (e.g., i and the comparison?). Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <30% HAFMI Pop 65+ Pop <18 Renter Rate Median Owner Value	Type (ratio) (difference) (difference) (difference) (difference)	e comparison een your cust he table. d difference. af the compa- entage points Active V Slightly Higher 1.25 1.50 536 1.25 536 536 536 536	jurisdiction om criteria For ratios, t arison?). Fo difference Values: Higher 1.50 2.00 10% 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50	n. Enter custo and the defaint the comparison of differences is there betw Default Much Higher 2.00 3.00 20% 2.00 2.00 2.00 2.00 2.00 2.00 2.	m criteria an is , the veen the Lower 0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75

Figure 5. Planning Toolkit spreadsheet: Initial view. The initial view of the Toolkit enables the user to set the target jurisdiction using the highlighted drop-down menu in column E, circled in red at the top of the spreadsheet. Any geography present in the list may be set as the target jurisdiction. Tab navigation used to move on to additional stages is shown circled in red at the bottom of the screen.

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SETTING REFERENCE GEOGRAPHIES

The next step is "Setting Reference Geographies," which will be used for comparison to the target geography. To begin, use the drop-down lists in the Issue Identification and Issue Characterization tabs, as shown in Figure 6. The examples provided here refer to the controls in the tab titled "Stage 1: Issue Identification." However, the process for setting reference geographies and generating comparisons is the same for the Issue Characterization spreadsheet. Refer back to these instructions when using either the Issue Identification or Issue Characterization steps of the Toolkit.

	А	В	С	D	E	F	F
3	Stage 1:	Basic Issue Identific	ation				
	This stage examines CP	PD Maps data for the	target jurisdiction comp	ared to two other geog	raphies (e.g., a similar		
	jurisdiction and the sta	ite) and national stat	istics. This basic analysis	s allows the user to ider	ntify specific issues for		
	analysis in Stages 2 and	d 3. The target jurisdi	ction is set on the Contr	ol Panel. You can choos	e the reference		
	geography in the shade	ed box below. The re	ference geography is al	so shaded in the table.	You can change the		
4	comparison jurisdiction	ns by clicking on the t	table header and select	ing from the list that ap	pears.		
5					KEY		
6		Target:	Reference:		Slightly Higher		
7	Define Comparison:	Target Jurisdiction	NATION		Higher		
8					Much Higher		
9					Lower		
10							
				Reference Geography			1
11		Result	Target Jurisdiction	1		 NATION 	
12	Housing Issues				Nation	<u>^</u>	
13	Substandard		1.24%	1.50%	Reference Geography 1	1.06%	
14	Overcrowded	Much Higher	9.14%	8.0%	Reference Geography 2 (Sta	3.01%	
15	Hh Pay >30%	Higher	47.30%	48.24%		35.33%	
16						-	
17	Demographics and Ger	neral Housing Charac	teristics				
12	Doworty Pato	Higher	22 50%	26.05%	0.00%	12 12%	
10	Poverty Rate	ingliei	22.30/0	20.03%	0.0078	13,12/0	-
19	<80% HAFMI	nighei	45.95%	54.59%	#DIV/0!	42.21%	-
19 20	<80% HAFMI Pop 65+	inghei	45.95% 8.72%	20.03% 54.59% 8.96%	#DIV/0!	42.21% 12.61%	-
19 20 21	<80% HAFMI Pop 65+ Pop <18	Slightly Higher	45.95% 8.72% 30.94%	20.03% 54.59% 8.96% 32.11%	#DIV/0! 0.00%	42.21% 12.61% 24.61%	-
19 20 21 22	<pre><80% HAFMI Pop 65+ Pop <18 Renter Rate</pre>	Slightly Higher Higher	45.95% 8.72% 30.94% 50.55%	54.59% 8.96% 32.11% 57.79%	0.00% #DIV/0! 0.00% 0.00% 100.00%	42.21% 12.61% 24.61% 33.11%	-
19 20 21 22 23	<pre><80% HAFMI Pop 65+ Pop <18 Renter Rate Median Owner Value</pre>	Slightly Higher Higher Much Higher	45.95% 8.72% 30.94% 50.55% 138.13%	26.03% 54.59% 8.96% 32.11% 57.79% 140.78%	#DIV/0! 0.00% 0.00% 100.00% 0.00%	42.21% 42.21% 12.61% 24.61% 33.11% 100.00%	
19 20 21 22 23 24	<pre><80% HAFMI Pop 65+ Pop <18 Renter Rate Median Owner Value Median Contract Rent</pre>	Slightly Higher Higher Much Higher	45.95% 8.72% 30.94% 50.55% 138.13% 103.56%	26.03% 54.59% 8.96% 32.11% 57.79% 140.78% 98.07%	#DIV/0! 0.00% 0.00% 100.00% 0.00%	42.21% 42.21% 12.61% 24.61% 33.11% 100.00%	
19 20 21 22 23 24 25	<pre><80% HAFMI Pop 65+ Pop <18 Renter Rate Median Owner Value Median Contract Rent Median Hh Income</pre>	Slightly Higher Higher Much Higher n/a	45.95% 8.72% 30.94% 50.55% 138.13% 103.56% \$43,036	26.03% 54.59% 8.96% 32.11% 57.79% 140.78% 98.07% \$34,757	#DIV/0! 0.00% 0.00% 100.00% 0.00% 0.00% \$0	42.21% 42.21% 12.61% 24.61% 33.11% 100.00% 100.00% \$51,425	

Figure 6. Selecting reference geographies. Set the desired reference geographies by using the drop-down lists in columns D and E. The name of the selected reference geography will then be displayed along with values for each variable.

Values for two different reference geographies can be displayed by selecting them from the drop-down menus available in columns D and E, as Figure 6 shows. Notice that these are the same geographies selected in the Data Toolkit widget in CPD Maps. When clicking the arrow for the drop-down list, users may initially see a blank drop-down list, depending on the number of additional geographies included in the tool. Use the scroll bar on the right-hand side of the drop-down to scroll up until the list of reference geographies is visible.

The displayed reference geographies can be used for comparison to the target geography (the results of the comparisons are displayed in column B). The Toolkit's default reference geography for comparison is always the nation. Figure 6 displays the data for the nation as a whole within the grey shading in column F. In this case, the classification in column B (result) and the shading in column C (target jurisdiction) are the result of a comparison between the target jurisdiction and the nation (Figure 6).



The descriptor in the "Result" column is based on criteria discussed in further detail in the Results Criteria section, found below in this Guide. The result may be "Much Higher," "Higher," "Slightly Higher," "Lower," or "n/a." The result also determines the color of the cell for the target jurisdiction, as indicated by the color-coded values in the "Key" (Figure 7).

Only one reference geography at a time can be used as the basis for comparison. Users can choose a different reference geography to generate comparison values by selecting from the reference geography drop-down list in column C (Figure 7). To change the basis for comparison to a geography other than the nation, users must add the desired reference geography to column D or E (shown in Figure 7). Only those reference geographies selected as column headers for columns D and E will appear along with the nation in the reference drop-down list.

	А	В	С	D	E	F	- 4			
3	Stage 1: Basic Issue Identification									
	This stage examines CPD Maps data for the target jurisdiction compared to two other geographies (e.g., a similar									
	jurisdiction and the state) and national statistics. This basic analysis allows the user to identify specific issues for									
	analysis in Stages 2 and 3. The target jurisdiction is set on the Control Panel. You can choose the reference									
	geography in the shaded box below. The reference geography is also shaded in the table. You can change the									
4	comparison jurisdictions by clicking on the table header and selecting from the list that appears.									
5				/	KEY					
6		Target:	Reference:		Slightly Higher					
	Define Comparison:	Target Jurisdiction	Reference Geography	\sim						
7		(1	•	Higher					
8			Reference Geography 1		Much Higher					
9			NATION	4)	Lower					
10										
				Reference Geography	Reference Geography					
11		Result	Target Jurisdiction	1	2 (State)	NATION				
12	Housing Issues						=			
13	Substandard		1.24%	1.50%	1.15%	1.06%				
14	Overcrowded		9.14%	8.03%	7.80%	3.01%				
15	Hh Pay >30%		47.000/							
16			47.30%	48.24%	46.48%	35.33%				
			47.30%	48.24%	46.48%	35.33%				
17	Demographics and Ger	neral Housing Charac	47.30% teristics	48.24%	46.48%	35.33%	_			
17 18	<i>Demographics and Ger</i> Poverty Rate	neral Housing Charac	47.30% teristics 22.58%	48.24% 26.05%	46.48% 12.93%	35.33% 13.12%				
17 18 19	Demographics and Ger Poverty Rate <80% HAFMI	heral Housing Charac Lower	47.30% teristics 22.58% 45.95%	48.24% 26.05% 54.59%	46.48% 12.93% 42.31%	35.33% 13.12% 42.21%				
17 18 19 20	Demographics and Ger Poverty Rate <80% HAFMI Pop 65+	heral Housing Charac	47.30% teristics 22.58% 45.95% 8.72%	48.24% 26.05% 54.59% 8.96%	46.48% 12.93% 42.31% 10.94%	35.33% 13.12% 42.21% 12.61%				
17 18 19 20 21	Demographics and Ger Poverty Rate <80% HAFMI Pop 65+ Pop <18	heral Housing Charac Lower	47.30% teristics 22.58% 45.95% 8.72% 30.94%	48.24% 26.05% 54.59% 8.96% 32.11%	46.48% 12.93% 42.31% 10.94% 26.00%	35.33% 13.12% 42.21% 12.61% 24.61%				
17 18 19 20 21 22	Demographics and Ger Poverty Rate <80% HAFMI Pop 65+ Pop <18 Renter Rate	Lower	47.30% teristics 22.58% 45.95% 8.72% 30.94% 50.55%	48.24% 26.05% 54.59% 8.96% 32.11% 57.79%	46.48% 12.93% 42.31% 10.94% 26.00% 42.06%	35.33% 13.12% 42.21% 12.61% 24.61% 33.11%				
17 18 19 20 21 22 23	Demographics and Ger Poverty Rate <80% HAFMI Pop 65+ Pop <18 Renter Rate Median Owner Value	Lower	47.30% teristics 22.58% 45.95% 8.72% 30.94% 50.55% 138.13%	48.24% 26.05% 54.59% 8.96% 32.11% 57.79% 140.78%	46.48% 12.93% 42.31% 10.94% 26.00% 42.06% 258.47%	35.33% 13.12% 42.21% 12.61% 24.61% 33.11% 100.00%				
17 18 19 20 21 22 23 24	Demographics and Ger Poverty Rate <80% HAFMI Pop 65+ Pop <18 Renter Rate Median Owner Value Median Contract Rent	Lower Lower Lower Slightly Higher	47.30% teristics 22.58% 45.95% 8.72% 30.94% 50.55% 138.13% 103.56%	48.24% 26.05% 54.59% 8.96% 32.11% 57.79% 140.78% 98.07%	46.48% 12.93% 42.31% 10.94% 26.00% 42.06% 258.47% 148.44%	35.33% 13.12% 42.21% 12.61% 24.61% 33.11% 100.00% 100.00%				
17 18 19 20 21 22 23 24 25	Demographics and Ger Poverty Rate <80% HAFMI Pop 65+ Pop <18 Renter Rate Median Owner Value Median Contract Rent Median Hh Income	Lower Lower Lower Slightly Higher n/a	47.30% teristics 22.58% 45.95% 8.72% 30.94% 50.55% 138.13% 103.56% \$43,036	48.24% 26.05% 54.59% 8.96% 32.11% 57.79% 140.78% 98.07% \$34,757	46.48% 12.93% 42.31% 10.94% 26.00% 42.06% 258.47% 148.44% \$60,392	35.33% 13.12% 42.21% 12.61% 24.61% 33.11% 100.00% 100.00% \$51,425				

Figure 7. Changing the comparison geography. The reference geography drop-down list in column C, circled in red above left, specifies which geography is being used to generate comparisons. This example compares the target geography with the "Reference Geography 1" data highlighted in gray in column D. The result of the comparisons is indicated in columns B (labeled "Result") and C (labeled "Target Jurisdiction"). The color coded values in column C correspond to categories shown in the key, circled in red to the above right.

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Note: When using the Planning Toolkit for the first time, it is necessary first to set the target jurisdiction in the Control Panel tab before moving on to the next stage of analysis. The user may change the reference jurisdiction, used as the basis for comparison, from the default of nation to any other geography in the drop-down list. However, the user must first select reference geographies for the columns in the Issue Identification table before substituting them for the default of national as the reference geography.



RESULTS CRITERIA

In addition to setting the target jurisdiction, the control panel tab previously discussed (in Selecting a Target Geography in this Guide) also allows users to view and adjust the criteria that the tool uses to classify the results into the much higher, higher, slightly higher, and lower categories discussed earlier. Adjustments to the criteria that determine

Tip: Understanding the criteria settings helps explain the math behind the tool.

these categories can be made for both Issue Identification as well as for Issue Characterization, which can be viewed by scrolling below the stage 1 criteria values shown in Figure 8. This Figure describes the default and custom settings for the results criteria.

	12	8 🗸 💿	<i>f</i> _∞ Default										≽
	D	E	F	G	Н	l I	J	K	L	М	N	0	
23	ADVAN	ICED CONTROLS											
24													
25	25 Stage 1 Issue Identification Criteria												
	You car	n adjust the criteria use	d to determine	whether the	e target juris	diction is sli	ghtly						
	higher,	higher, much higher, o	r lower than the	e compariso	n jurisdictio	n. Enter cust	om criteria						
	in the t	able to the right. You ca	an toggle betwe	en your cust	tom criteria	and the defa	ault criteria						
26	by sele	cting the "active values	" at the top of t	he table.									
	There a	are two types of compar	risons: ratio and	difference.	For ratios, t	he comparis	on is						
	propor	tional (e.g., is the targe	t twice the size	of the comp	arison?). Fo	r difference	s, the						
	compar	rison is absolute (e.g., h	low many perce	ntage point	s difference	is there bet	ween the					_	=
27	target a	and the comparison?).											
28				Active	Values:	Default		L.		Custom	Values		1
				Slightly		Default			Stightly		Much		
				Jinging		Custom					Witten		
29		Variable	Туре	Higher	Higher	Custom Higher	cower		Higher	Higher	Higher	Lower	
29 30		Variable Substandard	Type (ratio)	Higher 1.25	Higher 1.50	Custom Higher 2.00	tower 0.75		Higher 0.00	Higher 0.00	Higher 0.00	Lower 0.00	
29 30 31		Variable Substandard Overcrowded	Type (ratio) (ratio)	Higher 1.25 1.50	Higher 1.50 2.00	Custom Higher 2.00 3.00	Lower 0.75 0.75		Higher 0.00 0.00	Higher 0.00 0.00	Higher 0.00 0.00	Lower 0.00 0.00	-
29 30 31 32		Variable Substandard Overcrowded Hh Pay >30%	Type (ratio) (ratio) (difference)	Higher 1.25 1.50 5%	Higher 1.50 2.00 10%	Custom Higher 2.00 3.00 20%	cower 0.75 0.75 -5%		Higher 0.00 0.00 0%	Higher 0.00 0.00 0%	Higher 0.00 0.00 0%	Lower 0.00 0.00 0%	-
29 30 31 32 33		Variable Substandard Overcrowded Hh Pay >30% Poverty Rate	Type (ratio) (ratio) (difference) (ratio)	Higher 1.25 1.50 5% 1.25	Higher 1.50 2.00 10% 1.50	Custom Higher 2.00 3.00 20% 2.00	0.75 0.75 -5% 0.75		Higher 0.00 0.00 0% 0.00	Higher 0.00 0.00 0% 0.00	Higher 0.00 0.00 0% 0.00	Lower 0.00 0.00 0% 0.00	
29 30 31 32 33 34		Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI	Type (ratio) (ratio) (difference) (ratio) (difference)	Higher 1.25 1.50 5% 1.25 5%	Higher 1.50 2.00 10% 1.50 10%	Custom Higher 2.00 3.00 20% 2.00 2.00	0.75 0.75 -5% 0.75 -5%		Higher 0.00 0.00 0% 0.00 0%	Higher 0.00 0.00 0% 0.00 0%	Higher 0.00 0.00 0% 0.00 0%	Lower 0.00 0.00 0% 0.00 0%	
29 30 31 32 33 34 35		Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI Pop 65+	Type (ratio) (ratio) (difference) (difference) (difference)	Higher 1.25 1.50 5% 1.25 5% 5%	Higher 1.50 2.00 10% 1.50 10% 10%	Custom Higher 2.00 3.00 20% 2.00 20% 20%	0.75 0.75 -5% 0.75 -5% -5%		Higher 0.00 0.00 0% 0.00 0% 0%	Higher 0.00 0.00 0% 0.00 0% 0%	Higher 0.00 0.00 0% 0.00 0% 0%	Lower 0.00 0.00 0% 0.00 0%	
29 30 31 32 33 34 35 36		Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI Pop 65+ Pop <18 Dester Date	Type (ratio) (ratio) (difference) (ratio) (difference) (difference) (difference)	Higher 1.25 1.50 5% 1.25 5% 5% 5%	Higher 1.50 2.00 10% 1.50 10% 10% 10%	Custom Higher 2:00 3:00 20% 2:00 20% 2:00 2:0%	Cower 0.75 0.75 -5% 0.75 -5% -5%		Higher 0.00 0.00 0% 0.00 0% 0%	Higher 0.00 0.00 0% 0.00 0% 0%	Higher 0.00 0.00 0% 0.00 0% 0%	Lower 0.00 0.00 0% 0% 0%	
29 30 31 32 33 34 35 36 37		Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI Pop 65+ Pop <18 Renter Rate	Type (ratio) (ratio) (difference) (ratio) (difference) (difference) (difference)	Higher 1.25 1.50 5% 1.25 5% 5% 5% 5%	Higher 1.50 2.00 10% 1.50 10% 10% 2.00 10% 10% 10% 10%	Custom Higher 2:00 3.00 20% 2.00 20% 20% 20%	cower 0.75 0.75 -5% 0.75 -5% -5% -5% -5%		Higher 0.00 0.00 0% 0.00 0% 0% 0%	Higher 0.00 0.00 0% 0.00 0% 0% 0%	Higher 0.00 0.00 0% 0% 0% 0%	Lower 0.00 0.00 0% 0% 0% 0%	
29 30 31 32 33 34 35 36 37 38		Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI Pop 65+ Pop <18 Renter Rate Median Owner Value	Type (ratio) (ratio) (difference) (ratio) (difference) (difference) (difference) (difference) (difference)	Higher 1.25 1.50 5% 1.25 5% 5% 5% 5% 5%	Higher 1.50 2.00 10% 1.50 10% 10% 10% 10% 10% 10% 10% 10	Custom Higher 2:00 3.00 20% 2.00 20% 20% 20% 20% 3.0%	cower 0.75 0.75 -5% 0.75 -5% -5% -5% -5% -20% -20%		Higher 0.00 0.00 0% 0% 0% 0% 0%	Higher 0.00 0.00 0% 0% 0% 0% 0%	Higher 0.00 0.00 0% 0% 0% 0% 0%	Lower 0.00 0.00 0% 0% 0% 0% 0%	
29 30 31 32 33 34 35 36 37 38 39		Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI Pop 65+ Pop <18 Renter Rate Median Owner Value	Type (ratio) (ratio) (difference) (difference) (difference) (difference) (difference) (difference) (difference)	Higher 1.25 1.50 5% 1.25 5% 5% 5% 5% 10% 5%	Higher 1.50 2.00 10% 1.50 10% 10% 10% 20% 20%	Custom Higher 2:00 3.00 20% 2.00 20% 20% 20% 30% 3.0%	0.75 0.75 -5% 0.75 -5% -5% -5% -5% -20% -20%		Higher 0.00 0.00 0% 0% 0% 0% 0% 0%	Higher 0.00 0.00 0% 0% 0% 0% 0% 0%	Higher 0.00 0.00 0% 0.00 0% 0% 0% 0% 0%	Lower 0.00 0.00 0% 0% 0% 0% 0%	
29 30 31 32 33 34 35 36 37 38 39 14		Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI Pop 65+ Pop <18 Renter Rate Median Owner Value Median Contract Rent Control_Panel	Type (ratio) (ratio) (difference) (difference) (difference) (difference) (difference) (difference) (difference) (difference) ge_1_Issue_Iden	Higher 1.25 1.50 5% 1.25 5% 5% 5% 5% 10% 5% tification	Higher 1.50 2.00 10% 1.50 10% 10% 20% 10% Stage_2_1	Custom Higher 2:00 3.00 20% 2.00 20% 20% 20% 30% 30% 35we_Character	Cower 0.75 0.75 -5% 0.75 -5% -5% -5% -5% -20% -10% erizatio[]		Higher 0.00 0.00 0% 0% 0% 0% 0%	Higher 0.00 0.00 0% 0% 0% 0% 0%	Higher 0.00 0.00 0% 0% 0% 0% 0%	Lower 0.00 0.00 0% 0% 0% 0% 0%	

Figure 8. The "Advanced Controls" portion of the "Control Panel" tab allows the user to change the default comparison criteria. The drop-down menu titled "Active Values" available in column I allows the user to toggle between the default values and custom values that users may have entered in columns L-O.

UNDERSTANDING THE DEFAULT RESULTS CRITERIA

As stated earlier, "Results criteria" are expressed as either a ratio or percentage difference. The "Type" column in Table 2 shows whether the comparison is by ratio or difference. Ratios are used to compare variables with very small values because they more clearly show differences when two values are close to each other. In contrast, the actual percentage difference (subtracted value) between two values is used for variables with large values, where the absolute differences also tend to be larger. For comparison purposes, the Planning Toolkit formulas always round up calculated values to the nearest *hundredth*.



Table 2. Default Issue Identification criteria for results. The table shows the default values for the results categories from the advanced controls portion of the control panel tab, with shading added to the column headers that correspond to the criteria key. Comparison values for the variables are either a ratio or the actual percentage difference.

		Slightly		Much	
Variable	Туре	Higher	Higher	Higher	Lower
Substandard	(ratio)	1.25	1.50	2.00	0.75
Overcrowded	(ratio)	1.50	2.00	3.00	0.75
Hh Pay >30%	(difference)	5%	10%	20 %	-5%
Poverty Rate	(ratio)	1.25	1.50	2.00	0.75
<80% HAFMI	(difference)	5%	10 %	20 %	-5%
Pop 65+	(difference)	5%	10%	20 %	-5%
Pop <18	(difference)	5%	10%	20 %	-5%
Renter Rate	(difference)	5%	10%	20 %	-5%
Median Owner Value	(difference)	10%	20 %	30 %	-20%
Median Contract Rent	(difference)	5%	10%	15%	-10%

For example, consider the values for "Substandard" housing shown in Figure 9. The target jurisdiction has a value of 1.24% and the reference jurisdiction (the nation) has a value of 1.06%. In other words, 1.24% of the total housing stock in the target jurisdiction and 1.06% of the housing stock in the nation is substandard. Table 2 indicates that substandard housing criteria are expressed as a *ratio* and that the ratio of these two numbers must be greater than 1.25 to be classified *at least* slightly higher, or less than 0.75 to be classified as lower. To calculate the ratio of substandard housing in the target jurisdiction to substandard housing in the reference jurisdiction, divide the terms:

$$\frac{1.24\%}{1.06\%}$$
 = 1.169

Because the formulas always round calculated values to the nearest hundredth, the Toolkit will calculate a value of 1.17 for this ratio. Comparing the ratio to the default criteria values in Table 2 indicates that, in this case, the ratio is lower than the minimum value required to classify the result as at least slightly higher and is also greater than the maximum value required to classify the result as lower. Therefore the substandard housing variable will not receive a category classification for this comparison (see Figure 9).

	۵	B	C	D	F	F
3	Stage 1:	Basic Issue Identific	ation			
	This stage examines CF					
	iurisdiction and the sta					
	analysis in Stages 2 and	e the reference				
	geography in the shade	You can change the				
4	comparison jurisdiction	a box below. The re	table beader and selecti	ing from the list that an	nears	
-	companison junisaletto	is by checking of the		ing nom the list that up		
5		Taurat	Defenses		Cliebthy Ulieber	
0	Define Commenterer	Target:	Reference:		Slightly Higher	
/	Define Comparison:	Target Jurisdiction	NATION		Higner	
8					Much Higher	
9					Lower	
10						
				Reference Geography	Reference Geography	
11		Result	Target Jurisdiction	1	2 (State)	NATION
12	Housing Issues					
13	Substandard	(1.24%	1.50%	1.156	1.06%
14	Overcrowded	Much Higher	9.14%	8.03%	7.80%	3.01%
15	Hh Pay >30%	Higher 🤇	47.30%	48.24%	46.48%	35.33%
16						
17	Demographics and Ger	eral Housing Charac	teristics			
18	Poverty Rate	Higher	22.58%	26.05%	12.93%	13.12%
19	<80% HAFMI		45.95%	54.59%	42.31%	42.21%
20	Pop 65+		8.72%	8.96%	10.94%	12.61%
21	Pop <18	Slightly Higher	30.94%	32.11%	26.00%	24.61%
22	Renter Rate	Higher	50.55%	57.79%	42.06%	33.11%
23	Median Owner Value	Much Higher	138.13%	140.78%	258.47%	100.00%
24	Median Contract Rent		103.56%	98.07%	148.44%	100.00%
25	Median Hh Income	n/a	\$43,036	\$34,757	\$60,392	\$51,425 🗸
14	Control Panel	Stage 1 Issue Io	lentification Stage 2	2 Issue Characterizati		

Figure 9. Understanding results criteria. Values in this table are expressed as percentages of the total for each variable. Terms in the "Result" column and the corresponding highlighted values (in the "Target Jurisdiction" column) are expressed as either a ratio or actual percentage difference of the target jurisdiction compared with the reference jurisdiction.

Now consider the cost burden values, or "Hh Pay > 30%," shown in Figure 9. The target jurisdiction has a value of 47.3% and the reference jurisdiction (the nation) has a value of 35.33%. In other words, this means that 47.3% of households in the target jurisdiction and 35.33% of households in the Nation pay 30% or more of income towards rent or mortgage and are considered cost-burdened. Table 2 indicates that the Hh pay > 30% criteria are expressed as a *percentage difference* and that the actual percentage difference of these two numbers must be greater than 5% to be classified *at least* slightly higher, or less than -5% to be classified as lower. To calculate the actual percentage difference of the target jurisdiction to the reference jurisdiction, subtract the reference jurisdiction value from the target jurisdiction value and round up to the nearest whole number:

47.3% - 35.33% = 11.97% (rounded to 12%)

Comparing the actual percentage difference to the default criteria values in Table 2 indicates that, in this case, the result falls between the maximum value for the "higher" classification, and the minimum value for the "much higher" classification. The cost burdened variable will therefore receive a higher category classification in this comparison (Figure 9).



SETTING CUSTOM RESULTS CRITERIA

In addition to using the default results criteria discussed in the preceding section, users can also set custom values to classify results. Grantees may want to adjust the default values to take into account mitigating circumstances, such as the wide variation in regional housing characteristics when using the nation as the comparison geography, or to compensate for special circumstances based on local knowledge when **Tip:** Be careful when setting custom ratio criteria that deviate significantly from the default values. Small changes in ratio criteria thresholds will tend to have large effects on the comparison results. For example, changing the results criteria from 1.25 to 2 results in almost a two-thirds increase in sensitivity.

comparing nearby communities. In either case, try to make adjustments to custom criteria based on evidence and sound reasoning. For instance, if substandard housing problems affect the majority of a community and are geographically widespread, community development staff may decide to adjust criteria in ways that will help identify only the most severely affected neighborhoods or geographically clustered areas to advise resource allocation decisions. Fine tuning results in this manner may involve mapping the results of the comparisons in CPD Maps, which is discussed in more detail in the sections that follow.

	D	E	F	G	Н	l I	J	Κ	L	М	N	0
23	ADVAN	ICED CONTROLS										
24												
25	15 Stage 1 Issue Identification Criteria											
	You can adjust the criteria used to determine whether the target jurisdiction is slightly											
	higher, higher, much higher, or lower than the comparison jurisdiction. Enter custom criteria											
	in the t	able to the right. You ca	an toggle betwe	en your cust	om criteria	and the defa	ault criteria					
26	by sele	cting the "active values	" at the top of t	he table.								
	There a	are two types of compar	risons: ratio and	difference.	For ratios, t	he comparis	ion is					
	propor	tional (e.g., is the target	t twice the size	of the comp	arison?). Fo	r difference	s, the					
27	compar	rison is absolute (e.g., n	low many perce	ntage point	s difference	is there bet	ween the					
27	/ target and the comparison?).											
1 28	Active Values: Custom Custom Values											
20				Clinkshi		Default			cliabely.		P. de carle	
20		Variable	Time	Slightly	Uishar	Default Custom			Slightly	Uisbor	Much	Lower
29		Variable	Type	Slightly Higher	Higher	Default Custom Higher	Lower		Slightly Higher	Higher	Much Higher	Lower
29 30		Variable Substandard	Type (ratio)	Slightly Higher	Higher 1.20	Default Custom Higher 1.25	Lower 0.00		Slightly Higher 1.17	Higher 1.20	Much Higher 1.25	Lower
29 30 31		Variable Substandard Overcrowded	Type (ratio) (ratio)	Slightly Higher 1.17 0.00	Higher 1.20 0.00	Default Custom Higher 1.25 0.00	Lower 0.00		Slightly Higher 1.17	Higher 1.20	Much Higher 1.25 0.00	Lower 0.00 0.00
29 30 31 32		Variable Substandard Overcrowded Hh Pay >30%	Type (ratio) (ratio) (difference)	Slightly Higher 1.17 0.00 5%	Higher 1.20 0.00 12%	Default Custom Higher 1.25 0.00 20%	0.00 0.00 0.00 -5%		Slightly Higher 1.17 0.00 5%	Higher 1.20 0.00 12%	Much Higher 1.25 0.00 20%	Lower 0.00 0.00 -5%
29 30 31 32 33		Variable Substandard Overcrowded Hh Pay >30% Poverty Rate	Type (ratio) (ratio) (difference) (ratio)	Slightly Higher 0.00 5% 0.00	Higher 1.20 0.00 12% 0.00	Default Custom Higher 1.25 0.00 20% 0.00	0.00 0.00 -5%		Slightly Higher 1.17 0.00 5% 0.00	Higher 1.20 0.00 12% 0.00	Much Higher 1.25 0.00 20% 0.00	Lower 0.00 0.00 -5% 0.00
29 30 31 32 33 34 25		Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI Pop 65+	Type (ratio) (ratio) (difference) (difference) (difference)	Slightly Higher 1.17 0.00 5% 0.00 0%	Higher 1.20 0.00 12% 0.00 0%	Default Custom Higher 1.25 0.000 20% 0.000 0%	0.00 0.00 -5% 0.00 0%		Slightly Higher 1.17 0.00 5% 0.00 0%	Higher 1.20 0.00 12% 0.00 0%	Much Higher 1.25 0.00 20% 0.00 0%	Lower 0.00 -5% 0.00 0%
29 30 31 32 33 34 35 26		Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI Pop 65+ Pop c18	Type (ratio) (ratio) (difference) (difference) (difference) (difference)	Slightly Higher 1.17 0.00 5% 0.00 0% 0%	Higher 1.20 0.00 12% 0.00 0% 0% 0%	Default Custom Higher 1.25 0.00 20% 0.00 0% 0%	0.00 0.00 -5% 0.00 0% 0%		Slightly Higher 1.17 0.00 5% 0.00 0% 0%	Higher 1.20 0.00 12% 0.00 0% 0%	Much Higher 1.25 0.00 20% 0.00 0% 0%	Lower 0.00 -5% 0.00 0% 0%
29 30 31 32 33 34 35 36 37		Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI Pop 65+ Pop <18 Renter Rate	Type (ratio) (ratio) (difference) (ratio) (difference) (difference) (difference)	Slightly Higher 1.17 0.00 5% 0.00 0% 0% 0%	Higher 1.20 0.00 12% 0.00 0% 0% 0% 0%	Default Custom Higher 1.25 0.00 20% 0.00 0% 0% 0%	0.00 0.00 -5% 0.00 0% 0% 0%		Slightly Higher 1.17 0.00 5% 0.00 0% 0% 0%	Higher 1.20 0.00 12% 0.00 0% 0% 0% 0%	Much Higher 1.25 0.00 20% 0.00 0% 0% 0%	Lower 0.00 -5% 0.00 0% 0% 0%
29 30 31 32 33 34 35 36 37 38		Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI Pop 65+ Pop <18 Renter Rate Median Owner Value	Type (ratio) (difference) (ratio) (difference) (difference) (difference) (difference)	Slightly Higher 1.17 0.00 5% 0.00 0% 0% 0%	Higher 1.20 0.00 12% 0.00 0% 0% 0% 0% 0% 0% 0%	Default Custom Higher 1.25 0.00 20% 0.00 0% 0% 0% 0%	0.00 0.00 -5% 0.00 0% 0% 0% 0%		Slightly Higher 1.17 0.00 5% 0.00 0% 0% 0% 0%	Higher 1.20 0.00 12% 0.00 0% 0% 0% 0% 0%	Much Higher 1.25 0.00 20% 0.00 0% 0% 0% 0%	Lower 0.00 -5% 0.00 0% 0% 0% 0%
29 30 31 32 33 34 35 36 37 38 39		Variable Substandard Overcrowded Hh Pay >30% Poverty Rate <80% HAFMI Pop 65+ Pop <18 Renter Rate Median Owner Value Median Contract Bent	Type (ratio) (difference) (ratio) (difference) (difference) (difference) (difference) (difference)	Slightly Higher 1.17 0.00 5% 0.00 0% 0% 0% 0% 0%	Higher 1.20 0.00 12% 0.00 0% 0% 0% 0% 0% 0% 0% 0% 0%	Default Custom Higher 1.25 0.00 20% 0.00 0% 0% 0% 0% 0%	0.00 0.00 -5% 0.00 0% 0% 0% 0% 0% 0%		Slightly Higher 1.17 0.00 5% 0.00 0% 0% 0% 0% 0%	Higher 1.20 0.00 12% 0.00 0% 0% 0% 0% 0% 0% 0% 0% 0%	Much Higher 1.25 0.00 20% 0.00 0% 0% 0% 0% 0%	Lower 0.00 -5% 0.00 0% 0% 0% 0% 0% 0%

Figure 10. Entering custom criteria in the custom values portion of the control panel tab. Users adjust the values in the custom values table and then apply the values by selecting custom from the drop-down menu labeled "Active Values" in column I.

To set custom values, enter the new value for each variable on the right-hand side of the advanced control table on the control panel tab. Once the values are set, make the custom values active by selecting them in the drop-down menu, as Figure 10 shows.

Jack Smy Harty

Based on the discussion in the "Results Criteria" section above, users can modify both the ratio and actual percentage difference criteria to make the Toolkit more or less sensitive. For example, the Toolkit can be made more sensitive—that is, more likely to highlight an issue—by reducing a ratio criteria threshold from 1.25 to 1.1, or by changing an actual percentage difference criteria threshold from 15 percentage points to 10. Similarly, raising the criteria threshold values from 15 percentage points to 20 makes the Toolkit less sensitive, or less likely to highlight the issue.

When using custom values, the results criteria *for all variables* are obtained from the custom values table. Comparing Figures 8 and 10 shows that when custom values are entered for only two variables, the default values for the remaining variables are set to zero when the Active Values drop-down menu is set to custom. Therefore users should also populate the custom values table with default values for the variables they are *not* changing in order to maintain results for all available variables after the custom values are applied. The user can restore default values at any time by toggling the Active Values drop - down menu between "Custom" and "Default." Any values entered in the custom values table are retained, even when using the default selection for the active values table (Figure 10).

Note: Custom values can be used to fine tune the results criteria to take into account other Consolidated Plan considerations. To set only some values as custom and retain default for others, change the desired values in the custom fields and manually enter the default values into the remaining cells.

Jacob Charlen

Surveys, Estimates and Ranges

The Toolkit results are not intended to prescribe specific priorities or goals for a Consolidated Plan. Rather, they are meant to help users employ data as part of the overall decision-making process. This is an important consideration because the data in CPD Maps come primarily from the American Community Survey and the Comprehensive Housing Affordability Strategy (or CHAS), which are survey data products of the U.S. Census Bureau. This means these data are not a 100% count of all housing units, households, or people. Rather, the Census Bureau takes a random sample and estimates a value for the variable of interest. A properly taken random sample enables the Bureau to estimate with some accuracy the actual value without possessing this information for every unit or person. For example, rather than asking every household what their housing costs are, the Bureau asks a random sample of households and uses statistics to estimate the median amount in a given area.

Because these survey data are estimates, the data do not represent the actual value, e.g., the exact number of people who are cost burdened. However, in accordance with the methods it uses to draws the sample, the Census Bureau provides a range—or confidence interval—around the estimate, within which it is 90% sure the actual value falls. For example, an estimate might be that 35% of households are cost burdened, with a confidence interval of plus or minus 10 percentage points with a 90% confidence. This means that the Bureau is 90% sure the actual percentage of cost burdened households falls between 25% and 45%, with 35% being its best estimate. It is important to note that larger geographies generally mean larger sample sizes (due to a larger population) than smaller geographic areas. The result is that larger geographies, such as a county or place, often have more accurate estimates, and therefore have narrower confidence intervals around the estimate.

Keep in mind that many of the numbers used are not actual values, but estimates that have ranges of possible values. Because there is no perfectly precise set of data to work with, grantees should look at the data—and also the results produced by the Housing Tool and Economic Development Tool—as estimates, not as exact figures.



THE HOUSING TOOL

Consolidated Plan regulations establish broad program goals of providing decent housing, a suitable living environment and expanded economic opportunities. To address these goals, the regulations require a needs assessment and a market analysis for each community. The Data-Driven Planning Toolkit contains two major tools: the Housing Tool and the Economic Development Tool. The Housing Tool, described in this section, provides data on three housing issues specifically named in the regulations: "Substandard Housing," "Overcrowding," and "Cost Burden"—and enables users to identify areas within the jurisdiction where these conditions are most severe. Table 3 summarizes information that this tool can provide for each housing section required in the Consolidated Plan.

 Table 3. List of topics that the Housing Tool can address for the housing needs assessment and housing market analysis requirements of the Consolidated Plan.

Housing needs assessment	Housing market analysis
Summary of cost burden by income and tenure	Description of housing supply and demand
Summary of overcrowding by income and tenure	Condition and cost of available housing stock
Summary of substandard housing conditions by income and tenure	Identification of areas of low-income concentration

The Housing Tool supplements substandard housing, overcrowding, and cost burden data with related data on poverty, age, and language demographics, and descriptive housing information. The additional data provide context for the discussion of housing needs and housing market analysis in the Consolidated Plan. All of the Housing Tool data are described in detail in the Stage 1: Issue Identification and in the Stage 2: Issue Characterization sections that follow.

STAGE 1: ISSUE IDENTIFICATION

The first stage of data-driven planning is Issue Identification, where comparisons are performed between the "target jurisdiction" or "target geography" and one or more "reference geographies" in order to identify issues of concern. Click on the second spreadsheet tab, "Stage 1 Issue Characterization," at the bottom of the Excel document to examine the available comparison data (Figure 11).

The purpose of the Issue Identification stage is to determine which housing problems are most severe in the jurisdiction. Once users have identified the housing issues relevant to the jurisdiction, "Stage 2: Issue Characterization" will allow them to explore each of the issues in more depth, by providing expanded detail for each topic by income level and tenure.

A	В	С	D	E	F
5				KEY	
6	Target:	Reference:		Slightly Higher	
7 Define Comparison:	Target Jurisdiction	NATION	•	Higher	
8				Much Higher	
9				Lower	
10					
11	Pocult	Target lurisdiction	Reference Geography	Reference Geography	NATION
12 Housing Issues	Result	Target Juristiction	L.	2 (State)	NATION
13 Substandard	2	1.24%	1.50%	1.15%	1.069
14 Overcrowded	Much Higher	9.14%	8.03%	7.80%	3.019
15 Hh Pay >30%	Higher	47.30%	48.24%	46.48%	35.339
16					
Demographics and Ge	neral Housing Chara	cteristics			
18 Poverty Rate	Higher	22.58%	26.05%	12.93%	13.12
19 <80% HAFMI		45.95%	54.59%	42.31%	42.21
20 Pop 65+		8.72%	8.96%	10.94%	12.61
21 Pop <18	Slightly Higher	30.94%	32.11%	26.00%	24.61
22 Renter Rate	Higher	50.55%	57.79%	42.06%	33.11
23 Median Owner Value	Much Higher	138.13%	140.78%	258.47%	100.00
24 Median Contract Rent		103.56%	98.07%	148.44%	100.00
25 Median Hh Income	n/a	\$43,036	\$34,757	\$60,392	\$51,42
It + + H Control Panel	Stage 1 Issue I	dentification Stage	2 Issue Characterizati	SIII S	

Figure 11. The Issue Identification tab. This stage presents two broad categories of housing data, labeled "Housing Issues" and "Demographics and General Housing Characteristics" shown circled in red.

Description of Issue Identification: The Issue Identification stage presents data covering two broad categories of housing, labeled "Housing Issues" and "Demographic and General Housing Characteristics" (Figure 11). The housing issues category describes the three types of housing problems that are specifically required discussion topics in the Consolidated Plan regulations: substandard housing, overcrowding, and cost burden. The demographics and general housing characteristics category includes additional housing and demographic data that can inform the discussion of the main housing issues in the Consolidated Plan.

SUBSTANDARD HOUSING

The first variable, labeled "Substandard," presents data on the incidence of substandard housing in the target and reference geographies. Substandard housing is defined as a housing unit that lacks complete plumbing or kitchen facilities, or is in need of substantial repair. The substandard housing variable (Excel row 13) indicates the proportion of housing units with at least one substandard condition (Figure 12).

A	В	C	D	E	F
5				KEY	
6	Target:	Reference:		Slightly Higher	
7 Define Comparison:	Target Jurisdiction	NATION	•	Higher	
8				Much Higher	
9				Lower	
10					
11	Result	Target Jurisdiction	Reference Geography 1	Reference Geography 2 (State)	NATION
12 Housing Issues			<u>.</u>		
13 Substandard		1.24%	1.50%	1.15%	1.06%
14 Overcrowded	Much Higher	9.14%	8.03%	7.80%	3.01%
15 Hh Pay >30%	Higher	47.30%	48.24%	46.48%	35.33%
16					
17 Demographics and Ge	neral Housing Chara	cteristics			
18 Poverty Rate	Higher	22.58%	26.05%	12.93%	13.12%
19 <80% HAFMI		45.95%	54.59%	42.31%	42.21%
20 Pop 65+		8.72%	8,96%	10.94%	12.61%
21 Pop <18	Slightly Higher	30.94%	32.11%	26.00%	24.61%
22 Renter Rate	Higher	50.55%	57.79%	42.06%	33.11%
23 Median Owner Value	Much Higher	138.13%	140.78%	258.47%	100.00%
24 Median Contract Rent		103.56%	98.07%	148.44%	100.00%
25 Median Hh Income	n/a	\$43,036	\$34,757	\$60,392	\$51,425
K + + H Control Panel	Stage 1 Issue I	dentification Stage	2 Issue Characterizati) () () () () () () () () () (

Figure 12. Issue Identification: Substandard housing. The target geography experiences a substandard housing rate of 1.24% shown circled in red. The reference geography for comparison is the Nation.

The presence of substandard housing is an important factor in determining the housing needs of a community. Substandard conditions contribute to health and safety problems, discourage private sector investment in revitalization efforts and can stunt market demand for housing through a blighting influence. Where substandard housing is geographically concentrated, it may also contribute to the isolation of lower-income groups.

OVERCROWDING

The second variable, labeled "Overcrowded," presents data on the incidence of overcrowded housing in the target and reference geographies. Overcrowded housing is defined as homes with more than one person per room. The overcrowded variable (Excel row 14) indicates the proportion of housing units experiencing occupancy of more than one person per room (Figure 13).

A	В	C	D	E	F
5				KEY	
5	Target:	Reference:		Slightly Higher	
7 Define Comparison:	Target Jurisdiction	NATION	-	Higher	
3				Much Higher	
9				Lower	
0					
		2 1	Reference Geography	Reference Geography	
1	Result	Target Jurisdiction	1	2 (State)	NATION
2 Housing Issues					
3 Substandard		1.24%	1.50%	1.15%	1.069
4 Overcrowded	Much Higher	9.14%	8.03%	7.80%	3.019
5 Hh Pay >30%	Higher	47.30%	48.24%	46.48%	35.339
6					
7 Demographics and Ge	neral Housing Chara	cteristics			
8 Poverty Rate	Higher	22.58%	26.05%	12.93%	13.129
9 <80% HAFMI		45.95%	54.59%	42.31%	42.219
0 Pop 65+		8.72%	8,96%	10.94%	12.619
1 Pop <18	Slightly Higher	30.94%	32.11%	26.00%	24.619
2 Renter Rate	Higher	50.55%	57.79%	42.06%	33.119
3 Median Owner Value	Much Higher	138.13%	140.78%	258.47%	100.009
4 Median Contract Rent		103.56%	98.07%	148.44%	100.009
5 Median Hh Income	n/a	\$43,036	\$34,757	\$60,392	\$51,42

Figure 13. Issue Identification: Overcrowded housing. The target geography experiences an overcrowded housing rate of 9.14% shown circled in red. The reference geography for comparison is the Nation.

Overcrowding creates health and safety problems for members of the household, especially for children. Relatively high values may indicate a demand for more and/or larger affordable housing units. Addressing the presence of overcrowded housing is key to improving the livability of neighborhoods and reducing the geographic concentration of lower income groups.

COST BURDENED

The third variable, labeled "Hh Pay > 30%," presents data on the incidence of cost burdened households in the target and reference geographies. Cost burden, as stated earlier, is defined as households paying more than 30% of their income for housing costs. The "Hh pay > 30%" variable (Excel row 15) indicates the proportion of households experiencing cost burden (Figure 13).

A	В	C	D	E	F
5				KEY	
5	Target:	Reference:		Slightly Higher	
7 Define Comparison:	Target Jurisdiction	NATION	-	Higher	
3				Much Higher	
9				Lower	
0					
			Reference Geography	Reference Geography	
1	Result	Target Jurisdiction	1	2 (State)	NATION
2 Housing Issues	14 - 19				111 ×
3 Substandard		1.24%	1.50%	1.15%	1.065
4 Overcrowded	Much Higher	9.14%	8.03%	7.80%	3.019
5 Hh Pay >30%	Higher	47.30%	48.24%	46.48%	35.339
6					
7 Demographics and Ge	neral Housing Chara	cteristics			
8 Poverty Rate	Higher	22.58%	26.05%	12.93%	13.129
9 <80% HAFMI		45.95%	54.59%	42.31%	42.21
0 Pop 65+		8.72%	8,96%	10.94%	12.619
1 Pop <18	Slightly Higher	30.94%	32.11%	26.00%	24.619
2 Renter Rate	Higher	50.55%	57.79%	42.06%	33.119
Median Owner Value	Much Higher	138.13%	140.78%	258.47%	100.009
4 Median Contract Rent		103.56%	98.07%	148.44%	100.009
5 Median Hh Income	n/a	\$43,036	\$34,757	\$60,392	\$51,42

Figure 13. Issue Identification: Cost burdened. The cost burdened variable is labeled "Hh Pay > 30%." The target geography experiences an "Hh pay > 30%" rate of 47.3% shown circled in red. The reference geography for comparison is the nation.

Cost burdened households face larger economic risks than those without this condition. When housing costs are greater than 30% of income, funds may be insufficient for other essential living costs including food and medical care, as noted earlier. Children and elderly members of cost burdened households may be particularly vulnerable if there is insufficient income to meet their needs. Cost burdened households may also be at greater risk of eviction, foreclosure and homelessness—particularly if the households are dependent on the income of multiple wage earners. Addressing the causes of cost burden on households can help promote economic self-sufficiency, support the long term economic viability of communities, and address barriers to affordable housing.



ADDITIONAL CHARACTERISTICS

The "Demographics and General Housing Characteristics" category of the Issue Identification spreadsheet contains additional demographic and economic information that will be useful for identifying the severity of the main housing issues discussed above, as shown in Table 4.

Variable	Description	Why Included?
Demographics a	nd General Housing Characteristics	
Poverty rate	Portion of households with income below the poverty line	A high poverty rate may indicate other community problems, such as lack of employment, educational, and training opportunities, as well as a need for convenient access to healthy foods, banks, and other commercial and community services.
<80% HAMFI	Portion of households with incomes less than 80% of HUD Area Median Family Income (HAMFI)	Households below this income level are often eligible for federal assistance. In addition, a high proportion of lower income households may mean that housing problems are less likely to be addressed through market forces.
Pop 65+	Portion of persons who are at least 65 years old	The presence of persons 65 years of age and older in the community may suggest the need for special needs housing or other services targeting the elderly.
Pop <18	Portion of persons who are less than 18 years old	The presence of children—especially in combination with relatively high poverty rates, a high incidence of overcrowding, or substandard housing—may indicate potential need for additional services, such as youth development and educational services and facilities.
Renter rate	Portion of households that are renting	A high proportion of renters may indicate a high demand for rental units. High rental rates coupled with low vacancy may signal rising housing costs. High rental rates could also encourage a jurisdiction to pursue a strategy to increase home ownership or build more affordable rental housing.
Median owner value*	Median value of owner- occupied homes (with and without a mortgage)	The relative value of homes is a good indicator of the relative quality of neighborhoods and of the cost of housing within a geography.
Median contract rent*	Median rent for renter- occupied properties	This is an important indicator, because lower income households are more likely to rent their homes. Median contract rent can indicate barriers to home ownership if the monthly rental cost is considerably less than the monthly cost to own similar housing.

Table 4.	Variables	present in	Issue	Identification	table.
Tuble 4.	variables	presentin	13346	achieucion	tubic.

*On the spreadsheets, "median owner value" and "median rent" are expressed as their percentage of national values. For example, a median value that is three-quarters of the national value is expressed as 75%. National values are always 100%.

Many of the factors outlined in Table 4 will occur in conjunction with the three types of housing problems that the Consolidated Plan must address. Regulations specifically require the discussion of substandard housing, overcrowding, and cost burden, with a special emphasis on the impact of these issues on low-, moderate-, and middle-income persons. By using the income variables "Poverty rate" and "<80% HAMFI" in conjunction with the main housing issues, users will be able to identify where these conditions have a large impact on extremely low- and low-income persons, respectively. Similar requirements exist for consideration of children and the elderly, as well as the separate effect of these issues on renters versus owners. Examine the description and explanation for each variable in Table 4



for some ideas on how to use these supplemental data to identify areas and issues on which to focus in Stage 2: Issue Characterization.

INTERPRETING RESULTS: ISSUE IDENTIFICATION

To understand how the Stage 1 data can help grantees prioritize housing issues in a jurisdiction, examine each of the three housing issues required by the Consolidated Plan in turn. First, looking at Figure 14, consider a target jurisdiction (column C) geography—representing a local grantee—and compare it with "Reference Geography 1" (column D), which is a nearby city; "Reference Geography 2" (the state, column E); and the nation (column F).

Begin by looking at the results for each housing issue in comparison to the different reference geographies. Stage 1 provides a "big picture" overview that can be used to quickly identify primary issues that require more in-depth analysis as well as secondary issues that appear less critical in the jurisdiction.

SUBSTANDARD

	А	В	С	D	E	F					
3	Stage 1:	Basic Issue Identifica	ation								
	A B C D E F 3 Stage 1: Basic Issue Identification Image: Stage 1: Basic Issue Identification Image: Stage 2: Stage 1: Basic Issue Identification Image: Stage 2: Stage 1: Stage 2: Stage 1: Stage 1: Basic Issue Identification Image: Stage 2:										
	A B C D E F 3 Stage 1: Basic Issue Identification Image: Control of the stage of										
	analysis in Stages 2 and	d 3. The target jurisdi	ction is set on the Contr	ol Panel. You can choos	e the reference						
	geography in the shade	ed box below. The re	ference geography is al	so shaded in the table. '	You can change the						
4	comparison jurisdiction	ns by clicking on the t	table header and select	ing from the list that ap	pears.						
5					KEY						
6	6 Target: Reference: Slightly Higher										
7	Define Comparison:	Target Jurisdiction	NATION		Higher						
8					Much Higher						
9					Lower						
10											
				Reference Geography	Reference Geography						
11		Result	Target Jurisdiction	1	2 (State)	NATION					
12	Housing Issues						=				
13	Substandard		1.24%	1.50%	1.15%	1.06%					
14	Overcrowded	Much Higher	9.14%	8.03%	7.80%	3.01%					
15	Hh Pay >30%	Higher	47.30%	48.24%	46.48%	35.33%					
16											
17	Demographics and Ger	neral Housing Charac	teristics								
18	Poverty Rate	Higher	22.58%	26.05%	12.93%	13.12%					
19	<80% HAFMI		45.95%	54.59%	42.31%	42.21%					
20	Pop 65+		8.72%	8.96%	10.94%	12.61%					
21	Pop <18	Slightly Higher	30.94%	32.11%	26.00%	24.61%					
22	Renter Rate	Higher	50.55%	57.79%	42.06%	33.11%					
23	Median Owner Value	Much Higher	138.13%	140.78%	258.47%	100.00%					
24	Median Contract Rent		103.56%	98.07%	148.44%	100.00%					
25	Median Hh Income	n/a	\$43,036	\$34,757	\$60,392	\$51,425					
14	Stage 1 Issu	e Identification	Stage 2 Issue Characteria	zation / Stage 3 Is		•	Π				

Figure 14. The incidence of substandard housing in the target jurisdiction compared with the nation.

The substandard data (Excel row 13, shown in Figure 14) indicates:

- The proportion of substandard housing in the target geography is about the same as in the nearby city, the state, and the nation.
- The results for reference geography 1, the state, and the nation never exceed the threshold for slightly higher or lower.
- The similar level of substandard housing in the target geography and the reference geographies may indicate that this condition is not the most pressing housing issue in this jurisdiction.

Using the data. Even though the incidence of substandard conditions is similar to the reference geographies, it is important to note that the target geography does present a slightly higher proportion of children (persons under 18 years of age). As discussed earlier in Table 2, children living in overcrowded conditions may be particularly at risk, so this association may prompt grantees to examine the incidence of overcrowding affecting children. The Issue Location section of this guide explains the process grantees could use to map substandard housing along with an age variable, in order to determine where the two factors overlap.

OVERCROWDING

	А	В	С	D	E	F					
3	Stage 1:	Basic Issue Identifica	ation								
	This stage examines CF	PD Maps data for the	target jurisdiction comp	ared to two other geog	raphies (e.g., a similar						
	jurisdiction and the sta	ite) and national stati	istics. This basic analysis	s allows the user to ider	ntify specific issues for						
	analysis in Stages 2 and	d 3. The target jurisdi	ction is set on the Contr	ol Panel. You can choos	e the reference						
	geography in the shade	ed box below. The re	ference geography is al	so shaded in the table.	You can change the						
4	comparison jurisdiction	ns by clicking on the t	table header and select	ing from the list that ap	pears.						
5	KEY										
6		Target:	Reference:		Slightly Higher						
7	Define Comparison:	Target Jurisdiction	NATION		Higher						
8					Much Higher						
9					Lower						
10											
				Reference Geography	Reference Geography						
11		Result	Target Jurisdiction	1	2 (State)	NATION					
12	Housing Issues						Ξ				
13	Substandard		1.24%	1.50%	1.15%	1.06%					
14	Overcrowded	Much Higher 🤇	9.14%	8.03%	7.80%	3.01%					
15	Hh Pay >30%	Higher	47.30%	48.24%	46.48%	35.33%					
16											
17	Demographics and Ger	neral Housing Charac	teristics								
18	Poverty Rate	Higher	22.58%	26.05%	12.93%	13.12%					
19	<80% HAFMI		45.95%	54.59%	42.31%	42.21%					
20	Pop 65+		8.72%	8.96%	10.94%	12.61%					
21	Pop <18	Slightly Higher	30.94%	32.11%	26.00%	24.61%					
22	Renter Rate	Higher	50.55%	57.79%	42.06%	33.11%					
23	Median Owner Value	Much Higher	138.13%	140.78%	258.47%	100.00%					
24	Median Contract Rent		103.56%	98.07%	148.44%	100.00%					
24						4	the second se				
25	Median Hh Income	n/a	\$43,036	\$34,757	\$60,392	\$51,425					

Figure 15. The incidence of overcrowded housing in the target jurisdiction compared with the nation.

In contrast to the substandard comparison, the "Overcrowded" data (Excel row 14, shown in Figure 15) indicate cause for immediate concern:

• The rate of overcrowding in the target geography is over three times that of nation.

• The rate of overcrowding is above that of the nearby city and the state.

The high rate of overcrowding is also a concern because of the presence of other indicators of economic stress, including a high cost burden and a high incidence of poverty.
 Using the data. Figure 15 also shows that

Based on the high incidence of overcrowded conditions in the target geography, there is strong evidence to suggest that overcrowding is a problem in the jurisdiction. Both the nearby city and the state, however, also have overcrowding rates at least twice as high as the national average. This data may indicate that the overcrowding problem is regional in scope. **Using the data.** Figure 15 also shows that overcrowding in the target geography occurs together with a high poverty rate, a high cost burden, and a high percentage of renters relative to the nation. Taken together, these factors indicate that economic stress is likely contributing to the overcrowding. Considering the much higher value of owned homes and the high proportion of renters, a lack of affordable housing may be a primary driver of overcrowding for low- and moderate-income persons within the jurisdiction.

COST BURDENED

	А	В	С	D	E	F	
3	Stage 1:	Basic Issue Identific	ation				
	This stage examines CF	PD Maps data for the	target jurisdiction comp	ared to two other geog	raphies (e.g., a similar		
	jurisdiction and the sta	ite) and national stat	istics. This basic analysis	s allows the user to ider	ntify specific issues for		
	analysis in Stages 2 and	d 3. The target jurisdi	ction is set on the Contr	ol Panel. You can choos	e the reference		
	geography in the shade	ed box below. The re	ference geography is al	so shaded in the table.	You can change the		
4	comparison jurisdiction	ns by clicking on the f	table header and select	ing from the list that ap	pears.		
5					KEY		
6		Target:	Reference:		Slightly Higher		
7	Define Comparison:	Target Jurisdiction	NATION		Higher		
8					Much Higher		
9					Lower		
10							
				Reference Geography	Reference Geography		
11		Result	Target Jurisdiction	1	2 (State)	NATION	
12	Housing Issues						=
13	Substandard		1.24%	1.50%	1.15%	1.06%	
14	Overcrowded	Much Higher	9,14%	8.03%	7.80%	3.01%	
15	Hh Pay >30%	Higher 🤇	47.30%	48.24%	46.48%	35.33%	
16							
17	Demographics and Ger	neral Housing Charac	teristics				
18	Poverty Rate	Higher	22.58%	26.05%	12.93%	13.12%	
19	<80% HAFMI		45.95%	54.59%	42.31%	42.21%	
20	Pop 65+		8.72%	8.96%	10.94%	12.61%	
21	Pop <18	Slightly Higher	30.94%	32.11%	26.00%	24.61%	
22	Renter Rate	Higher	50.55%	57.79%	42.06%	33.11%	
23	Median Owner Value	Much Higher	138.13%	140.78%	258.47%	100.00%	
24	Median Contract Rent		103.56%	98.07%	148.44%	100.00%	
25	Median Hh Income	n/a	\$43,036	\$34,757	\$60,392	\$51,425	
14	→ → I Stage 1 Issu	e Identification 🦯	Stage 2 Issue Characteriz	zation Stage 3 Is			1

Figure 16. The incidence of cost burdened households compared with the nation.



The incidence of cost burden, labeled "Hh Pay > 30%" (Excel row 15, shown in Figure 16) also indicates potential cause for further examination:

- The incidence of cost burden in the target geography is approximately 12 percentage points higher that of the nation.
- The incidence of cost burden in the target geography is roughly equal to that of the nearby city and the state.
- The incidence of cost burden in the target geography is associated with other indicator of economic stress, including a much higher overcrowding rate and a high incidence of poverty.

Using the data. While the target geography shares a similarly high rate of cost burden with the state, as compared to the nation, it has a poverty rate nearly double that of the state. The target jurisdiction has a higher proportion of renters than the state, but also has overall lower median contract rent and median owner value for owned homes. These factors suggest that, compared with the state, poverty may be a more important contributor to the cost burden problem in the target jurisdiction than the cost of housing.

The high incidence of cost burdened conditions in the target geography provides evidence to suggest a possible problem in the jurisdiction. Additionally, both the nearby city and the state have a very similar proportion of cost burdened households. This strongly suggests that cost burden could be a regional problem in scope.

Jacob Charlen

STAGE 2: ISSUE CHARACTERIZATION

The next stage of Data-Driven Planning is Issue Characterization, where users can examine the three issues identified in Stage 1 (substandard housing, overcrowding, and cost burdened households) in greater detail. Click on the third spreadsheet tab at the bottom of the page, labeled "Stage 2 Issue Characterization," and circled in red (Figure 17).

The Stage 2 spreadsheet provides comparisons of the target geography to one of the reference geographies for each issue variable in the same manner as the Stage 1 Issue Identification spreadsheet. However, in Stage 2 the three housing issues identified in Stage 1 are expanded to help users understand the populations they affect and how they are affected. Stage 2 also displays the *number of units* affected to help assess the extent of the problem.

1	8	1	D	E		Q.	H.	. E.
Stag	pe Zr	Besic boue Character	option					
The	stage anamines more detail	led OPD Meps date by tax	ue for the target jurisdict	ion compared to two att	ver geographies je.g., a			
3111	ler jurisdiction and the stat	al and national statistics.	This efforts the uper to b	etter characterize issue	a identified in Stage 1.			
					HEY.			
		Tergett	Befarminis:		Slightly Higher .			
Owf	Ine Competitions	Terget Justufictiess.	MATKIN	1	Higher			
					New Pringfrom			
					a second s			
		10)					Hill or Housing Units in	
-			1	Reference Geography	Reference Geography			
0	Select laces	Bezait	Target Jurisdiction	1	2 (State)	NATION	Target Jariadiction	Deniminator
iato	- Carrier and							_
Cive:	tittoodeä	Much Higher	9.149	5.03%	7,80%	2.01%	13,844	Households
Own	ner HH 2 or laza/room	Lower	46,989	40.40%	55.61%	65.00%	73,122	HouseHolds
Own	har HH 3.03 to 1.5/room	Much Higher	1.785	1.30%	3.81%	0.87%	2,665	Households
Own	monifield 1314 poor	Much Higher	0.715	0.51%	0.52%	0.21%	1,070	HouseHolids
fig.r	tar HH 1 or lata/room	Bightly Higher	43,88%	52.57%	36.52%	22,39%	66,426	HouseHolds
fier	ter HH 1.01 to 1.5/room	Much Higher	4.425	4.52%	3,44%	1.33%	6,034	Households
fier	ter HH 1,515 room	Much Higher	1.185	1.82%	2.01%	0.60%	1,455	Households
Our	ner-Occupient							
Ove	rcrowded 0-30%AMI		0.14%	0.19%	0.18%	0.12%	105	Owner-Oct Units
Ove	rcrowded 30-50%4MI	Much Higher	- 6.129	0.54%	0.45N	0.20%	425	Owner-Occ Units
Ove	rttroided 50-60%AMI	Much Higher	C105	0.75%	0.83%	0.34%	645	Owner-Occ Units
Ove	rtrowded 80~100MAM	Much Higher	C 185	0.15%	Q.47%	0.19%	430	Owner-Occ Units
544	enery OC 0-SONAME	Higher	0.055	0.19%	0.08N	0,05%	40	Owner-Occ Units
See	energy OC SCI-SCRUAMI	Much Higher	6.425	0.00%	0.14%	0.05%	300	Owner-Oct Units
See	erely OC 10-EONAM	Much Higher	10.285	0.49%	0.25%	0.07%	195	Owner-Occ Units
See	energy OC 60-300%AMI	Much Higher	2.149	0.00%	0,14%	0,04%	205	Owner-Occ Units
Arr	tai .							1
Chie	ttrowded 0-30%AMI	Much Higher	2.119	2.24%	2.10%	3,138	1,690	Rental Units
Che	rttrowded 10-50NAMI	Higher	1.045	1.010	2.10%	0.29%	1,405	Rental Units

Clicking on the Stage 2 tab at the bottom of the page opens the worksheet, shown in Figure 17.

Figure 17. Opening the Stage 2 Issue Characterization tab. The Stage 2 Tab provides more detailed variables listed on the far left column. To display them, use the "Select Issues" dropdown menu circled in red.

Description of Issue Characterization: In this tab, the Housing Tool populates four tables containing data on housing problems and their characteristics. The first three tables provide more detail about the three housing problems introduced in Stage 1: overcrowding, cost burden, and substandard housing. The fourth table in the tab includes additional housing and demographic data that may be useful for designing programs that address housing problems.

Using the data. The relative values shown in the "Results" column compare the target geography to the reference geography in the same manner as in Stage 1. The values for each variable from the target geography are compared to the values for the selected reference geography, which will be shown in grey in the table (see Figure 17). The third column (labeled "Target Jurisdiction" in the figure) contains the color-coded value of the variable for the target jurisdiction.

Users may wish to focus on one or more housing

problems, especially if the data analysis in Stage 1 has identified an issue that is severe. To do so, select specific tables to display by clicking on the small triangle in the upper far left of the table, circled in red
in Figure 17: Elect Issues. Unchecking the checkboxes will hide the unchecked data table, so that users can focus on the selected data.

Issue Characterization data. In addition to comparing the target jurisdiction with a reference geography, Stage 2 provides more detailed data about the nature of each housing problem. The first table in this tab, for example, supports a deeper analysis of the overcrowding problem. Questions for analysis include:

- How much of this overcrowding is severe (i.e., more than 1.5 persons per room)?
- How does overcrowding by owner-occupants compare with overcrowding by renters?
- How does overcrowding by very low-income households compare with low- and moderateincome households?
- In raw numbers, how many households are affected?

Stage 2 Issue Characterization has two additional columns on the far right that do not appear in the Stage 1 Issue Identification table (see small chart to the right). The column, labeled "HH or Housing Units in" and then "Target Jurisdiction," presents the total number of units that are in that category. As shown in the data circled, there are 2,665 households experiencing a given housing problem. This raw number allows users to better understand the nature and extent of a problem. The second column added on the far right is labeled the "Denominator" and represents the raw number for "Households," "Owner-Occupied Units" or "Rental Units," as appropriate.

	HH or Housing Units in	
NATION	Target Jurisdiction	Denominator
3.01%	13,844	Households
63.80%	71,117	Households
0,87%	2,665	Households
0.21%	1,070	Households
31,19%	65,426	Households
1.33%	5,654	Households
0.60%	3,435	Households

OVERCROWDING

The first item on the spreadsheet deals with overcrowding (see Figure 18). The table includes three sections, each of which addresses some aspect of overcrowding. As Figure 18 shows, the first section (Excel rows 12-19) addresses the degree of overcrowding, and the second and third sections (rows 20-37) address overcrowding among owner occupants and renters, respectively, by income group. If the issue of overcrowding has been identified in Stage 1 as a concern, this table will help users understand the subpopulations in which it is most prevalent.

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	~ L				17		in the	
	5	C	D	1.5	- E	G	H-	10
		-					HDH or Housing Units in	
-	- 1222 States	1200.20	Access to the distance		Reference Geography 2		*	1000
ļ	4- Select Issues	Nesvie	Target Jurisdiction	Reference beography 1	(90806)	NAIKIN	taget innetition	Denumination
	Issue = Overcrowding	13/10/2010/10/10		-		1000		
	Overcrowded	Much Higher	4.141	2 B.03%	7,80%	3.01%	13,844	Households
	Owner HH 1 or less/room	Lower	46.98%	40.40%	55.61%	85.80%	2122	Households
	Owner HH 1.01 to 1.5/room	Much Higher	1.103	1,30%	1.81%	0.87%	2,665	Households
	Owner HH 151+/room	Much Higher	0.715	0.51%	0.52%	0.21%	1,070	Households
	Renter HH 1 or less/ room	SlightlyHigher	43.88%	\$1.57%	36.59%	33.39%	66.426	Households
	Renter HH 1.01 to 1.5/room	Much Higher	4.605	4,39%	3,44%	1.33%	6,654	Piouseholds
	Renter HH 1.51+/ room	Much Higher	-1.8	1.62%	2.03%	0.60%	3,455	Households
	Owner-Occupient							
	Overprovided 0-30%AMI		0.14%	0.19%	0.18%	0.12%	105	Owner-Occ Unit
	Overprovided 30–50NAMI	Much Higher	0.375	0.34%	0.43%	0.30%	425	Owner-Oct Unit
	Overcrowded 50-80%AMI	Much Higher	2.959	0.73%	0.83%	- 京,34%	645	Owner-Occ Unit
	Overprovided 80-100%AMI	Much Higher	0.565	0.15%	0.47%	0.29%	420	Owner-Occ Unit
	Severely OC 0-30%AMI	Higher	0.05%	0.19%	0.08%	0.05%	-40	Owner-Occ Unit
	Severely OC 50-50%AMI	Much Higher	0.404	0.00%	0.14%	0.05%	300	Owner-Oct Unit
	Severely OC 50-80%AMI	Much Higher	3.265	0.49%	0.25%	0.07%	195	Owner-Oc: Unit
	Severely OC 80-300%AMI	Much Higher	0144	0.00%	0.14%	0.04%	105	Owner-Oct Unit
	Rental				and the second sec	52773		Sister and
	Overcrowdett 0-30%AMI	Much Higher	2.395	2.24%	2.10%	1.21%	1,830	Rental Units
	Overcrowded 30-50%AMI	Higher	1.94%	2.51%	2.10%	0.99%	1,405	Rental Units
	Overprowded 50-80%AMI	Much Higher	3,115	1.85%	1.96%	0.94%	1,615	Rental Units
	Overcrowided 80~100%/WI	Higher	0.73%	0.68%	0.77%	0.38%	560	Rental Units
	Severely OC 0-30%AMI	Much Higher	1.295	0.66%	1.51%	0.55%	1,065	Rental Units
	Severely OC 50-50% AMI	Much Higher	1.558	1.10%	1.25%	0.48%	.880	Revital Units
	Severely OC 50-80% AM1	Much Higher	3,975	0.61%	1.03%	0.37%	745	Rental Units
	A CONTRACTOR AND ADDRESS	Minhung	0.386	6 144	0.044	15 1 AM	124	Bentist Maritie

Figure 18. Issue Characterization: Overcrowding table. The overcrowding data displays both overcrowding and severe overcrowding by tenure and income-level. Column H (examples circled in red), lists the total number of HH or housing units affected by the variable to provide a sense of scale. Note that in this Figure and in others in this section, rows 1-10 are hidden to make the text in the table larger and easier to read.

As shown in the first section of the table (labeled "Issue=Overcrowding") in Figure 18:

- The first row (Excel row 13) indicates the percentage of households that are overcrowded.
- The next three rows (rows 14-16) indicate the percentage of owner-occupied households that are not overcrowded (i.e., with one person per room or less), overcrowded (with 1.01-1.5 persons per room), or "Severely OC" (i.e., severely overcrowded, with more than 1.5 persons per room).

Using the data. In the example in Figure 18, overcrowding is 9.14% (higher or much higher than in the nation as a whole for both owners and renters). Additionally, the circled totals in Excel column H show the number of households affected, with almost three times as many renters as owner-occupants overcrowded in the target jurisdiction.

 The next three rows (17-19) provide the same data on degree of overcrowding among renting households.

The second section of the table in Figure 18 ("Owner-Occupied," rows 20-28) shows the portion of owner-occupied units that are either overcrowded or severely overcrowded, broken out by income range:

- Rows 21-24: Overcrowded owner-occupied households at 0–30% of area median income (AMI), 30–50% of AMI, 50–80% of AMI, and 80–100% of AMI.
- Rows 25-28: Severely overcrowded owner-occupied households, broken out by the same income ranges.

The third section of the table ("Rental," rows 30-37) provides the same information (overcrowding and severe overcrowding, by income range) for renter-occupied housing units.

COST BURDEN

The second table under Issue Characterization illustrates the nature and extent of housing cost burden in the target jurisdiction (see Figure 19). HUD's measurement of housing cost burden for households is the payment of 30% or more of income for housing by the household. This table includes three sections, comparable to those seen in Figure 18: the first section (labeled "Issue = Cost Burdened") summarizes the extent of cost burden for owner and renters, as well as for households with incomes above and below \$35,000 (rows 39-47). The second and third sections (rows 48-71) break out the information on cost burden and affordability of housing for owner occupants and renters.

	B	C .	0	E		G	H	20
10	1 1						HI or Housing Units	in
<u>1</u>	- Select Issues	Besult	Target Jurisdiction	Reference Geography 1	Geography 2 (State)	NATION	Target Jurisdiction	Denominator
29	Issue = Cost Burdened	at the second second	and the second second			CONTRACTOR OF STREET, S		
10	Median Hhincome	nla	\$43,036	\$34,757	\$60,332	#51,429	nla	1
41	Paying > 30%	Higher	47.30%	48.24%	45.48%	35.33%	71,615	Households
12	Earn less than \$35K pay > 30%	SightlyHigher	31.84%	37.2%	21.33%	22.00%	48,207	Households
13	Earn mole than \$35K pay > 30%		15.46%	11.03%	24.43%	13.33%	23,408	Households
14	Owner Earn less \$35K pays 30%		7.85%	8.87×	6.75%	9,21%	11.891	Households
45	Owner Earn more \$35K pay/ 30%		1165%	8.52%	17.94%	10.81%	17,638	Households
16	Renter Earn less \$35K page 30%	Hohet	23.99%	30.34%	15.24%	12.73%	36.316	Households
17	Renter Earn more \$35K pai/> 30%	0.000	3.6%	2.5%	8.55%	2.52%	5.772	Households
48	Owner-Occupied	1		1000	100 C			
49	Cost-burdened>30% 0-30% AM	Lower	0.67%	1.46%	0.86%	1.15%	505	Owner-Ooo Uni
50	Cost-burdened>38%, 30-58% AM		178%	1.38%	1420	2.23%	1,330	Derver-Boo Uni
51	Cost-burdened) 30%, 50-80% AM		3.66%	3.02%	3.09%	4.03%	2,740	Dener-Doc Uni
52	Cost-burdened>30%, 80-100% AM	-	2.97%	2.39%	2.83%	2.74%	2.225	Dener-Doc Uni
53	Cost-burdened>50% 0-30% AM	Lower	2.9%	4.09%	3.82%	3.86%	2.180	Owner-Doo Uni
54	Cost-burdened >50%, 30-50% AM	SilohtluHigher	3.49%	3.65%	3.44%	2.74%	2,610	Owner-Doo Uni
55	Cost-burdened) 50%, 50-80% AM	Hoher	40%	3.95%	4,1900	2.37%	3.005	Dener-Doc Uni
56	Cost-burdened>50%, 80-100% AM	Higher	158%	0.93%	2.0%	0.64%	1.180	Dener-Doc Uni
57	Units Not Alfordable to 50% HAVET		37.13%	95.7%	97.33%	92.70%	72,752	Daniet-Dec Uni
58	Units Not Attordable to 80% HAMFI	SightlyHigher	33.07%	82,30%	55.17%	65.25%	69.672	Denet-Doo Uni
19	Units Not Attordable to 100% HAMFI	Hoher	90.0%;	88.2%;	93.05%	76.58%	67.382	Owner-Oop Uni
60	Rental			constant.			C	
61	Cost-burdened>30%, 0-30% AM		2.50%	157%	2.05%	2.96%	1.915	RevtalUnits
62	Cost-burdened>30%, 30-50% AM		6.23%	8.65%	5.68%	7.50%	4,815	RentalUnits
13	Cost-burdened>30%, SO-80% AM		8.06%	8,29%	7.8%	6.85%	6.770	RencalUnits
64	Cost-burdened>30% 80-100% AM	Hoher	2,48%	1223	2.72%	153%	1905	BentalUnits
85	Cost-burdened>50%, 0-30% AM		14.62%	17.94%	12.83%	14.630.	11,190	RevialUnits
66	Cost-burdened >50%, 30-50% AM	SightioHigher	6.87%	7.90%	6.12:	4.905	5 255	FleritalUnits
67	Cost-burdened>50%, 50-60% AM	Sightly Higher	169%	0.78%	2.03%	114%	1290	RentalUnits
58	Cost-burdened>50%, 80-100% AM	Hohei	0.29%	0.07%	0.28%	0.15%	225	RentalUnits
69	Units Not Attordable to 30% HAMFI		95,27%	94,59%	95.0%	91.31	72.915	RencalUnits
70	Units Not Attordable to 50% HAMFI	Hohet	85.50%	79.895	86.330	74.22%	65,440	RentalLinite
71	Units Not Alfordable to 80% HAMPI		43,46%	38.93%	55.274	46.45%	37,855	RevalUnits
1	• • Control Panel Stage	1 Issue Identificate	Stage 2 B	sale Characteriz	ation State 3	Issue Location	181	TURE .

Figure 19. Issue Characterization: Cost burdened. The spreadsheet provides detailed data for households experiencing cost burden and severe cost burden and breaks down each element by tenure and income level.

The data in Figures 19 and 20 enables users to look at cost burden in detail, breaking out cost burdened households by tenure and income:

- The first row (row 40) shows median income for the target jurisdictions and the reference geographies (note that median incomes will not be displayed if the user has selected a custom geography).
- The next row (row 41) shows the total proportion of those paying more than 30% of their income for housing.
- The following two rows (rows 42-43) show the portion of all households earning either less than or more than \$35,000 that also pay more than 30% of their income for housing.
- Finally, the last four rows (rows 44-47) break out these income categories by tenure.

	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			ſ.	r(			
A	8	c	(B)(	E	Ŧ	G	U U	
10							HH or Housing Units in	
13 7	€ Select Issues	Result	Target Arisdiction	Reference Geography 1	Reference Geography 2 (State)	NATION	Target Jurisdiction	Denominator
316	issue - Cost Burdened	0 00000 m		a	100000000000000000000000000000000000000		-	Contraction of the second s
101	Median Hh Income	n/a	\$43,036	\$34,757	560,192	\$51,425	n/ə	
41	Paying > 30%	Higher	47.30%	3 48.24N	46.48%	35.33%	71,615	Households
42	Earn less than \$35K pay >30%	Slightly Higher	11845	87.21%	21.99%	22.00%	48,207	Households
423	Earn more than \$55K pay >30%		15.46%	11.03%	24.49%	13.53%	23,408	Households
44	Owner Earn less \$358 pay=50%		7.85%	5.87%	6.75%	9,215	11,891	Households
45	Owner Earn more \$35K pay/30%		11,615	1.52%	17.94%	10.81%	17,656	Households
16	Renter Earn less \$35K pay×30%	Higher (	33,1695	30.54%	15.24%	12.796	16,316	Households

Figure 20. Issue Characterization: Cost burdened.

**Using the data.** Note in Figure 20 that nearly half (47.3%) of the households are cost burdened; the target jurisdiction's rate is higher than the rate of the nation (35.33%) as a whole. Note that the segment with relatively highest cost burden (23.99%) and the greatest number of households earning less than \$35,000 per year (\$36,316) are renters.

The second and third sections in the cost burden table are labeled "Owner-Occupied" and "Rental," rows 48-71. (See Figure 21.) These sections break out cost burden (paying more than 30% of income) and severe cost burden (paying more than 50% of income) by income range for owneroccupied units and rentals.

1	A 8	c	0	14
10				
11	+ Select Insues	Result	Target Jurisdiction	Reference Geograp 1
48	Owner-Occupied			
49	Cast-burdened >50%, 0-50% AMI	Lower	0.67%	14
50	Cast-burdened x50%, 30-50% AMI		1785	15
\$1	Cost-burdened >80%, 50-80% AMI		3.56%	3.0
52	Cost-burdened >30%, 80-100% AMI		2.97%	2.5
98	Cost-burdened >50%, D-30% AMI	Lawer	2.915	4,0
54	Cast-burdened >50%, 30-50% AMI	Slightly Higher	3,49%	3.6
35	Cost-burdened >50%, 50-80% AMI	ttigher	4.015	3.9
56	Cost-burdened >50%, 80-100% AMI	Higher	1.58%	0.9
37	Units Not Affordable to 30% NAMES	11100000	97.19%	.95.7
38	Units Not Affordable to 60% HAMPI	Slightly Higher	33.07%	92.3
59	Units Not Affordable to 100% HAMFI	Higher (	90.01N	38.2
60	Rental			Contraction of the
61	Cost-burdened >30%, 0~30% AMI		2.50%	1.5
167	Cast-burdened >30%, 30-50% MMI		0.29%	8.6
63	Cost-burdened >50%, 50-80% AMI		8.06%	8.2
64	Cast-burdened >90%, 80-100% AMI	Higher	2,49%	12
05	Cost-burdened >50%, 0-30% AMI	and the second sec	14,62%	17.9
65	Cost-burdened >50%, 30-50% AMI	Stightly Higher	6.87%	7.9
67	Cast-burdened >50%, 50-80% AMI	Slightly Higher	1.69%	0.7
68	Cost-burdaned >50%, 80-100% AM	Higher	0.29%	0.0
69	Units Not Affordable to 30% HAMFI		95.27%	94.5
70	Units Not Affordable to 50% HAMPI	Higter	85.50%	79.8
71	Units Not Affordable to 80% HAVE!	100000-mil	49.46%	38.9

Figure 21. Issue Characterization: Cost burden, owner-occupied and rental.

The owner-occupied section (rows 48-59) displays the following information:

- The first four rows (rows 49-52) display the percentage of owner-occupied households that are cost burdened, by income range: 0-30% of AMI, 30-50% AMI, 50-80% AMI, and 80-100% AMI. These households are paying more than 30% of income for housing, but less than 50%.
- The next four rows (rows 53-56) show owner-occupants who are severely cost burdened, paying more than 50% of their income for housing.



- The last three rows (rows 57-59) of the owner-occupied section show the supply of owneroccupied housing that is affordable to various income ranges: up to 50% of AMI, up to 80% of AMI, and up to 100% of AMI.
- The third section (labeled "Rental," rows 60-71), provides this information for rental units.

Taken together, these figures provide valuable information about the nature and extent of cost burden in the target jurisdiction. By comparing the percentage of the housing supply that is not affordable in the context of the number of cost burdened households, the user can better understand the gap between these households' need and the supply of homes that are affordable to them.

The data in Figure 21 may suggest a closer balance between supply and demand for moderate-income renters (above 80% of AMI). Note that this tool does not provide information about the suitability or quality of the affordable rental housing stock. However, the data available in the Toolkit regarding substandard housing can provide an important perspective on overall housing quality in the target geography.

### SUBSTANDARD HOUSING

The third table in the Issues Characterization spreadsheet, labeled "Substandard Housing" presents data on the incidence of substandard housing in the target jurisdiction (see Figure 22). This table is organized in three sections, comparable to the overcrowding and cost burden tables. The first section (rows 73-74) provides data on the incidence of substandard housing in the target jurisdiction; the second and third sections (rows 76-87) provide additional information on substandard housing stock occupied by owners and renters of varying incomes

	A 8	¢	D	E	÷	0	(H)	4
10							HH or Housing Units in	
15	T & Select issues	Result	Target Juriveliction	Reference Geography 1	Reference Geography 2 (State)	NATION	Target Artisdiction	Denominator
73	Issue - Substandard							
74	Substanderal		1.24%	1.50%	1.15%	1.06N	1,880	Households
15	Other Structure Types (e.g., RV)	Lower	2.955	5.00%	-4.48N	7.76%	4,471	Households
ne .	Owner-Occupied			and the second				Second Second
57	Built 1949 or earlier	Lower C	13,285	8.28%	14.80%	18,48%	5,944	Owner-Occ Units
28	Substandard, 0-30% AMI	Lower	0.05%	0.10%	0.06%	0.14%	35	Owner-Occ Units
29	Substandard, 30-50% AMI		0.11%	0,10%	0.06%	0.11%	85	Owner-Occ Units
10	Substandard, 50-80% AMI		0.14%	0.44%	0.08%	0,13%	105	Owner-Occ Units
83	Substandard, 8D-100% AMI	Lower	0.02%	0.19%	0.04%	0.07%	15	Owner-Occ Units
12	Rental							
83	Built 1949 or contien	Lower C	15 125	10.88%	18.66%	22,72%	10.044	Rental Units
84	Substandend, 0-30% AMI		0.78%	0.32%	0.80%	0.65%	595	Rental Units
25	Sobstandard, 30-50% AMI		0.37%	0.57%	0.43%	0.36%	280	. Nerrial Units
18.	Substandard, 3D-80% AMI		0.27%	0.55%	0.36%	0.35%	205	Rental Units
82	Substandard, 80-100% AMI	Lower	0.09%	0.00%	0.16%	0,13%	40	Rental Units

Figure 22. Issue Characterization: Substandard housing.

The first of the three sections of substandard housing table (labeled "Issue = Substandard") has just two rows:

- The first row (row 74) displays the proportion of homes that have some substandard characteristic (i.e., lacking complete kitchen or plumbing facilities).
- The second row (row 75) presents the portion of homes that are not regular structures, but mobile homes or recreational vehicles.



The next two sections of the table shown in Figure 22 (owner-occupied, rows 76-81, and rental, rows 82-87) break out the proportion of substandard housing by income for owner-occupied homes and renter-

occupied homes. These tables include the portion of homes that were built before 1949. The prevalence of older homes may not indicate an issue; indeed, historic homes may be a significant asset to communities. However, this type of housing is more likely to have some type of structural problem or to be in

**Using the data.** The proportion of the population in substandard housing in our target jurisdiction is about the same as the nation as a whole; 1.24 percent of the units are substandard—a total of 1,880 substandard units (circled in Figure 22 above). Here, the fact that a lower proportion of the housing was built before 1949 than the nation as a whole (circled on the table above) indicates that the housing stock in this geography is generally newer than the average for the nation as a whole.

need of rehabilitation, even if not technically substandard.

### **ADDITIONAL CHARACTERISTICS**

The last table on the Issue Characterization spreadsheet (labeled "Additional Housing and Demographic Characteristics and Factors," see Figure 23) contains demographic and economic information that may be useful when designing programs in the Consolidated Plan. This table provides data on characteristics in addition to those provided in Stage 1 (see Table 4, variables present in Issue Identification, above).

1.1	A	В	С	D	E	F	G
10							
11	-	← Select Issues	Result	Target Jurisdiction	Reference Geography 1	Reference Geography 2 (State)	NATION
89		Additional Housing and Demographic Characteri	stics and Factors				
90		Households with one or more people under 18 years	Slightly Higher	43.60%	46.14%	38.10%	34.22%
91		Households with one or more people 60 years and over		26.93%	25.92%	30.63%	31.61%
92		One-person Household		24.68%	22.10%	24.57%	27.32%
93		Population 5 years and over that speak English 'not at all'	Much Higher	4.67%	4.34%	4.04%	1.55%
94		Median value for owner-occupied units with a mortgage	Much Higher	130.87%	136.43%	239.19%	100.00%
95		Units built 2000 or later		9.67%	15.83%	9.24%	11.35%
96		Units built 1980–1999		32.68%	31.80%	26.58%	28.76%
97		Units built 1950–1979		44.44%	42.58%	47.73%	40.01%
98		Units built 1949 or earlier	Lower	13.20%	9.78%	16.46%	19.88%
99		Median age of structure for renter-occupied units	n/a	1975	1978	1971	1972

**Figure 23.** Additional housing and demographic characteristics and factors. The list provides key additional data beyond the three issues of overcrowding, cost burden, and substandard—including age of structure and median value of owner- and renter-occupied units.

While these characteristics and factors may not indicate a specific issue, these data are related to the three types of housing problems that must be addressed, as required by the Consolidated Plan, and provide a context for better understanding how these problems can be addressed. Table 5 presents these variables.



 Table 5. Issue Characterization: Additional factors to consider related to housing and demographic characteristics presented in Stage 2.

Variable	Why Included?
Households with one or more people under 18 years	Indicates proportion of households with children in the home; may indicate level of demand for single family homes, need for educational and human services for children and families.
Households with one or more people 60 years and older	Indicates proportion of households with senior or elderly members; may indicate level of demand for senior services and/or housing meeting the needs of seniors.
One-person households	Indicates likely demand for smaller units and/or rental housing.
Population 5 years and older that speak English "not at all"	Indicates potential challenges in communicating program requirements, need for materials in languages other than English.
Median value for owner- occupied units with a mortgage	Indicates the relative affordability of homeownership; the data are presented as a percentage (100% = the median value for the nation as a whole).
Units built:	Indicates the relative age of housing in the target jurisdiction; may indicate likely condition and general marketability; a low percentage of newer homes in a market may suggest lack of population and/or economic growth.
Median age of structure for renter-occupied units	Indicates the relative age of rental units in the target jurisdiction; may indicate likely condition and general marketability.

**Note**: Use the Issue Characterization stage to examine each issue in depth. If necessary, analyze several target geographies and create custom geographic groupings to fully understand the key issues in the jurisdiction. Remember that the toolkit enables users to select and quickly substitute alternative reference geographies. Review the value in the "HH or Housing Units in Target Jurisdiction" column to identify the scope of each issue.

# Jacob Charlen

### **INTERPRETING RESULTS: ISSUE CHARACTERIZATION**

Once the data elements in Issue Characterization have been analyzed and reviewed, users can identify primary and secondary priorities as well as the specific populations affected. Users may want to consider how their priorities or areas of concern fit into the context of a larger region? Grantees may consider alignment with other jurisdictions or ongoing planning processes. Grantees can also begin to think about strategies to address primary issues as part of their program activities.

To see how the data in Stage 2 can help grantees consider local priorities in this example, return to the overcrowding data discussed earlier (in Figure 18). Then note the owner-occupied and rental overcrowding data compared with the nation in Figure 24.

-	A III	8	c	Ð	E.	1	6	н	1
3	St	age 2i	Basic Issue Character	ization	A REAL PROPERTY AND A REAL PROPERTY.	CONTRACTOR OF A			
4	The	is stage examines more detail milar jurisdiction and the stat	led CPO Maps data by iss e) and national statistics	we for the target jurisdict . This allows the user to b	ion compared to two of etter characterize issue	her geographies (e.g., a is identified in Stage 1.			
5						KEY			
6	De	efine Comparisons	Target Target Aurisdiction	Reference: NATION		Slightly Higher Higher			
8	-	entimotene statescont				Much Higher			
10								HH or Housing Units in	
11	•	← Select laures	Result	Target Jurisdiction	Reference Geography 1	Reference Geography 2 (State)	NATION	Target Jurisdiction	Denominator
20	0	www.Occupied							
21	0	renorowated 0-30%AMI		0.14%	0.19%	0.19%	0.12%	105	Owner-Occ Units
22	0	vercrowded 30-50%AMI	Much Higher	0.575	0.34%	0.45%	0.20%	425	Owner-Occ Units
73	0	rencrowded 50-80%AMI	Much Higher	0.86%	0.73%	0.83%	0.34%	645	Owner-Occ Units
24	0	vercrowded 80-100%AMI	Much Higher	0.564	0.15%	0.47%	0.15%	420	Owner-Occ Units
25	Se	werely DC 0-30%AMI	Higher	0.05%	0.19%	0.08%	0.03%	40	Owner-Occ Units
2E	Se	warely DC 30-50%AMI	Much Higher	0.40%	0.00%	0.14%	0.05%	300	Owner-Occ Units
27	Se	iverally OC 50-80%AMI	Much Higher	0.26%	0.49%	0.25%	0.07%	195	Owner-Oct Units
28	Sá	warely DC 80-100%AMI	Much Higher	0.14%	0.00%	0.14%	0.04%	\$05	Owner-Occ Units
29	Re	ental					100 C	F.7663	Contraction of the second
30	0	rencrowded 0-30%AMI	Much Higher	2.399	2.24%	2.10%	1.11%	1,830	Rental Units
21	0.	ercrowded 30-50%AMI	Higher	1.04%	2.31%	2.10%	0.99%	1,405	Rental Units
32	0	rencrowided 50-80%AMI	Much Higher	1.114	1.85%	1.96%	0.94%	1,615	Rental Units
57	0	rencrowded 80-100%AMI	Higher	0.73%	0.68%	0.77%	0.36%	560	Rental Units
34	Se	warely DC 0-30%AMI	Much Higher	1 394	0.68%	1.51%	0.55%	1,065	Rental Units
15	Se	verely DC 30-50NAMI	Much Higher	1.155	1.10%	1.25%	0.43%	880	Rental Units
36	Se	wareity DC SO-80%AMI	Much Higher	0.97%	0.61%	1.03%	0.37%	745	Rental Units
37	Se	verely OC 80-100%AMI	Higher	0.23%	0.14%	0.36%	0.14%	175	Rental Units

**Figure 24. Owner-occupied and rental overcrowding data compared with the nation.** Overcrowding in the Target Jurisdiction is "Higher" or "Much Higher" than the nation as a whole in nearly every income range for both owners and renters.

As the data shows, the incidence of overcrowding is higher or much higher than in the nation as a whole in every case. Incidence of both overcrowding and severe overcrowding is prevalent among owners and renters, as well as across all income ranges below median income. However, note the differences when overcrowding is compared with the state in Figure 25.

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4	A	B	C	D	E	F	G	н	1
З		Stage 2:	Basic Issue Characteri	zation					
		This stage examines more detail	ed CPD Maps data by iss	e for the target jurisdicti	on compared to two oth	ner geographies (e.g., a			
4		similar jurisdiction and the state	e) and national statistics.	This allows the user to be	etter characterize issue	es identified in Stage 1.			
5						KEY			
6			Target:	Reference:		Slightly Higher			
7		Define Comparison:	Target Jurisdiction	Reference Geography 2 (State)		Higher			
8				101-00		Much Higher			
9						Lower			
10								HH or Housing Units in	
11	*	← Select Issues	Result	Target Jurisdiction	Reference Geography 1	Reference Geography 2 (State)	NATION	Target Jurisdiction	Denominator
20	1	Owner-Occupied		· · · · · · · · · · · · · · · ·				s	
21		Overcrowded 0-30%AMI		0.14%	0.19%	0.18%	0.12%	105	Owner-Occ Units
22		Overcrowded 30-50%AMI	Slightly Higher	0.57%	0.34%	0.45%	0.20%	425	Owner-Occ Units
23		0 1 1 50 000(114)			1 Statistics			CAF	0 0 11 11
24		Overcrowded 50-80%AMI		0.86%	0.73%	0.83%	0.34%	645	Owner-Occ Units
		Overcrowded 50–80%AMI Overcrowded 80–100%AMI		0.86%	0.73%	0.83%	0.34%	420	Owner-Occ Units Owner-Occ Units
25		Overcrowded 50-80%AMI Overcrowded 80-100%AMI Severely OC 0-30%AMI	Lower	0.86% 0.56% 0.05%	0.73% 0.15% 0.19%	0.83% 0.47% 0.08%	0.34% 0.19% 0.03%	420	Owner-Occ Units Owner-Occ Units Owner-Occ Units
25 26		Overcrowded 50–80%AMI Overcrowded 80–100%AMI Severely OC 0–30%AMI Severely OC 30–50%AMI	Lower Much Higher	0.86% 0.56% 0.05% 0.05% 0.40%	0.73% 0.15% 0.19% 0.00%	0.83% 0.47% 0.08% 0.14%	0.34% 0.19% 0.03% 0.05%	420 420 40 300	Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units
25 26 27		Overcrowded SO-30%AMI Overcrowded 80-100%AMI Severely OC 0-30%AMI Severely OC 30-50%AMI Severely OC 50-80%AMI	Lower Much Higher	0.86% 0.56% 0.05% 0.40% 0.26%	0.73% 0.15% 0.19% 0.00% 0.49%	0.83% 0.47% 0.08% 0.14% 0.25%	0.34% 0.19% 0.03% 0.05% 0.07%	420 420 40 300 195	Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units
25 26 27 28		Overcrowded SO-B058AMI Overcrowded 80-300%AMI Severely OC 0-30%AMI Severely OC 30-50%AMI Severely OC 50-80%AMI Severely OC 80-100%AMI	Lower Much Higher	0.86% 0.56% 0.05% 0.40% 0.26% 0.14%	0.73% 0.15% 0.19% 0.00% 0.49% 0.00%	0.83% 0.47% 0.08% 0.14% 0.25%	0.34% 0.19% 0.03% 0.05% 0.05% 0.07% 0.04%	420 40 300 195 105	Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units
25 26 27 28 29		Overcrowdad SO-B05%AMI Overcrowdad 80-100%AMI Severely OC 0-30%AMI Severely OC 30-50%AMI Severely OC 50-80%AMI Severely OC 80-100%AMI Rental	Lower Much Higher	0.86% 0.56% 0.05% 0.40% 0.26% 0.14%	0.73% 0.15% 0.09% 0.49% 0.00%	0.83% 0.47% 0.08% 0.14% 0.25% 0.14%	0.34% 0.19% 0.03% 0.05% 0.07% 0.04%	420 420 300 195	Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units
25 26 27 28 29 <b>30</b>		Overcrowded SO-B05%AMI Overcrowded SO-100%AMI Severely OC 30-50%AMI Severely OC 30-50%AMI Severely OC 30-50%AMI Severely OC 30-100%AMI Rental Overcrowded 0-30%AMI	Lower Much Higher	0.86% 0.56% 0.05% 0.40% 0.25% 0.26% 0.24% 2.39%	0.73% 0.15% 0.09% 0.00% 0.49% 0.00%	0.83% 0.47% 0.08% 0.14% 0.25% 0.14% 0.14% 0.14%	0.34% 0.19% 0.03% 0.05% 0.07% 0.04%	420 420 300 195 105 1,830	Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Rental Units
25 26 27 28 29 <b>30</b> 31		Overcrowdad So-DoskAMI Severely OC O-30%AMI Severely OC 30-50%AMI Severely OC 30-50%AMI Severely OC 50-80%AMI Severely OC 80-100%AMI Rentol Overcrowdad 0-30%AMI Overcrowdad 30-50%AMI	Lower Much Higher	0.86% 0.56% 0.05% 0.26% 0.14% 	0.73% 0.15% 0.09% 0.00% 0.49% 0.00% 	0.83% 0.47% 0.08% 0.14% 0.25% 0.14% 2.10%	0.34% 0.19% 0.03% 0.05% 0.07% 0.07% 0.04%	420 420 300 195 105 1,830 1,405	Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Rental Units Rental Units Rental Units
25 26 27 28 29 30 31 32		Overcrowded SO-20%AMI Severely OC O-30%AMI Severely OC 30-50%AMI Severely OC 30-50%AMI Severely OC 50-80%AMI Rental Overcrowded 0-30%AMI Overcrowded 30-50%AMI Overcrowded 30-50%AMI	Lower Much Higher	0.85% 0.56% 0.40% 0.26% 0.14% 2.39% 1.84%	0.73% 0.15% 0.09% 0.49% 0.00% 2.24% 2.31% 1.85%	0.83% 0.47% 0.08% 0.14% 0.25% 0.14% 2.10% 2.10% 1.96%	0.34% 0.19% 0.03% 0.05% 0.07% 0.04% 1.11% 0.99% 0.94%	445 420 40 300 195 105 1,830 1,830 1,405 1,615	Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Rental Units Rental Units Rental Units
25 26 27 28 29 30 31 32 33		Overcrowded SO-20%AMI Severely OC O-30%AMI Severely OC 30-50%AMI Severely OC 30-50%AMI Severely OC 30-50%AMI Severely OC 30-100%AMI Rental Overcrowded 0-30%AMI Overcrowded 30-50%AMI Overcrowded 30-80%AMI Overcrowded 30-80%AMI	Lower Much Higher	0.85% 0.56% 0.05% 0.40% 0.25% 0.14% 2.39% 1.84% 2.21% 0.73%	0.73% 0.15% 0.09% 0.00% 0.00% 2.24% 2.31% 1.85% 0.68%	0.83% 0.47% 0.08% 0.14% 0.14% 2.10% 2.10% 1.96% 0.77%	0.34% 0.19% 0.03% 0.05% 0.07% 0.04% 	420 420 300 195 105 1,830 1,430 1,405 1,655 560	Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Rental Units Rental Units Rental Units Rental Units
25 26 27 28 29 30 31 32 33 34		Overcrowded SO-B0%AMI Overcrowded SO-100%AMI Severely OC 30-50%AMI Severely OC 30-50%AMI Severely OC 30-50%AMI Severely OC 30-100%AMI Overcrowded 0-30%AMI Overcrowded 30-50%AMI Overcrowded SO-100%AMI Severely OC 0-30%AMI	Lower Much Higher	0.86% 0.56% 0.05% 0.26% 0.14% 2.39% 1.84% 2.11% 0.73% 1.39%	0.73% 0.15% 0.09% 0.09% 0.09% 0.09% 2.24% 2.31% 1.85% 0.68% 0.68%	0.83% 0.47% 0.08% 0.14% 0.25% 0.14% 2.10% 2.10% 2.10% 1.96% 0.77% 1.51%	0.34% 0.19% 0.03% 0.05% 0.07% 0.04% 1.11% 0.99% 0.94% 0.38% 0.55%	440 420 300 195 105 1,830 1,405 1,615 5560 1,065	Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Rental Units Ren
25 26 27 28 29 30 31 32 33 34 35		Overcrowded SO-200%AMI Severely OC O-30%AMI Severely OC 30-50%AMI Severely OC 30-50%AMI Severely OC 50-100%AMI Rentol Overcrowded 30-50%AMI Overcrowded 30-50%AMI Overcrowded 80-100%AMI Severely OC 30-50%AMI Severely OC 30-50%AMI	Lower Much Higher	0.86% 0.56% 0.40% 0.26% 0.14% 2.39% 1.84% 2.11% 0.73% 1.39% 1.39%	0.73% 0.15% 0.05% 0.49% 0.00% 2.24% 2.31% 1.85% 0.68% 0.68% 1.10%	0.83% 0.47% 0.08% 0.14% 0.25% 0.14% 2.10% 2.10% 2.10% 1.96% 0.77% 1.51% 1.25%	0.34% 0.19% 0.03% 0.05% 0.04% 0.04% 0.99% 0.99% 0.38% 0.55% 0.43%	645 420 40 300 195 105 1,830 1,405 1,615 560 1,065 880	Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Rental Units Rental Units Rental Units Rental Units Rental Units Rental Units Rental Units
25 26 27 28 29 30 31 32 33 34 35 36		Uvercrowded So-D05&AMI Severely OC 0-30%AMI Severely OC 30-50%AMI Severely OC 30-50%AMI Severely OC 50-100%AMI Rental Overcrowded 0-30%AMI Overcrowded 30-50%AMI Overcrowded 80-100%AMI Severely OC 0-30%AMI Severely OC 30-50%AMI Severely OC 50-80%AMI	Lower Much Higher	0.86% 0.56% 0.40% 0.26% 0.14% 2.39% 1.84% 2.31% 0.73% 1.35% 0.97%	0.73% 0.15% 0.09% 0.00% 0.00% 2.24% 2.31% 1.85% 0.68% 0.68% 1.10%	0.83% 0.47% 0.08% 0.14% 0.25% 0.14% 2.10% 2.10% 1.96% 0.77% 1.51% 1.25% 1.03%	0.34% 0.19% 0.03% 0.05% 0.07% 0.07% 0.04% 0.111% 0.99% 0.94% 0.33% 0.35% 0.33%	645 420 40 300 195 105 1,80 1,80 1,405 560 1,065 880 745	Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Rental Units Rental Units Rental Units Rental Units Rental Units Rental Units Rental Units Rental Units
25 26 27 28 29 30 31 32 33 34 35 36 37		Overcrowded SO-B0%AMI Severely OC O-30%AMI Severely OC 30-50%AMI Severely OC 30-50%AMI Severely OC 30-50%AMI Rental Overcrowded O-30%AMI Overcrowded SO-80%AMI Overcrowded SO-80%AMI Overcrowded SO-80%AMI Severely OC 30-50%AMI Severely OC 50-80%AMI Severely OC 50-80%AMI Severely OC 50-80%AMI	Lower Much Higher	0.86% 0.56% 0.40% 0.25% 0.40% 0.26% 0.25% 0.23% 1.84% 0.73% 1.39% 1.15% 0.73% 0.23%	0.73% 0.15% 0.09% 0.00% 0.00% 2.24% 2.31% 1.85% 0.68% 0.68% 1.10% 0.61%	0.83% 0.47% 0.08% 0.14% 0.25% 0.14% 2.10% 2.10% 1.96% 0.77% 1.51% 1.25% 1.03% 0.36%	0.34% 0.19% 0.03% 0.05% 0.07% 0.04% 	445 420 40 300 195 105 1,830 1,405 1,615 560 1,065 880 745 175	Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Owner-Occ Units Rental Units

Figure 25: Owner-occupied and rental overcrowding data compared with the state.

Note that the incidence of overcrowding in the target jurisdiction is generally similar to the state as a whole (labeled "Reference Geography 2").

How these data are used will depend on knowledge of local conditions and policy priorities. The following are only examples of the many possible ways to interpret this information:

- The fact that *overcrowding is a statewide problem* may lead the grantee to advocate for statewide strategies to address the problem.
- The fact that **other local jurisdictions are facing this problem** may lead to opportunities for networking with other grantees around such issues as enhancing services for homeless households that are "doubling up," extended families sharing a household, etc.
- Noting that both *overcrowding and severe overcrowding in the target jurisdiction are higher than the statewide rate for owner-occupants with incomes between 30-50% AMI*, the jurisdiction may want to consider strategies to find out more about the problems facing these homeowners.
- Even though rates of overcrowding are relatively higher for owner occupants, *the problem of overcrowding affects over five times as many rental households as owner occupants.* The grantee may want to consider whether the community needs more units with three or more bedrooms for renting families.

In order to learn more about overcrowding patterns, grantees can use "Stage 3, Issue Location" to further analyze the topic spatially.

# Jacob Bar Charles

### **STAGE 3: ISSUE LOCATION**

Upon completing Stages 1 and 2 of the Housing Tool, users will have a good understanding of the issues that affect the jurisdiction, as well as what housing types, tenure types, and income groups are most affected. Based on comparisons with reference geographies, grantees will also have a sense of which problems are likely to be regional in scope. However, it is important to consider the spatial relationship among different housing issues affecting the jurisdiction. For example, substandard, overcrowded, or cost burdened conditions may occur together or separately, and each issue might be geographically clustered or dispersed. The Issue Location function assists users with identifying where in the jurisdiction these issues are most severe, by informing use of the Map Query and widget in CPD Maps.

Mapping is a powerful tool for planning. Grantees can choose to visualize data for issues of interest at any one of several geographic levels, down to detailed examination at the census tract level for neighborhood scale analysis. State grantees may want to explore the distribution of issues at larger geographic levels, including cities, county subdivisions, and counties—to understand how regional issues are related to differences in housing and economic conditions across a broad mix of urban and rural areas. The Housing Tool's Issue Location stage can help all types of users to identify whether problems are geographically clustered, which can assist with prioritizing limited resources. Issue Location can also help users address Consolidated Plan requirements to describe areas of low-income concentration within the jurisdiction.

### **USING ISSUE LOCATION**

The Issue Location table pictured in Figure 26 provides a starting point for setting the search criteria in the Map Query widget and CPD Maps. Users can choose which Issue Location variables to map based on their results from Stages 1 and 2. For example, recall that in the Issue Identification discussion, an initial comparison found that overcrowding and cost burden were two significant issues in the target geography. The discussion that follows first looks at the overcrowding issue using Issue Location and then moves on to examine cost burden.

The Issue Characterization data indicated that overcrowding was higher or much higher than in the nation as a whole, among both owners and renters, as well as across all income ranges below median income. The Issue Location table (Figure 26) provides a way to further explore these results by mapping areas with overcrowded housing *within* the target geography by census tract using CPD Maps. To help set threshold amounts in the Map Query widget, the Housing Tool provides recommended levels based on national data levels, as well as for the pre-selected reference geographies.

The Issue Location table displays a "Recommended Threshold" value for mapping overcrowding of "Higher than 12.21%." The Recommended Threshold value is a query value for mapping overcrowding in the target geography compared to the nation. Additionally, a "Custom Reference" drop-down menu is set to "Reference Geography 2 (State)" to provide a recommended query value for mapping overcrowding in the target geography compared to the "Custom Reference" geography. In this instance, the secondary threshold is generated by the state's values. The secondary threshold value is labeled "Higher than" and "9.82%" (Figure 26).

					And					
	А	В	С	D	E F	G				
3	Stage 3:	Issue Location								
4	Widget. You can look at up to three variables in the Map Query Widget in CPD Maps, so you can use the Issue Identification and Characterization in the previous Stages to determine which variables to look at and use the thresholds in this Stage to see the 4 areas or neighborhoods where the issue is concentrated.									
1	Jurisdiction:	Default Reference:	Custom Reference:							
	Target Jurisdiction	NATION	Reference Geography							
7			2 (State)							
8										
9	Issue	Query on	Recommended Th	nreshold	Secon	dary Threshold				
	Substandard Housing	% of households with	Highorthan	1 22%	Highort	han 1.20%				
10		substandard housing	Higher than	1.55%	Higher u	1.2370				
	Overcrowding	% of households with	Higherthan	12 21%	Higher t	0.92%				
11		overcrowding	Higher than	12.21/0	Higher u	1d11 3.02/0				
12	Cost Burdened	% of households paying >30%	Higher than	53.29%	Higher ti	han 47.71%				
		% renter units affordable to	Lower than	2 75%	Lowerth	1 60%				
13		30% HAMFI*	Lower than	2.7370	Lowerti	4.00%				
14		% renter units affordable to	Lower than	8.86%	Lowerth	nan 14.05%				
14		% renter units affordable to								
15		80% HAMFI*	Lower than	49.04%	Lower th	nan 47.67%				
16		% owner units affordable to 50% HAMFI*	Lower than	0.57%	Lower th	nan 2.71%				
17		% owner units affordable to 80% HAMFI*	Lower than	3.02%	Lowerth	nan 5.88%				
		% owner units affordable to	Lower than	3.27%	Lowerth	nan 8.47%				

**Figure 26.** The Issue Location table. The table provides recommended values for mapping identified issues using the Map Query widget. Circled in red, the local planning jurisdiction is the target and the "Custom Reference" is the state. The recommended and secondary threshold values for the overcrowding issue are 12.21% and 9.82%, respectively.

Users can then enter the threshold values from the Issue Location table into the Map Query widget The Map Query widget allows users to select up to three variables and set threshold criteria to determine where multiple conditions exist within a specific area (Figure 26). The recommended threshold values in the Stage 3 Issue Location spreadsheet are calibrated so that when two variables are used, the criteria will return approximately half the tracts in a given jurisdiction.² The criteria threshold values can be adjusted up or down in the Map Query widget as desired to increase or decrease the number of resulting geographies.

² The Tool was calibrated at the national level. Consequently, depending on the specific geography, the criteria may return slightly more or less than half of the tracts for the given jurisdiction.



Before opening the Map Query widget In CPD Maps, use the Grantee Selection Field search box to select the grantee jurisdiction that corresponds to the study area. This step allows users to query by census tract, limits the data displayed to the selected grantee jurisdiction, and improves the map responsiveness. Once the grantee jurisdiction is selected, open

**Tip:** Map Query allows up to three variables to be queried at one time. The map in Figure 33 illustrates this capacity.

the Map Query widget and select "Grantee Jurisdiction" as the area to query in the first dialog box. The Map Query dialog box also presents options for selecting a geographic type that will serve as the basic unit for displaying the variables that exceed the recommended thresholds. The geographic types available include tract, place, county subdivision, county, and state. This example displays census tracts that exceed the recommended overcrowding threshold values. Select "Tract" and click "Next." The dialog box that appears prompts users to select up to three variables for mapping (Figure 27). In this case, the overcrowding variable is selected from the "Housing Needs - Housing Problems" menu heading (shown in Figure 27).

Map Query - Choose Up To Three Variables	×
Current grantee: FRESNO - CDBG	
Housing Needs Housing Problems	•
% of nouseholds with 1 of 4 housing unit problems	
% of households with 1 of 4 severe housing problems	
% of heuseholds with substandard housing	
% of households with cost burden (paying >30%)	=
% of households with severe cost burden (paying >50%)	
# of households at risk of homelessness (multiple unrelated family renter households with overcrowding)	
Housing Supply	
Characteristics of the Housing Stock	
Total Housing Units	
Vacancy Rate	
Median value of owner occupied units	
Median contract rent for renter occupied units	-
Help Export Back Next Fi	nish

**Figure 27.** Using the Map Query widget dialog to select issue variables for mapping. Users can select and map up to three variables. In this case, the single variable "% of households with overcrowding" has been selected from the Housing Needs-Housing Problems menu heading.

	F.A.
Map Query - Select Min/Max For Each Variable	×
Current grantee: FRESNO - CDBG	
% of households with overcrowding: 12.21 - 34.63	34.63
Result count: 43 out of 127	
Help	Export Back Next Finish

Figure 28. Threshold values from the Issue Location stage are entered into the Map Query widget for variables to be mapped. The Map Query allows users to either enter values into the provided fields manually or use the adjustment slider to set the threshold values.

The final stage of Issue Location mapping involves entering the recommended threshold values produced by the Issue Location table into the Map Query widget (see Figure 28). The Issue Location table (Figure 26) tells users whether to enter the recommended threshold criteria in the "Minimum" or the "Maximum" field (in Figure 28) by indicating higher than or lower than next to the recommended value. In this case, the Issue Location table has recommended a higher than threshold value of 12.21% for the overcrowding variable, so the recommended threshold value is entered into the "Minimum" value field in the Map Query dialog (in Figure 28) to display all overcrowding rates over 12.21%. The Map Query widget automatically enters the maximum value. Clicking the finish button displays a list of all tracts matching the threshold criteria and maps all of the tracts, which appear outlined in green on the map display, as Figure 29 shows.



**Figure 29.** Mapping all of the tracts within a target jurisdiction that meet the threshold values supplied by the Issue Location **table.** In the Figure, the target jurisdiction is outlined in black and the census tracts that exceed the minimum threshold value for overcrowding recommended by the Issue Location tool are outlined in green.

The results of the Map Query identified 43 census tracts with overcrowded conditions. The results produce a striking geographic trend that informs the previous Stage 1 and 2 analyses: the highest rates of overcrowding are mostly confined to the southern half of the jurisdiction.

**Tip:** Depending on the variable and threshold level, grantees may want to further refine the map query data levels to display a smaller number of matching geographies or use multiple query variables, as displayed in Figure 33.



The Consolidated Plan regulations also require the discussion of housing needs and market analysis to include the location and degree of concentration of low-income households. Grantees can use the Map Selection to overlay information about the location of low-income households onto the map of overcrowded census tracts. Open the Map Selection tool, and select "% Low Income Households" from the "Community Indicators" menu (Figure 30).

In the resulting graphic, the percentage of lowincome households for all census tracts is displayed along with the Issue Location data on overcrowded households (Figure 31). The Map Selection stool provides many economic, demographic, and other types of spatial data to help grantees understand the issues mapped using Issue Location and the Map Query widget . Additional data available include information on poverty rates, the percentage of extremely low- and moderate-income households, race and ethnicity, and other factors required for the discussion of housing needs and market analysis in the Consolidated Plan.



Figure 30. Displaying the percentage of low-income households using the Map Selection tool. Users can add supplementary data to the Issue Location maps to depict a wide variety of available spatial data.



**Figure 31.** Overcrowded census tracts within the jurisdiction are overlaid with data on the percentage of low-income households for all tracts. In the map the target jurisdiction is outlined in black, the overcrowded tracts are outlined in green. Tracts within the target jurisdiction with the highest percentage of low-income households are circled in red.

Figure 31 shows that there is a correlation between overcrowding and low-income households within the target jurisdiction, however exceptions exist. Notice that some of the overcrowded tracts in the southeastern portion of the geography also have the lowest percentage of low-income households in the region, while four of the overcrowded tracts in the center of the map, circled in red, also contain the highest proportions of low-income households within the jurisdiction. The correlation of a large population of low-income persons and a high incidence of overcrowded conditions may indicate that this area should be prioritized over others when addressing the overcrowding issue.

Returning to the issue of cost burden, the Issue Characterization analysis indicated relatively high values among all income groups. The absolute number of cost burdened renter households was almost twice that of owner households (> 31,000 households affected). Issue Location can further inform these findings by providing threshold criteria for seven different categories related to cost burden. As a supplementary exercise, use the Issue Location function to map the percentage of households paying >30% of income towards housing cost.



The Map Query widget allows users to map up to three variables simultaneously, making it possible examine the relationship of overcrowded tracts to cost burdened tracts. Selecting both the "% of households with overcrowding" and the "% of households with cost burden (paying > 30%)" in the Map Query widget and entering the recommended minimum threshold values, as shown in Figure 32, results in the map shown in Figure 34.

Map Query - Select Min/Max For Each Variable	×
Current grantee: FRESNO - CDBG	
% of households with overcrowding: 12.21 - 34.63	
0 34.63	
% of households with cost burden (paying >30%): 53	
0 100	
Result count: 24 out of 127	
Help Export Back Next Finis	h

**Figure 32.** Threshold values from the Issue Locations stage are entered into the Map Query widget for variables to be **mapped.** In this case, the recommended threshold value of 12.21% is entered as the minimum threshold value for overcrowding and the recommended threshold value of 53.29% is entered as the minimum value for cost burden. The map query produced a result of 24 census tracts. These are displayed on the map in Figure 33.



**Figure 33. Census tracts within the jurisdiction with both overcrowded and cost burdened households.** 24 census tracts meet the Issue Location recommended criteria thresholds for both overcrowded and cost burdened conditions. The arrows indicate the two census tracts with both housing problems that also have the highest percentage of low-income households.

The Map Query widget identified 24 census tracts (out of 127 total) that met the criteria for *both* overcrowding and cost burden obtained from the Issue Location threshold values. The "% low-income households" map layer was then added to the map to identify two tracts at the center of the jurisdiction that experience these two housing problems and also have a percentage of low-income households greater than 60% (Figure 33).

By helping users to analyze the geographic relationship between the two most pressing housing issues in the target jurisdiction, the user can identify which census tracts to focus on when attempting to alleviate the most severe overcrowding and cost burden issues in the jurisdiction. Adding data on the location of low-income households enables users to further identify a small number of census tracts where the issues occur and low-income populations are concentrated, as required by the Consolidated Plan.

**Note:** Once issues of concern are identified in Stages 1 and 2 comparisons, mapping these variables using the identified threshold values from the Issue Location table can reveal trends that may not have been obvious from the comparisons alone. In this way, the Map Query widget in CPD Maps enables users to better understand the geographic extent of problems within their jurisdiction and the relationship between identified problems.

This section has described the Housing Tool within the Data-Driven Planning Toolkit in CPD Maps and explained how to use it. The section that follows will describe the use of the Economic Development Tool.



### THE ECONOMIC DEVELOPMENT TOOL

In addition to the goals of providing decent housing and a suitable living environment, the Consolidated Plan regulations also require grantees seeking assistance under the CDBG program to complete a summary of the community's non-housing community development needs, and are encouraged to include a description of economic activities as part of neighborhood and community revitalization efforts³. The Economic Development Toolkit provides data on population, education, employment, and income that allows users to identify areas within their jurisdiction where expanded economic opportunities may be needed. Table 6 summarizes how the Toolkit data can help identify potential economic opportunity needs that can be addressed with Consolidated Plan grants.

Table 6. Types of economic opportunity goals in a Consolidated Plan and related Economic Development Toolkit data	. Bold
text indicates the applicable Toolkit data fields.	

Potential Economic Opportunity Needs	Relevant Toolkit Data
Job Creation and Retention	Identification of areas with a high unemployment rate and with lower educational attainment and percent in labor force
Establishment, stabilization and expansion of small businesses (including micro-businesses)	Employment status (percent in labor force and median earnings) by age and educational attainment; unemployment rate by age and educational attainment; average commute times
Provision of public services to increase employment	Identification of areas of with a high <b>unemployment rate</b> , lower <b>educational attainment</b> , and a large youth concentration ( <b>Population Age 18–24</b> )
Provision of jobs to low-income persons living in areas affected by Consolidated Plan programs and Activities	<b>Percent in labor force</b> by educational attainment; Identification of areas with a large need for expanded economic opportunities ( <b>unemployment rate, median</b> <b>household income, median earnings</b> )
Availability of mortgage financing to low-income persons	Identification of areas of low-income concentration (median household income, median earnings); educational attainment status
Access to capital and credit to promote long term economic and social viability of the community	Percent in labor force by educational attainment; median earnings by educational attainment; median household income
Creating self-sufficiency opportunities to address generational poverty in federally assisted and public housing	Educational attainment status by age; unemployment rate by educational attainment and age

³ See 24 CFR Part 91.215(f) and 24 CFR Part 91.315(f)

In addition, the detailed population characteristics provided in the Economic Development Toolkit may help communities to inform their Housing Needs and Housing Market analysis by supplementing the Housing Toolkit data with detailed information about the economic situation of residents.

**Note**: It is important to understand the CPD maps data used in the toolkit is based on a recent 5-year estimate from the American Community Survey (ACS) and in some cases the economic context of a region may be significantly different today than during the estimate period on which the data are based. Keep in mind that the ACS 5-year estimates for the recent past represent an average of both the *fastest* and *slowest* periods of economic growth during the last decade. More recent 5-year ACS data may be available from the <u>American Community Survey</u> website, and current 1-year data may be available for larger communities. Recent unemployment and work force estimates are also available for select communities from <u>the Bureau of Labor Statistics</u> website. HUD plans to update CPD Maps continuously as new data become available.

# Jacob Charles

### **STAGE 1: ISSUE IDENTIFICATION**

The first stage of the Economic Development Toolkit is Issue Identification, where comparisons are made between the target geography and one or more reference geographies to identify trends in two categories, "General Indicators" and "Age and Education." The spreadsheet tab, labeled "Stage 1 Issue Characterization" displays the available comparison data for this stage (Figure 35).

**Description of Issue Identification:** The Issue Identification stage presents data covering two broad categories of economic information (General Indicators and Age and Education, Figure 35). The "General Indicators" category broadly describes the workforce status of the general population. The "Age and Education" category describes the population by age group and educational attainment.

The purpose of the Issue Identification stage is to identify which economic problems are most severe in the jurisdiction. Once users have identified the economic issues relevant to the jurisdiction, Stage 2: Issue Characterization allows grantees to explore each of the identified issues in more depth by providing detail on the population by age, income, educational attainment, and employment status.

	А	В	C	D	E	F
5					KEY	
6	Define Comparison:	Target: Target Jurisdiction	Reference: Reference Geography		Higher	
7		-	3 (State)		Nuch Higher	
8				1	Lower	
9					Much Lower	
10		Result	Target Jurisdiction	Reference Geography 1	Reference Geography 3 (State)	NATION
2	General Indicators			2		
13	Unemployment Rate	Higher	10.87%	12.60%	7.86%	7.20%
14	Civilian Labor Force as % of Total Population	Lower	45.88%	43.50%	49.47%	50.51%
15	Average Commute Time (minutes)	n/a	20.6	20.4	27.0	25.2
16	Population	n/a	467,089	75,153	36,308,527	301,461,533
17	Median Hh Income	Much Lower	83.69%	67.59%	117.44%	100.00%
18			e. C	2		
10	Age and Education					
20	Population Age 18-24		11.65%	13.03%	10.05%	9.90%
21	Population Age 25-64	Lower	48.69%	45.90%	53.01%	52.89%
22	HS equivalent or less	Much Higher	49.52%	53.21%	42.56%	45.31%
23	Some college		32.78%	33.76%	30.65%	29.59%
24	BA/BS or more	Much Lower	17.70%	13.03%	26.79%	25.10%
14	Control Panel	Stage 1 Issue Io	lentification Stage 2	Issue Characterization	4	

**Figure 35.** The Issue Identification tab. This stage presents two broad categories of economic data, *General Indicators* and *Age and Education*, shown circled in red above.



#### **UNEMPLOYMENT RATE**

The first variable "Unemployment Rate" (Excel row 13) is the rate of joblessness among the labor force (people who are looking for work) for the general population over the age of 16 (Figure 36).

4	A	В	С	D	E	F
5					KEY	
6 7	Define Comparison:	Target: Target Jurisdiction	Reference: Reference Geography 3 (State)		Higher Much Higher	
8					Lower	
9					Much Lower	
10						
11		Result	Target Jurisdiction	Reference Geography 1	Reference Geography 3 (State)	NATION
12	<b>General Indicators</b>					
13	Unemployment Rate	Higher 🔇	10.87%	12.60%	7.86%	7.20%
14	Civilian Labor Force as % of Total Population	Lower	45.88%	43.50%	49.47%	50.51%
15	Average Commute Time (minutes)	n/a	20.6	20.4	27.0	25.2
16	Population	n/a	467,089	75,153	36,308,527	301,461,533
17	Median Hh Income	Much Lower	83.69%	67.59%	117.44%	100.00%
18			9. 9.	2		
19	Age and Education					
20	Population Age 18–24		11.65%	13.03%	10.05%	9.90%
21	Population Age 25-64	Lower	48.69%	45.90%	53.01%	52.89%
22	HS equivalent or less	Much Higher	49.52%	53.21%	42.56%	45.31%
23	Some college		32.78%	33.76%	30.65%	29.59%
24	BA/BS or more	Much Lower	17.70%	13.03%	26.79%	25.10%
14	Control Panel	Stage 1 Issue Id	lentification Stage 2	Issue Characterization	4	

Figure 36. Issue General Indicators: Unemployment. The target geography experiences an unemployment rate of 10.87%. The

reference geography for comparison is the state.

The unemployment rate is an important indicator of the economic health of communities. A high rate of unemployment means that the unemployed and their families are losing potential income, and the community economy also suffers as the unemployed person's reduced income prevents them from spending their earnings in the local economy, a factor which may contribute to further job losses⁴.

⁴ http://www.bls.gov/cps/cps_htgm.htm

# Jacob Charlen

### LABOR FORCE PARTICIPATION RATE

The second variable "Civilian Labor Force as % of Total Population" is data on the "labor force participation rate," as defined by the Bureau of Labor Statistics (for a detailed description, see glossary). The civilian labor force is the sum of both employed and unemployed persons in the target and reference geographies. The variable "Civilian Labor Force as % of Total Population" (Excel row 14) indicates the proportion of persons over the age of 16 who are either employed or actively looking for work (Figure 37).

	A	В	С	D	E	F
5					KEY	
6		Target:	Reference:		Higher	
7	Define Comparison:	Target Jurisdiction	Reference Geography 3 (State)		Much Higher	
8					Lower	
9					Much Lower	
10						
11		Result	Target Jurisdiction	Reference Geography 1	Reference Geography 3 (State)	NATION
12	General Indicators			2		
13	Unemployment Rate	Higher	10.87%	12.60%	7.86%	7.20%
14	Civilian Labor Force as % of Total Population	Lower 🤇	45.88%	43.50%	49.47%	50.51%
15	Average Commute Time (minutes)	n/a	20.6	20.4	27.0	25.2
16	Population	n/a	467,089	75,153	36,308,527	301,461,533
17	Median Hh Income	Much Lower	83.69%	67.59%	117.44%	100.00%
18			57. 57.	2		
19	Age and Education					
20	Population Age 18–24		11.65%	13.03%	10.05%	9.90%
21	Population Age 25-64	Lower	48.69%	45.90%	53.01%	52.89%
22	HS equivalent or less	Much Higher	49.52%	53.21%	42.56%	45.31%
23	Some college		32.78%	33.76%	30.65%	29.59%
24	BA/BS or more	Much Lower	17.70%	13.03%	26.79%	25.10%
14	Control_Panel	Stage 1 Issue Id	entification / Stage_2	Issue_Characterization	( m	

**Figure 37. Issue Identification: Civilian Labor Force Participation Rate.** The target geography has a labor force participation rate of 45.88%. The reference geography for comparison is the state.

The Civilian Labor Force is an important indicator of the overall job market. In depressed economic circumstances, the unemployment rate alone can be misleading, as it does not report the number of persons who have stopped actively seeking work. These persons are referred to as "marginally attached to the labor force," (see glossary or footnote 5 on previous page). Understanding the overall labor force as a proportion of the population can reveal the size of the marginally attached worker population. However, it is important to understand that marginally attached workers are only one class of persons who are not counted in the labor force. Other types of persons who are not considered in the labor force —persons who have no job and are not looking for one— include full-time students, retired persons, and family members taking care of children or other dependents. (See footnote 5 on previous page)

# Jacob Charlen

### AVERAGE COMMUTE TIME

The third variable "Average Commute Time (minutes)" is data on the average number of minutes spent by workers commuting to and from work (Excel row 15, Figure 38).

A	А	В	C	D	E	F
5					KEY	
6 7	Define Comparison:	Target: Target Jurisdiction	Reference: Reference Geography 3 (State)		Higher Much Higher	
8					Lower	
9					Much Lower	
10						
11		Result	Target Jurisdiction	Reference Geography 1	Reference Geography 3 (State)	NATION
12	General Indicators					
13	Unemployment Rate	Higher	10.87%	12.60%	7.86%	7.20%
14	Civilian Labor Force as % of Total Population	Lower	45.88%	43.50%	49.47%	50.51%
15	Average Commute Time (minutes)	n/a	20.6	20.4	27.0	25.2
16	Population	n/a	467,089	75,153	36,308,527	301,461,533
17	Median Hh Income	Much Lower	83.69%	67.59%	117.44%	100.00%
18			9 . 9 .			
19	Age and Education					
20	Population Age 18–24		11.65%	13.03%	10.05%	9.90%
21	Population Age 25-64	Lower	48.69%	45.90%	53.01%	52.89%
22	HS equivalent or less	Much Higher	49.52%	53.21%	42.56%	45.31%
23	Some college		32.78%	33.76%	30.65%	29.59%
24	BA/BS or more	Much Lower	17.70%	13.03%	26.79%	25.10%
14	Control Panel	Stage 1 Issue Ig	Intification Stage	Issue Characterization		

Figure 38. Issue Identification: Average Commute Time. The target geography experiences an average commute time of 20.6 minutes. The reference geography for comparison is the state.

The average commute time is central to understanding how much time employed persons spend getting to and from work. Longer commute times may indicate that employment centers are located far from worker's homes, or it may indicate that transportation barriers, such as a lack of adequate public transportation, exist. In addition, longer commute times mean workers have less time to spend with their families. Note that there is no comparison performed in the "Results" column for "Average Commute Time (minutes)." This is discussed further in the Interpretation section below. Additionally, because commute times are average values, these data will not be available when combining more than one geographic area into a custom geography.

### POPULATION

The fourth variable "Population" is data on the total number of persons in the jurisdiction (Excel row 16, Figure 39).

	A	В	С	D	E	F
5					KEY	
6	Define Comparison:	Target: Target Jurisdiction	Reference: Reference Geography 3 (State)		Higher Much Higher	
8					Lower	
9					Much Lower	
10						
11		Result	Target Jurisdiction	Reference Geography 1	Reference Geography 3 (State)	NATION
12	General Indicators		94	6 12		
13	Unemployment Rate	Higher	10.87%	12.60%	7.86%	7.20%
14	Civilian Labor Force as % of Total Population	Lower	45.88%	43.50%	49.47%	50.51%
15	Average Commute Time (minutes)	n/a	20.6	20.4	27.0	25.2
16	Population	n/a	467,089	75,153	36,308,527	301,461,533
17	Median Hh Income	Much Lower	83.69%	67.59%	117.44%	100.00%
18						
19	Age and Education					
20	Population Age 18–24		11.65%	13.03%	10.05%	9.90%
21	Population Age 25-64	Lower	48.69%	45.90%	53.01%	52.89%
22	HS equivalent or less	Much Higher	49.52%	53.21%	42.56%	45.31%
23	Some college		32.78%	33.76%	30.65%	29.59%
24	BA/BS or more	Much Lower	17.70%	13.03%	26.79%	25.10%
14	Control Panel	Stage 1 Issue I	dentification / Stage 2	Issue Characterization	4	•

**Figure 39. Issue Identification: Population.** The target geography contains a total of 467,089 persons. The reference geography for comparison is the state.

The population includes all persons, of any age, living in the target jurisdiction. Even though the total population includes children and the elderly (persons who are not considered in either the unemployment rate or the civilian labor force), the total population is important as a reference for understanding the absolute size of the jurisdiction's economy and demand for services. Note that there is no comparison performed in the "Results" column for "Population." This is discussed further in the Interpretation section below.



### **MEDIAN HOUSEHOLD INCOME**

The fifth variable "Median Hh Income" is data on the median household income as a percentage of the national median (Excel row 17, Figure 40).

	A	В	С	D	E	F
5					KEY	
6 7	Define Comparison:	Target: Target Jurisdiction	Reference: Reference Geography 3 (State)		Higher Much Higher	
8					Lower	
9					Much Lower	
10						
11		Result	Target Jurisdiction	Reference Geography 1	Reference Geography 3 (State)	NATION
12	General Indicators	57.				
13	Unemployment Rate	Higher	10.87%	12.60%	7.86%	7.20%
14	Civilian Labor Force as % of Total Population	Lower	45.88%	43.50%	49.47%	50.51%
15	Average Commute Time (minutes)	n/a	20.6	20.4	27.0	25.2
16	Population	n/a	467,089	75,153	36,308,527	301,461,533
17	Median Hh Income	Much Lower 🔇	83.69%	67.59%	117.44%	100.00%
18				2		
19	Age and Education					
20	Population Age 18–24	99. SV.	11.65%	13.03%	10.05%	9.90%
21	Population Age 25-64	Lower	48.69%	45.90%	53.01%	52.89%
22	HS equivalent or less	Much Higher	49.52%	53.21%	42.56%	45.31%
23	Some college		32.78%	33.76%	30.65%	29.59%
24	BA/BS or more	Much Lower	17.70%	13.03%	26.79%	25.10%
14	Control_Panel	Stage 1 Issue Id	lentification / Stage 2	Issue Characterization	- III	<b>)</b>

**Figure 40. Issue Identification: Median Hh Income.** The target geography has a median household income that is 83.69% of the national median. The reference geography for comparison is the state, which has a median household income that is 117.44% that of the national median household income.

The median household income is important to understanding how the earning power of households in the target geography compares with that of the nation and the other reference geographies. For both the target and reference geographies, the median household income is always expressed as a percentage of the national median, which is standardized at 100% (Figure 39). Median household income can be an important indicator of economic stress. A low median household income combined with a high unemployment rate may indicate that some households are struggling to find work for one or more workers.

### **POPULATION AGE**

The variables "Population Age 18-24" and "Population Age 25-64" break down the population into two age groups (Excel rows 20-21 of Figure 40). Notice that the two categories combined include only adult populations between the ages of 18 and 64 (Figure 41).

4	А	В	С	D	E	F
5					KEY	
6	Define Comparison:	Target: Target Jurisdiction	Reference: Reference Geography		Higher	
/			3 (State)		Much Higher	
ŏ				1	Lower	
5					IMUCH LOWER	
10		Result	Target Jurisdiction	Reference Geography 1	Reference Geography 3 (State)	NATION
12	General Indicators			2		
13	Unemployment Rate	Higher	10.87%	12.60%	7.86%	7.20%
14	Civilian Labor Force as % of Total Population	Lower	45.88%	43.50%	49.47%	50.51%
15	Average Commute Time (minutes)	n/a	20.6	20.4	27.0	25.2
16	Population	n/a	467,089	75,153	36,308,527	301,461,533
17	Median Hh Income	Much Lower	83.69%	67.59%	117.44%	100.00%
18				2		
19	Age and Education					
20	Population Age 18–24	(	11.65%	13.03%	10.05%	9.90%
21	Population Age 25-64	Lower	48.69%	45.90%	53.01%	52.89%
22	HS equivalent or less	Much Higher	49.52%	53.21%	42.56%	45.31%
23	Some college		32.78%	33.76%	30.65%	29.59%
24	BA/BS or more	Much Lower	17.70%	13.03%	26.79%	25.10%
14	Control Panel	Stage 1 Issue Io	entification Stage 2	Issue Characterization	41	

**Figure 41. Issue Identification: Population Age.** The adult population of the target geography is composed of 11.65% persons between the ages of 18-24 and 48.69% persons between the ages of 25-64. The reference geography for comparison is the state, which is composed of 10.05% persons between the ages of 18-24 and 53.01% persons between the ages of 25-64.

The share of the adult working age population is an important indicator of the overall age structure of the community. The age 18-24 category is composed of young adults who are more likely to be in school, part-time workforce positions, or entry level workforce positions and may have a lower earning potential, particularly if they have lower levels of educational attainment than their peers. A large number of persons in this category may indicate a need to provide access to vocational or secondary education opportunities. The age 25-64 category is composed of working age adults who are under the age of Social Security eligibility, but who are more likely to occupy skilled jobs and earn a higher wage than younger workers.



### **EDUCATIONAL ATTAINMENT**

The variables "HS equivalent or less", "Some college" and "BA/BS or more" pertain to the highest level of education attained by the adult population aged 18-64 (Excel rows 22-24 of Figure 42). "HS equivalent or less" describes the percentage of persons that are either high school graduates/GED equivalent or have less than a high school education. "Some college" describes the percentage of persons with some college or university education and "BA/BS or more" describes the percentage of persons with a four-year secondary education degree or more.

	А	В	С	D	E	F
5					KEY	
6 7	Define Comparison:	Target: Target Jurisdiction	Reference: Reference Geography 3 (State)		Higher Much Higher	
8					Lower	
9					Much Lower	
10 11		Result	Target Jurisdiction	Reference Geography 1	Reference Geography 3 (State)	NATION
12	General Indicators	4	51	2		
13	Unemployment Rate	Higher	10.87%	12.60%	7.86%	7.20%
14	Civilian Labor Force as % of Total Population	Lower	45.88%	43.50%	49.47%	50.51%
15	Average Commute Time (minutes)	n/a	20.6	20.4	27.0	25.2
16	Population	n/a	467,089	75,153	36,308,527	301,461,533
17	Median Hh Income	Much Lower	83.69%	67.59%	117.44%	100.00%
18			9 . 9 .			
19	Age and Education					
20	Population Age 18–24		11.65%	13.03%	10.05%	9.90%
21	Population Age 25-64	Lower	48.69%	45.90%	53.01%	52.89%
22	HS equivalent or less	Much Higher	49.52%	53.21%	42.56%	45.31%
23	Some college	(	32.78%	33.76%	30.65%	29.59%
24	BA/BS or more	Much Lower	17.70%	13.03%	26.79%	25.10%
14	Control Panel	Stage 1 Issue Io	lentification Stage 2	Issue Characterization	41 III	

**Figure 42. Issue Identification: Educational Attainment.** The adult population aged 18-64 of the target geography is composed of 49.52% persons with a High School/GED equivalent education or less; 32.78% persons with some college education; and 17.7% persons with at least a four-year secondary education degree. The reference geography for comparison is the state, which is composed of 42.56% persons with a High School/GED equivalent education or less, 30.65% persons with some college education, and 26.79% persons with at least a four-year secondary education degree.

The degree of educational attainment among the labor force is positively correlated with a lower unemployment rate and higher median earnings⁵. Understanding the educational status of the labor force is vital to assessing the vulnerability of the labor force to economic stress, anticipating the need for education or vocational opportunities, addressing unemployment, and boosting the earning power of low-income populations.

⁵ http://www.bls.gov/emp/ep_chart_001.htm

# Jacob Charlen

### **INTERPRETING RESULTS: ISSUE IDENTIFICATION**

To understand how the Stage 1 data can help grantees prioritize economic development issues in their jurisdiction, this Guide will examine each of the employment, age, and education indicators described above. Consider a "Target Jurisdiction" (column C) geography representing a local grantee and compare it with the additional "Reference Geography 2 (County)" (column D), which is the county in which the Target Jurisdiction is located, "Reference Geography 3 (State)" (column E), as well as the nation (Figure 43). Refer back to the "Setting Up the Toolkit" section of this guide for help with configuring the target and reference geographies for analysis.

Begin by looking at the results for each economic issue in comparison to the different reference geographies. Stage 1 provides a "big picture" overview users can use to quickly identify primary issues that require more in-depth analysis and secondary issues that appear to be less critical in the jurisdiction.

	А	В	С	D	E	F	
3	Stage 1:	<b>Basic Issue Identifica</b>	ation				
	This stage examines CP						
	jurisdiction and the stat	e) and national stati	stics. This basic analysis	allows the user to iden	tify specific issues for		
	analysis in Stages 2 and	3. The target jurisdic	tion is set on the Contro	ol Panel. You can choose	e the reference		
	geography in the shade	d box below. The ref	erence geography is als	o shaded in the table. Y	'ou can change the		
4	comparison jurisdiction	s by clicking on the t	able header and selecti	ng from the list that app	oears.		
5					KEY		
6		Target:	Reference:		Higher		
	Define Comparison:	Target Jurisdiction	Reference Geography				
7			3 (State)		Much Higher		
8					Lower		
9					Much Lower		
10							
							i _
				Reference Geography	Reference Geography		
11		Result	Target Jurisdiction	2 (County)	3 (State)	NATION	
12	General Indicators						Ĺ.
13	Unemployment Rate	Higher 🔇	10.87%	9.99%	7.86%	7.20%	Í.
	Civilian Labor Force as	Lower	45.000/	45.270/	40.47%	E0 E1%	
14	% of Total Population	Lower	43.00%	43.37%	45.4770	50.51%	
	Average Commute	n/a	20.6	21.4	27.0	25.2	
15	Time (minutes)	11/ 4	20.0	21.4	27.0	23.2	
16	Population	n/a	467,089	890,750	36,308,527	301,461,533	
17	Median Hh Income	Much Lower	83.69%	89.90%	117.44%	100.00%	
18							
19	Age and Education						
20	Population Age 18–24		11.65%	10.97%	10.05%	9.90%	
21	Population Age 25–64	Lower	48.69%	48.85%	53.01%	52.89%	
22	HS equivalent or less	Much Higher	49.52%	51.32%	42.56%	45.31%	
23	Some college		32.78%	31.70%	30.65%	29.59%	
24	BA/BS or more	Much Lower	17.70%	16.98%	26.79%	25.10%	-
14	Control Panel	Stage 1 Issue Id	entification Stage 2	Issue Characterization	•		

#### UNEMPLOYMENT RATE

Figure 43. The unemployment rate of the target jurisdiction compared to that of the state.

The "Unemployment Rate" data (Excel Row 13, shown in Figure 43) indicates a cause for concern in the target jurisdiction:



- The unemployment rate of the target geography is similar to that of the county, but "Higher" than the state and the nation.
- The "Higher" incidence of unemployment in the county, compared with both the state and the nation may indicate that this problem is regional in scope.
- The relatively high rate of unemployment within the target geography may indicate that this condition is a significant economic problem facing the jurisdiction.

Using the data. It is important to remember that the unemployment rate does not tell the entire story about employment status within the jurisdiction. To be counted as unemployed, a person must have been actively seeking a job within the four weeks prior to survey. A person may also be counted as *employed* even though they may only be able to find part-time work, a condition called under-employment. Therefore, it is important to consider the unemployment rate in the context of the jurisdiction's age, educational attainment status, and total labor force characteristics to gain a more complete picture of a community's employment status.

#### LABOR FORCE PARTICIPATION RATE

	А	В	С	D	E	F	
3	Stage 1:	<b>Basic Issue Identific</b>	ation				
	This stage examines CP	D Maps data for the t	arget jurisdiction comp	ared to two other geogr	aphies (e.g., a similar		
	jurisdiction and the stat	te) and national stati	stics. This basic analysis	allows the user to iden	tify specific issues for		
	analysis in Stages 2 and	3. The target jurisdic	tion is set on the Contro	ol Panel. You can choose	e the reference		
	geography in the shade	d box below. The ref	erence geography is als	o shaded in the table. Y	ou can change the		
4	comparison jurisdiction	s by clicking on the t	able header and selecti	ng from the list that app	ears.		
5					KEY		
6		Target:	Reference:		Higher		
	Define Comparison:	Target Jurisdiction	Reference Geography				
7		-	3 (State)		Much Higher		
8					Lower		
9					Much Lower		
10							
				Reference Geography	Reference Geography		-
11		Result	Target Jurisdiction	2 (County)	3 (State)	NATION	
12	General Indicators						
13	Unemployment Rate	Higher	10.87%	9.99%	7.86%	7.20%	
	Civilian Labor Force as	Lower	45.00%	45.379/	40.479/	E0 E1%	
14	% of Total Population	Lower	45.88%	45.37%	49.47%	50.51%	
	Average Commute	nla	20.6	21.4	27.0	25.2	
15	Time (minutes)	iya	20.0	21.4	27.0	23.2	
16	Population	n/a	467,089	890,750	36,308,527	301,461,533	
17	Median Hh Income	Much Lower	83.69%	89.90%	117.44%	100.00%	
18							
19	Age and Education						
20	Population Age 18–24		11.65%	10.97%	10.05%	9.90%	
21	Population Age 25–64	Lower	48.69%	48.85%	53.01%	52.89%	
22	HS equivalent or less	Much Higher	49.52%	51.32%	42.56%	45.31%	
23	Some college		32.78%	31.70%	30.65%	29.59%	
24	BA/BS or more	Much Lower	17.70%	16.98%	26.79%	25.10%	-
14	Control Panel	Stage 1 Issue Id	entification Stage 2	Issue Characterization	4		

Figure 44. The labor force participation rate of the target jurisdiction compared to that of the state.

Along with a relatively high unemployment rate, the civilian labor force participation rate (Excel row 14, shown in Figure 44) indicates a cause for concern about the employment status within the target geography:

- The participation rate of the target geography is similar to that of the county, and "Lower" than the state and the nation.
- The "Lower" labor force participation rate in the target jurisdiction and the county, as compared with both the state and the nation, may indicate that this problem is regional in scope.
- The relatively low rate of labor force participation within the target geography may indicate that there is a large number of persons who have not actively sought work for at least four weeks prior to when they participated in the American Community Survey.
- The possibility of a high number of workers not actively seeking work within the target geography may indicate that there is a structural unemployment problem facing the jurisdiction.

## Jack Smy Harther

**Using the data.** It is important to remember that the civilian labor force is comprised of persons over 16 years of age who are *either employed or unemployed*. The labor force does not include persons serving in the military, institutional inmates, or persons who have not actively sought work for at least four weeks prior to the survey (this last category of persons is officially referred to as "marginally attached workers" by the BLS, see glossary for a detailed explanation of labor force components). The labor force also does not include other types of persons who have no job and are not looking for one— such as full-time students, retired persons, and family members taking care of children or other dependents. One group of persons not counted in the labor force who may be of particular interest are "discouraged workers." Discouraged workers are a subset of marginally attached workers who report not looking for work within the past twelve months for one of four reasons⁴; they believe no job is available to them in their line of work or area, they had previously been unable to find work, they lack the necessary schooling, training, skills, or experience or, employers think they are too young or too old, or they face some other type of discrimination⁴.

#### AVERAGE COMMUTE TIME

	А	В	С	D	E	F	
3	Stage 1:	Basic Issue Identifica	ation				Ē
	This stage examines CP	D Maps data for the t	arget jurisdiction compa	ared to two other geogr	aphies (e.g., a similar		
	jurisdiction and the stat	te) and national stati	stics. This basic analysis	allows the user to iden	tify specific issues for		
	analysis in Stages 2 and	3. The target jurisdic	tion is set on the Contro	ol Panel. You can choose	e the reference		
	geography in the shade	d box below. The ref	erence geography is als	o shaded in the table. Y	ou can change the		
4	comparison jurisdiction	s by clicking on the t	able header and selecting	ng from the list that app	bears.		
5					KEY		
6		Target:	Reference:		Higher		
	Define Comparison:	Target Jurisdiction	Reference Geography				
7		-	3 (State)		Much Higher		
8					Lower		
9					Much Lower		
10							
				Reference Geography	Reference Geography		
11		Result	Target Jurisdiction	2 (County)	3 (State)	NATION	
12	General Indicators		U				
13	Unemployment Rate	Higher	10.87%	9.99%	7.86%	7.20%	
	Civilian Labor Force as		15.00%			50 5400	
14	% of Total Population	Lower	45.88%	45.37%	49.47%	50.51%	
	Average Commute		20.6	21.4	27.0	25.2	
15	Time (minutes)	n/a 🔪	20.6	21.4	27.0	25.2	
16	Population	n/a	467,089	890,750	36,308,527	301,461,533	
17	Median Hh Income	Much Lower	83.69%	89.90%	117.44%	100.00%	
18							
19	Age and Education						
20	Population Age 18–24		11.65%	10.97%	10.05%	9.90%	
21	Population Age 25–64	Lower	48.69%	48.85%	53.01%	52.89%	
22	HS equivalent or less	Much Higher	49.52%	51.32%	42.56%	45.31%	
23	Some college		32.78%	31.70%	30.65%	29.59%	
24	BA/BS or more	Much Lower	17.70%	16.98%	26.79%	25.10%	Ŧ
-							

Figure 45. The average commute time of the target jurisdiction, reference geographies and the nation.

The average commute time (Excel row 15, shown in Figure 45) indicates how much time the average employed person spends commuting to and from work each day. The average commute time includes the time spent waiting for public transportation (for those who utilize public transportation for commuting).

Note that the tool does not provide a threshold value for average commute time in the "Control Panel" tab of the spreadsheet, so no comparison results are generated for this variable in column B ('n/a' appears in the "Result" column in Excel row 15). This is because commute times can vary widely between different jurisdictions. Instead the average commute time is presented for reference only. However, a jurisdiction may still find it useful to make qualitative comparisons of average commute time within different parts of a jurisdiction or between different areas:

- The average commute time is similar to the county but somewhat lower than both the state and the nation.
- The average commute time may be related to the types of jobs available or the proximity of population and job centers.



• There is no obvious relationship between unemployment and the average commute time when qualitatively comparing these values for the target jurisdiction to those of the state or nation. However, it is possible that the lower average commute time for the target jurisdiction, considered together with the relatively high rate of unemployment, could indicate that the unemployed population may not have access to nearby job markets or transportation infrastructure necessary to commute to job centers farther afield.

#### POPULATION

	А	В	С	D	E	F	
3	Stage 1:	Basic Issue Identific	ation				
	This stage examines CP						
	jurisdiction and the stat						
	analysis in Stages 2 and	3. The target jurisdic	tion is set on the Contro	ol Panel. You can choose	e the reference		
	geography in the shade	d box below. The ref	erence geography is als	o shaded in the table. Y	ou can change the		
4	comparison jurisdiction	s by clicking on the t	able header and selecting	ng from the list that app	oears.		
5					KEY		
6		Target:	Reference:		Higher		
	Define Comparison:	Target Jurisdiction	<b>Reference Geography</b>				
7			3 (State)		Much Higher		
8					Lower		
9					Much Lower		
10							
				Reference Geography	Reference Geography		
11		Result	Target Jurisdiction	2 (County)	3 (State)	NATION	
12	General Indicators						
13	Unemployment Rate	Higher	10.87%	9.99%	7.86%	7.20%	
	Civilian Labor Force as	Lauran	45.00%	45.070/	40.479/	E0 E19/	
14	% of Total Population	Lower	45.88%	45.37%	49.47%	50.51%	
	Average Commute	nla	20.6	21.4	27.0	25.2	
15	Time (minutes)	Пуа	20.0	21.4	27.0	23.2	
16	Population	n/a 🔇	467,089	890,750	36,308,527	301,461,533	
17	Median Hh Income	Much Lower	83.69%	89.90%	117.44%	100.00%	
18							
19	Age and Education						
20	Population Age 18–24		11.65%	10.97%	10.05%	9.90%	
21	Population Age 25–64	Lower	48.69%	48.85%	53.01%	52.89%	
22	HS equivalent or less	Much Higher	49.52%	51.32%	42.56%	45.31%	
23	Some college		32.78%	31.70%	30.65%	29.59%	
24	BA/BS or more	Much Lower	17.70%	16.98%	26.79%	25.10%	-
14	Control_Panel	Stage 1 Issue Id	entification Stage_2	Issue_Characterization	•	► I	1

Figure 46. The population of the target jurisdiction, reference geographies, and the nation.

The population size (Excel row 16, shown in Figure 46) indicates the total population of the target and reference geographies. Population is not compared with the reference geography ('n/a' appears in the "Result" column in Excel row 16), but is presented for reference purposes.

- The population of the target jurisdiction is almost half a million persons, roughly one-half the population of the county (Reference Geography 2).
- The population of the county (Reference Geography 2) *includes* that of the target jurisdiction, which is a part of it.



- There are approximately 214,000 persons in the civilian labor force (total population X labor force participation rate), and therefore approximately 253,000 persons not in the labor force within the target jurisdiction.
- The 253,000 persons not in the labor force include both dependent children, persons without a job and not looking for one (such as retired persons and those caring for children or other dependents), and marginally attached workers, including discouraged workers.

#### MEDIAN HOUSHOLD INCOME

	А	В	С	D	E	F	
3	Stage 1:	<b>Basic Issue Identific</b>	ation				
	This stage examines CP	D Maps data for the t	arget jurisdiction comp	ared to two other geogr	aphies (e.g., a similar		
	jurisdiction and the stat	e) and national stati	stics. This basic analysis	allows the user to iden	tify specific issues for		
	analysis in Stages 2 and	3. The target jurisdic	tion is set on the Contro	ol Panel. You can choose	e the reference		
	geography in the shade	d box below. The ref	erence geography is als	o shaded in the table. Y	ou can change the		
4	comparison jurisdiction	s by clicking on the t	able header and selecting	ng from the list that app	ears.		
5					KEY		
6		Target:	Reference:		Higher		
	Define Comparison:	Target Jurisdiction	Reference Geography				
7			3 (State)		Much Higher		
8					Lower		
9					Much Lower		
10							
							_
				Reference Geography	Reference Geography		
11		Result	Target Jurisdiction	2 (County)	3 (State)	NATION	
12	General Indicators		_				
13	Unemployment Rate	Higher	10.87%	9.99%	7.86%	7.20%	
	Civilian Labor Force as	1	45.00%	45.070/	40.470/	50.519/	
14	% of Total Population	Lower	45.88%	45.37%	49.47%	50.51%	
	Average Commute	nla	20.6	21.4	27.0	25.2	
15	Time (minutes)	II/a	20.0	21.4	27.0	23.2	
16	Population	n/a	467,089	890,750	36,308,527	301,461,533	
17	Median Hh Income	Much Lower 🔇	83.69%	89.90%	117.44%	100.00%	
18							
19	Age and Education						
20	Population Age 18–24		11.65%	10.97%	10.05%	9.90%	
21	Population Age 25–64	Lower	48.69%	48.85%	53.01%	52.89%	
22	HS equivalent or less	Much Higher	49.52%	51.32%	42.56%	45.31%	
23	Some college		32.78%	31.70%	30.65%	29.59%	
24	BA/BS or more	Much Lower	17.70%	16.98%	26.79%	25.10%	-
14 4	Control Panel	Stage 1 Issue Id	entification Stage 2	Issue Characterization	4		

Figure 47. The median household income of the target jurisdiction, reference geographies, and the nation.

The median household income (Excel row 17, shown in Figure 47) for the Target Jurisdiction is "Much Lower" than that of the state. This strongly indicates that the median household income in the target geography is of significant concern:

- In addition to being "Much Lower" than the state, the median household income for the target jurisdiction is also "Much Lower" than the nation and "Lower" than the county.
- The jurisdiction may also want to explore the regional context of the identified deficiency in household income by changing the settings to make the county the target jurisdiction. Doing so shows that the median household income in the county is "Much Lower" than either the state or the nation, indicating that the problem may be regional in scope.

• Similarly, the jurisdiction may want to compare the median household income for the state to that of the nation. Doing so indicates that the statewide median household income is "Much Higher" than that of the nation, indicating that income inequality may be a significant statewide issue.

**Using the data.** Examining the "General Indicators" category may reveal a more detailed picture of the employment status of the jurisdiction. The relatively low median household income and civilian labor force participation rate combined with a relatively high unemployment rate in the example jurisdiction suggest that household earnings are significantly lower than their potential due to one or more household members who are unable to find employment—there may be a significant number of workers who want to find a job but have stopped looking for employment. Consequently, the unemployment rate may underestimate the number of job seekers in the target jurisdiction.
#### **POPULATION AGE**

	А	В	С	D	E	F	
3	Stage 1:	Basic Issue Identifica	ation				
	This stage examines CPI	D Maps data for the t	arget jurisdiction compa	ared to two other geogr	aphies (e.g., a similar		
	jurisdiction and the stat	e) and national stati	stics. This basic analysis	allows the user to iden	tify specific issues for		
	analysis in Stages 2 and	3. The target jurisdic	tion is set on the Contro	ol Panel. You can choose	e the reference		
	geography in the shade	d box below. The ref	erence geography is als	o shaded in the table. Y	ou can change the		
4	comparison jurisdiction	s by clicking on the t	able header and selecting	ng from the list that app	ears.		
5					KEY		
6		Target:	Reference:		Higher		
	Define Comparison:	Target Jurisdiction	Reference Geography				
7		-	3 (State)		Much Higher		
8					Lower		
9					Much Lower		
10							
				Reference Geography	Reference Geography		
11		Result	Target Jurisdiction	2 (County)	3 (State)	NATION	
12	General Indicators		_				
13	Unemployment Rate	Higher	10.87%	9.99%	7.86%	7.20%	
	Civilian Labor Force as	1	45.00%	45.079/	40.479/	50.519/	
14	% of Total Population	Lower	45.88%	45.37%	49.47%	50.51%	
	Average Commute	- 1-	20.6	21.4	27.0	25.2	
15	Time (minutes)	n/a	20.0	21.4	27.0	25.2	
16	Population	n/a	467,089	890,750	36,308,527	301,461,533	L
17	Median Hh Income	Much Lower	83.69%	89.90%	117.44%	100.00%	L
18							L
19	Age and Education						1
20	Population Age 18–24		11.65%	10.97%	10.05%	9.90%	L
21	Population Age 25–64	Lower	48.69%	48.85%	53.01%	52.89%	
22	HS equivalent or less	Much Higher	49.52%	51.32%	42.56%	45.31%	
23	Some college		32.78%	31.70%	30.65%	29.59%	
24	BA/BS or more	Much Lower	17.70%	16.98%	26.79%	25.10%	-
14	Control Panel	Stage 1 Issue Id	entification Stage 2	Issue Characterization	4		

Figure 48. The population age characteristics of the target jurisdiction, reference geographies, and the nation.

The population age characteristics (Excel rows 20-21, shown in Figure 48) differ from those of the state and the nation:

- The target jurisdiction and the county (Reference Geography 2) have a similar proportion of younger and older working age persons.
- Both the target jurisdiction and the county have a "Lower" proportion of 25-64 year old working persons than both the state and the nation.

• The target jurisdiction has over 1.5% more young working age persons than the state or the nation while the number of 25-64 year old working age persons is "Lower" than both the state and the nation. When considered together with the relatively high rate of unemployment, this could indicate that younger age working persons may be leaving the community in greater numbers than other age groups.

**Using the data.** Together, the results for the population age categories suggest that the working age population is skewed toward the younger category of workers in the example jurisdiction. This is significant because the nationwide unemployment rate among 16-24 year olds has averaged over twice that of the 25-64 age group over the period 2007-2012. Understanding the age distribution of working age persons within a jurisdiction is important to solving the problem of high unemployment—young people may need access to different educational resources, while older workers might benefit from retraining programs.

#### EDUCATIONAL ATTAINMENT

	А	В	С	D	E	F	
3	Stage 1:	Basic Issue Identific	ation				
	This stage examines CP	D Maps data for the t	arget jurisdiction comp	ared to two other geogr	aphies (e.g., a similar		
	jurisdiction and the stat	te) and national stati	stics. This basic analysis	allows the user to iden	tify specific issues for		
	analysis in Stages 2 and	3. The target jurisdic	tion is set on the Contro	ol Panel. You can choose	e the reference		
	geography in the shade	d box below. The ref	erence geography is als	o shaded in the table. Y	ou can change the		
4	comparison jurisdiction	s by clicking on the t	able header and selecting	ng from the list that app	ears.		
5					KEY		
6		Target:	Reference:		Higher		
	Define Comparison:	Target Jurisdiction	Reference Geography				
7			3 (State)		Much Higher		
8					Lower		
9					Much Lower		
10							
							Í _
				Reference Geography	Reference Geography		=
11		Result	Target Jurisdiction	2 (County)	3 (State)	NATION	
12	General Indicators						
13	Unemployment Rate	Higher	10.87%	9.99%	7.86%	7.20%	
	Civilian Labor Force as	Lower	AE 000/	45 270/	40.479/	E0 E1%	
14	% of Total Population	Lower	45.88%	45.37%	49.47%	50.51%	
	Average Commute	nla	20 F	21.4	27.0	25.2	
15	Time (minutes)	Пуа	20.0	21.4	27.0	23.2	
16	Population	n/a	467,089	890,750	36,308,527	301,461,533	
17	Median Hh Income	Much Lower	83.69%	89.90%	117.44%	100.00%	
18							
19	Age and Education						
20	Population Age 18–24		11.65%	10.97%	10.05%	9.90%	
21	Population Age 25–64	Lower	48.69%	48.85%	53.01%	52.89%	
22	HS equivalent or less	Much Higher	49.52%	51.32%	42.56%	45.31%	
23	Some college	<b>(</b>	32.78%	31.70%	30.65%	29.59%	
24	BA/BS or more	Much Lower	17.70%	16.98%	26.79%	25.10%	-
14	Control Panel	Stage 1 Issue Id	entification State 2	Issue Characterization	Image:		

Figure 49. The educational attainment status of the target jurisdiction, reference geographies and the Nation.



The educational attainment of the target jurisdiction (Excel rows 22-24, shown in Figure 49) indicate that lower educational status may contribute to the workforce problems present in the target jurisdiction:

- The target jurisdiction and the county (Reference Geography 2) have a similar proportion of all three educational attainment categories, indicating that lower educational attainment may be a regional issue.
- The target jurisdiction has a "Much Higher" proportion of "HS equivalent or less" and a "Much Lower" proportion of "BA/BS or more" than the state.
- The target jurisdiction has a "Higher" proportion of "HS equivalent or less" and a "Much Lower" proportion of "BA/BS or more" than the nation.

Using the data. Greater educational attainment is linked with higher employment rates and income.⁶ The target jurisdiction has a proportionally greater number of persons within the lowest educational attainment category than either the state or the nation, which may be a contributory cause of high unemployment and lower median household incomes. Additionally, a "Much Lower" proportion of persons with higher education degrees may further contribute to lower median incomes and may indicate a lack of demand for skilled employment in our changing economy.

The Issue Identification comparisons discussed above identified a high rate of unemployment, a low rate of labor force participation, a low median income, and lower educational attainment as issues affecting the target jurisdiction.

The relatively low rate of labor force participation within the jurisdiction may indicate that there is a large number of persons who are not actively seeking work, which could indicate a structural unemployment problem. Additionally, the jurisdiction contains a relatively low proportion of 25-64 year old working persons as compared to either the state or the nation. When employment status within the jurisdiction is considered together with the population age characteristics of the jurisdiction, these factors may indicate that younger age working persons are leaving the community due to a lack of jobs, relatively low wages for existing jobs, a lack of access to affordable post-secondary education, or some combination of these factors.

Stage 2 will help grantees to explore the issues identified in Stage 1 in more detail by breaking out the education, employment, and income data presented in Stage 1 by age group and educational attainment.

# Jacob Charlen

### **STAGE 2: ISSUE CHARACTERIZATION**

The second stage of the Economic Development Toolkit is "Issue Characterization," where the categories of employment, education and income identified in Stage 1 are broken out to allow grantees to explore issues in more depth by providing expanded detail for the population by age, income, educational attainment, and employment status.

The data in Stage 1 demonstrated that conditions of high unemployment, low median income, and low educational attainment suggest that many households have members who are struggling to find work and are vulnerable to economic stress. These data further suggest that educated young people (i.e., those with some college or a college degree) may be leaving the community in larger numbers than other age and educational groups. This section of the manual details examples of how the expanded data can be used to provide additional insights about economic conditions in the jurisdiction. Here, as in Stage 1, the values for the target jurisdiction are compared with other geographies selected by the user.

Clicking on the Tab "Stage_2_Issue_Characterization" opens a worksheet describing age and education characteristics of the labor force for the target jurisdiction and selected reference geographies.

Users may wish to focus on one or more economic development problems, especially if the data analysis in Stage 1 has identified an issue that is severe. If so, select specific tables to display by clicking on the small triangle in the upper far left of the table (circled in red in Figure 17 on page 34): Unchecking the checkboxes will hide the corresponding data table, so that users can focus on the selected data.

The top portion of this screen (Excel rows 13-25) displays data for two age groups (18-24 and 25-64) broken down by level of educational attainment. These educational levels are the same as in Stage 1 (see Figure 42) except that Stage 2 supports further analysis by further breaking down the level of "HS equivalent or less" into two categories: "Less than HS" and "HS equivalent." This table is shown in Figure 50 below:

	A	8	ć	D	E	F	6	H I	1
2	Stage 2:		Issue Characterization	n: Age and Education		22			
4	This stage ex other geogra specific issu	amines more detai phies (e.g., a simili es identified in Sta	iled CPD Meos data relater ar jurisdiction and the stat oge 1.	d to age groups and educate (e) and national statistics.	tion for the target jurisd This allows the user to	iction compared to two better characterize			
5	-				<u>a</u>	KEY			
D			Target:	Reference:		rtigher			
1	Denne Comp	umpon:	Jarget Junabetion	00401/00	0	NAUCH HIgher			
9						Much Liney			
10	* Select Charac	teristics	Result	Target lurisdiction	Reference Geography	Reference Geography 3 (State)	NATION	Denominator	
13	Ages 18-24:	Population							
14	Unemp	loyment Rate*		3.55%	5.23%	2.42%	2.38%	Total population ages 16-24	
15	Less the	an MS	Much Higher	22.29%	22,88%	18.47%	17.18%	Total population ages 18-24	
15	HS equi	ivalent	And a state of	29.72%	35.40%	31,39%	31.99%	Total population ages 18-24	
17	Some C	ollege		42.95%	40.09%	42.17%	41.85%	Total population ages 18-24	
18	Bachel	or's or higher	Lower	5.04%	1.63%	7.98%	8.98%	Total population ages 18-24	
19	Ages 25 64:	Reputation			E Constanti		2.800.00	and the second	
20	Unemp	owment Rate		214%	7.28%	5.20%	4.66N	Total population ages 25-64	
23	cess the	an HS	Much Higher	21.08%	28.56%	18.38%	12.95%	Total population ages 25-64	
22	H5 equi	ivalent	Much Lower	22.95%	21.49%	21.17%	28.09%	Total population ages 25-64	
23	Some C	oliege		31.97%	33.88%	29.55%	29.46%	Total population ages 25-64	
24	Bachel	or's or higher	Much Lower	21.00%	16.07%	30,90%	29.50%	Total population ages 25-64	
25	-	- antemplayment	t for ages 16-24						

Figure 50. Stage 2 screen showing the unemployment rate and education attainment categories for 18-24 year olds and 25-64 year olds.



As shown in Figure 50, Stage 2 displays educational attainment for the 18-24 year old age group on Excel rows 15-18, and for the 25-64 year old age group on rows 21-24. Note that for each geography selected, the total of these four educational categories will also be 100% within each age group; i.e., all the persons in each of these age groups falls into one, and only one, of these educational categories.

Using the 25-64 year old age group in Figure 50 as an example, the table shows (Excel row 20) that 7.14% of this age group is unemployed compared to a rate of 4.66% for the nation as a whole. Similarly, Excel row 21 shows that 24.08% of the 25-64 year old population in the target geography has less than a high school education, a much higher percentage than the rate of 12.95% for the nation as a whole. Indeed, throughout the table the relationship between a high unemployment rate and a high percentage of persons with less than a high school education is in evidence.

The bottom portion of this table, Excel rows 26-43, examines employment and income data for each educational attainment category described above for persons 25-64 years old (persons 18-24 years old are excluded from these data because a high proportion have not completed their education). For each educational attainment level, the percentage of persons in the labor force, the unemployment rate, and the median earnings for these persons are shown. Figure 51 shows the data for persons with less than a high school education.

5 6 7 8 9		Define Comparison:	Target: Target Jurisdiction	Reference: NATION		KEY Higher Much Higher Lower Much Lower		
10		Select Characteristics	Result	Target Jurisdiction	Reference Geography	Reference Geography 3 (State)	NATION	Denominator
25		* Unemployment	for ages 16-24			20 SN - 11		
26		Characteristics by Education	on the second of the					
22		Less than HS: Population						
28	<	Percent in Labor Force		59.885	58.42%	65.50%	61.20	Population with less than HS, ages 75-64
29		Unemployment Rate	Much Higher	17.10%	18.85%	10.04%	11.03%	Population whin less than RS, in the labor force, ages 23-64
30	0	Median Earnings	Much Lower	84.74%	75.78%	99.11%	100.00%	
33		His or equivalence Population	7 1925-19765	1.000	100A			

Figure 51: Employment data for persons with less than a high school education.

Figure 51 illustrates the three data elements for persons with less than a high school education (Excel rows 27-30), with key points noted by red circles:

- *Percent in Labor Force.* Note that in Stage 2, the percentage in the labor force is displayed as a percentage of the persons *with less than HS, ages 25-64.* In Stage 1, the percentage in the labor force was displayed as a *percent of the total population,* including children, persons over 65, etc. Because children and the elderly, who are not normally part of the labor force, are excluded from the denominator in Stage 2, the percentages in the labor force in Stage 2 are significantly higher (Excel row 28).
- Unemployment Rate. Here the unemployment rate is displayed for persons aged 25-64 with less than a high school education and, at 17.18%, is "much higher" than for the same category nationwide (Excel row 29).
- Median Earnings. Note that in Stage 2, median earnings are displayed, as opposed to median household income, as in Stage 1. Because income here is related to educational attainment, it must be based on the individual wage-earner, not the household, which does not have an "educational attainment." In other words, Figure 51 shows that persons in the target



jurisdiction, ages 25-64 and with less than a high school education, have median earnings which are 84.74% of the median earnings of the same group nationwide (black arrow, Excel row 30). This indicates that not only does the target jurisdiction have a high percentage of persons without a high school diploma; they also have higher unemployment and lower earnings than their counterparts nationwide.

The same data are shown in the table for the following groups:

- Persons with a high school education or equivalent (Excel rows 31-34);
- Persons with some college (Excel rows 35-38);
- Persons with BA/BS (bachelor's degree) or more (Excel rows 39-43).

For persons with a college degree, median earnings are further broken out between persons with a bachelor's degree (Excel row 42), and persons with a graduate or professional degree (Excel row 43), indicated by the red circle (Figure 51a).

Define Comparison:	Target: Target Jurisdiction	Reference: NATION		Higher Much Higher		
				Lower Much Lower		
- Select Characteristics	Result	Target harisdiction	Reference Geography 1	Reference Geography 3 (State)	NATION	Denominator
Median Earnings	Much Lower	相关:打ち	87,41%	105.66%	100.00%	2
Some College: Population	. <u>1110000</u> .45595		1 1.0000000		404000	
Percent in Labor Force		79.89%	77.28%	78.38%	80.44%	Population with some college, ages 25-64
Unemployment Rate		7.65%	6.545	6.36%	5.55%	Population with some college, in the labor force, ages 25-64
Median Earnings	Lower	93,34%	80.95%	112.10%	100.00%	
BA/B5 or more: Population						
Percent in Labor Force		86.54%	B4.28%	84.55%	85.45%	Population with 8A/B5 or more, ages 25-64
Unemployment Rate		3-35%	4,03%	3.85%	3.08%	Population with 0A/05 or more, in the labor force, ages 25-64
Median Earnings (Bachelor's Degree)		99.31%	97.84%	112,43%	100.00%	
Median Earnings (Graduate or Professional Degree)		104.17%	105.32%	118.35%	100.00%	

Figure 51a. Employment Data for persons with at least some college. Note that median earnings for persons with a bachelor's degree compared with the nation as a whole are displayed separately from persons with a graduate or professional degree.

# Jacob Charlen

#### **INTERPRETING RESULTS: ISSUE CHARACTERIZATION**

The additional data comparisons provided in Stage 2 can help grantees to determine the specific populations that experience economic issues in their jurisdiction. As in Stage 1, the example considers a "Target Jurisdiction" (Excel column D) geography representing a local grantee; for comparison, we can select from an additional "Reference Geography 1" (a nearby city), "Reference Geography 2 (County)," which is the county in which the Target Jurisdiction is located, and "Reference Geography 3 (State)" as well as the nation. Here we are comparing the Target Jurisdiction to a nearby city (column E), its state (column F), and the nation (column G) (Figure 52).

(at)	A	В	C	D	E	F	G	-
3		Stage 2:	Issue Characterizatio	n: Age and Education				
4		This stage examines more detail other geographies (e.g., a similar specific issues identified in Stag	ed CPD Maps data relate r jurisdiction and the sta e 1.	d to age groups and educat te) and national statistics.	tion for the target jurisd This allows the user to	iction compared to two better characterize		
5						KEY		
6			Target:	Reference:		Higher		
7		Define Comparison:	Target Jurisdiction	NATION		Much Higher		
8						Lower		
9						Much Lower		
10								
11	-	Select Characteristics	Result	Target Jurisdiction	Reference Geography 1	Reference Geography 3 (State)	NATION	
12	٩.	Characteristics by Age Group				20 40 D		
13		Ages 18–24: Population						_
14		Unemployment Rate*		3.55%	5.23%	2.42%	2.38%	-
15		Less than HS	Much Higher	22.29%	22.88%	18.47%	17.18%	-
16		HS equivalent		29.72%	35.40%	31.39%	31.99%	3
17		Some College		42.95%	40.09%	42.17%	41.85%	-
18		Bachelor's or higher	Lower	5.04%	1.63%	7.98%	8.98%	_
19		Ages 25–64: Population						
20		Unemployment Rate		7.14%	7.28%	5.26%	4.66%	- 3
21		Less than HS	Much Higher	24.08%	28.56%	18.38%	12.95%	-
22		HS equivalent	Much Lower	22.95%	21.49%	21.17%	28.09%	_
23		Some College		31.97%	33.88%	29.55%	29.46%	
24		Bachelor's or higher	Much Lower	21.00%	16.07%	30.90%	29.50%	3
25		* Unemployment f	for ages 16–24					

Figure 52: Educational attainment characteristics by age group. The Target Jurisdiction evidences lower overall educational attainment than the nation as a whole.

This Guide will begin by examining the educational attainment characteristics of the two major population groups. In all the geographies, the percentage of persons 18-24 with "some college" is 40-42%, reflecting the fact that many in this age group are still in school. However, the fact that 22.29% of this age group in the target jurisdiction has less than a high school diploma compared to 17.18% of the nation as a whole suggests possible lower overall educational attainment levels in the target jurisdiction. This conclusion is supported by an even greater disparity in the 25-64 age group, where 24.08% of the target jurisdiction has less

**Data in Stage 1** identified a high rate of unemployment, a low rate of labor force participation, low median income, and lower educational attainment as issues affecting the target jurisdiction. The relatively low rate of labor force participation within the jurisdiction could suggest a structural unemployment problem. Additionally, the jurisdiction contains a relatively low proportion of 25-64 year old working persons as compared to either the state or the nation.

than a high school education, compared with only 12.95% in the nation as a whole.



This Guide will now look at the educational levels of the 25-64 year olds—the community's workforce. In the nation as a whole, the 25-64 year old age group is roughly equally divided among those with a high school equivalent education, those with some college, and those with a college degree (28-30% at each educational level). While the target jurisdiction's work force has a comparable percentage with some college (31.97%), it is lagging behind in those with a high school diploma or a college degree—and the percentage with less than a high school education is nearly double the nation as a whole (24.08% compared to 12.95% nationwide).

Using the data. In Figure 52, does the fact that 29.72% of the 18-24 year olds are "HS equivalent" bode well for the Target Jurisdiction, given the fact that only 22.95% of the 25-64 year olds have a high school diploma? Perhaps, but note also that about 48% of the younger group have some college or a college degree, compared with almost 53% of the older group. It may mean that the community is losing its college-educated young people to other markets. This is another area where local knowledge will help the grantee interpret the data.

These educational levels appear to be a limiting factor in the future economic growth of the target jurisdiction. However, by comparing the target jurisdiction with its state (rather than with the nation), this factor can be further analyzed. See Figure 53.

	А	В	C	D	E	F	G
З		Stage 2:	Issue Characterizatio	n: Age and Education			
4		This stage examines more detaile other geographies (e.g., a similar specific issues identified in Stag	ed CPD Maps data relate r jurisdiction and the sta e 1.	d to age groups and educat te) and national statistics.	ion for the target jurisd This allows the user to	iction compared to two better characterize	
5						KEY	
6			Target:	Reference:		Higher	
7		Define Comparison:	Target Jurisdiction	Reference Geography 3 (State)		Much Higher	
8						Lower	
9						Much Lower	
10							
11	-	Select Characteristics	Result	Target Jurisdiction	Reference Geography 1	Reference Geography 3 (State)	NATION
12		Characteristics by Age Group			6		
13		Ages 18–24: Population					
14		Unemployment Rate*		3.55%	5.23%	2.42%	2.38%
15		Less than HS	Higher	22.29%	22.88%	18.47%	17.18%
16		HS equivalent		29.72%	35.40%	31.39%	31.99%
17		Some College		42.95%	40.09%	42.17%	41.85%
18		Bachelor's or higher		5.04%	1.63%	7.98%	8.98%
19		Ages 25–64: Population					
20		Unemployment Rate		7.14%	7.28%	5.26%	4.66%
21		Less than HS	Much Higher	24.08%	28.56%	18.38%	12.95%
22		HS equivalent		22.95%	21.49%	21.17%	28.09%
23		Some College		31.97%	33.88%	29.55%	29.46%
24		Bachelor's or higher	Much Lower	21.00%	16.07%	30.90%	29.50%
25		* Unemployment f	for ages 16–24				

Figure 53. Educational Attainment characteristics by age group compared to its state. Educational attainment is also lower in the Target Jurisdiction than the state as a whole.

Here again, while slightly less pronounced, the trends noted in comparison with the nation persist: the percentage with less than a high school education is higher or much higher in both age groups, and the percentage with a bachelor's degree is much lower than the state as a whole. This will be a challenge for the jurisdiction in competing with other communities throughout the state for jobs and investment.



However, in comparison with Reference Geography 1—a nearby city—the Target Jurisdiction is faring better (Figure 54).

31	A	В	С	D	E	F	G
3	į	Stage 2:	Issue Characterizatio	n: Age and Education			
4		This stage examines more detail other geographies (e.g., a simila specific issues identified in Stag	ed CPD Maps data relate r jurisdiction and the sta re 1.	d to age groups and educat te) and national statistics.	tion for the target jurisd This allows the user to	iction compared to two better characterize	
5		ġ.				KEY	
6			Target:	Reference:		Higher	
7		Define Comparison:	Target Jurisdiction	Reference Geography 1		Much Higher	
8						Lower	
Э						Much Lower	
0							
1	•	Select Characteristics	Result	Target Jurisdiction	Reference Geography 1	Reference Geography 3 (State)	NATION
2		Characteristics by Age Group	6	1			
3		Ages 18–24: Population					
4		Unemployment Rate*		3.55%	5.23%	2.42%	2.38
5		Less than HS		22.29%	22.88%	18.47%	17.18
6		HS equivalent	Much Lower	29.72%	35.40%	31.39%	31.999
7		Some College		42.95%	40.09%	42.17%	41.859
8		Bachelor's or higher	Higher	5.04%	1.63%	7.98%	8.989
9		Ages 25–64: Population					
0		Unemployment Rate		7.14%	7.28%	5.26%	4.669
1		Less than HS	Lower	24.08%	28.56%	18.38%	12.959
2		HS equivalent		22.95%	21.49%	21.17%	28.099
3		Some College		31.97%	33.88%	29.55%	29.469
4		Bachelor's or higher	Higher	21.00%	16.07%	30.90%	29.509
15		* Unemployment	for ages 16–24				

**Figure 54. Educational attainment characteristics by age group compared to a nearby city.** Educational attainment in the target jurisdiction is similar to or slightly higher than a neighboring city.

Note that in both age groups, compared with Reference Geography 1, the percentage of those with a high school education or less is lower in the Target Jurisdiction and those with bachelor's degree or more is higher. This comparison suggests that low educational attainment levels may be a regional problem, suggesting possible regional strategies.

In order to better understand the implications of this educational data, this Guide will look at employment and earnings by income level. These data for persons 25-64 are in Excel rows 26-43 in Stage 2, and are illustrated in Figure 55 below.

	m the			<u>L</u>	4.		JEr
5					KEY		
б 7	Define Comparison:	Target: Target	NATION		Higher Much Higher		
8				57	Lower		
9					MuchLower		
0		-					
	t Characteristics	Bocult	l arget	Reference Geography 1	Geography 3 (State)	NATION	Denominator
25	Unemployment fo	rages 16-24	Junsaiction	Oeography i	(State)	Innion	Denominator
6	Characteristics by Educati	on	1	ek			
27	Less than HS: Population			8			
8	Percent in Labor Force		59.88%	58.42%	65.50%	61.20%	Population with less than HS, ages 25-64
:9	Unemployment Rate	Much Higher	17.18%	18.85%	10.04%	11.03%	Population with less than HS, in the labor force, ages 25-64
30	Median Earnings	Much Lower	84.74%	75.78%	99.11%	(100.00%	
11	HS or equivalent:						
2	Percent in Labor Force	Lower	71.30%	68.09%	73.23%	74.69%	Population with HS or equivalent, ages 25-64
3	Unemployment Rate	Higher	10.37%	10.20%	8.01%	7.16%	Population with HS or equivalent, in the labor force, ages 25-64
4	Median Earnings	Much Lower	89.73%	87.41%	105.66%	(100.00%	)
5	Some College: Population						2000 100 100 2000 -
6	Percent in Labor Force		79.89%	77.28%	78.38%	80.44%	Population with some college, ages 25-64
7	Unemployment Rate		7.65%	6.54%	6.36%	5.55%	Population with some college, in the labor force, ages 25-64
8	Median Earnings	Lower	93.34%	80.95%	112.10%	(100.00%	)
9	BAIBS or more:	20			1		Sense -
0	Percent in Labor Force		86.54%	84.28%	84.55%	85.45%	Population with BA/BS or more, ages 25-64
1	Unemployment Rate		3.35%	4.09%	3.85%	3.08%	Population with BA/BS or more, in the labor force, ages
2	Median Earnings (Bachelor's Degree)		99.31%	97.84%	112.43%	(100.00%	
13	Median Earnings (Graduate or Professional Degree)		104.17%	105.32%	118.35%	100.00%	$\triangleright$

**Figure 55: Employment Data by Educational Level.** This table shows the persistent relationships between educational attainment and other variables: participation in the labor force, unemployment rate, and median earnings. Labor force participation, employment, and earnings increase with education in every geography.

Analysis of the data presented in Figure 55 above will be aided if users consider three important factors in these data:

- As noted earlier, the labor force data here is provided only for persons from 25-64. Many persons in the under-25 age group are still in school and are not included in these data.
- Median earnings are related only within each educational level. As noted by the red circles in the "Nation" column in Figure 55, the percentage for the nation is always 100%. This table provides no data, for example, on the differences in median incomes between persons at different educational levels. While the table can tell us that median earnings for persons with less than a high school education in the Target Jurisdiction are 84.74% of the national median for persons in the same age and education category, it does not tell us what their incomes are,⁶ or how they compare to incomes of persons in other educational attainment classifications.
- Higher educational attainment results in higher levels of labor force participation and lower unemployment. Note how the red circled percentages of labor force participation in the "Target Jurisdiction" column steadily increase as educational level increases. Note also that this is true for every geography. It is typical for participation in the labor force to increase with increased education. Similarly, it is true that unemployment decreases with increased education. As a result, these data are useful primarily for displaying how persons with varying educational

⁶ Median incomes for the target geography are available by census tract or by county in CPD Maps.



attainment compare to their counterparts in other reference geographies and the nation as a whole.

With these factors in mind, this Guide will now examine the employment and earnings for those with less than a high school education in Figure 56 below (some rows have been "hidden" so that it is easier to see important relationships). As shown on Excel row 20, unemployment in the Target Jurisdiction is much higher than the national average (7.14% in the Target Jurisdiction compared to 4.66% nationwide at the time these data were gathered). Note also that in the Target Jurisdiction, persons 25-64 with a high school equivalent or less make up

**Using the Data.** Figure 55 demonstrates a persistent pattern that may help local policy makers better understand the economic conditions in the target jurisdiction: for every criterion on the table (labor force participation, unemployment, and median earnings), the disparity for persons in the target jurisdiction—compared to the nation as a whole—*decreases* as educational levels increase. In other words, as educational attainment increases, the target jurisdiction more closely achieves outcome parity with the nation as a whole.

47.03% of the population, compared with 41.04% nationwide (summing the percentages on Excel rows 21 and 22).

11	B	. c.	0	ε	F	ŭ.	н
5			1		KEY		
6 7	Define Comparison:	Target: Target Jurisdiction	Reference: NATION		Higher Much Righer		
8					Lower Much Lower		
10	Select Characteristics	Result	Target Jurisdiction	Reference Geography 1	Reference Geography 3 (State)	NATION	Denominator
12	Characteristics by Age Group						
10	Ages 25-64: Population			5			diality states and the
20	Unemployment Rate		7.14%	7.28%	5.26%	4.66%	Total population ages 25-64
23	Less than HS	Much Higher	24.08%	28.56%	18.38%	12.95%	Total population ages 25-64
22	HS equivalent	Much Lower	22 55%	21.49%	21.17%	28.09%	Total population ages 25-64
26	<b>Characteristics</b> by Education			2			
27	Less than HS: Population						
29	Unemployment Rate	Much Higher	\$7.19%	18.85%	10.04%	11.03%	Population with less than H5, in the labor force, ages 25-64
30	Median Earnings	Much Lower	84,74%	75.78%	99.11%	100.00%	
32	HS or equivalent: Population						
53	Unemployment Rate	Higher	30.37%	10.20%	8.02%	7.36%	Population with H5 or equivalent, in the labor force, ages 25-64
34	Median Earnings	Much Lower	39.73%	87.41%	105.66%	100.00%	

Figure 56: Employment and earnings for persons with a high school equivalency or less. Persons in the Target Jurisdiction with a high school education or less are more likely to be unemployed and if working, likely to earn less, than their counterparts in the nation as a whole.

In particular, the group with less than a high school education comprises 24.08% of the 25-64 year old population, is suffering a 17.18% unemployment rate, and is being paid 84.74% of what persons of the same age and education attainment categories are earning nationwide (Excel rows 21, 29-30). High school graduates do better, but are still facing higher unemployment (10.37% compared to 7.16%) and earning lower wages than their counterparts nationwide (89.73% of the national median earnings for high school graduates, Excel rows 33-34).



Data on persons whose education includes at least some college is found further down the table. These data are shown in Figure 57 (data in some rows are hidden to better display both the relevant data and the column headings).

4 3	A D	C	D	E	7	G	H
5	Define Comporison:	Target: Target turisdiction	Reference: NATION		KEY Higher Much Higher		
-					Much Lower		
1	<ul> <li>Select Characteristics</li> </ul>	Result	Target Jurisdiction	Reference Geography 1	Reference Geography 3 (State)	NATION	Denominator
2	Characteristics by Age Group						
9	Ages 25-64: Population		- Contract			and the	
9	Some College		31.97%	33.88%	29.55%	29.46%	Total population ages 25-64
4	Bachelor's or higher	Much Lower	21.00%	16.07%	50.90%	29.50%	Total population ages 25-64
5	<ul> <li>Unemployment</li> </ul>	it for ages 16-24					
6	Characteristics by Education				· · · · · · · · · · · · · · · · · · ·		
5	Some College: Population						
6	Percent in Labor Force		79.89%	77.28%	78.38%	80,44%	Population with some college ages 25-64
7	Unemployment Rate		7.65%	6.54%	6.36%	5.55%	Population with some college in the labor force, ages 25-64
8	Median Earnings	lower	93.545	80.95%	112.10%	100.00%	
81	BA/BS or more: Population	A 18-099715	3	1000000		and the second sec	
8	Percent in Labor Force		86.54%	84,28%	84.55%	85.45%	Population with BA/BS or more, ages 25-64
3	Unemployment Rate		3.35N	4.09%	3.85%	3.08%	Population with BA/BS or more, in the labor force, ages
2	Median Earnings (Bachelor's Degree)		99.31%	97.84%	112.43%	100.00%	
	Median Earnings (Graduate o Professional Degree)	¢.	104.17%	105.32%	118.35%	100.00%	

**Figure 57: Employment and earnings for persons with at least some college.** As educational levels increase, residents of the Target Jurisdiction begin to more closely resemble their nationwide counterparts in terms of employment and earnings. At the highest level of educational attainment, median earnings are actually *higher* than the nation as a whole.

The Target Jurisdiction has a much lower percentage of college graduates (21% compared with 29.5% nationwide, Excel row 24). But while those with some college in the Target Jurisdiction earn 93.34% of what their counterparts earn nationwide, persons with a bachelor's degree draw even, and those with a graduate or professional degree earn *more* than the national median for persons of a similar education level (Excel rows 38, 42-43). In addition, this is the only educational attainment level in which the unemployment rate in the Target Jurisdiction approaches the national average.

This wide disparity in income between those with some college and those with a graduate or professional degree may suggest that the economy in the Target Jurisdiction places a higher-than-typical premium on an advanced degree; indeed, it may have a shortage of persons with advanced degrees and must pay more to attract them. This could be evidence of long term difficulty in retaining or attracting talent (however, note that wages in the state are also very high for persons with advanced degrees, and although these persons in the Target Jurisdiction close this gap slightly, they still have earnings less than the state median for their counterparts with the same level of education).

Similarly, while it is not surprising that as educational attainment increases the likelihood of unemployment decreases, local planners may be interested to discover that in the Target Jurisdiction:

- there is a greater proportion of persons with lower educational attainment than in the nation as a whole;
- the unemployment rate is higher for persons with less than a college degree than among their counterparts nationwide; and

- generally, persons without a college degree are paid less than their counterparts nationwide; but-
- this disparity decreases with each level of increased educational attainment.

The data in Stage 1 demonstrated that conditions of high unemployment, low median income, and low educational attainment suggest that many households have members who are struggling to find work and are vulnerable to economic stress. These data further suggest that young people may lack access to affordable post-secondary education, or that they may be leaving the community.

Further analysis in Stage 2 suggests that the burdens of high unemployment and low earnings are impacting those with less than a high school education most, and that incremental increases in education—from a high school diploma, to some college, to a bachelor's, and a graduate degree—results in a narrowing of the gap between residents of the Target Jurisdiction and the nation as a whole.

Grantees will need to place these observations in the context of their knowledge of local market conditions to plan specific strategies that can provide greater economic opportunity for low- and moderate-income residents. For example, strategies might include identifying and attracting low-skill jobs or expanding the range of affordable educational opportunities for persons in school, including high school completion alternatives and vocational education tied to opportunities in the local market. Similarly, if local knowledge confirms the data-based conclusion that there is a shortage of skilled professionals in the local market, the grantee may want to develop strategies to attract and retain young talent.

Grantees can then use the thresholds suggested in Stage 3 to create maps indicating where conditions of high unemployment and low income are most prevalent, to guide the siting of appropriate economic development activities.

# Jacob Bar Charles

### **STAGE 3: ISSUE LOCATION**

Upon completing Stages 1 and 2 of the Economic Development Tool, users will have a good understanding of how employment, educational attainment, and income issues affect the jurisdiction, as well as which age groups are most affected. Based on the comparisons with reference geographies, grantees will also have a sense of which problems are likely to be larger in scope than their target geography. However, it is important to consider the spatial relationship among the different economic development issues affecting the jurisdiction. For example, populations with a lower educational attainment and low household income may occur together or separately, and each issue may be geographically clustered or spread out.

Similar to Stage 3 of the Housing Tool, Issue Location in the Economic Development Tool allows the user to identify where in the jurisdiction unemployment, educational attainment, and income issues are most severe by providing a starting point for using the Map Query and widget in CPD Maps to further analyze these variables.

Mapping is a powerful tool for planning. Grantees can choose to visualize data for issues of interests at any one of several geographic levels, down to detailed examination at the census tract level for neighborhood scale analysis. State grantees may want to explore the distribution of issues at larger geographic levels; including cities, county subdivisions, and counties—to understand how regional issues are related to differences in housing and economic conditions across a broad mix of urban and rural areas. The Housing Tool's Issue Location stage can help all types of users to identify whether problems are geographically clustered, which can assist with prioritizing limited resources. Issue Location can also help users address Consolidated Plan requirements to describe areas of low-income concentration within the jurisdiction.

#### **USING ISSUE LOCATION**

The Issue Location table provides a starting point for setting the search criteria in the Map Query widget in CPD Maps based upon the criteria results from Stages 1 and 2 (Figure 58). For example, recall that in the Issue Identification discussion, an initial comparison found that high unemployment, a low median income, and lower educational attainment were issues in the target geography. The Issue Characterization Stage then further clarified these issues within the jurisdiction, identifying a high percentage of persons with less than a high school education among both age groups, as well as a "Much Higher" rate of unemployment and "Much Lower" median earnings among persons with less than a high school education.

This Guide will now examine these issues using Issue Location by mapping the occurrence of these problems *within* the target geography by census tract using CPD Maps. To help set threshold amounts in the Map Query widget, the Issue Location tab provides recommended values based on comparisons with national data as well as values based on comparisons with pre-selected reference geographies. These threshold values can also be fine-tuned based on results from the initial recommended values and local knowledge of the jurisdiction.

The Issue Location table displays a "Recommended Threshold" value (generated from comparison with national values) for mapping the percentage of unemployed persons with less than a High School education as "Higher Than 20.26%" (row 13, columns C and D in Figure 58). Additionally, a "Custom Reference" drop-down menu [set to "Reference Geography 3 (State)"] displays a recommended "Secondary Threshold" value for mapping unemployment among persons with less than a high school education based on a comparison of the target jurisdiction to the selected custom reference geography. In this instance, the "Secondary Threshold" is generated by the state's values. The secondary threshold value is "Higher Than 20.75%" (row 13, columns F and G in Figure 58).

A	В	С	D	E	F	G
Stage 3:	Issue Location					
This stage links th enter in the Map CPD Maps, so you determine which neighborhoods w	he analysis in Stages 1 and 2 back to C Query Widget. You can look at up to a can use the Issue Identification and a variables to look at and use the thre where the issue is concentrated.	PD Maps by providing gu three variables in the Ma Characterization in the p sholds in this Stage to se	idance on valu ap Query Widge previous Stages e the areas or	es to et in to		
Jurisdiction: Target Jurisdictio	n Default Reference: NATION	Custom Reference: Reference Geography 3 (State)				
Issue	Querrien	Perommonded	rashold		Secondary Thr	shold
AGE	% are 16-24 unemployed	Higher than	4,14%		Higher than	4.129
	% age 25 64 unemployed	Higher than	8.38%		Higher than	8.089
EDUCATION	% unemployed with less than HS	Higher than	20.26%		Higher than	20.75%
	% unemployed with HS or equiv.	Higher than	11.98%		Higher than	11.569
	% unemployed with some college	Higher than	8.70%		Higher than	8.30%
	% unemployed with BA/BS or more	Higher than	3.48%		Higher than	3.60%
INCOME	Median household income	Lower than	\$38,842		Lower than	\$34,358

**Figure 58.** The Issue Location table. The table provides recommended values for mapping identified issues using the Map Query widget. Circled in red, the Jurisdiction is set to "Target Jurisdiction" and the Custom Reference is set to the state. The Recommended and Secondary Threshold values for the "% unemployed with less than HS" issue are 20.26% and 20.75%, respectively.

Threshold values from the Issue Location table can then be entered into the Map Query widget a in CPD Maps. The Map Query widget allows users to select up to three variables and set criteria for these data. The Issue location tab provides recommended threshold values for variables from the Economic

**Tip:** Map Query allows multiple (up to three) variables to be queried at one time. This is illustrated in Figures 59-60.

Development Toolkit (Figures 58 and 59). As the number of variables entered into the Map Query widget a in CPD Maps increases, the total number of geographies returned by the query will decrease.

Before opening the Map Query widget a in CPD Maps, use the Grantee Selection Field search box to select the grantee jurisdiction that corresponds to the study area. This step allows users to query by census tract, limits the data displayed to the selected grantee jurisdiction, and improves the map responsiveness. To learn more about using the Grantee Selection Field search box, refer to the <u>CPD</u>



<u>Maps Desk Guide</u> for detailed use instructions. Once the grantee jurisdiction is selected, open the Map Query widget and select "Grantee Jurisdiction" as the area to query in the first dialog box.

The Map Query dialog box also presents options for selecting a geographic type that will serve as the basic unit for displaying the variables that exceed the recommended thresholds. The geographic types available include tract, place, county subdivision, county, and state. This example displays census tracts that exceed the recommended overcrowding threshold values. Select "Tract" and click "Next." The next dialog prompts the user to select up to three variables to map. In this case, examine two variables to look at household income (median income in the past 12 months) and unemployment by age (percentage unemployed with less than a high school education).

Map Query - Choose Up To Three Variables	×
Current grantee: FRESNO - CDBG	
Educational Attainment by employment status	*
% employed with less than high school	
% employed with high school graduate (or equivalent)	
% employed with some college or Associate's degree	
% employed with a Bachelor's degree or higher	
✓ I with less than high school	
% unemployed with high school graduate (or equivalent)	
% unemployed with some college or Associate's degree	
% unemployed with a Bachelor's degree or higher	
Employment (Tract Only)	_
Change in Total Jobs	=
Change in Agriculture, Mining, Oil and Gas Extraction	
Change in Construction	
	*
Help Export Back Next F	-inish

**Figure 59.** Using the Map Query widget dialog to select issue variables for mapping. Up to three variables can be selected and mapped together. In this case, the variable "% unemployed with less than high school" has been selected from the "Educational Attainment by employment status" menu heading and the variable "Median Household Income in the past 12 months" has been selected from the "Demographic - Summary Information" menu heading (not visible).

The final stage of Issue Location mapping involves entering the recommended threshold values produced by the Issue Location table into the Map Query widget (Figure 60). The Issue Location table tells users whether to enter the recommended threshold criteria in the "Minimum" or the "Maximum" field by indicating "Higher than" or "Lower than", respectively, next to the recommended value (Figure 58). In this case, the Issue Location table has recommended a "Higher Than" threshold value of 20.26% for the "% unemployed with less than high school" variable. The value is entered into the "Minimum" value field in the Map Query dialog and a "Lower Than" threshold value of \$38,842 is entered for the "Median household income in the past 12 months" variable, which is then entered in the "Maximum" value field (Figure 60). The "Result Count: 49 out of 100" in the lower left corner of the window indicates



that 49 of the 100 census tracts in the target jurisdiction meet *both* of the selection criteria. Clicking the "Finish" button displays a list of all tracts matching the threshold criteria and maps all of the tracts, which appear highlighted in green on the map display (Figure 61).

Map Query - Select Min/Max For Each Variable	×
Current grantee: FRESNO - CDBG	
% unemployed with less than high school 20.26 - 100	*
0	100
Median Household Income in the past 12 months: 11,001	2
11,001	141,750
Result count: 49 out of 123	
Help Export Back	Next Finish

Figure 60. Threshold values from the Issue Location stage are entered into the Map Query Widget for variables to be mapped. In this case, the recommended threshold value for "% unemployed with less than high school" of 20.26% is entered in the minimum value field and the recommended threshold value of \$38,842 for the "Median household income in the past 12 months" variable is entered in the "Maximum" value field.



**Figure 61.** Mapping all of the tracts within a target jurisdiction that meet the threshold values supplied by the Issue Location table. In the Figure, the target jurisdiction is highlighted in black and the census tracts that exceed the threshold values for the variables "Median household income in the past 12 months" and "% unemployed with less than high school" recommended by the Issue Location tool are highlighted in green.

The results of the Map Query identified 49 census tracts with *both* a higher number of unemployed persons with less than a high school education and a lower household income, as compared with the nation. The results help to narrow down the most severely affected areas within the jurisdiction, but some additional information may make it possible to further narrow the results. To examine additional economic

**Tip:** Depending on the variable and threshold level, grantees may want to further refine the map query data levels to display a smaller number of matching geographies or use multiple query variables, as displayed in Figure 60.

development characteristics for the identified tracts, users can supplement the information presented in Figure 61 by using the Map Selection 🐲 tool to overlay additional information about unemployment and job availability.

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Figure 62. Displaying the change in total jobs using the Map Selection tool. The user may add supplementary data to the Issue Location maps to depict a wide variety of available spatial data.

Open the Map Selection 🐗 tool, and select Change in Total Jobs" from the Community Indicators menu (Figure 62). The absolute change in total job numbers for all census tracts is displayed along with the Issue Location data on education and unemployment for persons with less than a high school education (Figure 63). The Map Selection 🐗 tool can provide many additional economic, demographic, and other types of spatial data to help users understand the issues mapped using Issue Location and the Map Query Widget 🔍. Additional data available include the change in jobs by employment categories, the percentage of unemployment, and other factors that are important to consider in the discussion of economic development problems and meeting economic opportunity goals in the Consolidated Plan.

**Note:** It is important to understand the CPD maps "Map Selection" variables (Figure 62) that reference a "Change in..." some variable over time measure change from the decennial Census value to a more recent 5-year estimate. Interpreting these change variables can be complicated because the decennial Census value represents a single point-in-time estimate while the ACS 5-year data represent an average value over a 5-year time frame. When using these change variables, keep in mind that the ACS 5-year estimates for the recent past represent an average of both the *fastest* and *slowest* periods of economic growth during the last decade.



Figure 63. Census tracts experiencing high unemployment and low household income among persons with less than a high school education are overlaid with data for all tracts showing the change in total jobs. In the map the target jurisdiction is outlined in black, the data on unemployment by educational attainment and household income are highlighted in green, and the tracts within the target jurisdiction with the largest number of jobs lost are circled in red.

Figure 63 shows that three tracts within the jurisdiction that are losing a large number of jobs. Overall job gain/loss within the jurisdiction is mixed, but over half of the identified tracts with high unemployment and low household income are experiencing job loss. The beige color indicates that between -500 and zero total jobs have been lost within the identified tracts. One tract in particular, highlighted in purple and circled in red on the map, has lost more than 1,000 jobs. The data on total job gains/loss suggest that the areas circled in red are experiencing a severe employment crisis, and persons with low educational attainment may be affected in greater proportion than those with higher educational attainment.

The Map Selection  $\ll$  tool can provide additional information to help users understand the patterns of unemployment issues affecting their jurisdiction. Selecting the "Change in Population Age 18-24" from the Community Indicators -> Demographic -> General drop-down menu of the Map Selection  $\ll$  tool can help to illustrate how younger populations are shifting as a result of changing employment factors in the jurisdiction (Figure 64).



Figure 64. Census tracts experiencing high unemployment and low household income among persons with less than a high school education are overlaid with data for all tracts on the change in population ages 18-24. In the map the target jurisdiction is outlined in black, the data on unemployment by educational attainment and household income are highlighted in green, and the tracts within the target jurisdiction with out-migration of 18-24 persons are highlighted in shades of purple.

Figure 64 shows that 14 out of 49 census tracts identified by the Issue Location criteria are losing persons between the ages of 18-24, including the three census tracts identified in Figure 63 as having the greatest number of jobs lost. Recall from the Stage 2 analysis that over 22% of the 18-24 year old population within the jurisdiction has less than a high school education. Although there are many reasons why people move, high unemployment and low wages may be responsible for out-migration of younger age adults from the areas experiencing high unemployment. Considered together, these data suggests that out-migration affects a greater proportion of 18-24 year olds with lower educational attainment. The out-migration of young people from the jurisdiction is potentially a cause for alarm, as these people represent the future of the jurisdiction's labor force.



### **APPENDIX: GLOSSARY OF TERMS**

**Average Commute Time:** Commute time refers to the total number of minutes that it usually took the person to get from home to work each day during the reference survey week. The elapsed time includes time spent waiting for public transportation, picking up passengers in carpools, and time spent in other activities related to getting to work.¹

**CPD Maps:** A module of the eCon Planning Suite that provides data for the Economic Development Toolkit. Additionally, the thresholds in Stage 3 can be used to create thematic maps of the community that communicate economic conditions and support future planning. Click on the following link to access: <u>http://egis.hud.gov/cpdmaps/</u>. CPD Maps is available to the general public (i.e., IDIS access is not required). For more information see:

#### http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/about/conplan/cpdmaps

**Discouraged workers:** A subset of marginally attached workers not in the labor force who want and are available for a job and who have looked for work sometime in the past 12 months (or since the end of their last job if they held one within the past 12 months), but who are not currently looking for employment due to one (or more) of four reasons; they believe no job is available to them in their line of work or area, they had previously been unable to find work, they lack the necessary schooling, training, skills, or experience or, employers think they are too young or too old, or they face some other type of discrimination.^{2,3}

**Educational attainment:** Educational attainment refers to the highest level of education that an individual has completed. This is distinct from the level of schooling that an individual is currently attending.⁴

**Employed persons:** Persons 16 years and over in the civilian labor force who, during the reference week, (a) did any work at all (at least 1 hour) as paid employees; worked in their own business, profession, or on their own farm, or worked 15 hours or more as unpaid workers in an enterprise operated by a member of the family; and (b) all those who were not working but who had jobs or businesses from which they were temporarily absent because of vacation, illness, maternity or paternity leave, labor-management dispute, job training, or other family or personal reasons, whether or not they were paid for the time off or were seeking other jobs. Each employed person is counted only once, even if he or she holds more than one job.²

**Issue Characterization:** Stage 2 of the Economic Development Toolkit, in which variables in Stage 1 are further broken out to allow grantees to explore issues in more depth by providing expanded detail for the population by age, income, educational attainment, and employment status.

**Issue Identification:** Stage 1 of the Economic Development Toolkit, which makes comparisons between the target geography and one or more reference geographies and evaluates them for their degree of variance to identify issues of concern.

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**Issue Location:** Stage 3 of the Economic Development Tool allows users to further characterize where in the jurisdiction unemployment, educational attainment, and income issues are most severe by providing a starting point for using the Map Query a widget in CPD Maps to analyze these variables further.

**Labor Force Participation Rate:** The labor force as a percent of the civilian non-institutional population. The civilian labor force is the sum of both employed and unemployed persons in the target and reference geographies, excluding institutional or incarcerated persons. The civilian labor force excludes persons who have no job and are not looking for one, such as full-time students, retired persons, family members taking care of children or other dependents, as well as persons who have stopped actively seeking work (officially termed *marginally attached workers*).²

**Map Query (CPD Maps):** The Map Query and widget enables users of CPD Maps to identify census tracts in the community where multiple conditions exist (e.g., high unemployment, low income, and long commute times).

**Marginally attached workers:** Persons not in the labor force who want and are available for work, and who have looked for a job sometime in the prior 12 months (or since the end of their last job if they held one within the past 12 months), but were not counted as unemployed because they had not searched for work in the 4 weeks preceding the survey. Discouraged workers are a subset of the marginally attached workers who have not looked for work in the prior 12 months preceding the survey for one (or more) specific reasons (see discouraged workers).²

**Median Household Income:** Median Household income includes the income of the head of household and all other individuals 15 years old and over in the household, whether they are related to the head of household or not. The median divides the income distribution into two equal parts: one-half of the cases falling below the median income and one-half above the median. For households and families, the median income is based on the distribution of the total number of households and families including those with no income.¹

**Unemployed persons:** Persons aged 16 years and older who had no employment during the current survey period, were available for work, except for temporary illness, and had made specific efforts to find employment sometime during the 4 week period ending with the current survey period. Persons who were waiting to be recalled to a job from which they had been laid off need not have been looking for work to be classified as unemployed.²

**Unemployment rate:** The unemployment rate represents the number unemployed as a percent of the labor force.²

¹Definitions adapted from, http://quickfacts.census.gov/qfd/states/00000.html

²Definitions adapted from, http://www.bls.gov/bls/glossary.htm

³http://www.bls.gov/cps/cps_htgm.htm

⁴http://www.census.gov/people/