



Measures and Metrics for a WWRP Program Match Reduction or Waiver Policy for Underserved Populations and Communities in Need

December 9, 2016

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PROJECT SUMMARY

Measures and Metrics for a WWRP Program Match Reduction or Waiver Policy for Underserved Populations and Communities in Need

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WSU-SESRC was retained to assist the Recreation and Conservation Office to identify and report on potential options for criteria and metrics that may identify an “underserved population” and a “community in need.” This report contains the results of the analysis of potential measures related to those terms that could be used as a basis for defining waiver eligibility by applicants to the Washington Wildlife and Recreation Program (WWRP).

The report is based on an extensive reviews of available research, data/program information and websites, including personal interviews with federal and state-level agencies, parks and recreation association and organization research, grant and program directors, and staff. The report includes an analytical summary matrix depicting the key measures, descriptions, pro-con attributes, and other details for each measure under consideration.

The conclusion section summarizes recommended data sources and measures. Appendices are included containing details on selected measures and related reference information, and a list of organizations and staff consulted for this project.

INTRODUCTION

The Recreation and Conservation Office (RCO) is working to implement the provisions of newly codified RCW 79A.15.070, which describes the match requirements for applicants receiving Local Parks, Trails, and Water Access grants in the Washington Wildlife and Recreation Program (WWRP).

Following a [published review](#) of the Washington Wildlife and Recreation Program ([WWRP](#)), the governor signed [Substitute Senate Bill 6227](#) (SSB 6227) in the spring of 2016. SSB 6227 added the underlined statement to the existing [WWRP Revised Code of Washington \(RCWs\)](#)¹:

“(4) The board may not approve a project of a local agency where the share contributed by the local agency is less than the amount to be awarded from the outdoor recreation account. The local agency's share may be reduced or waived if the project meets the needs of an underserved population or a community in need, as defined by the board.”²

The terms *underserved population* and *community in need* are statutorily undefined.

RCO staff will meet with a stakeholder work group (“WWRP Match Waiver Work Group”) quarterly starting in the fall of 2016, and Recreation and Conservation Office Staff is expected to recommend a WWRP waiver or reduction policy for the Recreation and Conservation Funding Board (RCFB) to consider by the end of 2017.

Defining Terms

The Legislature did not define the meaning of “underserved population” and a “community in need.” In addition to definition, the bill also left open what evidence and measures should be used as the basis for potential waiver criteria. Typical definitional content and measures relevant to each term is summarized below.

UNDERSERVED POPULATIONS

This term generally refers to groups of individuals who have not been adequately served in some regard, compared to the population at large, whether due to characteristics of the group,

¹ RCW 79A.15

² Substitute Senate Bill 6227, Sec 7(4), Rows 15-20, p12

or circumstances that lead to unequal treatment or access to (and availability of) certain resources or services. For public program eligibility and resource allocation decisions, the choice of variables and measures used depends heavily on the purposes of the program (i.e., housing, health care, parks and recreation, employment, etc.).

In general, where the focus is on specific groups, the underserved are typically described in relation to certain economic and demographic characteristics, including measures related to: Income (typically low-income), Poverty Status (high), Race/Ethnicity (minorities), Age (young/old), Gender (women and single parents), Homelessness (status), Disability (physical and mental), and Educational Attainment (level). Measures such as lack of health care or other insurance, and housing are sometimes included. Research shows that the greatest disparities in distribution and park access exist across urban, suburban and rural communities for low-income populations and some racial/ethnic minority populations.³

COMMUNITIES IN NEED

The same rationale can apply to the definition of groups of individuals (communities) that collectively have not been adequately served. The demographic measures noted above can also be applied to entire communities, where such data are available. The primary difference is that geography is the lead or distinguishing factor, intended to identify the economic or demographic characteristics of a defined geographic area or sub-area. In this sense, 'need' might be defined through specific measures (income, poverty, race/ethnicity, etc.) as they relate to identified geographical units, such as states, counties, urban/rural areas, cities or neighborhoods, Census tracts or blockgroups, for instance, in relation to some comparative benchmark (i.e., the average or median value for that geographic unit).

PARK NEED AND DEFICIENCY

Both underserved populations and communities in need can be associated directly with measures that relate to the availability of parks and recreation facilities, and this connection is implied in the new language included in SSB 6227. Thus, an important consideration in determining the WWRP reduction or waiver policy is whether and how to include measures that relate to park need and deficiency. The [National Recreation and Park Association](#) (NRPA) suggests that a park system, at a minimum, be composed of a 'core' system of park

³ Chona, S., Wolch, J. & Wilson, J. (2010). Got green? Addressing environmental justice in park provision. *Geojournal*, 75(3): 229-248.

lands, with a total of 6.25 to 10.5 acres of developed open space per 1,000 population. This general range offers a useful baseline for planning purposes, however it must be adapted by individual park and recreation organizations as it does not take into account the specific mix of facilities, the variations in the types of park or open space available in a community, the condition of park facilities, the specific parkland needs of the population, nor the demographic characteristics or trends of the population or communities being served.

Data and Measurement Challenges

Many of the research and program managers consulted for this project reported that they routinely rely on primary information provided by applicants, who may also include secondary data available through existing government data systems.⁴ Most expressed the need to continue to shift even more toward a data-driven foundation to enhance their ability to more consistently define and determine program eligibility, project criteria, and for evaluation. Many respondents reported that while they and their organizations are continuing to develop their capacity to add or integrate new metrics and external data sources, most are moving forward incrementally, due to resource constraints, program changes or other factors.

Among the advantages of primary data requested of applicants is that it can be tied directly to the criteria and objectives required by specific programs. These data are typically more current than data that may be derived from existing secondary sources, which is usually not real-time and can lag recent changes in communities, including socioeconomic and demographic shifts. Many local primary data sources can be readily verified by examination, however more extensive, confidential or proprietary information may require a higher level of administrative review and assessment.

Some important advantages of relying on secondary data (i.e. Census) is that many sources provide a historical context, the best sources are usually systematically collected following some research-based protocol, and in many cases allows for an integrated analysis and comparison of many different variables and trends. As noted above, these data are typically not 'real-time' and many assumptions (judgments) are made regarding definitions, measurement and analysis methods that can differ among sources, making the interpretation and comparison between data sources technically challenging. Incorporating and applying

⁴ For the purposes of this report, 'primary' data refers to data or information that is collected, generated or provided by applicants that is specific to the project application criteria, while 'secondary' data is data collected by a third party organization, agency or individuals for some other research purpose.

secondary data also requires internal expertise and infrastructure to develop and maintain, and these capacities can vary among departments and organizational units.

Finally, there is a growing number of secondary data sources available by topic area, yet most of these data sources and systems are designed for a specific purpose, and secondary users of these data must consider whether and how these data can be adapted for their needs; users are limited to that which is collected and which followed the specific data definitions and collection protocols provided in the initial design. Secondary data systems also vary in the quality of the measures (validity, reliability and measurement error). Thus, it may be that some available measures and data are not well-suited for some purposes, or they can contribute to the needs of secondary users, but in a limited way.

ANALYSIS SUMMARY

Since the language contained in SSB 6227 left the responsibility of defining the terms *underserved population* and *community in need* to the RCFB, there exists some flexibility to determine whether the language and measures described in the waiver policy should include:

1. Criteria regarding the need for park lands and facilities
2. Measures of the demographics and socioeconomic characteristics of the populations and communities served by a proposed project.
3. Related measures, as determined by the board.

It is also useful to recognize the underlying intent of the modifications to the RCW through SSB 6227 regarding match reductions or waivers, which appears to be twofold:

1. To allow financial relief from the match requirement for applicants for whom park lands and facilities are inadequate to serve the surrounding population (who are 'park-deficient'), and;
2. That certain characteristics of the individuals and communities served by the project lend them to be underserved and/or financially challenged such that they be unable to meet the match requirements.

This clarification is important as it forms the basis for the selection of measures to be used in evaluating applicants' match reduction or waiver requests. Going forward, a related clarification may be needed regarding the priorities ascribed to the statements of intent as well as the selected measures.

Park Need and Deficiency

One central feature of park and recreation facility need is determining a method to estimate the service area surrounding a proposed or existing park. Defining a service area also helps to identify likely users of park facilities and helps define boundaries within which the demographic characteristics of the population can be assessed. The wide variety of park definitions, facility types and conditions inherent in different parks and recreation jurisdictions and service areas can influence who actually uses park facilities.

Similar measures of park need and deficiency were identified by staff from all parks and recreation staff consulted through this report, and they are relevant for consideration as among the criteria for the match waiver or reduction policy. Perhaps the most commonly-cited approach is to consider adapting the existing National Recreation and Park Association (NRPA)

standard of 6.25 to 10.5 acres of developed open space per 1,000 population as a starting point for the purposes of identifying project match reduction or waiver eligibility. As noted above, there are many limitations to the original national standard, especially when considering the wide variety of definitions, facility types and conditions inherent in different parks and recreation jurisdictions and service areas.⁵ Reliance on some adaptation of the national standard does, however, carries several advantages, including that the standard is based on extensive expert analysis and agreement on the parameters based on empirical and qualitative data. Also, the national standard appears to have been widely applied and accepted as the formal or *de facto* benchmark, adapted for use by many states, agencies and park districts. NRPA staff reported that while they recognize that this is an imperfect measure that can vary depending on the specific project, they sought to identify a common yardstick that was already well accepted, that their stakeholders agreed made sense, and which helped reinforce the use of common criteria. Today there is no published acreage standard in the U.S., and NRPA encourages communities to develop their own level of service standards to meet the specific needs of their communities and residents.⁶

Some states, such as California, have further adapted the standard to target what they identify as high-priority areas, which include communities in which there are less than 3 acres of parkland per thousand people, which the state defines as a ‘critical lack of park space’ (Prioritization also incorporates income and poverty measures for that service area, discussed below).

Some definitions used to denote park access, while similar, are more refined than others. The Trust for Public Land’s (TPL) Parkscore index program, for instance, measures how well the 100 largest U.S. cities are meeting the need for parks. Their system relies on a composite measure that assesses park acreage, facilities and investment, and access by the population to arrive at a total Parkscore measure.⁷ The access variable measures the percentage of the population

⁵ These measures are often characterized separately in the literature and in practice as Level of Service standards by acres per capita (amount and distribution of park land), and by facilities per capita (number and distribution of facilities).

⁶ For a thoughtful review of level of service definitions, metrics and alternative measures, see Barth, D. (2016). *Alternatives for Determining Parks and Recreation Level of Service* (May). American Planning Association: <https://www.planning.org/pas/memo/2016/may/>

⁷ See: <http://parkscore.tpl.org/methodology.php>. Barth (2016) notes that there has been a growing trend away from outdated standards and toward development of benchmarking efforts that are used to compare park and recreation systems internally and against other systems across the country, such as TPL’s Parkscores and NRPA’s Parks and Recreation Operating Ratio and GIS (PRORAGIS) system.

living within a ten minute walk (1/2 mile) of a public park.⁸ Their methodology assesses park need using GIS mapping technology for a defined area. Unlike California’s GIS-based system, which defines potential park need using simple geographic radius coordinates (as the crow flies), the TPL approach employs a half-mile (ten minute walk) definition that accounts for barriers to access that is reportedly “entirely within the public road network and uninterrupted by physical barriers such as highways, train tracks, rivers, and fences.”⁹

Some additional examples:

- The California State Park and Recreation Commission established their GIS-based system to integrate several related variables, including measures of park need/deficiency (less than 3 acres per thousand), a half-mile radius access/service area measure, and select demographic characteristics of the service population.¹⁰
- The County of Los Angeles conducted a large scale parks need assessment, which led them to develop a web map interface that allow staff and the public to analyze study area details while also considering five different categories of park and population metrics.¹¹
- The City of San Francisco recently issued a new (2016) city charter which required the city’s parks and recreation department develop equity metrics to determine as a baseline of existing recreation and park services and resources in low-income neighborhoods and disadvantaged communities, and to identify “equity zones” for new development or improvements. Staff reviewed options and conducted an intense public input process, then recommended a GIS-based system of demographic, pollution and health-related data already compiled by a department within the California Environmental Protection Agency.¹² The short timeline to complete the baseline (less

⁸ See: http://parkscore.tpl.org/Methodology/TPL_10MinWalk.pdf. The TPL also cites research showing that among the 100 largest cities in the U.S., 70 have explicit distance goals, and 61 percent of those (43) use the half-mile standard. Twelve others have a standard of less than a half-mile.

⁹ See: <http://parkscore.tpl.org/methodology.php>

¹⁰ California has more than one GIS-driven mapping system, and they do not all use the same specific demographic variables. Most report some form of population, income and/or poverty status (U.S. Census), and employment/unemployment data to guide development of park projects.

¹¹ See: <http://www.greeninfo.org/work/project/public-access-to-park-needs-data>. Both the California State Park and Recreation Commission and Los Angeles County retained GreenInfo to develop their GIS-based web system to incorporate relevant data, maps and analytical capabilities. The system designed for Los Angeles County began in 2016 and uses 30 different data sets, including existing data on area pollution exposure, health, and ability to access parks and recreation.

¹² See: <http://sfrecpark.org/wp-content/uploads/Equity-Metrics-Sept-2016-004.pdf>. Going forward, one potential challenge is that CalEPA plans to change and upgrade its data system to a new version, and it is not evident what

than six months) compelled staff to readily adopt the CalEPA data and select the metrics and measures it provided, in part because they were already being used by local communities for other purposes.¹³ The mapping tool identifies as Equity Zones those tracts that are ranked with the highest 20% incidence of age (youth & seniors), asthma, low birth weight, low education levels, linguistic isolation, poverty and unemployment, when compared to the city as a whole.

Population and Demographic Data: The U.S. Census

Conversations with program staff at both parks and recreation and non-parks agencies and reviews of relevant documents show that most federal and state programs that use benchmark population/demographic data as the basis for program eligibility or award decisions rely on a small number of key measures (i.e. median household income, poverty rates/ratios, etc.). Few respondents reported relying on composite indexes comprising multiple measures, or other combinations of multiple metrics, mainly because they can be technically complicated and difficult to apply. One respondent (HUD), for example, described how the political process has led to increasing the number of measures in an attempt to be more inclusive, with the unintended consequence of complicating the allocation process, making it more difficult to manage and explain, and increasing challenges to allocation decisions.

Data from the U.S. Census is the most commonly-applied data source used for identifying and characterizing underserved populations and communities in need, and serves as the standard for the purposes of administering the allocation of governmental programs and services to those targeted groups. The Census provides data through several large data collection and analysis programs, including the **Current Population Survey (CPS)**, which is the Census' longest-running survey, and which covers a wide range of demographic, social, economic and cultural topics. Data from the CPS is the basis for several key measures including poverty.

Although the CPS has a long history and is well-regarded, the **American Community Survey (ACS)** was most frequently cited by federal and state agencies as the foundational data source for several key measures, including income, employment, race/ethnicity, and several other

effect, if any, this may have on its use to identify equity zones for the city. See CalEPA's CalEnviroScreen: <http://oehha.ca.gov/calenviroscreen>.

¹³ Staff also conducted a comprehensive review of existing parks and facilities, visiting and rating each facility to identify its condition and status in each neighborhood, which they used to establish park scores as a supplement the CalEPA measures.

variables that are related to underserved populations and communities in need.¹⁴ Although interviewees stressed that Census data is not perfect (there are concerns about sample sizes and measurement error, especially at sub-national levels of analysis) however it is deemed the most comprehensive and reliable source available. For sub-national analyses and government eligibility and resource allocation purposes, the ACS is viewed as the best source. Primary reasons why ACS is preferred over the CPS include:

1. It is the largest ongoing data source available (behind CPS), and is regarded as among the most reliable data source of its type.
2. It is more comprehensive than the CPS, containing a wide range of demographic, economic and social/cultural variables. It also contains variables not included in the CPS.
3. Data for many key measures is available at the sub-state and sub-county levels (tracts and blockgroups).¹⁵ In fact, the ACS is the only source of small-area statistics available on a wide range of key social and economic characteristics for all communities in the country. In addition to income, poverty and health insurance, other topics include education, language ability, the foreign-born population, marital status, migration, homeownership, the cost and value of homes, and others. Compared to the CPS, the ACS has a larger sample size, and smaller sample error, which is extremely important when these data are used for sub-level analyses.
4. Comparatively few alternative (comparable) state or sub-state data measures are available that are as reliable as ACS, or as frequently used.
5. While the CPS asks respondents about income in the previous calendar year, the ACS asks respondents about income in a rolling 12-month period throughout the year.
6. Both one-year and five-year (rolling average) data are available through ACS.¹⁶ The five-year data are more reliable than one-year data, especially at the sub-county level (tracts and blockgroups); not all measures are available at the tract or blockgroup level.
7. Most federal and state programs that use ACS and other data as the basis for program eligibility or resource allocation decisions rely on a relatively small number of key measures (i.e. median household income, poverty rates or ratios). Few rely on composite indexes comprising multiple measures because they can be technically complicated and difficult to apply.

¹⁴ See Appendix A for more details on CPS-ACS comparisons and uses.

¹⁵ Blockgroups are subdivisions of a census tract. It is the smallest geographic unit published by the Census. Blockgroups are contained within tracts, but they may cross county lines, voting districts, economic zones, postal codes, and other defined areas.

¹⁶ The U.S. Census recently discontinued its 3-year ACS program in 2015 due to federal budget cuts. Estimates for 2011-2013 and earlier are still available but no new 3-year estimates will be produced.

Primary Measures and Metrics for Consideration

Interviews and consultation with a range of state and federal agencies, research and program staffs were conducted to determine the types of measures used to determine program eligibility, allocate resources to qualified individuals or communities, or to evaluate program outcomes (See Appendix B).

The following matrix summarizes the most commonly-mentioned demographic and related measures, and the advantages and disadvantages of each, roughly in the order in which they were mentioned by research and program staffs. The predominant data source recommended by federal and state staff was the U.S. Census, specifically the 5-year ACS because it relies on a larger sample frame and has less measurement error than the one-year data sample.

Additional potential sources were also reviewed and some were also mentioned by respondents. Those sources are also noted below in Figure 1.

Figure 1:
Summary of Potential Demographic Measures for Underserved Populations and Communities in Need

Measure and Source	Summary Description	Pro	Con	Notes
Median Household Income Census-ACS	Middle value of all household incomes	Accounts for all households in an area. Median is more stable measure than mean (average). Data are available at Tract and Blockgroup levels.	All households are weighted the same—persons living alone have the same weight as 5-person families. Median measure does not account for incomes at extreme ends of the distribution	Likely the most widely used and accepted measure of income.
Median Family Income Census-ACS	Middle value of all family household incomes.	Excludes non-family households from the measure. Avoids the apples-and-oranges mixing of family and	Excludes non-family households; does not take into account everybody in the community. Could be very misleading in a	Widely used and accepted measure of income

		<p>non-family HHs. Commonly used as a required measure for governmental programs.</p> <p>Data are available at Tract and Blockgroup levels.</p>	<p>community with a significant non-family-household population. As a median the measure does not take into account incomes at the upper and lower ends of the distribution.</p>	
<p>Average Household Income (mean) Census-ACS</p>	<p>Sum of all household incomes divided by the number of households.</p>	<p>Takes into account all households in an area and is the average income level for the area. Averages are widely-used statistical measures.</p>	<p>The measure weighs all households the same - persons living alone have the same weight as 5-person families. Averages can be distorted by a small number of extreme values, especially at the high end.</p>	<p>Not as widely-used as Median HHI</p>
<p>Average Family Income (mean) Census-ACS</p>	<p>Sum of all the family incomes divided by the number of families.</p>	<p>Excludes those non-family households from the measure. Avoids the apples-and-oranges mixing of family and non-family HHs. Averages are widely-used statistical measures.</p>	<p>Excludes households, so it does not take into account everybody in the community. Could be very misleading in a community with a significant non-family-household population. Averages can be distorted by a small number of extreme values, especially at the high end.</p>	<p>Not as widely used as Median FI</p>
<p>Per Capita Income Census-ACS</p>	<p>Total income reported in the Census divided by the total population</p>	<p>Agencies like the BEA are able to estimate total income without doing a detailed survey and thus can publish PCI estimates. Perception exists that this measure is somehow more "fair" because it counts everybody. Computation is simple.</p>	<p>It ignores the fact that certain people who are counted in the denominator do not have their income included in the numerator (people in institutions, military barracks, etc.) and also makes no allowance for how the people are distributed in households. Example: PCI counts 3</p>	<p>Popular but can be misleading</p>

		Available at Tract and Blockgroup levels.	people each living alone with an income of \$6,000 the same as a 3-person family with an income of \$18,000 (even though the first case involves 3 people classified as poor while the latter has none).	
Poverty Status Census-CPS/ACS	The number and percent of people who fall below the federal poverty line	Poverty status (and poverty rate) is often cited by policymakers, researchers, and advocates who are evaluating social programs and determining eligibility for government spending. Available with breakouts for several demographic and other variables (race/ethnicity, family type, etc.). Available at Tract and Blockgroup levels.	There are several criticisms of the poverty measure: It is based on a methodology developed in the 1960s and now widely recognized as outdated. A frequent criticism is that the official poverty level is too low. Also, it does not measure the depth of economic need (severity) and generally has not kept pace with changes in social and economic behavior and geographic factors, among others. Other technical and methodological concerns have been raised.	Very popular core measure but has technical challenges. Census is experimenting with Supplemental Poverty Measures.
Poverty Ratio: Ratio of Income to Poverty Level Census-ACS	The sum of the poverty ratios of all persons in the poverty universe divided by the number of persons in that universe. May be used to measure the 'depth' of poverty.	The poverty ratio may be the single best measure of a person's economic well-being. . It takes into account income (including the income of the person's entire household) and also the structure of the person's household, as built into the poverty threshold tables. Taking the average of these numbers could be the	See above	

		<p>best measure of a community as well. It has the additional benefit of being timeless: a mean poverty ratio for a community looked at over a 40-year period would not require any adjustment for inflation: that would already have been factored into the poverty thresholds upon which the poverty ratios are based.</p> <p>Available at Tract and Blockgroup levels.</p>		
<p>Race/Ethnicity Census-ACS</p>	<p>RACE or ETHNICITY: Alone Or In Combination With One Or More Other Races</p>	<p>5-year sample is the most reliable</p> <p>Available to Blockgroup level</p>	<p>Small sample sizes at sub-area level</p>	
<p>Income and Taxes by Postal Zip Code IRS Tax Information¹⁷</p>	<p>IRS tax information,</p>	<p>Administrative data—not sample, includes all who filed return. Contains many related income, deduction and tax variables.</p>	<p>Not available to state agencies (except Dept. of Revenue) for research purposes.</p> <p>Only includes those who filed returns;</p>	<p>Not widely used; interest at federal level (HUD), but still experimental.</p>

¹⁷ Income Tax Return Data by Zip Code are based on individual income tax returns filed with the IRS and are available for Tax Years 1998, 2001, and 2004 through 2014: <https://www.irs.gov/uac/soi-tax-stats-individual-income-tax-statistics-zip-code-data-soi>.

According to OFM staff IRS tax return data by zip code are not available for general use. Washington’s department of Revenue does use these data for financial recording purposes but IRS data are not available to other state agencies. Even OFM reportedly does not currently have access to these data.

		Available overall and by Zip Code	complications due to small business owners.	
Types Of Health Insurance Coverage By Age¹⁸ Census CPS/ACS	Public, Private, or Uninsured	Available to Blockgroup level. No other breakout variables (sex, HH Income, etc.) tied to Health Insurance offer blockgroup-level data.	Supplemental or proxy indicator of low-income, Poverty	
Unemployment WA Employment Security Dept. (ESD), via US Bureau of Labor Statistics (BLS)¹⁹	BLS publishes monthly Local Area Unemployment Statistics (LAUS) for cities with a population of 25K or more. ESD maintains LAUS for counties, and metropolitan statistical areas. ²⁰	Available monthly for cities and by county. Not available at Census Tract or Blockgroup level.	Measures of unemployment are complicated and often not very representative of the population. LAUS have small sample sizes, esp. metro levels.	Measure does not account for unemployed who have given up searching.

¹⁸ For a thoughtful analysis of the relationship between income, poverty and health, see:

<http://poverty.ucdavis.edu/faq/how-does-poverty-relate-health-insurance-coverage>

¹⁹ Every month, the federal Bureau of Labor Statistics (BLS) surveys households to learn whether residents are employed or unemployed and looking for work. The WA-ESD uses these survey data to create local unemployment estimates. These estimates are included in ESD’s [monthly employment report](#).

²⁰ BLS-LAUS: <http://www.bls.gov/la/lauov.htm>. ESD maintains LAUS for counties, and metro statistical areas.: <https://fortress.wa.gov/esd/employmentdata/reports-publications/regional-reports/local-unemployment-statistics>

CONCLUSIONS AND RECOMMENDATIONS

Several key observations and recommendations emerged from this review and analysis of measures that should be considered as the basis for Match Reductions or Waivers under the WWRP:

1. Definitions of Underserved Populations and Communities in Need are both rooted in the idea that certain populations (or communities) have needs that are not adequately served by society, either because they do not have access to certain resources or they are somehow excluded from participating.
2. The designations are not only based upon the inherent attributes of the individuals in the population (such as gender, age, race, ethnicity, etc.), but also a set of circumstances which may cause certain demographic groups to experience greater challenges to participating in, or receiving, resources including parks and recreation facilities.
3. Definitions and strategies used to identify and define park need (or deficiency) appear to be similar and are evolving to include more measures and GIS-based systems and tools.
4. There are many demographic and conditional (environmental) variables that are related to populations that are underserved or communities in need, and the majority of those can be tied directly to measures of income or poverty. Not all measures are available at the blockgroup (sub-tract) level. Some additional examples from the U.S. Census, ACS and other sources that could be considered:²¹
 - Race (esp. African American, Alaska Native/Pacific Islanders are more likely than non-minorities to be in poverty)
 - Ethnicity: Hispanic or Latino Origin (Hispanic/Latino's are more likely than non-minorities to be in poverty).
 - Age (Under age 18, and some groups over age 65, are more likely to be in poverty)
 - Gender (women somewhat more likely than men to be in poverty)
 - Nativity and Citizenship Status (foreign-born, non-citizens are more likely to be in poverty)
 - Disability Status and Type (Disabled are twice as likely to be in poverty)
 - Education attainment (No HS Diploma = much higher poverty than some college or degree)

²¹ See: *U.S. Poverty Statistics*: <http://federalsafetynet.com/us-poverty-statistics.html>

- Family structure (Female householder, and single parents of either gender are more likely than married couple to be in poverty).
 - Work status (Individuals not working or working part time are more likely to be in poverty)
 - Residence (Those living outside metropolitan statistical areas are often more likely to be in poverty)
 - Health: Obesity and other major health conditions (CDC researchers and other health scientists regularly use Census data to link rates of obesity and health problems to individuals and communities in poverty—those who live in poverty-dense counties are most prone to obesity, sedentariness and diabetes).²²
5. Poverty measures are derived directly from income, and measures of income for individuals and groups show a similar relationship to key demographic variables. Similarly, income (and poverty) are related to conditional (environmental) variables, such as health. For underserved populations and communities in need, low levels of income are most often negatively associated with these demographic and environmental variables.
 6. In every instance where agencies and park-related organizations have targeted or incorporated underserved populations or communities in need, income-related measures (especially the U.S. Census) are identified and applied. In weighing which variables and measures to select for the purposes of determining eligibility for (and decisions regarding) WWRP match reductions or waivers, it may be prudent to consider relying on a small number of reliable key income/poverty measures (at least initially), and especially those that are familiar and have been used effectively through experience.

It may seem attractive to select and include a range of variables and measures to determine reduction or waiver eligibility, such as combining one or more demographic variables (i.e., age or race/ethnicity, etc.) with other environmental measures in order to target reduction or waiver eligibility to specific underserved populations and communities in need. While this approach may be technically feasible, the review of data, measures and input from researchers and program staffs suggest that this approach carries certain risks. Depending on the data sources, individual measures often have unique definitional and technical characteristics and measurements, and in some cases these sources may not be readily compared.

²² See: Levine, J. (2011), *Poverty and Obesity in the U.S.* Diabetes (November): 60(11): <http://diabetes.diabetesjournals.org/content/60/11/2667.full>

Combining multiple variables into a composite index or integrated measure, and which may ascribe different weights (priorities) to each variable is technically possible, especially if they come from the same source (i.e. Census-ACS). But index and composite measures are technically complicated and may amplify the amount of statistical error inherent in each measure. As noted by research and program staffs, combined measures are also more difficult to apply and explain, compared to relying on a small number of foundational variables.

7. For the purposes of determining match reduction or waiver eligibility, and to limit the time and investment costs required to construct, maintain and rely on a multi-variate strategy, it is recommended that income-related measures be considered as foundational. Because income is highly-related to many key demographic and environmental variables, it is relevant as a general measure and indicator variable for match reduction or waiver eligibility that incorporates (by association) many of the other measures that might otherwise be used to authorize reductions or waivers for projects aimed at underserved populations and communities in need.
8. The most reliable, relevant and robust measures of income available are those provided through the U.S. Census. Because it provides information at the tract and blockgroup level, data through the Census' American Community Survey (ACS) is especially appropriate; there are no comparable data sources or measures available. Use of ACS data was recommended by all research and program staffs consulted, and its use is consistent with practices now in use by the majority of government programs and services that incorporate measures of income and poverty.
9. Based on the analytical reviews of Census data sources and input from research and program staffs, it appears that Median Household Income (5-year ACS) is probably the most reliable, appropriate and versatile income variable available for the purposes of identifying underserved populations and communities in need and as the primary basis for determining eligibility for WWRP match reductions or waivers. As noted earlier in this report, it is both the most widely-used measure of income, serves as the eligibility basis for many federal and state government programs, and is the only comprehensive data source that provides measures at the sub-county and sub-tract (blockgroup) level.
10. Supplemental measures: There does appear to be a growing interest in incorporating additional measures and data regarding race/ethnicity, and various health indicators for a population that would be served by a proposed park or park facility. Most research and program staffs reported that they have not yet instituted many systematic changes to their criteria for project proposals. Some request new information of applicants, and some provide descriptive information for race, ethnicity and some health indicators as data 'overlays' through their GIS mapping systems, but not as foundational criteria for project applications. Other respondents said they do track these data to determine the

characteristics of park users in order to ascertain how closely users mirror the population the park was intended to serve, and to track changes over time.

- a. Race and Ethnicity: Many racial and ethnic minority groups have lower incomes, higher rates of poverty and other challenging conditions than non-minorities, and inequalities in park access, for instance, often exist alongside socio-demographic indicators.²³ Granting reductions or waivers for park projects in communities with high concentrations of these populations enables park development in financially constrained areas. Not all racial or ethnic minorities or communities are poor, however, and poverty rates among some racial sub-groups (Southeast Asian groups including Hmong, Cambodian, Laotian and Vietnamese, for example) are considerably higher than other groups in the same category.²⁴ These data are often not available at fine levels of disaggregation, and sample sizes at the sub-area level (Census-ACS) are often small.²⁵ The Census also plans to change how it defines and measures race in the near future, thus rather than including race and ethnicity as a foundational measure (like income), it should be determined whether race and ethnicity are more appropriate as supplemental measures for the purpose of granting match reductions or waivers.
- b. Health Indicators: The association between public health and the availability and use of parks has been well established, yet feedback from research and program staffs suggest that the systematic use of health data for establishing park need (or deficiency) does not yet appear to be well developed. The TPL does reference a CDC-based model that estimates obesity for children by Census block groups, and provides access to these data through their ParkScore index. TPL notes, however, that the data are limited and descriptive, and that the estimates “do not take into account park access and thus no correlation can be made between park access and the obesity estimates....”²⁶ TPL staff indicated that in the future they intend to more fully integrate measures of health and

²³ Evaluating park access and equity to promote physical activity and public health (2014). National Recreation and Park Association, April: <http://www.parksandrecreation.org/2014/April/Evaluating-Park-Access-and-Equity-to-Promote-Physical-Activity-and-Public-Health/>

²⁴ *The Rise of Asian Americans* (2013). Pew Research Center, Social and Demographic Trends (April 4 update): <http://www.pewsocialtrends.org/2012/06/19/the-rise-of-asian-americans/>

²⁵ The U.S. Census is re-examining how it collects and reports data by race and ethnicity and plans to make changes in future census questionnaires. See: <http://www.pewresearch.org/fact-tank/2016/10/04/federal-officials-may-revamp-how-americans-identify-race-ethnicity-on-census-and-other-forms/>

²⁶ See: <http://parkscore.tpl.org/methodology.php>

race/ethnicity into their ParkScore index calculations.²⁷ San Francisco's recent efforts to incorporate health and demographic information may provide useful input about data integration, however the decision to adopt an existing data system rather than a customized design leaves open questions about efficacy that will take time to answer.²⁸ Again, in deciding whether to include specific health indicators it should be determined whether the available data are appropriate and reliable, as well as whether they should serve as foundational or supplemental measures for the purpose of granting match waivers.

Recommendations

The Recreation and Conservation Office (RCO) could elect to pursue a fuller technical and analysis of specific options for the metrics and measures to include in its recommendations for the composition of criteria for its match reduction or waiver policy. Many of the data elements available for consideration, especially those available through the U.S. Census, are already widely used by federal, state and local governments, including park and recreation organizations. The identification of park-deficient (high priority) areas could be derived by using or adapting established national guidance such as is provided through NRPA or other sources, and aligning that information with selected demographic measures. The TPL's 2008 analysis of potential areas of park need in Washington, which incorporated the national standard of six acres per 1,000 residents with a single low income measure (Census-based median household income) represents an early effort to implement this basic model.²⁹ Several related GIS-based mapping technologies and systems are also available through these sources and private-sector developers, which could serve as useful models for future design or adaptation beyond the waiver policy.

Designing an approach that initially relies on a small number of key measures, as described earlier, could effectively establish a foundation of relevant and reliable measures that could be

²⁷ The CDC is reportedly working on a national data system comprising 27 major health indicators that can provide statistical data for each measure that aligns with the U.S. Census tracts. The system is slated to be launched for public use in the spring of 2017. Depending on the design, this system may provide a reliable method for associating specific health indicators and demographics to park access and use.

²⁸ See: <http://sfrecpark.org/wp-content/uploads/Equity-Metrics-Sept-2016-004.pdf>. This system overlays Census Tracts by adapting Cal-EPA's ('CalEnviroScreen') health and population characteristics data (from the U.S. Census), but does not include race or ethnicity measures. See: California Office of Environmental Health Hazard Assessment: <http://oehha.ca.gov/calenviroscreen>.

²⁹ *Potential Areas of Park Need and WWRP Recreation Projects: Analysis Overview (2008)*. The Trust for Public Land (September). TPL's approach identified and defined potential areas of park need as Census-based blockgroups that had fewer than six acres per 1,000 residents and had less than 80 percent of statewide median household income.

incrementally expanded, based on experience and review, to include additional variables over time. Alternately, designing a more expansive model initially, and that integrates and maps data from other sources (i.e., health-related statistics from the CDC or other state or local sources) that are deemed important to include, should also be considered. This option could prove to be more technically challenging and costly in terms of required time and resources, but might yield a design that is more comprehensive, progressive and potentially useful for adaptation to other RCO policies and programs. These options are not mutually-exclusive, as further review could reveal viable alternatives that meet the needs of the reduction or waiver policy and Recreation and Conservation Office staff, however they do offer a continuum for discussion and decision making.

As a summative recommendation, the Recreation and Conservation Office should consider whether it wishes to pursue a fully-developed multi-measure reduction or waiver policy and mapping model that incorporates many different measures it deems important—potentially integrating on or more data sources and measures—or to develop this capability incrementally. An incremental approach should begin with establishing agreement about the selection of a few key measures, and consideration of gradually adding new measures and weights/priorities, following regular, systematic reviews of the effects of the match reduction or waiver policy on park development, users and outcomes over time, and as resources and required technical expertise become available.

APPENDICES

APPENDIX A: U.S. Census American Community Survey Background, Data Access and Availability

American Community Survey 5-Year Data (2005-2009 to 2010-2014)³⁰

February 24, 2016

Logan T. Powell

The American Community Survey (ACS) is an ongoing survey that provides data every year -- giving communities the current information they need to plan investments and services. The ACS covers a broad range of topics about social, economic, demographic, and housing characteristics of the U.S. population. Much of the ACS data provided on the Census Bureau's Web site are available separately by age group, race, Hispanic origin, and sex. The 5-year estimates from the ACS are "period" estimates that represent data collected over a period of time. The primary advantage of using multiyear estimates is the increased statistical reliability of the data for less populated areas and small population subgroups.

- **Summary files** contain the most detailed cross-tabulations, [many](#) of which are published down to block groups. The data are population counts. There are over 64,000 variables in this dataset.
- **Data profiles** contain broad social, economic, housing, and demographic information. The data are presented as population counts and percentages. There are over 2,400 variables in this dataset.

How the Census Bureau Measures Income and Poverty³¹

³⁰ U.S. Census (from: <http://www.census.gov/data/developers/data-sets/acs-survey-5-year-data.html>)

³¹ From: <http://blogs.census.gov/2016/09/08/how-the-census-bureau-measures-income-and-poverty-4/>

Income, poverty and health insurance statistics for 2015 from the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) will be released Tuesday, Sept. 13, 2016. One-year statistics from the 2015 American Community Survey (ACS) will be released on Thursday, Sept. 15, 2016.

In all likelihood, the national statistics from these two sources will not be identical. Why not, which is correct? Well, it is complicated.

There are several reasons why the statistics from the two surveys differ. One of the most notable ways is that the CPS asks respondents about income in the previous calendar year while the ACS asks respondents about income in a rolling 12-month period throughout the year.

The CPS is conducted every month and serves as the nation's primary source of statistics on labor force characteristics. Supplements are added in most months; the CPS ASEC provides the official annual statistics on the nation's poverty levels as well as statistics on income, age, sex, race, marital status, educational attainment, employee benefits, work schedules, school enrollment, health insurance, noncash benefits and migration.

The CPS is the longest-running survey conducted by the Census Bureau. The CPS ASEC asks detailed questions categorizing income into over 50 sources. The key purpose of the CPS ASEC is to provide timely and detailed estimates of income and poverty and to measure change in these national-level estimates. The CPS ASEC is the official source of the national poverty estimates calculated in accordance with the Office of Management and Budget's Statistical Policy Directive 14. For more information on the CPS ASEC, visit <www.census.gov/programs-surveys/cps.html>.

The ACS, on the other hand, is the only source of small-area statistics available on a wide range of important social and economic characteristics for all communities in the country. In addition to income, poverty and health insurance, other topics include education, language ability, the foreign-born population, marital status, migration, homeownership, the cost and value of homes, and many more.

The ACS has an annual sample size of about 3.54 million addresses across the United States and Puerto Rico and includes both housing units and group quarters (e.g., nursing homes and prisons). The ACS is conducted in every county throughout the nation, and every municipio in Puerto Rico, where it is called the Puerto Rico Community Survey. Beginning in 2006 (2005 data year), ACS data were released annually for geographic areas with populations of 65,000 and greater. For information on the ACS sample design and other topics, visit <www.census.gov/programs-surveys/acs>.

Statistics from these two surveys may differ for multiple reasons. First, income questions on the CPS ASEC are much more detailed than the summary questions asked on the ACS. For the CPS ASEC, interviewers administer the survey to respondents while people primarily respond to ACS questions over the Internet or by mail. (Interviewers follow up with households who do not respond to the ACS online or by mail.)

Second, the reference periods for the two surveys are very different. The CPS ASEC asks respondents to report on their income in the previous calendar year. The ACS asks about income in the prior 12 months. Since the ACS is a continuous survey administered throughout the year, some respondents to the 2015 ACS (those who fill out the survey in January 2015) are reporting income received between January 2014 and December 2014, while other respondents (those who fill out the survey in December 2015) are reporting income received between December 2014 and November 2015.

These differences often result in different national statistics for such key indicators as poverty, median income and income inequality. Despite differences in the “levels” of these indicators, the trends over time tend to be very similar across the two surveys.

Many people contact us each year asking which estimate to use for a particular purpose. For national statistics, we recommend the CPS ASEC because it provides a historical time series at the national level and in some cases, back more than half a century. **Because of the larger sample size and smaller sampling errors, we recommend using the ACS for subnational geographies.**

Options for Accessing and Using ACS Data³²

Source:	What is it?	Topics/Product Type Included:	Year(s) Available & Data Set(s) Included:	Geographies Included:
QuickFacts census.gov/quickfacts	Quick, easy access to facts about people, business, and geography	Selected estimates about social, economic, and housing characteristics	Most recent ACS 5-year estimates	All states and counties, and for cities and towns with more than

³² From: <http://www.census.gov/programs-surveys/acs/guidance/which-data-tool/data-tools-chart.html>

				5,000 people
My Congressional District census.gov/mycd	Interactive tool that provides the latest demographic and economic statistics for every congressional district	Selected estimates about people, jobs, housing, economic, and education	Most recent ACS 1-year estimates	114th Congressional Districts
Census Explorer census.gov/censusexplorer/	Interactive map that allows you to visualize selected ACS topics	Selected estimates about people, education, income, and commuting	ACS 5-year estimates	States, counties, metro areas, and census tracts
Census Flows Mapper flowsmapper.geo.census.gov/	Web mapping application for county-to-county migration flows maps	Selected estimates about social, economic, and demographic characteristics	2006-2010 ACS 5-year estimates to latest release	Counties
Census Language Mapper census.gov/hhes/socdemo/language/data/language_map.html	Web-based map application built to display ACS	Language	2007-2011 ACS 5-year estimates	Tracts

	language data			
OnTheMap for Emergency Management onthemap.ces.census.gov/em/	Census Bureau's data for disasters, natural hazards, and weather events	Selected estimates about social, economic, demographic and housing characteristics	Most recent ACS 5-year estimates	Block groups aggregated to approximate event boundaries
Census Business Builder census.gov/data/data-tools/cbb.html	Interactive map that allows small business owners and regional planners a way to easily navigate to and use key demographic and economic data	Selected estimates about social, economic, demographic, and housing characteristics	Most recent ACS 5-year estimates	Custom regions built by county (Regional Analyst Edition), counties, cities/towns, ZIP codes, and neighborhoods (tracts)
American FactFinder (AFF) factfinder.census.gov	Census Bureau's main data dissemination tool	Data Profiles, Detailed Tables, Geographic Comparison Tables, Subject Tables	2005-2009 ACS 5-year estimates to latest release	All areas down to block group level*

		Comparison Profile, Data Profiles, Detailed Tables, Geographic Comparison Tables, Narrative Profiles**, Selected Population Profiles, Subject Tables	2005-2007 to 2011-2013 ACS 3-year estimates	Areas with populations of 20,000+
		Comparison Profile, Data Profiles, Detailed Tables, Geographic Comparison Tables, Narrative Profiles**, Ranking Tables, Selected Population Profiles, Subject Tables	2005 ACS 1-year estimates to latest release	Areas with populations of 65,000+
Summary File Retrieval Tool census.gov/program-surveys/acs/data/tools/summary-file-retrieval-tool.html	An Excel macro tool ideal for downloading tables from the ACS	Summary File	2005-2009 to 2008-2012 ACS 5-year Summary File	All areas down to block group level

	Summary File	Summary File	2006-2008 to 2010-2012 ACS 3-year Summary File	Areas with populations of 20,000+
		Summary File	2008 to 2012 ACS 1-year Summary File	Areas with populations of 65,000+
DataFerrett dataferrett.census.gov	Census Bureau's data analysis and extraction tool	Summary File	2005-2009 ACS 5-year Summary File to latest release	All geographies down to block group level
		Public Use Microdata Sample (PUMS)	2004 ACS 1-year, 2005-2007 ACS 3-year, and 2005-2009 ACS 5-year PUMS files to latest release	Nation, regions, divisions, states, and PUMAs (Puerto Rico Community Survey began in 2005)
File Transfer Protocol (FTP) www2.census.gov/programs-surveys-acs/	Census Bureau's storage center for	Data Tables	1996 to 2004 ACS 1-year estimates	Varies

	archived and current data	Summary File	2005-2009 ACS 5-year Summary File to latest release	All areas down to block group level
		Summary File	2005-2007 to 2011-2013 ACS 3-year Summary File	Areas with populations of 20,000+
		Summary File	2005 ACS 1-year Summary File to latest release	Areas with populations of 65,000+
		Public Use Microdata Sample (PUMS)	1996 ACS 1-year, 2005-2007 ACS 3-year, and 2005-2009 ACS 5-year PUMS files to latest release	Nation, regions, divisions, states, and PUMAs
API (Application Programming Interface) census.gov/developers	Census Bureau's source for developers to access data to			
		Data Profiles	2008-2012 ACS 5-year estimates	All areas down to tract level

	create software applications		to latest release	
		Summary File	2006-2010 ACS 5-year estimates to latest release	All geographies down to block group level
		Data Profiles & Summary File	2010-2012 to 2011-2013 ACS 3-year estimates	Areas with populations of 20,000+
		Data Profiles & Summary File	2012 ACS 1-year estimates to latest release	Areas with populations of 65,000+
		Data Profiles	2011 ACS 1-year Congressional Districts	Congressional Districts

***Block groups are available for the first time in American FactFinder with the 2009-2013 ACS 5-year data release. Previously, this geography level was only available in the ACS Summary File.**

****The Census Bureau discontinued the Narrative Profiles for both the 1-year and 3-year data releases. The 2012 ACS 1-year and 2010-2012 ACS 3-year Narrative Profiles are the last release in American FactFinder. Beginning with the 2008-2012 ACS 5-year data release, only 5-year Narrative Profiles are available on our [website](#).**

U.S. Census-American Community Survey

DATA AVAILABILITY

2015 Data Release Schedule

Updated August 8, 2016

Planned Release	Data Products ¹	Lowest Level Geography ²
September 15, 2016	<p>1-Year Data Release on American FactFinder:</p> <ul style="list-style-type: none"> ▪ Data Profiles ▪ Comparison Profiles ▪ Selected Population Profiles ▪ Ranking Tables ▪ Subject Tables ▪ Detailed Tables ▪ Geographic Comparison Tables <p>1-Year Summary File</p>	<p>Places, County Subdivisions (where available)³</p> <p>Geographies of 65,000+ population</p> <p>Exception: Ranking Tables – the lowest level is States</p>
October 20, 2016	1-Year Public Use Microdata Sample (PUMS) File	Public Use Microdata Area (PUMA)
	<p>1-Year Supplemental Estimates Release on American FactFinder:</p> <ul style="list-style-type: none"> ▪ Detailed Tables 	Places, County Subdivisions (where available)

		Geographies of 20,000+ population
December 8, 2016	<p>5-Year Data Release on American FactFinder:</p> <ul style="list-style-type: none"> ▪ Data Profiles ▪ Subject Tables ▪ Detailed Tables ▪ Geographic Comparison Tables <p>5-Year Summary File</p> <p>5-Year Narrative Profiles (on ACS website)</p>	<p>Census Block Groups</p> <p>Exceptions: Geographic Comparison Tables - the lowest level is Places/County Subdivisions</p>
January 19, 2017	<p>1-Year & 5-Year Spanish Version of Puerto Rico Community Survey Data Release on American FactFinder</p>	<p>See Lowest Level Geography for 1-Year & 5-Year Data Products shown above</p>
	<p>5-Year Public Use Microdata Sample (PUMS) File</p>	<p>Public Use Microdata Area (PUMA)</p>
	<p>5-Year Variance Replicate Estimates</p>	<p>Block Group</p>

1 For information on the types of data products available, see the [Compass Series PowerPoint Presentation](#)

2 The lowest level of geography refers to the Census geographic hierarchy. For more information on census geography, see the [Geographic Terms and Concepts](#)

3 For definitions of the types of geographic areas listed, see the [Geographic Terms and Concepts](#)

2011-2015 ACS 5-year estimates

Posted May 25, 2016

Release Schedule

The 2011-2015 American Community Survey (ACS) 5-year estimates will be released on Thursday, December 8, 2016. These data will be available for all geographic areas including census tracts, ZIP Code Tabulation Areas (ZCTAs), and block groups. The 2011-2015 ACS 5-year PUMS files and 2011-2015 ACS 5-year replicate estimates will be released on Thursday, January 19, 2017. For more information on the release schedule, visit [2015 ACS Release Schedule](#).

2015 ACS 1-year estimates

Posted September 15, 2016

2015 ACS 1-year Estimates Released September 15

- 2015 ACS 1-year estimates are available in [American FactFinder](#) and the [API](#).
- 2015 ACS 1-year estimates are based on data collected from January 1, 2015 to December 31, 2015.
- 2015 ACS 1-year estimates are available for geographic areas with populations of 65,000 or more.

When to Use 1-year, 3-year, or 5-year Estimates

This source essentially says that the 5-year has the largest sample size, is the most reliable, yet least current (compared to the one-year; the 3-year estimates have been discontinued) and the 5-yr. is best used when:

- Precision is more important than currency
- Analyzing very small populations
- Examining tracts and other smaller geographies because 1-year estimates are not available

APPENDIX B: Program and Agency Staff Contacted and Interviewed

Washington State Government:

- George Hough, Demographer, OFM
- Marc Baldwin, Deputy Director Forecast, OFM
- Greg Weeks, Sr. Researcher, OFM (formerly of the WA Employment Security Dept-LMEA)
- Toby Robertson, Economist, OFM
- Diane Fay, Community Services Block Grant Program Manager, WA Dept. of Commerce

Other State Government:

- Lee Butterfield, Policy Director, California State Park and Recreation Commission
- Stacy Radine Bradley, Deputy Director of Planning, San Francisco Recreation and Park Department
- Taylor Emerson, Strategic Planning Analyst, San Francisco Recreation and Park Department

Federal Government:

- Greg Bischak, Program Manager, Community Development Financial Institutions (CDFI), Dept. of Treasury
- Steve Washington, Staff Specialist, CFI, Dept. of Treasury
- John Laswick, Research Manager, HUD
- Todd Richardson, Director, Policy Development and Research, HUD

Parks and Recreation Associations and Organizations

- Melissa May, Research Manager, National Recreation and Park Association
- Marla Collum, Sr. Program Manager, National Recreation and Park Association
- Carolyn Hill, Director of Grants and Programs, National Park Foundation
- Bob Heuer, Deputy Director of Urban GIS, the Trust for Public Land (San Francisco)