BEFORE THE METRO COUNCIL

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| FOR THE PURPOSE OF DIRECTING STAFF TO MOVE FORWARD WITH THE PHASE 2 CLIMATE SMART COMMUNITIES SCENARIOS PROJECT EVALUATION | ) ) ) ) | RESOLUTION NO. 13-4438<br><br>Introduced by Councilor Collette |

WHEREAS, the State of Oregon's 2007 greenhouse gas emissions reductions goals direct Oregon to stop increases in greenhouse gas emissions by 2010, reduce emissions to at least 10 percent below 1990 levels by 2020, and reduce emissions to at least 75 percent below 1990 levels by 2050; and

WHEREAS, Oregon Legislature passed House Bill 2001, also known as the Jobs and Transportation Act ("JTA"), in 2009; and

WHEREAS, Section 37 of the JTA requires Metro requires in the Portland metropolitan area to prepare and cooperatively select a preferred land use and transportation scenario for achieving greenhouse gas emission reductions from motor vehicles with a gross vehicle weight rating of 10,000 pounds or less (light vehicles); and

WHEREAS, land use and transportation scenario planning by the Portland metropolitan area is part of a broader effort by the state; in cooperation with metropolitan areas, to evaluate changes to land use and transportation plans and policies to significantly reduce greenhouse gas emissions from light vehicle travel; and

WHEREAS, the Metro Council, with the advice and support of the Metro Policy Advisory Committee ("MPAC") and the Joint Policy Advisory Committee on Transportation ("JPACT"), adopted the 2035 Regional Transportation Plan ("RTP") in 2010 and directed staff to conduct greenhouse gas scenario planning; and

WHEREAS, on December 16, 2010, the Metro Council, with the advice and support of MPAC, adopted the Community Investment Strategy and established six desired outcomes to reflect the region's desire to develop vibrant, prosperous and sustainable communities with safe and reliable transportation choices, that minimize greenhouse gas emissions and that distribute the benefits and costs of growth and change equitably in the region; and

WHEREAS, in 2011, the Land Conservation and Development Commission ("LCDC") adopted Oregon Administrative Rule ("OAR") 660-044, which included per capita greenhouse gas emissions reduction targets for each of Oregon's six metropolitan area, including the Portland metropolitan region to help meet statewide goals to reduce greenhouse gas emissions to 75 percent below 1990 levels by the year 2050; and

WHEREAS, in 2012, the LCDC amended OAR 660-044 to direct Metro to evaluate a reference case that reflects implementation of existing adopted comprehensive and transportation plans and at least two alternative land use and transportation scenarios that accommodate planned growth while achieving a reduction in greenhouse gas emissions from light vehicles, and guide Metro in the evaluation and selection of a preferred land use and transportation scenario by December 31, 2014; and

WHEREAS, the Portland metropolitan region is undertaking greenhouse gas scenario planning for light vehicles through the Climate Smart Communities Scenarios Project to demonstrate climate

change leadership, maximize achievement of all six of the region's desired outcomes, implement the 2035 RTP and Community Investment Strategy and respond to Section 37 of the JTA and OAR 660-044; and

WHEREAS, the Climate Smart Communities Scenarios Project is a 3-phase collaborative effort designed to help communities in the Portland metropolitan region realize their aspirations for growth and development, support the region's economy and reduce greenhouse gas emissions from light vehicles as required by the State; and

WHEREAS, the Scenarios Project is building on the land use and transportation strategies contained in the 2040 Growth Concept, the long-range vision adopted by the region in 1995, local adopted plans and visions and 2010 Metro Council actions; and

WHEREAS, Phase 1 of the Scenarios Project focused on understanding the region's land use and transportation choices by conducting a review of published research and testing 144 regional scenarios in 2011; and

WHEREAS, Phase 2 of the Scenarios Project, in 2012 and 2013, focused on shaping future choices for the region to advance implementation of community visions by conducting further analysis of the Phase 1 scenarios, confirming local land use visions, preparing eight community case studies and engaging community and business leaders, city and county officials and staff, county coordinating committees, responsible state agencies, a technical work group and Metro's technical and policy advisory committees to develop assumptions for three scenarios to test and a set of evaluation criteria to be used to measure and compare them; and

WHEREAS, the Metro Council, JPACT, MPAC, Metro Technical Advisory Committee ("MTAC"), and Transportation Policy Advisory Committee ("TPAC") have considered the Recommended Phase 2 Scenario Assumptions and the Recommended Evaluation Criteria; and

WHEREAS, the region's decision-makers will use the results of the Phase 2 evaluation and subsequent stakeholder engagement to direct development, evaluation and selection of a preferred scenario in Phase 3 in 2014; and

WHEREAS, the preferred scenario will likely identify additional policies and strategies needed to achieve the needed GHG emissions reductions while meeting other economic, social and environmental goals and supporting the individual needs and aspirations of communities in the region; and

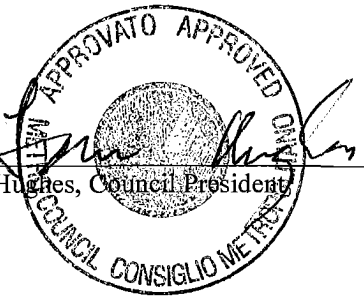
WHEREAS, MPAC and JPACT unanimously recommended that the Metro Council direct staff to move forward with the Phase 2 evaluation as set forth in the Recommended Phase 2 Scenario Assumptions and the Recommended Evaluation Criteria; now, therefore,

BE IT RESOLVED THAT:

1. The Metro Council recommends further study of the Recommended Phase 2 Scenario Assumptions in Exhibit A using the Recommended Evaluation Criteria in Exhibit B.

2. The Metro Council directs staff to move forward with the Phase 2 Climate Smart Communities Scenarios Project evaluation and report back to Metro's technical and policy advisory committees in October 2013.

ADOPTED by the Metro Council this 6th day of June, 2013.




Tom Hughes, Council President

Approved as to Form:

Alison Kean Campbell, Metro Attorney

CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

**Exhibit A to Resolution No. 13-4438**

# Recommended Phase 2 Scenario Assumptions

May 17, 2013

## Shaping our choices for the future

A scenario is an example of what the future might look like based on the choices we make today. The three scenarios presented will be tested in summer 2013. More detailed documentation of the assumptions and analysis methodologies will be prepared during the evaluation process.

The results of the analysis will be used to stimulate a discussion about our choices for the future and the possible impacts they may have on how we live, travel, work and invest in our communities. Working together, cities, counties and regional partners will decide which elements from each of the three scenarios should go forward into one preferred scenario for the region to adopt in December 2014. Considerations for developing a preferred scenario will include: costs and benefits across public health, environmental, economic and social equity outcomes, financial implications, public support and political will.

The Oregon Legislature has required the Portland metropolitan region to reduce per capita greenhouse gas emissions from cars and small trucks by 2035.

**NOTE: The scenarios are cumulative and for research purposes. The scenarios do not represent future Metro Council, Oregon Transportation Commission, TriMet or local government policy intentions.**

## WHAT THE FUTURE MIGHT LOOK LIKE IN 2035

| | Scenario A<br>RECENT TRENDS | Scenario B<br>ADOPTED PLANS | Scenario C<br>NEW PLANS AND POLICIES |
|---|---|---|---|
| **Purpose** | This scenario shows the results of implementing adopted plans to the extent possible with existing revenues. | This scenario shows the results of raising additional revenues - as called for in the adopted Regional Transportation Plan – to allow the region to make more progress toward implementing adopted plans. | This scenario shows the results of pursuing new policies, more investment and new revenue sources to more fully achieve adopted and emerging plans. |

LESS INVESTMENT AND POLICIES MORE

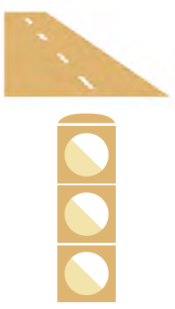
### LAND USE ASSUMPTIONS

| | Scenario A<br>RECENT TRENDS | Scenario B<br>ADOPTED PLANS | Scenario C<br>NEW PLANS AND POLICIES |
|---|---|---|---|
| **Land use plans and zoning** | Local land use plans and zoning as adopted by cities and counties for downtowns, main streets and employment areas will be the same for all three scenarios. The Southwest Corridor Plan land use vision will be incorporated into Scenario C. | | |

### EDUCATION AND INCENTIVES ASSUMPTIONS

| | Scenario A<br>RECENT TRENDS | Scenario B<br>ADOPTED PLANS | Scenario C<br>NEW PLANS AND POLICIES |
|---|---|---|---|
| **Education and incentives** | ▪ 30% of households practice fuel efficient driving techniques and participate in travel options programs<br>▪ 20% of employees participate in commute programs<br>▪ 4% of households participate in car-sharing<br>▪ 20% of vehicle owners use pay-as-you-drive insurance | ▪ 30% of households practice fuel efficient driving techniques and participate in travel options programs<br>▪ 20% of employees participate in commute programs<br>▪ 4% of households participate in car-sharing<br>▪ 40% of vehicle owners use pay-as-you-drive insurance | ▪ 60% of households practice fuel efficient driving techniques and participate in travel options programs<br>▪ 40% of employees participate in commute programs<br>▪ 4% of households participate in car-sharing<br>▪ 100% of vehicle owners use pay-as-you-drive insurance |

### TRANSPORTATION ASSUMPTIONS

| | Scenario A<br>RECENT TRENDS | Scenario B<br>ADOPTED PLANS | Scenario C<br>NEW PLANS AND POLICIES |
|---|---|---|---|
| **Streets and highways**  | **Operations and maintenance**<br>▪ Fall behind on fixing potholes and making repairs and implement 50% of regional TSMO strategic plan to achieve 10% delay reduction<br>**Capital**<br>▪ I-5 Bridge Replacement<br>▪ Other currently funded projects | **Operations and maintenance**<br>▪ Keep up with fixing potholes and making repairs and implement full regional TSMO strategic plan to achieve 20% delay reduction<br>**Capital**<br>▪ Adopted Financially Constrained RTP including: I-5 Bridge Replacement, Sunrise Project from I-205 to 172nd Avenue, US 26 widened to 6 through lanes to Cornelius Pass Road and interchange improvements at US 26, OR 217, I-205, and Troutdale/I-84 | **Operations and maintenance**<br>▪ Keep up with fixing potholes and making repairs and implement expanded TSMO strategic plan to achieve 35% delay reduction<br>**Capital**<br>▪ State RTP project list, including interchange improvements at I-5/OR 217 interchange (Phase 2) and I-84/I-5 |
| **Bike and pedestrian** | ▪ Limited investments in improving access to transit with no dedicated funding | ▪ Complete adopted RTP bike and pedestrian projects | ▪ Complete 100% of regional bike and pedestrian networks as identified in the Regional Active Transportation Plan, including regional trails, further targeting short trips and access to transit and centers |

*See reverse for more information* →

**NOTE: The scenarios are cumulative and for research purposes. The scenarios do not represent future Metro Council, Oregon Transportation Commission, TriMet or local government policy intentions.**

# Recommended Phase 2 Scenario Assumptions

May 17, 2013

## WHAT THE FUTURE MIGHT LOOK LIKE IN 2035

| | Scenario A<br>RECENT TRENDS | Scenario B<br>ADOPTED PLANS | Scenario C<br>NEW PLANS AND POLICIES |
|---|---|---|---|
| **Purpose** | This scenario shows the results of implementing adopted plans to the extent possible with existing revenues. | This scenario shows the results of raising additional revenues - as called for in the adopted Regional Transportation Plan – to allow the region to make more progress toward implementing adopted plans. | This scenario shows the results of pursuing new policies, more investment and new revenue sources to more fully achieve adopted and emerging plans. |

## TRANSPORTATION ASSUMPTIONS (CONTINUED)

| | Scenario A<br>RECENT TRENDS | Scenario B<br>ADOPTED PLANS | Scenario C<br>NEW PLANS AND POLICIES |
|---|---|---|---|
| **Transit** | **Operations and maintenance**<br>▪ Maintain existing TriMet service with small increases targeted to address overcrowding and delays due to congestion<br>▪ Implement SMART and C-TRAN plans<br><br>**Capital**<br>▪ Extend MAX to Milwaukie<br>▪ Extend MAX to Vancouver, WA<br>▪ Complete Portland streetcar loop | **Operations and maintenance**<br>▪ Reinvest in and expand frequent bus service in priority corridors<br>▪ Implement SMART and C-TRAN plans<br><br>**Capital**<br>▪ Streetcar extension along priority corridors<br>▪ Additional transit priority and pedestrian/bike access to transit projects | **Operations and maintenance**<br>▪ Expand frequent bus service coverage to all major arterials with supporting land use connecting regional and town centers, consistent with TriMet Service Enhancement Plans<br>▪ Expand local bus service coverage and connections to frequent bus service and high capacity transit, consistent with TriMet Service Enhancement Plans<br>**Capital**<br>▪ Cascadia rail connections to Eugene, Salem and Vancouver B.C.<br>▪ High capacity transit: Southwest Corridor, AmberGlen and Oregon City<br>▪ WES service frequency improvements and extension to Salem<br>▪ Bus rapid transit serving Powell/Division, I-205 and Tualatin-Valley Highway corridors<br>▪ Other Portland streetcar extensions<br>▪ Additional transit priority and pedestrian/bike access to transit projects |

## PRICING ASSUMPTIONS

| | Scenario A<br>RECENT TRENDS | Scenario B<br>ADOPTED PLANS | Scenario C<br>NEW PLANS AND POLICIES |
|---|---|---|---|
| **Pricing** | **Existing revenues at 2012 levels**<br><br>**Fuel use and emissions fees**<br>▪ Federal gas tax = 18 cents/gallon<br>▪ State gas tax = 30 cents/gallon<br>▪ Local gas tax = 1-2 cents/gallon<br>Vehicle travel fees<br>▪ I-5 Bridge toll<br>**Other transportation fees**<br>▪ Payroll tax and farebox recovery<br>▪ Parking fees in downtown Portland, OHSU campus and the Lloyd district<br>▪ Other federal, state and local revenues at existing levels | **Revenues assumed to fund adopted RTP**<br><br>**Fuel use and emissions fees**<br>▪ Federal gas tax = 18 cents/gallon<br>▪ State gas tax = 55 cents/gallon<br>▪ Local gas tax = 1-2 cents/gallon<br>Vehicle travel fees<br>▪ I-5 Bridge toll<br>**Other transportation fees**<br>▪ Payroll tax and farebox recovery<br>▪ Parking fees in more locations served by high capacity transit<br>▪ Other federal, state and local revenues at RTP levels | **New and expanded revenues at levels needed to fund investments**<br>**Fuel use and emissions fees**<br>▪ Federal gas tax = 18 cents/gallon<br>▪ Carbon fee = $20-50/ton<br>▪ Local gas tax = 1-2 cents/gallon<br>**Vehicle travel fees**<br>▪ I-5 Bridge toll<br>▪ VMT fee = $.03-.15/mile<br>**Other transportation fees**<br>▪ Payroll tax and farebox recovery<br>▪ Parking fees in new locations served by high capacity transit and frequent bus service<br>▪ Other federal, state and local revenues at RTP levels |

## FLEET AND TECHNOLOGY ASSUMPTIONS GIVEN TO THE REGION BY THE STATE

| | Scenario A<br>RECENT TRENDS | Scenario B<br>ADOPTED PLANS | Scenario C<br>NEW PLANS AND POLICIES |
|---|---|---|---|
| **Fleet and technology** | The vehicle and fuel assumptions for the year 2035 will be the same for all three scenarios. The assumptions were developed by three state agencies (ODOT, ODEQ and ODOE), and assumed by the Land Conservation and Development Commission when setting the region's per capita GHG emissions reduction target in 2011. The assumptions were developed based on the best available information and current estimates about improvements in technologies and fuels. | | |



Metro

CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

# Recommended Phase 2 Evaluation Criteria

| Evaluation criteria | Questions to answer | Evaluation measure | Estimation Method/Tool |
|---|---|---|---|
| **Social equity** | *How will our choices affect the region's most vulnerable populations?* | Highlighted evaluation measures will be measured across population groups (e.g., income, age and ethnicity) to identify whether disproportionate impacts may occur to vulnerable populations in the region. Vulnerable populations are defined to include: low-income households, communities of color, older adults, children, households with limited english proficiency and people with disabilities. | |
| **Jobs and housing** | *How will our choices affect where we work and live?* | Number and distribution of housing (by type, cost and location) | MetroScope output |
| | | Number and distribution of jobs (by type and location) | MetroScope output |
| | | Housing and job growth captured inside urban growth boundary compared to growth captured in nearby areas | MetroScope output |
| | | Employment access and proximity to labor markets | MetroScope output and ArcGIS |
| | | Employment land in proximity to key transportation corridors (Land zoned for employment use in proximity to major transportation corridors) | MetroScope output and ArcGIS |
| | | Access to destinations (households within .5-mile distance of large employment centers, colleges and high schools, libraries, regional shopping centers, airports, hospitals, major medical centers, parks, and major social service sites by income group, race and ethnicity, and age) | MetroScope output and ArcGIS |
| **Cost and the Economy** | *What will our choices cost and how will they affect public sector and household budgets, and the economic competitiveness of businesses and industry in the region?* | Transportation infrastructure costs (capital and operations) | GreenSTEP output |
| | | Other public/private infrastructure costs | GreenSTEP/MetroScope output |
| | | Social costs per capita and by income group (e.g., combined cost of travel delay, climate change damage and adaptation, energy security, air and noise pollution, crash costs to non-drivers and other environmental impacts) | GreenSTEP output |
| | | Household cost burden - Housing and transportation costs combined per household by income group (total and as a percent of income by income group) | MetroScope and GreenSTEP outputs |
| | | Freight truck travel delay costs | GreenSTEP output |
| | | Transportation revenues per capita and by income group | GreenSTEP output |
| **Travel** | *How will our choices affect how we get around?* | Vehicle miles traveled per capita | GreenSTEP output |
| | | Vehicle delay per capita | GreenSTEP output |
| | | Transit service per capita (revenue miles) | GreenSTEP output |
| | | Access to transit (households and jobs within .5-mile distance of high capacity transit stations/ stops and .25-mile distance of frequent bus stops by income group, race and ethnicity, and age) | MetroScope output and ArcGIS |
| | | Average commute trip length | MetroScope output |
| **Energy consumption and GHG emissions** | *How will our choices affect climate change and energy security?* | GHG emissions per capita | GreenSTEP output |
| | | Fuel consumption (region-wide) (petroleum-based, liquid and gaseous fuels consumed in light vehicle engines) | GreenSTEP output |
| **Natural resources** | *How will our choices affect air quality, water supplies and farms, forestland and natural areas?* | Criteria pollutant emissions | GreenSTEP output |
| | | Land consumed for development | MetroScope output |
| | | Residential water consumption | GreenSTEP output |
| **Public health** | *How will our choices affect our health?* | Physical activity per capita (walk trips and bike miles) | GreenSTEP and public health model output |
| | | Chronic illness (obesity, diabetes, asthma) | Public health model output |
| | | Traffic safety (change in fatalities and injuries) | Public health model |
| **Feasibility** | *What choices can we afford, what choices are feasible and how do we implement our choices in an equitable and cost-effective manner?* | Financial, legal, legislative or regulatory barriers for implementation | Qualitative assessment |
| | | Political or public acceptability | Qualitative assessment |
| | | Institutional capacity for implementation and long-term "ownership" | Qualitative assessment |
| | | Policy tools to support neighborhood stability and reduce existing community disparities during implementation | Qualitative assessment and ArcGIS |

**STAFF REPORT**

IN CONSIDERATION OF RESOLUTION NO. 13-4438, FOR THE PURPOSE OF DIRECTING STAFF TO MOVE FORWARD WITH THE PHASE 2 CLIMATE SMART COMMUNITIES SCENARIOS PROJECT EVALUATION

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Date: May 17, 2013 Prepared by: Kim Ellis, x1617

**BACKGROUND**

Since 2006, Oregon has initiated a number of actions to respond to mounting scientific evidence that shows the earth's climate is changing, signaling a long-term commitment to significantly reduce greenhouse gas (GHG) emissions in Oregon.

In 2007 the Oregon Legislature established statewide GHG emissions reduction goals. The goals apply to all emission sectors - energy production, buildings, solid waste and transportation - and direct Oregon to:

- Stop increases in GHG emissions by 2010
- Reduce GHG emissions to 10 percent below 1990 levels by 2020
- Reduce GHG emissions to at least 75 percent below 1990 levels by 2050

In 2009, the Oregon Legislature passed House Bill 2001, the Jobs and Transportation Act (JTA). Section 37 of the Act requires Metro to develop two or more alternative land use and transportation scenarios by January 1, 2012 that are designed to accommodate planned population and job growth for the year 2035 and reduce GHG emissions from light vehicles. Section 37 of the Act also requires Metro to adopt a preferred scenario after public review and consultation with local governments, and calls for local governments in the Portland metropolitan region to implement the adopted scenario.

In 2010, the Metro Council adopted the 2035 Regional Transportation Plan (RTP) and directed staff to conduct greenhouse gas scenario planning consistent with the JTA. The Metro Council also adopted the Community Investment Strategy and established six desired outcomes in 2010 to reflect the region's desire to develop vibrant, prosperous and sustainable communities with safe and reliable transportation choices, that minimize greenhouse gas emissions and that distribute the benefits and costs of development equitably in the region.

To guide Metro's scenario planning work, the Land Conservation and Development Commission (LCDC) adopted the Metropolitan Greenhouse Gas Reduction Targets Rule (Oregon Administrative Rule 660-044) in May 2011. Also required by section 37 of the JTA, the rule identifies GHG emissions reduction targets for each of Oregon's six metropolitan areas for the year 2035. The targets identify the percentage reduction in per capita GHG emissions from light vehicle travel that is needed to help Oregon meet its GHG emissions reduction goals.

The LCDC target-setting process assumed changes to the vehicle fleet mix, improved fuel economy, and the use of improved vehicle technologies and fuels that would reduce 2005 emissions levels from 4.05 to 1.5 MT CO2e per capita by the year 2035. The adopted target for the Portland metropolitan area calls for a 20 percent per capita reduction in GHG emissions from light vehicle travel by the year 2035. This target reduction is in addition to the reduction expected from changes to the fleet and technology sectors as identified in the Agencies' Technical Report. Therefore, to meet the target, per capita roadway GHG emissions must be reduced by an additional 20 percent below the 1.5 MT CO2e per capita by the year

2035 – to 1.2 MT CO2e per capita. The adopted target for the region is the equivalent of 1.2 MT CO2e per capita by the year 2035.

In 2012, the LCDC amended OAR 660-044 to further direct Metro to evaluate a reference case that reflects implementation of existing adopted comprehensive and transportation plans and at least two alternative land use and transportation scenarios that accommodate planned growth while achieving a reduction in greenhouse gas emissions from light vehicles, and guide Metro in the evaluation and selection of a preferred land use and transportation scenario by December 31, 2014.

## CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

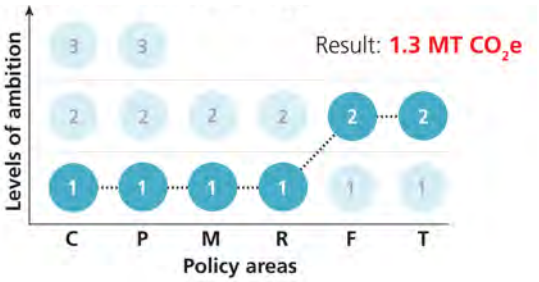
Since 1995, Metro and its partners have collaborated to help communities realize their local aspirations while moving the region toward its goals for making a great place: vibrant communities, economic prosperity, transportation choices, equity, clean air and water, and regional climate change leadership. Local and regional efforts to implement the 2040 Growth Concept, 2035 RTP and the Community Investment Strategy provide a good basis for the GHG scenario planning work required of the region.

The Portland metropolitan region is undertaking greenhouse gas scenario planning in three phases as part of the Climate Smart Communities Scenarios Project (Scenarios Project) to demonstrate climate change leadership, implement the 2010 Council actions and respond to Section 37 of the JTA and OAR 660-044.

Working together with city, county, state, business and community leaders, Metro is researching how land use and transportation policies and investments can be leveraged to help us create great communities, support the region's economy and meet goals for reducing greenhouse gas emissions. The adopted land use plans and zoning of cities and counties across the region are the foundation for the scenarios to be tested, with a goal of creating a diverse yet shared vision of how we can keep this region a great place for years to come – for everyone – and meet state greenhouse gas emissions goals.

## PHASE 1: UNDERSTANDING OUR LAND USE AND TRANSPORTATION CHOICES

Phase 1 focused on understanding the region's choices for reducing greenhouse gas emissions from cars and small trucks. Staff tested 144 different combinations of land use and transportation policies (called scenarios) to learn what it might take to meet the region's greenhouse gas emissions reduction target. More than 90 scenarios met or exceeded the target. In addition, staff found that current plans and policies together with advancements in fleet and technology get the region close to the target. The findings are summarized in *Understanding Our Land Use and Transportation Choices: Phase 1 Findings* (January 2012).




**Phase 1 found that current plans and policies together with advancements in fleet and technology get the region close to the state target of 1.2 MT $CO_2e$ per capita.**

A range of choices exist to meet the region's state greenhouse gas emissions reduction target and most of the strategies under consideration are already being implemented to varying degrees in communities to achieve other important economic, social and environmental goals.

Staff also conducted sensitivity analysis of the Phase 1 scenarios to better understand the GHG emissions reduction potential of individual strategies. The strategies tested included pay-as-you-drive insurance,

traffic operations, expanded transit service, pricing, transportation demand management programs, community design and advancements in clean fuels and vehicle technologies.

Assuming adopted community plans and national fuel economy standards, the most effective individual strategies for reducing greenhouse gas emissions were found to be:

- Fleet and technology advancements
- Transit service expansion
- Pricing of transportation (e.g., fuel price, pay-as-you-drive insurance, parking fees, mileage-based fee, and carbon fee)

The reductions found for each strategy individually do not reflect synergistic benefits that could come from combining various strategies. It is also important to note that while some strategies did not individually achieve significant GHG reductions, such as increasing walking or bicycle mode share or participation in marketing and incentives programs, they remain important elements to complement more effective strategies such as transit service expansion and building walkable downtowns and main streets as called for in community plans.

To date, no evaluation has been conducted on the potential financial, political, social equity, environmental or economic implications of the different strategies; these implications will be considered as part of the Phase 2 scenarios evaluation.

**PHASE 2: SHAPING OUR LAND USE AND TRANSPORTATION CHOICES**

Phase 2 has focused on shaping future choices for the region to advance implementation of community visions and meet the region's greenhouse gas emissions reduction target. The Climate Smart Communities Scenarios Project made significant progress in 2012 and early 2013:

- **Engaged local governments and other stakeholders to share project information and early findings.** From January to September 2012, Metro councilors and staff shared the Phase 1 findings and other project information through briefings to city councils, county boards, county-level coordinating committees, state commissions, Metro advisory committees, regional and state conferences and other meetings. Staff also regularly convened a local government staff technical working group in 2012. The work group provided technical advice to Metro staff, and assistance with engaging local government officials and senior staff.
- **Convened workshops with community leaders on the public health, equity/environmental justice, and environmental outcomes that are most important to consider in the scenario evaluation process.** Reports documenting the Public Health, Environmental and Equity/Environmental Justice workshop recommendations are provided in Attachments 1, 2, and 3, respectively.
- **Partnered with business associations to host a series of focus groups to understand their challenges, opportunities and priorities.** The first four focus groups have been held in partnership with the Columbia Corridor Association, the East Metro Economic Alliance, the Clackamas County Business Alliance, the Westside Economic Alliance and Wilsonville and Greater Hillsboro Chambers of Commerce, and the Portland Business Alliance small business group. One focus group remains that will be held in partnership with the Home Builders Association to provide perspectives from residential and commercial builders and real estate developers. A summary report is provided in Attachment 4.
- **Developed a community investment choices frame to guide development of three alternative scenarios to be tested in Summer 2013.** The project's technical work group continues to serve an

important advisory role to staff and helped develop the framework. The work group will continue to assist Metro staff during the evaluation to finalize assumptions and review the results of the analysis.

- **Researched eight case studies to spotlight local success stories and the innovative strategies they have implemented to achieve their local visions and that will also help reduce greenhouse gas emissions.** The case studies are provided in Attachment 5.
- **Convened workshops with local staff to affirm visions for future community development using Envision Tomorrow to make sure the latest information on local land use goals is incorporated into the project.** Southwest Corridor project staff used Envision Tomorrow to develop the draft land use vision for the corridor last fall. All of these assumptions will be used as land use inputs in the scenarios tested in the summer, 2013.
- **Conducted OptIn survey to gauge public awareness of and support for GHG reduction goals, land use and transportation strategies being considered to reduce emissions, and willingness to take personal action.** Detailed results of the survey are available on the project website.

## OVERVIEW OF INVESTMENT CHOICES TO BE TESTED IN PHASE 2

To stimulate thinking about the region's choices for the future and the possibilities they present, three scenarios will be tested in 2013. The three alternative scenarios to be evaluated are conceptual in nature, and are not intended to represent a preferred scenario or future Metro Council, Oregon Transportation Commission (OTC), local government or TriMet policy intentions. The scenarios draw from the policies tested in Phase 1 and bear greater resemblance to realistic, yet ambitious policy alternatives than the 144 scenarios tested in Phase 1 of the project.

The evaluation process is consistent with OAR 660-044-0040, which requires the region to evaluate at least 3 scenarios – a reference case scenario that reflects implementation of existing adopted comprehensive plans and transportation plans and at least two alternative land use and transportation scenarios for meeting greenhouse gas reduction targets.

The adopted land use visions (as expressed in local plans and zoning codes) of cities and counties across the region are the foundation for the scenarios to be tested. The analysis will consider transportation investments together with different levels of funding, advancements to clean fuels and vehicle technologies and, to the extent possible, and emerging community visions identified through the Southwest Corridor Plan. The analysis will inform development of a preferred land use and transportation scenario and identification of the policies, tools, investment and actions needed to implement it. <u>It is important to emphasize that the preferred scenario developed in 2014 will likely include elements from all 3 scenarios tested.</u>

### Purpose

The purpose of scenario planning is to test a range of potential futures that reflect choices policymakers, businesses and individuals might make to help answer policy questions that forecasted growth and fiscal constraints raise about our ability to protect the region's quality of life and economy for current residents and future generations, and meet state targets for reducing greenhouse gas emissions.

Major objectives of the analysis are to:

- Test distinct investment policy choices that frame the boundaries of the political landscape and public opinion to better understand the impact of different levels of investment on public health, travel behavior, development patterns, social equity, the economy, the environment and greenhouse gas emissions.

- Evaluate the relative effect and cost of different investment choices in order to recommend what combinations of investments, tools and strategies are needed to best achieve community visions and state greenhouse gas emissions reductions.
- Provide recommendations to guide development and implementation of a preferred land use and transportation scenario.

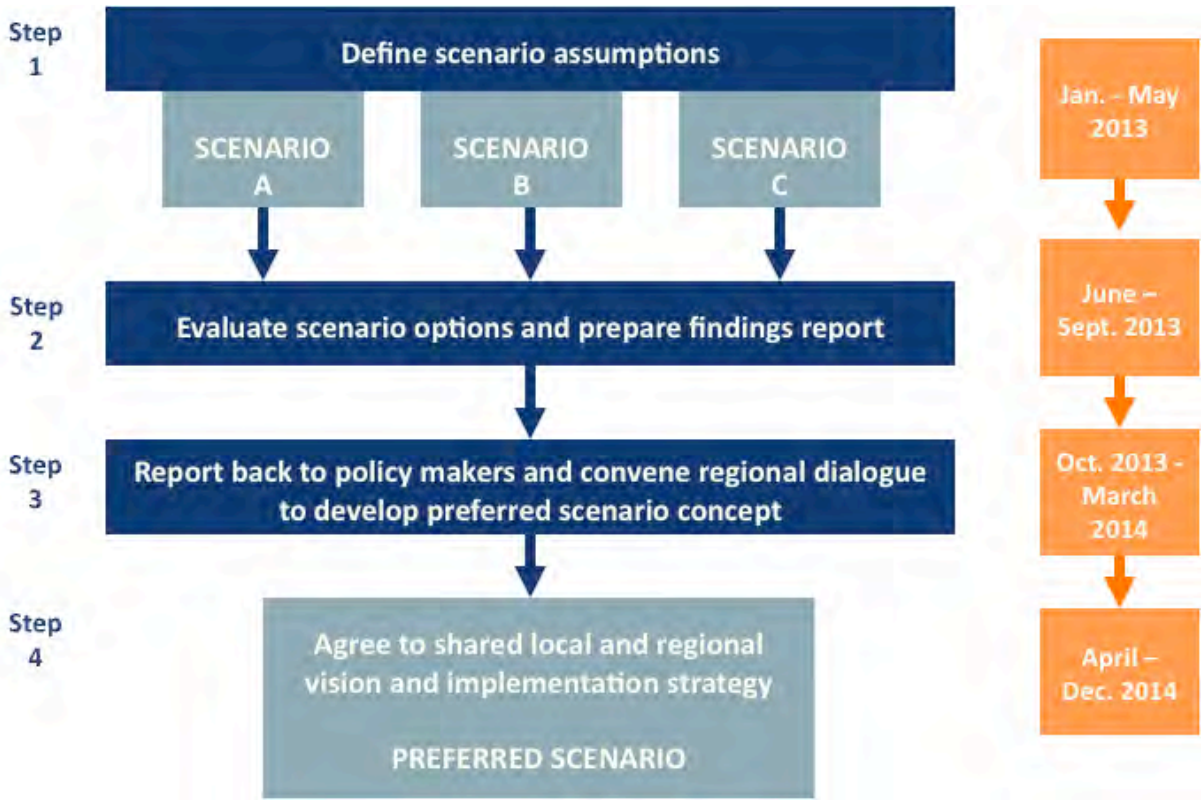
**Questions to Answer with the Evaluation**
The evaluation has been designed to answer several policy questions, including:

- How will our choices affect where we work and live?
- What will our choices cost and what can we afford?
- How will our choices affect public sector and household budgets, and the economic competitiveness of businesses and industry in the region?
- How will our choices affect how we get around?
- How will our choices affect climate change and energy security?
- How will our choices affect air quality, water supplies and farms, forestland and natural areas?
- How will our choices affect our health?
- Which strategies are most effective for supporting community visions and reducing greenhouse gas emissions?
- What choices are feasible and how do we implement our choices in an equitable and cost-effective manner?
- What are the risks, opportunities and tradeoffs of our choices – considering public health, social equity, environmental, economic, financial, and political implications?

## General Construct and Scope

Each of the three scenarios is based on a "What if" policy-theme focus, resulting in a distinct mix and level of transit service, bike, pedestrian, road, system and demand management strategies that are linked to pricing strategies (revenues) assumed within in each scenario. The three scenarios represent what the region could look like in 2035, if various transportation and land use strategies are pursued, and what it could mean for how we live, how we work, how we get around and how we invest. The adopted land use plans and zoning codes of cities and counties across the region are the foundation for the scenarios to be tested. **Figure 1** shows the general construct and timeline for this analysis.

**Figure 1. Climate Smart Communities Investment Scenarios Construct and Timeline**




Each scenario is initiated by a "what if" question:

- **Scenario A (Recent Trends) – What if we implement adopted plans to the extent possible with existing revenues?**

  *Purpose: This scenario shows the results of implementing adopted plans to the extent possible with existing revenues.*

  Scenario A represents what the future could look like if recent trends continue and we implement adopted plans with existing revenues (e.g., gas tax, payroll tax and existing local sources like urban renewal district (URD), SDCs, TIFs that have been used to fund transportation investments). Scenario A assumes the region continues to rely on existing revenues, which continue to decline in their purchasing power over time due to rising costs, inflation and improved fuel economy of vehicles. In addition, some URD are set to expire between now and 2035. This future would reflect maintaining existing TriMet service with small increases targeted to address overcrowding, delays due to congestion giving priority to routes serve the region's most vulnerable communities – children, seniors, low-income and communities of color. Transit service growth is tied to the forecasted rate of job growth in the region, which reflects that the payroll tax continues to be the primary source of funding for transit service. Other transportation investments would also be limited as an increasing share of the revenues available are spent on maintaining the transportation system in place today. Bicycle and pedestrian investments are focused on improving access to transit, and providing safe routes to schools. Major capital road and transit capital investments are limited to construction of the I-5 Bridge Replacement (including extending MAX from Portland to Vancouver), a MAX extension from Portland to Milwaukie, the Sellwood Bridge Replacement, completion of the Portland streetcar loop and other projects earmarked by House Bill 2001.

An implication of limited community investment is that cities and counties are not able to achieve their adopted plans and the region falls short of goals for maintaining an adequate supply of shovel-ready industrial lands that attract new employers, and most employment growth occurs in existing employment areas that currently have good transportation access. *This scenario is not expected to meet the greenhouse gas emissions target.*

- **Scenario B (Adopted Plans)** - What if we raise additional revenues - as called for in the adopted Regional Transportation Plan – to allow us to make more progress toward implementing adopted plans?

  *Purpose: This scenario shows the results of raising additional revenues - as called for in the adopted Regional Transportation Plan – to allow the region to make more progress toward implementing adopted plans.*

  Scenario B represents what the future could look like if we counter recent trends and are successful implementing adopted plans with additional revenues assumed in the 2035 Regional Transportation Plan. The scenario would assume the adopted Financially Constrained RTP levels of transit, road, operations and bike/pedestrian investment, current adopted local land use plans and planned funding as adopted in the RTP (e.g., 1 cent per year gas tax increase, increases to vehicle registration fees, some increase in the payroll tax for transit). In this scenario, TriMet is able to reinvest in and expand frequent bus service in priority corridors and to serve the region's most vulnerable communities. Scenario B assumes the 2035 RTP Financially Constrained System of projects and programs adopted by JPACT and the Metro Council in June 2010.

  An implication of this scenario is that with significantly more community investment, cities and counties are better able to achieve their adopted plans and attract new employers – as reflected in the regionally-reviewed 2035 growth distribution adopted by the Metro Council in November 2012. The region is better able to maintain its competitive advantage by helping local companies access global markets and grow local jobs. More job opportunities are likely to be available throughout the region in downtowns, existing employment areas and other locations with good transportation access. *This scenario may meet the greenhouse gas emissions target.*[1]

- **Scenario C (New Plans and Policies)** - What if we pursue new policies and revenue sources to more fully achieve adopted and emerging plans?

  *Purpose: This scenario shows the results of pursuing new policies, more investment and new revenue sources to more fully achieving adopted and emerging plans.*

  Scenario C represents what the future could look like if we are able to fully implement adopted plans (including the full RTP) and additional transit, bike, pedestrian and road investments needed to support new plans such as the Southwest Corridor Plan, East Metro Connections Plan, and the Regional Active Transportation Plan. In this scenario, TriMet is able to further expand high capacity transit and frequent and local bus service to more parts of the region with supporting land use and to better serve the region's most vulnerable communities. Major transit capital investments include extending high capacity transit to the Southwest Corridor, AmberGlen and Oregon City, and bus rapid transit serving the Powell/Division, I-205 and Tualatin-Valley Highway corridors as called for in the High Capacity Transit System Plan adopted by the Metro Council in June 2010. The State of Oregon implements a comprehensive intercity transit system, which includes extending WES commuter rail service from Wilsonville to Salem and Cascadia high-speed rail that connects the

[1] The regionally-reviewed growth distribution will be used in this analysis. A draft growth distribution was used in Phase 1. In addition, the RTP financially constrained system state gas tax increase assumption of 1 cent per year increase was not fully evaluated in Phase 1. The state gas tax was assumed in the Level 2 pricing assumptions as a mileage-based fee. Many of the Phase 1 scenarios with Level 2 pricing met or exceed the state greenhouse gas emissions target.

region to Salem and Eugene as well as other major west coast cities, including Seattle and Vancouver, B.C. More services, shopping opportunities and job opportunities are located near transit and where people live and work. Scenario C assumes the 2035 RTP State System of projects and programs and Tier 2 High Capacity Transit Plan corridors adopted by JPACT and the Metro Council in June 2010. Most major employers and commercial destinations in the region in the region have electric vehicle charging stations available for visitors and employees.

Scenario C also reflects a policy area (transportation pricing) that Metro and the region have not examined in great detail and more work is needed to understand the effectiveness and the potential benefits and impacts pricing policies bring, including effects on low-income households and businesses. This scenario will test new revenue mechanisms – expanded parking fees, a mileage-based fee and a carbon fee to maintain and operate the transportation system and fund needed investments and market incentives. This scenario is designed to explore using the carbon fee and mileage-based fee to test the effect of transitioning from the gas tax, as is currently being explored at the national and state levels. This scenario will test expanding parking fees in new locations served by high capacity transit and frequent bus service consistent with the Regional Transportation Functional Plan. The Regional Transportation Functional Plan identifies reduced parking requirements for areas that are served with 20-minute or better transit service, which includes areas within .5-mile of High Capacity Transit stops and .25-mile of Frequent Bus stops.

An implication of this scenario is that cities and counties are better able to achieve their adopted plans, attract new employers, and expand local companies' access to global markets to further grow local jobs because more sustainable transportation funding mechanisms are developed to fund needed investments. Incentives and market-oriented reform are linked with investments in information and green technology to further expand access to housing, economic and educational opportunities for everyone. *This scenario is expected to meet or exceed the greenhouse gas emissions target.*

## Phase 2 Scenarios Evaluation Framework

Adopted in 2010, the region's six desired outcomes will continue to be used as the framework guiding the evaluation. For the CSC scenarios project, social equity will be addressed as a lens across all desired outcomes. The six regional outcomes are:

- Vibrant Communities
- Economic Prosperity
- Safe and Reliable Transportation
- Leadership on Climate Change
- Clean Air and Water
- Equity

The Phase 2 scenarios evaluation will measure the GHG emissions reduction potential of the three scenarios and provide policy makers with information about the implications, benefits and drawbacks of different land use and transportation policy and investment choices, relative to the region's shared social equity, economic, environmental and community goals.

Staff will creating a "scorecard" to report how well the three scenarios work to advance the region's desired outcomes. Performance of each scenario will be reported using a set of key evaluation criteria that reflects input provided by the Metro Council, MPAC and JPACT in 2011, business and community leaders in 2012 and early 2013, and the public through an Opt-In opinion survey.

During the workshops and focus groups in 2012-13, the community leaders identified priority outcomes to be considered, and in some cases, potential evaluation measures. Feedback was clear that measurable

outcomes are vital to the success of the scenarios evaluation and monitoring future implementation of a preferred scenario. Priority outcomes included transportation system safety and reliability, the cost of motor vehicle and freight delay, neighborhood stability, access to education, resiliency of the natural environment, environmental justice and equity, attracting new businesses to the region and protection of farms, forestlands and natural areas. These outcomes are reflected in the evaluation criteria. Metro Council and advisory committee discussions in 2013 informed additional refinements.

Staff will use a combination of MetroScope, Metropolitan GreenSTEP, ArcGIS analysis and engagement activities to conduct the analysis. Planning-level cost estimates for each scenario will be developed by Metro, in partnership with ODOT and TriMet. For reference, the transportation investments assumed in Scenario B reflects the adopted financially constrained Regional Transportation Plan (RTP), which includes approximately $14 billion (2005 dollars) in multi-modal transportation investments and programs. The adopted State RTP projects assumed in Scenario C includes approximately $20 billion in multi-modal transportation investments and programs. Scenario C assumes more bike, pedestrian and transit investments and programs than the State RTP to reflect the Regional Active Transportation Plan and transit service enhancements identified by TriMet and SMART.

Several evaluation measures have been identified to look at the impacts on vulnerable populations, including low-income households and to the extent possible, communities of color, children, older adults, people with disabilities and households with limited English proficiency. The analysis tools have limitations in that GreenSTEP and MetroScope do not forecast the future population by race or ethnicity, and the results cannot be reported at a community or neighborhood level. GreenSTEP and MetroScope account for household income, which will be a focus of the social equity evaluation. Staff will use a methodology developed for the Regional Flexible Funds process to support the analysis, and look for opportunities to use the opportunity mapping tool and data developed by Metro in partnership with the Coalition for a Livable Future data to help illustrate demographic conditions and access to opportunities (e.g., access to transit or affordable housing) in the region.

Neighborhood stability was identified in the Equity and Environmental justice Workshop as a priority outcome to measure, particularly as it relates to increased gentrification and displacement pressure on low-income households and communities of color. Gentrification and displacement pressure can occur as housing values increase in a neighborhood in response to public policies and investments. A detailed analysis of neighborhood stability is not possible due to time and resource constraints, and limitations of the Phase 2 analysis tools. However, the evaluation will include collaborating with community leaders working to advance social equity in the region. To the extent possible, this collaboration will help identify areas of potential risk for gentrification and displacement and best practices policies/tools that, if implemented, could limit gentrification and displacement pressure and help reduce existing community disparities.

Evaluation activities will also scope implementation feasibility - including public acceptability, legal, legislative or regulatory barriers and institutional capacity – and identify short-term and long-term actions needed to implement the scenarios being evaluated. Policy discussions by the region's elected officials will inform the political feasibility of potential local and regional policies and actions.

More detailed documentation of the assumptions and analysis methodologies will be prepared during the evaluation process. A Phase 2 Findings Report will be developed that includes a scorecard and a narrative describing the methodology, analysis and outcome for each evaluation measure for each scenario and summarize results using info-graphics and other visual tools. No weighting of the evaluation measures is proposed. Decision-makers will be encouraged to determine the measures that are important to them and to include that in their decision-making.

The findings report will communicate which combination of strategies will achieve the state GHG targets and how different levels of investment and policy implementation could affect the cost of moving freight, air quality, household and business expenditures, public health, infrastructure costs, travel behavior, and

other outcomes. The report will be brought forward for discussion by the region's decision-makers and community and business leaders in Fall 2013. The information is expected to assist in the identification of the preferred scenario in spring 2014.

## OVERVIEW OF PHASE 3 - DEVELOPMENT AND SELECTION OF A PREFERRED LAND USE AND TRANSPORTATION SCENARIO

Phase 3, the final phase of the process, will begin in Fall 2013 with release of the scenarios analysis results. Release of the findings will kick-off a broader regional discussion aimed at identifying which policies, investments and actions should be included in a preferred scenario - likely drawing elements from each of the three scenarios tested in Phase 2. Policy recommendations that result from this discussion will provide direction to Metro, ODOT, TriMet and local agency staff on the draft preferred scenario to be analyzed in Spring 2014. A draft preferred scenario concept is anticipated by March/April 2014 to allow sufficient time to meet state timeline and scenario selection requirements.

A final preferred scenario is required to be selected by the end of 2014 after public review and consultation with local governments and state and regional partners. The preferred scenario will not result in a one-size fits all vision or implementation strategy. It will allow for local flexibility to support the differences among the region's cities and counties and seek to advance achievement of their of their unique goals and visions. The preferred scenario will also include regional and state implementation actions.

The preferred scenario will initially be implemented through amendments to Metro's Regional Framework Plan and 2040 Growth Concept in December 2014. Implementation through Metro's functional plans, local comprehensive plans, land use regulations and transportation system plans will occur through future actions as defined by Oregon Administrative Rules adopted by the Land Conservation and Development Commission.[2]

A summary of the process for moving forward with the scenarios analysis and final adoption of a preferred scenario to meet OAR 660-044-0040 is provided for reference.

| | |
|---|---|
| **June-August 2013** | Project staff and technical work group analyze investment scenarios using MetroScope, Metropolitan GreenSTEP and ArcGIS.<br><br>Convene workshops to support social equity evaluation and identify feasibility and actions likely to be necessary to implement scenarios.<br><br>Develop a "regional trends snapshot" in coordination with the 2014 RTP update existing conditions work for release in October 2013. The snapshot will summarize existing regional trends related to land use, housing, jobs, socio-demographics, travel behavior, land use and public health – relying on existing/available data sets and methods. The purpose of the snapshot is to provide context of where we are today, relative to the three 2035 future year scenarios that will be evaluated in summer 2013. |
| **August-September 2013** | Project staff and technical work group prepare Phase 2 CSCS Investment Choices Findings Report and other communication materials. |
| **Early October 2013** | Staff release CSCS Investment Choices Findings Report for regional discussion; begin phase 3. |

[2] OAR 660-044-0040 and OAR 660-044-0045.

| | |
|---|---|
| **November 14 or 15** | Project status update provided to the Land Conservation and Development Commission; an opportunity for the commission to provide comments and suggestions for Metro to consider as it moves forward |
| **Oct. 2013 – March 2014** | Report back to communities, decision-makers and regional partners on the results and decide which elements should be included in a preferred scenario. |
| **March/April 2014** | MPAC, JPACT and Metro Council confirm draft preferred scenario concept. |
| **April-July 2014** | Consult with local governments, and state and regional partners on draft preferred scenario concept and implementation strategies. |
| | Analyze draft preferred scenario using the regional travel demand model and Metropolitan GreenSTEP. |
| **Summer 2014** | Project staff prepare adoption package for public comment period. |
| **Fall 2014** | 45-day public comment period on adoption package. |
| **December 2014** | MPAC and JPACT recommendation to the Metro Council on the preferred land use and transportation scenario |
| | Metro Council takes action on recommended preferred land use and transportation scenario. |

**ANALYSIS/INFORMATION**

1. **Known Opposition** None known. The Metro Policy Advisory Committee (MPAC) and the Joint Policy Advisory Committee on Transportation (JPACT) unanimously recommended moving forward with the Phase 2 evaluation (as set forth in this staff report and Exhibits A and B) on May 8 and May 9, respectively.

2. **Legal Antecedents** Several State and regional laws and actions relate to this action.

   **Metro Council actions**
   - Resolution No. 08-3931 (For the Purpose of Adopting a Definition of Sustainability to Direct Metro's Internal Operations, Planning Efforts, and Role as a Regional Convener), adopted on April 3, 2008.
   - Ordinance No. 10-10-1241B (For the Purpose of Amending the 2004 Regional Transportation Plan to Comply with State Law; To Add the Regional Transportation Systems Management and Operations Action Plan, the Regional Freight Plan and the High Capacity Transit System Plan; To Amend the Regional Transportation Functional Plan and Add it to the Metro Code; To Amend the Regional Framework Plan; And to Amend the Urban Growth Management Functional Plan), adopted on June 10, 2010.
   - Ordinance No. 10-1244B (For the Purpose of Making the Greatest Place and Providing Capacity for Housing and Employment to the Year 2030; Amending the Regional Framework Plan and the Metro Code; and Declaring an Emergency), adopted on December 16, 2010.
   - RESOLUTION NO. 12-4324(For the Purpose of Accepting the Climate Smart Communities Scenarios Project Phase 1 findings and Strategy Toolbox for the Portland Metropolitan Region to Acknowledge the Work Completed to Date and Initiate Phase 2 of the Climate Smart Communities Scenarios Project), adopted on January 26, 2012.

**State of Oregon actions**

- Oregon House Bill 3543, the Climate Change Integration Act, passed by the Oregon Legislature in 2007, codifies state greenhouse gas reduction goals and establishes the Oregon Global Warming Commission and the Oregon Climate Research Institute in the Oregon University System.
- Oregon House Bill 2001, the Jobs and Transportation Act, passed by the Oregon Legislature in 2009, directs Metro to conduct greenhouse gas emissions reduction scenario planning and LCDC to adopt reduction targets for each of Oregon's metropolitan planning organizations.
- Oregon House Bill 2186, passed by the Oregon Legislature in 2009, directs work to be conducted by the Metropolitan Planning Organization Greenhouse Gas Emissions Task Force.
- Oregon Senate Bill 1059, passed by the Oregon Legislature in 2009, directs planning activities to reduce greenhouse gas emissions in the transportation sector and identifies ODOT as the lead agency for implementing its requirements. This work is being conducted through the Oregon Sustainable Transportation Initiative.
- OAR 660-044, the Metropolitan Greenhouse Gas Reduction Targets Rule, adopted by the Land Conservation and Development Commission (LCDC) in May 2011, and amended in November 2012.

3. **Anticipated Effects**
   - Staff will move forward to conduct the Phase 2 scenarios evaluation and report back to the Metro Council and Metro's technical and policy advisory committees in October 2013.

4. **Budget Impacts** None.

**RECOMMENDED ACTION**

Staff recommends approval of Resolution 13-4438.

**Attachment 1 to**
**Staff Report to Resolution No. 13-4438**

# Climate Smart Communities Scenarios

## Health Impact Assessment

Health Impact Assessment Program
Environmental Public Health Tracking Program
Research and Education Services
Center for Health Protection
Public Health Division
Oregon Health Authority

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**Acknowledgements:**

We would like to thank the members of this project's Advisory Group for their time, expertise, and participation in this HIA. See appendix A for a complete list of the Advisory Group.

We would like to thank Metro, especially Kim Ellis and Nuin-Tara Key for their assistance, and the Oregon Department of Transportation, in particular Brian Gregor, for providing data and support for the assessment. We are grateful to Dr. James Woodcock at the Centre for Diet and Activity Research, Cambridge Institute of Public Health, for allowing us to use ITHIM and for his expert consultation throughout the project, and to Dr. Neil Maizlish at the State of California Department of Public Health for sharing his ITHIM results with us. We would like to acknowledge Daniel Morris, Curtis Cude, Betsy Clapp and Marjorie Bradway for their technical review of this report, and Sandra Healy, Jill Brackenbrough, and Susan Dietz for their assistance throughout this project.

Finally, we thank this project's funders, the Centers for Disease Control and Prevention's Healthy Community Design Initiative, for their continued support to build state and local capacity to conduct Health Impact Assessment in Oregon.

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# Executive Summary

Health impact assessment (HIA) provides decision-makers with information about how a proposed policy, program or project may affect the health of people, with a specific focus on equity. HIA differs from traditional public health assessment in an important way - the health impacts of a proposal are assessed before a final decision is made, allowing the results of the HIA to be considered in the decision-making process. HIA provides objective information that can be used to increase the positive health impacts of a project or policy and mitigate negative impacts.

The Oregon Health Authority (OHA) conducts HIAs on projects or policies with statewide impact and on local or regional issues when there is sufficient interest from community members or other agencies. OHA supports statewide HIA practice by facilitating the Oregon HIA Network, providing trainings, and awarding mini-grants to local health departments.

The Climate Smart Communities Scenarios (CSCS) project underway in the Portland, Oregon metropolitan (PDX metro) region is the focus of this HIA. The CSCS project is Metro Regional Government's (Metro) response to a legislative requirement to meet Oregon greenhouse gas (GHG) emissions reduction goals for small trucks and cars. While the law was passed in an effort to mitigate climate change and reduce air pollution, Metro is also considering impacts on public health, the economy, the environment and equity as part of the planning effort.

The HIA will help to support Metro in their consideration of public health and health equity in the selection and implementation of transportation and land use decisions related to GHG reduction policy in the Portland metropolitan region. Our recommendations in this report apply to the selection of the three Phase Two GHG-reduction scenarios to be further tested in 2013, as well as the development and adoption of a preferred scenario in 2014.

Changes to our climate have the potential to impact health in many ways [1]. For example, more summer heat waves with higher temperatures or longer durations would increase heat-related illness and death. Increased frequency and severity of winter storms could lead to impacts such as increased respiratory illness from mold exposure, and increased drowning [2, 3]. Plans and policies intended to help communities mitigate or adapt to climate change also have health implications.

Creating walkable and bikeable communities may increase the proportion of Portland metropolitan region residents who meet physical activity benchmarks and reduce the burden of chronic diseases that are associated with inactivity, while reducing vehicle travel and carbon emissions [4, 5]. In addition, advancements in fuel technology and policies related to fleet mix and turnover also may reduce GHG emissions in the region. Reducing greenhouse gas emissions will have inevitable health benefits for Oregonians by slowing down climate change and improving air quality.

## Summary of Findings

OHA found that almost all of the policies under consideration could improve health, and that certain policy combinations were more beneficial than others. The majority of the health benefits result from increased physical activity, followed by reductions in road traffic crashes and lower exposure to particulate air pollution. Strategies that meet GHG reduction goals by decreasing vehicle miles traveled (VMT) will have the most positive impact on human health by increasing physical activity through active transportation and reducing injuries and fatalities from collisions.

The most health-promoting scenarios have similar elements: most ambitious levels of community design policies, intermediate and ambitious levels of pricing and incentives, highest levels of active transportation (including transit), lowest levels of single occupancy vehicle driving, and lowest levels of particulate air pollution. The majority of the health benefits come from increases in physical activity, followed by decreases in injuries and fatalities from collisions, and finally from decreased exposure to air pollution.

Some of the policies under consideration, or the way they are implemented, may also negatively affect health. For example, some communities in the Portland metropolitan region have poor access to active transportation infrastructure (sidewalks, bike routes, transit service). If these areas are not prioritized, implementation could worsen existing inequities, leading to increased health disparities for some of the region's residents.

The modeling tool used in this assessment shows positive health impacts due to reductions in motor vehicle crashes, but also revealed potential negative impacts from increased bike injuries. Understanding the range of potential impacts will help policy makers decide which strategies to prioritize and how to implement the strategies to maximize health and reduce health-related costs for local communities.

## CSCS HIA Key Recommendations

- Develop and implement a preferred scenario that meets or surpasses the greenhouse gas emissions reduction target set for the region.
- To maximize public health benefits and meet the state target, emphasize strategies that best increase active transportation and physical activity: community design, pricing and incentives.
- Include strategies, such as community design, that can lead to decreases in road traffic injuries and fatalities for all populations in the region, in particular for children.
- Carry out additional quantitative health impact assessment of the three scenarios that are identified for further evaluation in spring 2013 to further inform development and adoption of a final preferred scenario. OHA recommends the use of ITHIM or a similar health impacts model for this future assessment.

# Introduction

Health impact assessment (HIA) provides decision-makers with information about how a proposed policy, program or project may affect the health of people. HIA differs from traditional public health assessment in an important way - the health impacts of a proposal are assessed before a final decision is made, allowing the results of the HIA to be considered in the decision-making process. HIA provides objective information that can be used to increase the positive health impacts of a project or policy and mitigate negative impacts.

OHA conducts HIAs on projects or policies with statewide impact and on local or regional issues when there is sufficient interest from community members or other agencies. OHA supports statewide HIA practice by facilitating the Oregon HIA Network and providing trainings, and awarding small grants to local health departments.

## Purpose

The Climate Smart Communities Scenarios (CSCS) [6] project underway in the Portland, Oregon metropolitan (PDX metro) region is the focus of this HIA. The CSCS project is a response by Portland metropolitan regional government (Metro) to a legislative requirement to meet Oregon greenhouse gas (GHG) emissions reduction goals for cars and small trucks. While the law was passed in an effort to mitigate climate change and reduce air pollution, Metro is also considering impacts on public health, the economy, the environment and equity as part of the planning effort. All of the findings and recommendations in this report focus on public heath.

The report provides a community profile, including information about current health conditions; results of a literature review on the links between proposed policies and health outcomes; quantitative assessment of land use and transportation policies tested in Phase One of the CSCS project; and recommendations for future work to expand the reach of positive impacts and mitigate negative health impacts.

The HIA will support Metro in their consideration of public health and health equity in the selection and implementation of transportation and land use decisions related to GHG reduction policy in the Portland metropolitan region. Metro's CSCS technical work group, the Metro Council, and other committees and stakeholders will use the report as they develop additional policy options to be tested in 2013, and in the creation of a final scenario to be adopted in 2014.

## Climate Policy Background

Oregon passed a bill in 2007 that set goals for reducing GHG emissions in the state. House Bill 3543 states that Oregon will reduce emissions to 10 percent below 1990 levels by 2020, and to

75 percent below 1990 levels by 2050. In 2009, Oregon enacted House Bill 2001, which requires Metro to develop a preferred scenario that accommodates planned population and job growth and reduces GHG emissions from light vehicles. House Bill 2001 was a broad-based transportation bill that focused on sustainable transportation systems and funding, with the goal of ensuring that Oregon begins to address climate change. The law requires Metro to adopt the preferred scenario after public review and consultation with local governments. It also requires that local governments implement the preferred scenario through scheduled updates to transportation and land use plans.

The Oregon Land Conservation and Development Commission (LCDC) subsequently set light duty vehicle GHG emissions reduction targets for each of Oregon's six largest metropolitan areas in June 2011. In November 2012, the LCDC established administrative rules directing Metro to complete the scenario planning and adopt a preferred scenario by December 31, 2014. In the future, Oregon's other metropolitan planning organizations may also conduct similar scenario planning.

Metro's CSCS planning process will adopt a recommended transportation and land use scenario for the Portland metropolitan region that includes policies and strategies for reducing GHG emissions to meet the LCDC target. The adopted scenario will update regional policies and describe a general course of action for achieving the GHG emissions reduction target through policies, investments and actions at the state, regional and local levels.

The Oregon Health Authority (OHA) developed the CSCS HIA to support Metro's consideration of health impacts early in the scenario planning process and in future planning and implementation efforts.

## Climate Policy and Health

Changes to our climate have the potential to impact health in many ways [1]. For example, more summer heat waves with higher temperatures or longer durations would increase heat-related illness and death. Increased frequency and severity of winter storms could lead to impacts such as increased respiratory illness from mold exposure, and increased drowning [2, 3]. Plans and policies intended to help communities mitigate or adapt to climate change also have health implications.

Creating walkable and bikeable communities may increase the proportion of Portland metropolitan region residents who meet physical activity benchmarks and reduce the burden of chronic diseases that are associated with inactivity, while reducing vehicle travel and carbon emissions [4, 5]. In addition, advancements in fuel technology and policies related to fleet mix and turnover also may reduce GHG emissions in the region. Reductions in air pollution may have positive impacts on health, including reductions in chronic diseases such as asthma or cancer, and acute conditions such as heart attack or stroke.

However, these policies or the way they are implemented may also negatively affect health. For example, some communities in the Portland metropolitan region have poor access to active transportation infrastructure (sidewalks, bike routes, transit service). If these areas are not prioritized, implementation could worsen existing inequities, leading to negative health effects for some of the region's residents. Understanding the range of potential impacts will help policy makers decide which strategies to prioritize and how to implement the strategies to maximize health and reduce health-related costs for local communities.

## Climate Smart Communities Scenarios HIA

The CSCS HIA is intended to inform Phase Two of Metro's CSCS planning effort, which will include the development and evaluation of three alternative scenarios. Although the Phase Two scenario alternatives will draw from the 144 tested in the first phase of the CSCS project, the three scenarios will not necessarily match any of the 144 scenarios tested in Phase One. The three alternatives considered are framed around varying levels of community investment; each is designed to maximize public health, equity, economic, and environmental benefits.

In spring 2013, the Metro Council will direct staff to move forward to test the three alternatives developed in Phase Two, after gathering input from other community and business leaders at a regional summit. These alternatives will be assessed prior to the creation of a final scenario in Phase Three of the CSCS planning process. Results of the Phase Two assessment will be released in fall 2013 for discussion and to gather input to identify which policies, investments and actions should be included in a preferred scenario.

A final preferred scenario will be selected by the end of 2014 and will be implemented through policies, investments and actions at the regional and local levels, including Metro's Regional Transportation Plan and the Portland metropolitan region's growth management strategy and local plans.

The CSCS HIA will help to ensure that public health and health equity are considered in the selection and implementation of transportation and land use options related to GHG reduction policy in the Portland metropolitan region and potentially in Oregon's other metropolitan areas. The goals of the CSCS HIA are:

1. Provide evidence-based recommendations to aid decision-makers in understanding potential health impacts and tradeoffs of the CSCS policy options
2. Build and strengthen relationships between OHA and governing and planning bodies in the Portland metropolitan region
3. Promote consideration of health impacts in transportation planning and climate change mitigation efforts throughout the state
4. Promote HIA practice in Oregon

OHA followed the guidelines recommended in the North American HIA Practice Standards in developing each stage of the HIA. These stages include: screening, scoping, assessment, reporting and evaluation [7].

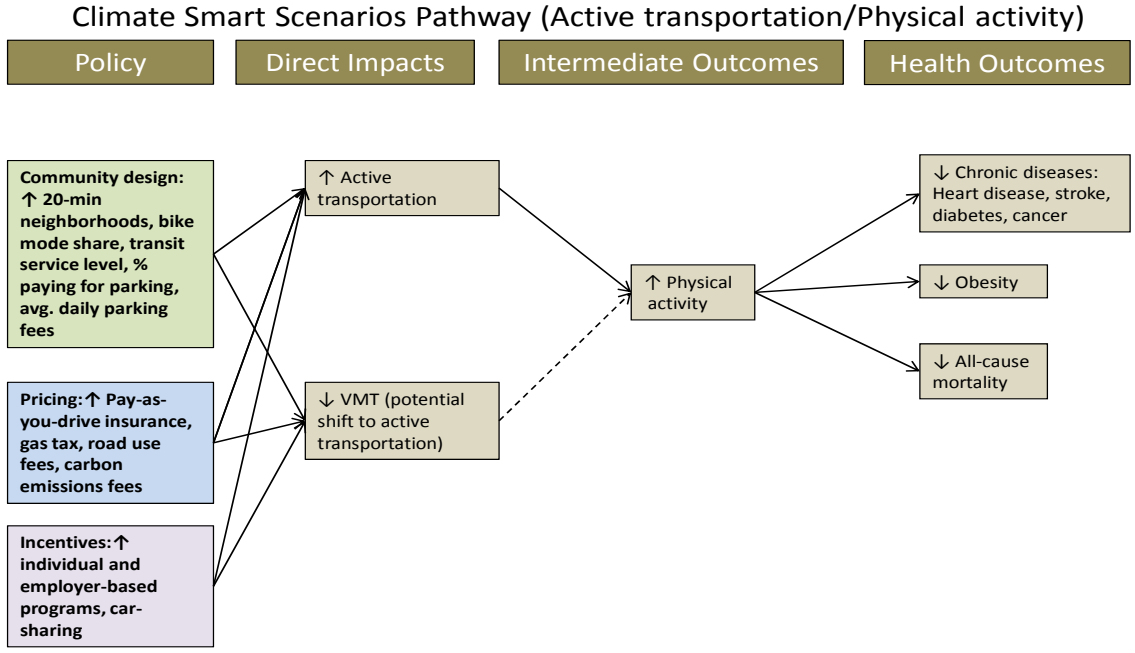
## Screening and Scoping

In September 2011, OHA screened the CSCS HIA with partners at Metro and determined that an HIA could bring important health considerations to the CSCS decision-making process. In March 2012, OHA convened a group of 37 stakeholders representing planning, transportation and public health experts from around the Portland metropolitan region for a one-day workshop. Many of these stakeholders also represented local communities and vulnerable populations who will be potentially impacted by Metro's adoption of a preferred scenario. In the meeting, OHA provided an overview of Metro's CSCS planning project, gave an introduction to health impact assessment methodology, and presented the above CSCS HIA goals.

With the input and support of the advisory group, OHA determined priority health impacts, obtained necessary data, and found essential sources for the literature review. A list of advisory group members can be found in Appendix A.

Below is a sample pathway diagram that demonstrates the potential links between GHG reduction policy and program options and health impacts in the Portland metropolitan region. The pathways were drafted by OHA during the scoping phase of the assessment and revised with input from the advisory committee and information learned during the assessment. Additional pathways demonstrating potential links between policies and programs related to particulate air pollution exposure and roadway-related injuries and fatalities and health impacts are in the findings section of the report.

**Pathway Diagrams 1 - Active transportation and physical activity**




## Assessment Methodology

OHA conducted a literature review about the proposed GHG reduction policies and the priority health determinants or impacts within our scope, which included physical activity, air pollution and road traffic injuries and fatalities. OHA identified the most relevant publications in each category for inclusion in the report's evidence base and rated their quality according to guidelines from the Agency for Healthcare Research and Quality [8]. A summary table is available on page 27.

In addition to the literature review, OHA used the Integrated Transport and Health Impact Modeling (ITHIM) tool in order to quantitatively determine which types of policy combinations had the most positive impact on health [9]. ITHIM is a comparative risk assessment model developed by Dr. James Woodcock at Cambridge University. ITHIM estimates changes to life expectancy and quality of life for scenarios based on known relationships between physical activity and chronic illnesses such as cardiovascular disease and diabetes; serious injuries and fatalities from motor vehicle related crashes; and illness and death from particulate air pollution exposure [9, 10].

## Reporting and Evaluation

This report presents information about potential health benefits and impacts of the proposed GHG reduction policies evaluated in Phase One of the CSCS project. It also provides recommendations for expanding the reach of positive impacts and mitigating negative health impacts. Subject matter experts from OHA, the CSCS HIA Advisory Committee and Metro reviewed the report. The report will be disseminated to policymakers and community stakeholders in the Portland metropolitan region and to state and national partners. An evaluation will be completed in the summer of 2013 and will include an evaluation of the CSCS HIA process and its effectiveness in influencing the decision-making process.

# Community Profile

The decision-makers and planners at Metro and the region's local governments have done significant work to understand the existing conditions related to health status and local health determinants, as shown in the region's planning documents, travel surveys and reports [11, 12]. The local health context is an essential consideration when choosing policies for inclusion in the 2014 preferred Climate Smart Communities Scenario and when implementing these policies. This existing conditions summary explores population and travel characteristics for the region's counties and presents information about the underlying health status of residents, with a particular focus on vulnerable populations who may experience worse health outcomes. County health measures are compared to the state or to national targets to provide context, as is customary in health assessments. The measures of health status and health determinants for Portland metropolitan region communities presented below relate to the CSCS policies that OHA assessed.

## Population and Travel Characteristics/Infrastructure

The Portland metropolitan region has a population of nearly 1.5 million distributed across three counties (Clackamas, Multnomah, and Washington) and 25 cities. It is the most populous region in Oregon and the 24th largest metropolitan area in the country. Portland itself is the sixth largest city on the West Coast. Population in the Portland metropolitan region is forecasted to grow to nearly 2 million by 2035 [13].

## Vehicle Miles Traveled

In the Portland metropolitan region in 2010, there were 5,074 vehicle miles traveled (VMT) per capita [14]. This was the lowest level of VMT per capita for the region since 1985 [14]. Nevertheless, due to population growth, average daily VMT has continued to grow steadily. Between 1982 and 2010, average daily VMT for the Portland metropolitan region has risen from 15 million miles to over 26 million miles [14].

In addition to population growth, long commute times and above average dependence upon automobiles for drive-alone commuters have contributed to the increase in VMT in the Portland metropolitan region. The average commute time for every county in the region is above the state average (Appendix B, Table 1). Additionally, Clackamas and Washington counties have higher percentages of single passenger auto commuters. Multnomah County is significantly below the state average of single passenger auto commuters; however, when examined at a smaller scale (Appendix B, Table 2) only the City of Portland is below average while more than one-third of Multnomah County's other cities are above average.

## Public Transit Travel

Substantial growth in public transit ridership within the Portland Metro region occurred in the late 1990s. From 1997 to 2007, ridership on bus and rail lines increased 45%, nearly twice the growth rate in population [15]. The rate of ridership slowed to 15% between 2002 and 2012, but it is still well over the 10% population growth rate the region experienced in the same decade [16, 17]. Additionally, with a 52-mile MAX light rail system, 79 bus lines, and a 14.7-mile WES Commuter Rail serving 570 square miles, nearly 90% of the region's residents live within one-half mile of a bus stop or a rail platform [15]. In 2004, transit ridership in the Portland metropolitan region was ranked 7$^{th}$ in the U.S. at 70 passenger trips per capita [18]. Since this time, TriMet, the agency overseeing transit services in the Portland metropolitan region, has expanded its transit network. Consequently, in 2009 transit ridership has increased to 73 passenger trips per capita [19]. TriMet currently operates 225 lift vehicles and provides 958,000 annual rides to seniors and people with disabilities. Weekly ridership on buses and MAX rail lines has increased for all but one year in the past 23 years due to recession-related service cuts [16, 17].

## Active Transportation Travel

Significant investments to expand bicycle infrastructure throughout the Portland metropolitan region have also occurred over the past two decades. For example, the City of Portland invested more than $12 million between 1991 and 2004 to develop its regional bicycle network which contains more than 300 bikeway miles [15, 20]. In addition, Metro's Regional Flexible Fund Allocation (RFFA) program provided funding for 46 miles of bicycle boulevards, bike lanes, trails and other bicycle projects between 2006 and 2015 [21]. These investments build on RFFA investments that have been made since 1995. Although bicycle data is limited, regional reports and a recently completed travel behavior survey have documented increased bicycle ridership throughout the region [15].

The regional pedestrian network has not seen the same level of expansion as public transit and bicycle facilities. In addition to locally funded pedestrian projects, Metro's RFFA program provided funding for nearly 9 miles of sidewalks in mixed-use centers throughout the Portland metropolitan region. Although nearly 90% of the region's residents live within one-half mile of a bus stop or a rail platform, only 69% of those stops are accessible by sidewalk [15]. Additionally, it was found that the region has 1,230 miles of potential pedestrian facilities located within transit/mixed use corridors and pedestrian districts [15]. In the regional network of corridors and districts, 19% of all streets have no sidewalks, 19% have sidewalks on at least one side of the street and 62 % of all streets had sidewalks on both sides of the street [15, 22].

One in six trips in the Portland metropolitan region are now made using active travel. Comparison of the 1994 and 2011 Oregon Household Activity Survey shows that between 1994-95 and 2011, all trips made by walking, biking and transit increased by 36% (from 13.1% to

17.8% of all trips) while trips made by auto declined by 5.7%. Walking trips increased by 14%, trips by biking increased over 190%, and trips by transit increased by 50% [23].

Lower income, disabled, and people of color make more of their trips using active travel, especially walking and transit, than higher-income, white and non-disabled persons [24]. People with disabilities particularly rely on access to transit for travel. Nearly 7% of the population reports having a disability that affects their ability to travel. People with disabilities drive and bike less and walk and take transit more often than people that reported having no disability that affects their ability to travel [25].

## Safety

Making streets safer for people walking and riding bicycles and reducing bicycle and pedestrian crashes is important to protecting the public's health. Feeling and being safe while walking and bicycling is an important factor in the travel choices people make and therefore is a critical part of a complete transportation system. Transportation safety is also an equity issue. Research and data show that people with low incomes and people of color are more likely to live near wide, high-traffic streets and are thus much more likely to be injured by an automobile [26].

Serious pedestrian and bicycle crashes account for 20% of all serious crashes in the region [27]. Serious crashes are those that result in a fatality or an incapacitating injury. While 3.2% of all trips (not counting trips to access transit) take place by bicycle, 8% of all serious crashes involve bicyclists. Pedestrians make 10% of all trips in the Portland metropolitan region (not including trips to access transit); however 12% of all serious and fatal crashes involve a pedestrian.

There were a total of 1,297 pedestrian crashes resulting in injury in the Portland metropolitan region between 2007 and 2010. Of those crashes, 252 resulted in a death or an incapacitating injury. The majority of pedestrian crashes occur while pedestrians are crossing the roadway, either at an intersection or mid-block. Nearly 80% of all serious and fatal pedestrian crashes occur when people are crossing the roadway.

There were a total of 1,503 bicycle crashes resulting in injury in the Portland metropolitan region between 2007 and 2010. Of those crashes, 140 resulted in a death or an incapacitating injury. Most serious and fatal bicycle crashes (73%) occur at intersections.

Major factors contributing to serious crashes include high-traffic streets, streets with multiple lanes, excessive speed, driver impairment due to alcohol or drugs, lack of adequate street lighting and congestion [27].

## Air Quality

Overall, air pollution in the Portland metropolitan region has decreased dramatically over the last 30 years [28]. However, air quality remains an environmental justice and equity issue. The Portland Air Toxics Solutions Committee Report mapped census block groups with minority

populations above 25% overlaid with total times above benchmarks for all pollutants observed in the study, including emissions from cars and trucks [29]. Visual inspection of the overlay suggests that there is an overlap between high minority and high impact areas in some areas of the study boundary, including Forest Grove, Hillsboro, Aloha, Beaverton, North Portland, East Portland and Gresham.

## Vulnerable Populations

Transportation is essential to the health of all the region's residents. Transportation connects people to jobs, schools, parks and recreation facilities, shopping, friends, and essential services like health care. Transportation-related air pollution and a lack of access to affordable, high-quality transportation options negatively impacts health. Certain groups within the region are more likely to be affected by air pollution and lack transit access, such as youth, seniors, low-income residents and communities of color [30, 31]. These groups are also at higher risk for health conditions linked to limited transportation options and transportation-related air pollution, such as asthma, heart disease, and obesity [32, 33].

## Age

Older adults make up a smaller portion of the Portland metropolitan region's population compared to Oregon as a whole (Table 1). Comparatively, children and teens comprise a greater share of Clackamas and Washington County's population than Oregon as a whole. Multnomah County has a lower percentage of youth than the state.

**Table 1. Portland Metropolitan Region Comparison, County and State - Age**

| Age Category | **Clackamas County** | **Multnomah County** | **Washington County** | **State of Oregon** |
|---|---|---|---|---|
| **Under 18 Years Old** | 23.7% | 20.5% | 25.6% | 22.6% |
| **65 Years or Older** | 13.6% | 10.5% | 10% | 13.9% |

Source: Profile of General Population and Housing Characteristics: 2010 prepared by the U.S. Census Bureau, 2011.

### Race and Ethnicity

When examining race and ethnicity within the Portland Metro region, Multnomah and Washington County are similar (Table 2). While white residents make up a large share of both counties' population (approximately 81%), Multnomah and Washington still have higher percentages of residents of color (in all race/ethnicity categories) than Oregon as a whole [34]. Washington County in particular has one of the greatest Hispanic/Latino population in the state [34]. In contrast, Clackamas County's population is primarily white and has smaller populations of communities of color (in all race/ethnicity categories) compared to Oregon as a whole [34].

Table 2. Portland Metropolitan Region Comparison, County and State – Race/Ethnicity

| Race/Ethnicity | Clackamas County | Multnomah County | Washington County | State of Oregon |
|---|---|---|---|---|
| **White** | 91.1% | 80.5% | 80.4% | 87.1% |
| **Black or African American** | 1.4% | 7.1% | 2.7% | 2.6% |
| **American Indian and Alaska Native** | 1.9% | 2.5% | 1.7% | 2.9% |
| **Asian** | 4.8% | 8.2% | 10.6% | 4.9% |
| **Native Hawaiian and Other Pacific Islander** | 0.5% | 0.9% | 0.9% | 0.7% |
| **Some Other Race** | 3.7% | 5.9% | 8.4% | 6% |
| **Hispanic or Latino** | 7.7% | 10.9% | 15.7% | 11.7% |

Source: Profile of General Population and Housing Characteristics: 2010 prepared by the U.S. Census Bureau, 2011.

In the Portland metropolitan region, both white and non-white heads of households make the majority of trips by auto. However, non-white householders make a greater percentage of their trips by walking, bicycling and transit than white householders. Non-white householders make 20.5% of all their trips by walking and bicycling and transit, while white householders make 15% of all their trips by walking and bicycling and transit [12].

## Income and Poverty

Within Clackamas and Washington counties, the median household income is approximately $62,000, which is higher than the median Oregon household income ($49,260) [35]. Within both counties, fewer than 10% of people had an income in the past 12 months lower than the poverty rate (Table 3) [35]. This was roughly 5% lower than the state as a whole. In comparison, Multnomah County has a median household income that is similar to the median Oregon household income [35]. Also, 16% of Multnomah County residents had an income in the past 12 months lower than the poverty rate [35], a slightly higher percentage than the state as a whole.

Table 3. Metropolitan Region Comparison, County and State – Other Demographics

| Category | Clackamas County | Multnomah County | Washington County | State of Oregon |
|---|---|---|---|---|
| **Median Household Income** | $62,007 | $49,618 | $62,574 | $49,260 |
| **Income in the past 12 months below the poverty level** | 9% | 16% | 9.5% | 14% |

Source: 2006-2010 American Community Survey [Oregon] prepared by the U.S. Census Bureau, 2011.

Households in the four-county Portland metropolitan region (including Clark County) with lower income levels make more of their trips using active travel modes, especially walking and taking transit. As income rises, more trips are made by auto. For example, for households with income under $15,000, 26% of all trips are made by active modes and 74% of trips are made by auto. This is compared to households with the highest level of income, $150,000 or more, where 11% of trips are made by active modes and 89% of trips are made by auto [12].

For walking trips, 32.8% of all walking trips are made by households with income under $35,000, 32.3% are made by households with income between $35,000 and $75,000, and 35% are made by households with income greater than $75,000. For trips by bicycle, 21.2% of all trips by bicycle are made by households with income under $35,000, 37.1% are made by households with income between $35,000 and $75,000, and 41.8% are made by households with income greater than $75,000 [12].

For transit trips, 44.6% are made by households with income under $35,000, 30% are made by households with income between $35,000 and $75,000 and 24.6% are made by households with income greater than $75,000 [12].

# Health Conditions

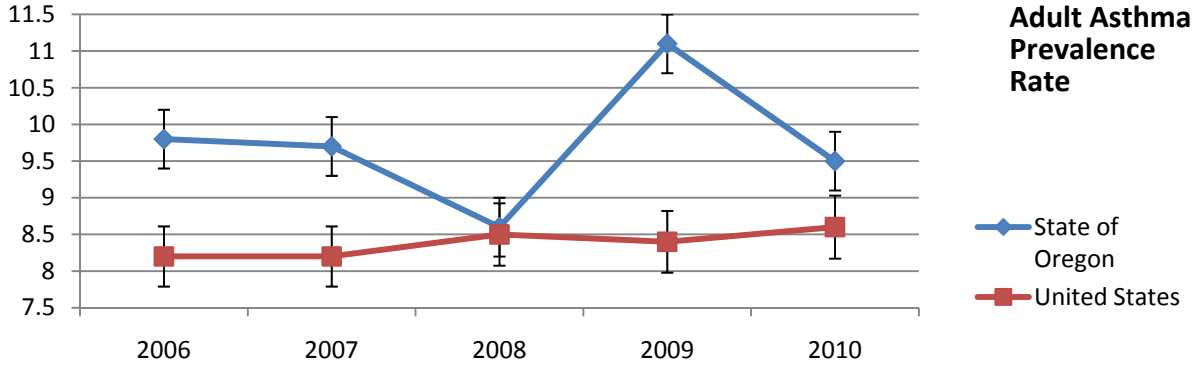
Chronic health diseases such as asthma, diabetes, stroke, heart disease, and cancer, along with factors such as obesity, are significant contributors to illness and death for all Oregon and Portland metropolitan region residents and many of the proposed policies designed to reduce GHG emissions would impact these chronic health conditions. For a tabular comparison of the burden of these illnesses, see Appendix B, Table 3.

## Asthma

Asthma is a chronic lung disease that inflames and narrows the airways to cause shortness of breath, coughing, and wheezing [36, 37]. Asthma affects people of all ages, but it is one of the most common long-term chronic diseases of children [38]. Exposure to air pollution increases the risk of developing asthma and can cause those with asthma to experience worsening of symptoms.

In 2009, approximately 10.2 % (≈300,000) of Oregon adults and 9.5% (≈ 83,000) of children had asthma [36] . As a result, Oregon ranked among the top five states in the nation with the highest percent of adults with asthma (Figure 1) [36, 39]. The most current county-level prevalence data (Figure 2) shows that from 2006 – 2009 the counties of Clackamas (9.7%), Multnomah (9.2%), and Washington (9.0%) fared the same or better than the state average prevalence (9.7%) of adult asthma [40].

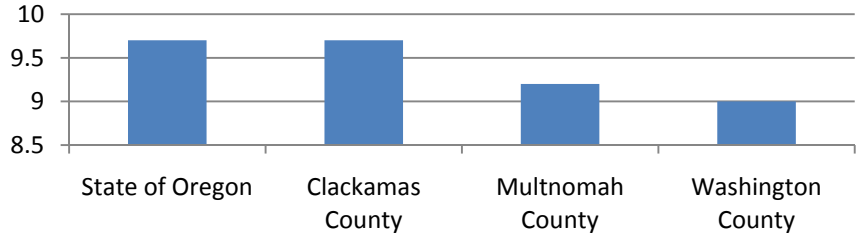
**Figure 1. Percent of adult population with asthma, Oregon and U.S.**




Source: Behavioral Risk Factors Surveillance System

Source for above image: http://www.cdc.gov/asthma/brfss/default.htm#08

Figure 2. Percent of adults with asthma, Oregon and Portland metropolitan region counties




**Age Adjusted Prevalence Rate of Asthma Among Adults: 2006 - 2009**

Source: Oregon Behavioral Risk Factors Surveillance System

Source for above image: http://public.health.oregon.gov/DiseasesConditions/ChronicDisease/Documents/TableI.pdf

Studies have shown that asthma is distributed unevenly throughout the population. Non-white children and children living in poverty have a significantly higher risk of asthma than do white children [41]. The local patterns of asthma were highlighted in 2002 by a study which showed lower income, more racially and ethnically diverse areas of inner Northeast Portland had higher rates of asthma than the county average and other higher income, less diverse areas within the region (such as Orenco Station in Hillsboro and inner Southeast neighborhoods in Portland) [42, 43].

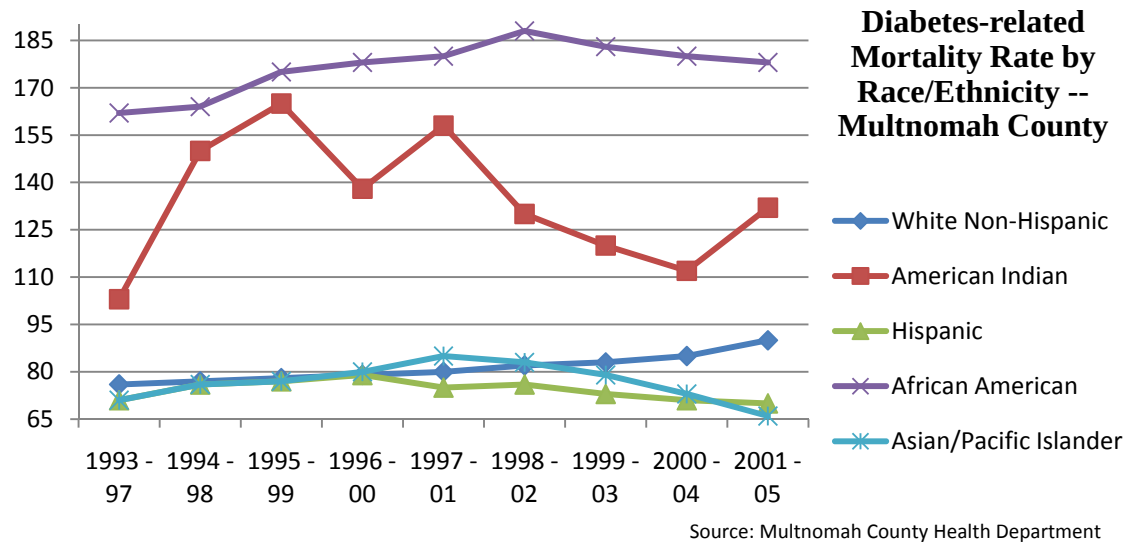
## Diabetes

Diabetes is a chronic disease in which blood sugar levels are high and not regulated well, which can lead to serious health complications and premature death [44]. It is the seventh leading cause of death in the United States[45]. Regular physical activity lowers the risk of diabetes.

In 2010, Oregon's diabetes prevalence rate for adults was 7.2%, leading to Oregon's rank among the 10 states with the lowest diabetes rates in the nation [46]. The most current county-level prevalence data shows that from 2006 – 2009 the counties of Clackamas (6.6%), Multnomah (6.2%), and Washington (5.9%) were similar to or slightly better than the state average (6.8%) for adult diabetes [40]. Although the Portland metropolitan region has slightly better diabetes rates than the state average, the rates are still much higher than the 20 per 1,000 population Healthy People 2010 target [47]. Moreover, the most recent data shows that Multnomah County has a higher diabetes mortality rate than the national average [48].

Diabetes predominately affects lower income groups, communities of color, and individuals over the age of 65 [42, 49]. In 2010, diabetes contributed 6.5% of the total deaths for non-white Oregonians, compared to only 3% for white non-Hispanic Oregonians [50]. Figure 3 shows the differences between different races/ethnicities in diabetes-related mortality rates.

Figure 3. Diabetes-related mortality rate, Multnomah County




Source: Multnomah County Health Department

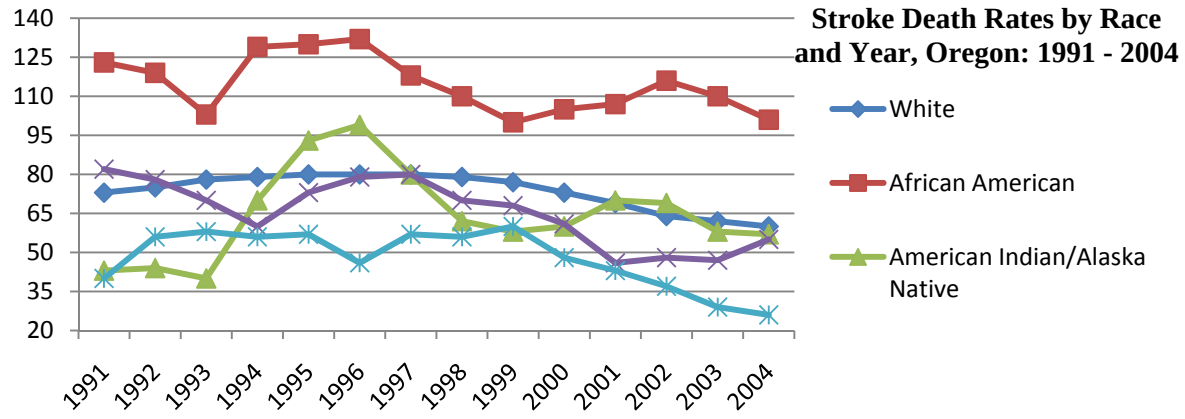
Source for above image: http://web.multco.us/sites/default/files/health/documents/winter2009_diabetes.pdf

## Stroke

Stroke is the third leading cause of death in Oregon [51]. In 2010, Oregon's stroke prevalence was 2.2% (1.9 – 2.6) and it ranked among the fifteen states in the nation with the lowest prevalence rate [52]. However, since 1990, Oregon's stroke death rate has been higher than the national average. With a death rate of 49 per 100,000 individuals, Oregon ranks among the top 10 states with the highest stroke death rate in the nation [53, 54]. The most current county-level prevalence data shows that from 2006 – 2009 the counties of Clackamas (2.6%), Multnomah (1.8%), and Washington (1.9%) were similar to the state average (2.3%) of stroke prevalence [53]. Regular physical activity lowers the risk of stroke.

Various studies have shown that in the United States, African-American communities are disproportionately affected by stroke [55]. This disparity also exists in Oregon. Since 1991, the stroke death rates for African Americans living in Oregon have been significantly higher than all other resident races and ethnicities (Figure 4). For example, the African-American death rate from stroke in 2005 was 90.4 per 100,000 [51]. The second closest was the death rate for American Indians/Alaskan Natives which was 69.0 per 100,000 [51]. Figure 4 below shows the differences between different races/ethnicities in stroke-related mortality rates.

Figure 4. Stroke mortality rates by race and year, Oregon




Source: Oregon Heart Disease and Stroke Prevention Program.

Source for above image:
http://public.health.oregon.gov/DiseasesConditions/ChronicDisease/HeartDiseaseStroke/Documents/2007BurdenReport.pdf

## Heart Disease

Heart disease refers to several heart conditions, the most common being coronary artery disease, which results when the flow of blood and oxygen to the heart is restricted or cut off [56]. This disease can cause heart attacks and angina. In 2009, more than 168,000 Oregonians (approximately 5.3%) had heart attack, angina, or coronary artery disease [53]. Approximately, 20% of all deaths in Oregon in 2010 were attributed to heart disease [50]. Nevertheless, the most recent Centers for Disease Control and Prevention data highlights that Oregon ranks among the top five states with the lowest heart disease prevalence in the nation [57]. Regular physical activity lowers the risk of heart disease, while exposure to airborne particulate matter increases the risk. The more a scenario promotes physical activity and decreases air pollution, the greater the expected reduction in this disease.

The most current county-level data shows that from 2006 – 2009 the prevalence of angina or heart attack in Clackamas (4.3%), Multnomah (4.6%), and Washington (4.2%) counties was below the state average (5.0%) [53]. Moreover, similar to the State of Oregon, heart disease mortality rates have dropped within the Portland metropolitan region. Nevertheless, heart disease is the second leading cause of death within Clackamas, Multnomah, and Washington counties [42, 58, 59]. While rates of heart disease mortality have dropped within the Portland metropolitan region, there are still populations that experience higher rates of heart disease. In Multnomah County, for example, the rate of coronary heart disease is higher for African-Americans than for other population groups [42]. Over the past 20 years in Oregon, heart disease mortality rates have been statistically higher in rural areas than in urban areas [53].

## Cancer

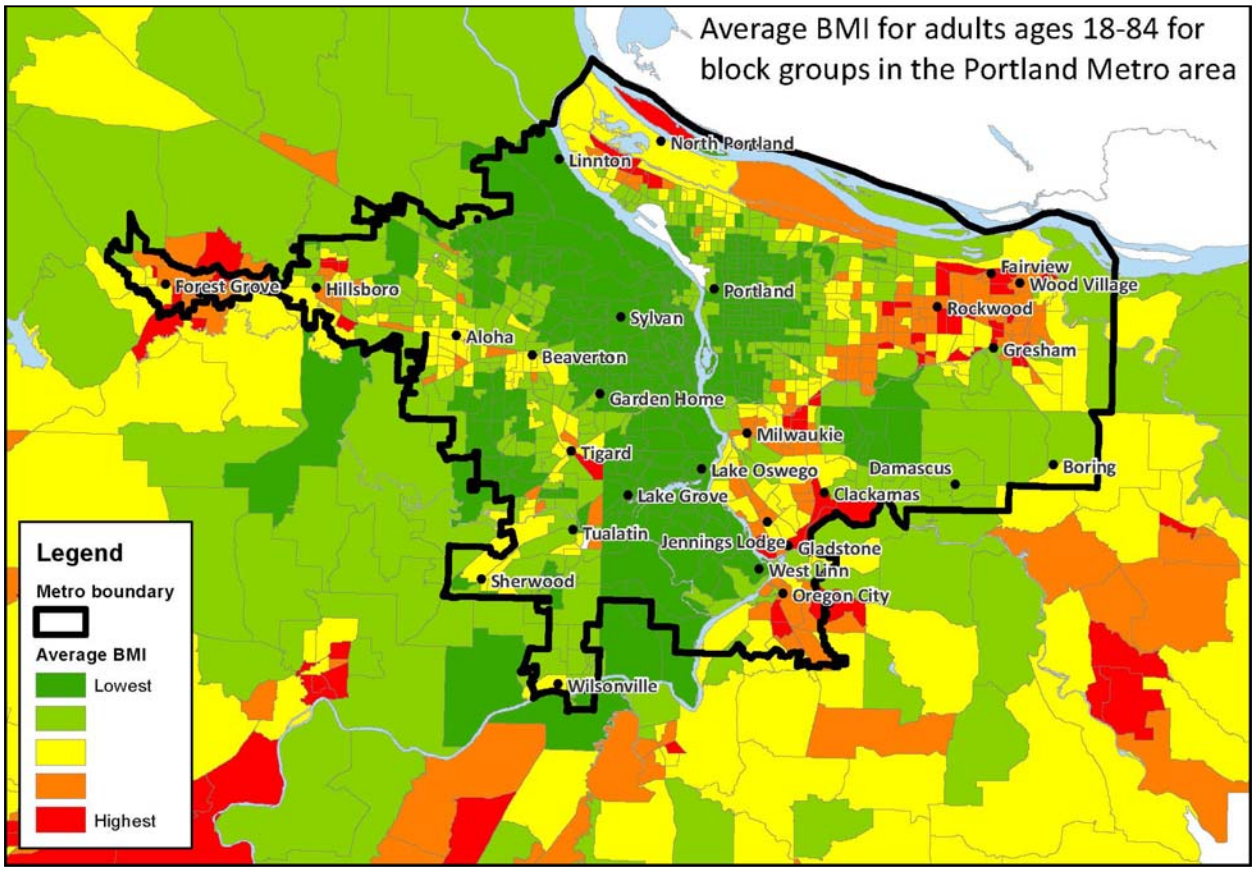
Cancer is the leading cause of death in Oregon and in the Portland metropolitan region [42, 58-60]. With a 2009 death rate of nearly 179 per 100,000 individuals, Oregon ranks in the top quarter of states with the highest cancer death rate in the nation [60, 61]. Additionally, except for lung and colorectal cancer, Oregon has higher incidence rates for all cancer types compared to the national average [62]. Regular physical activity lowers the risk of cancer. Reducing certain transportation-related air pollutants, such as benzene, can also lower cancer risk [29, 63].

Within the Portland metropolitan region, the most current county-level data shows that from 2005 – 2009 the cancer incidence rate for Multnomah County (477 per 100,000) was above the state average (465 per 100,000) while rates in Clackamas (457 per 100,000) and Washington (435) counties were below [64]. Cancer is also the leading cause of years of potential life lost in the region [58].

## Obesity

Obesity is increasingly a concern in Oregon and in the Portland metropolitan region [65]. Obesity contributes to the deaths of about 1,400 Oregonians each year, making it second only to tobacco as the state's leading cause of preventable death. More than 60% of Portland metropolitan region residents are overweight or obese, and more than half do not meet physical activity recommendations. Even more worrisome, since those overweight in childhood are more likely to remain so as adults, around one-quarter of Metro region adolescents are overweight or obese. Obesity varies significantly by neighborhood and may be correlated with measures of socio-economic status as well as aspects of the built environment (Figure 5).

**Figure 5. Age-adjusted mean Body Mass Index (BMI*) by census block group, Portland metropolitan region, from Department of Motor Vehicles records, 2010**




Source: Oregon Health Authority, Environmental Public Health Tracking report: DMV records are valuable for obesity surveillance in Oregon, September 2012

This map shows average body mass index (BMI) for adults ages 18-84, based on self-reported height and weight information on driver licenses and ID cards issued by the State of Oregon from 2003-2010. BMI is expressed in units of kg/m2, is the standard measure used for population-based obesity surveillance. Higher mean values indicate heavier populations. Data are aggregated by block groups based on 2010 Census definitions and age-adjusted to the 2000 U.S. Census standard population. Block groups are classified into quantiles based on all block groups in Oregon.

# Literature Review

## Methodology

OHA conducted a literature review about the proposed GHG reduction policies and the priority health determinants or impacts within our scope (physical activity, particulate air pollution exposure and road traffic injuries and fatalities).

The CSCS HIA literature review is summarized in Table 4. On the left side there is a list of the policy options that make up the scenarios assessed in Phase One of Metro's scenario planning effort. Metro's scenarios are combinations of the strategies in Table 4 at various levels of proposed change, from a base year representing current conditions (2010) to new policies or more ambitious implementation of current plans (level 3). For example, for the bicycle mode share strategy, the baseline is 10% of the region's single-occupant vehicle tours less than 20 miles round-trip by bike and the most ambitious policy change would increase that to 30%. Detailed descriptions of each strategy and the levels of potential change considered can be found in Metro's Phase One Findings report [66].

To search for available evidence to understand the links between the strategies on the left side and health outcomes on the right (see Table 4), OHA queried multiple online databases using standardized search terms, and included results from PubMed, Google Scholar, Oregon State University library, Human Impact Partners evidence base, and previously published HIAs, in particular the two completed by Upstream Public Health on climate change policy [67, 68]. OHA identified the most relevant publications in each category for inclusion in our evidence base, read and abstracted each article, and rated its quality according to guidelines from the Agency for Healthcare Research and Quality, and summarized the entire evidence base [8] in Table 4 below.

The literature review is represented graphically through pathway diagrams in findings sections of the report below. These diagrams show the connection between the policies and strategies and health outcomes through direct impacts and intermediate outcomes.

Table 4. Climate Smart Communities Scenarios HIA Literature Review - Summary of the Quality of Evidence

| Policies (existing conditions - most ambitious scenario) | Physical activity | Air pollution | Crash Injury/ Fatality |
|---|---|---|---|
| **Community design** | | | |
| Mixed use/complete neighborhoods | **** | * | ** |
| Bicycle mode share (2% - 30%) | **** | ** | ** |
| Transit service level (2010 level - 4x RTP level) | *** | ** | ** |
| Workers/non-work trips pay for parking (13%/8% - 30%/30%) | * | ** | * |
| Average daily parking fee ($5 - $7.25) | * | ** | * |
| **Pricing** | | | |
| Pay as you drive insurance (0% - 100%) | ** | ** | ** |
| Gas tax ($0.42 - $0.18/cost per gallon^) | ** | ** | ** |
| Road use fee ($0 - $0.03/cost per mile) | * | * | * |
| Carbon emissions fee ($0 - $50/cost per ton) | * | ** | ** |
| **Incentives** | | | |
| Households participating in eco-driving (0% - 40%) | N | * | * |
| Households participating in marketing programs (9% - 65%) | * | * | * |
| Workers in employer-based commuter programs (20% - 40%) | * | * | * |
| Car-sharing in high density areas (1 - 2 members/100 people) | * | * | * |
| Car-sharing in medium density areas (1 - 2 members/200 people) | * | * | * |
| **Fleet** | | | |
| Fleet Mix and turnover rate (light duty vehicles) | N | ** | * |
| **Technology** | | | |
| Fuel economy, Carbon intensity of fuels, electric tech., etc. | N | ** | N |

^Combined with road use fee - see page 28 of Metro's Phase 1 Findings report for details

**Legend**
**** 10+ strong studies
*** 5-9 strong studies
** 5 or more studies of weak or moderate quality, or studies have mixed results
* <5 studies and policy-impact link consistent with public health principles
N = No evidence found
For a full explanation of these proposed policies, please see the Metro Climate Smart Communities Phase 1 Findings Report [66].

# Integrated Transport and Health Impacts Modeling (ITHIM)

The Integrated Transport and Health Modeling (ITHIM) tool was developed by public health researchers in the UK to assess the potential health impacts of GHG reduction scenarios for London, UK and Delhi, India [9]. The model was later adapted for use in the San Francisco Bay Area and applied to transportation scenarios created to comply with California's GHG reduction goals. OHA further adapted the tool for use in the Portland metropolitan region, including the use of census data for the geography that makes up the Portland metropolitan region governed by Metro.

The purpose of the CSCS Project's Phase One analysis was to understand what level of policies and investments might be needed (beyond current adopted plans and policies) to meet the region's GHG reduction goals. In collaboration with ODOT, Metro staff tested 144 scenarios and found more than 90 scenarios met or exceeded the GHG emissions reduction goals, some by a significant margin. For more detailed information on the CSCS project and methodology please see the CSCS Phase One Report, an essential companion document to this report.

OHA did not assess the health impacts of each of the 144 Phase One scenarios. Instead, OHA used ITHIM to assess 6 sample scenarios in order to provide information about the health impacts of the types of policies and investments decision-makers will consider including as they develop the final three Phase Two scenarios.

## Methodology

For the purposes of this HIA, ODOT and Metro staff identified 6 sample scenarios of the 144 scenarios tested in Phase One. OHA also evaluated the current set of policies and investments, named 2010 Base Year, to provide a base year comparison.

The sample scenarios vary primarily with respect to the community design and pricing policy areas tested in Phase One of the CSCS project; differences between each primarily reflect progressively higher levels of transit, bicycle mode share, and pricing strategies as noted by the level 1, level 2 and level 3 labels for each policy area (e.g., community design, pricing).

- Sample scenarios 1 through 3 correspond to community design levels 1 to 3 and pricing level 1.
- Sample 4 through 6 correspond to community design levels 1 through 3 and pricing levels 2 and 3.

More information about the selection of the sample scenarios is available in Appendix D.

The inputs to ITHIM include:

- Information on household vehicle miles traveled (VMT) from the GreenSTEP model [69] developed by the Oregon Department of Transportation (ODOT)
- Monitored particulate matter ($PM_{2.5}$) from DEQ

- 2000 and 2010 census data [13], adjusted for the Portland metropolitan region; household travel data from Metro's Household Activity Survey [70]
- Crash data from ODOT [71]
- Information about the global burden of disease [72]

The outputs to ITHIM include: modeled data on changes in disease, injuries, and deaths. More information about ITHIM is available in Appendix D and in Woodcock et al [73].

## Limitations to ITHIM

ITHIM is a unique and reliable tool for modeling and comparing the health impacts of planning scenarios. This is especially true when ITHIM's outputs are considered alongside local health data, such as those described in the existing conditions summary above.

However, ITHIM was developed using global burden of disease data, and OHA did not adapt the tool to use Oregon or Portland metropolitan region health data. Additionally, ITHIM uses particulate air pollution, specifically $PM_{2.5}$, as a proxy for total transportation-related air pollution. Although such assessment is outside of the scope of this HIA, additional analyses on the reduction of toxic air pollutants and ozone precursors from transportation and transportation-specific policies (such as fleet turnover and advances in fuel technology) would likely show additional health benefits [9, 10].

## ITHIM detailed results

The CSCS HIA results indicate that all of the GHG reduction scenarios that Metro has evaluated to date could result in net health benefits from increases in active travel and decreases in both air pollution exposure and motor vehicle-related injuries and fatalities (Table 5). There are sample scenarios that are more beneficial to the health of Portland metropolitan region residents than others, and these are discussed in detail below. Additional summary tables are available in appendix C.

A summary of ITHIM's health impact results for sample scenarios 1 through 6 are reported in Table 5, which shows reductions in premature deaths, years of life lost (YLL), years living with disability (YLD), and disability-adjusted life years (DALY) for changes in physical activity, particulate air pollution exposure, and road traffic crashes. DALYs are calculated by adding YLL and YLD across a population. One DALY can be thought of as representing one lost year of healthy life. The sum of DALYs across a population represents the gap between current health status and an ideal health situation where the entire population lives to an advanced age, free of disease and disability [72].

Table 5. ITHIM Results: Annual health co-benefits compared to base year scenario (2010) for sample scenario 1-6 (2011), [illegible] to region

| | Counts | | | | | | Rate per Million Population | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sample scenario1 | Sample scenario2 | Sample scenario3 | Sample scenario4 | Sample scenario5 | Sample scenario6 | Sample scenario1 | Sample scenario2 | Sample scenario3 | Sample scenario4 | Sample scenario5 | Sample scenario6 |
| **Physical activity** | | | | | | | | | | | | |
| **Premature deaths** | -49 | -112 | -139 | -66 | -131 | -157 | -39 | -89 | -111 | -52 | -105 | -125 |
| **YLL** | -492 | -1,230 | -1,623 | -647 | -1,403 | -1,789 | -391 | -979 | -1,291 | -515 | -1,116 | -1,423 |
| **YLD** | -201 | -528 | -710 | -216 | -526 | -703 | -160 | -420 | -565 | -172 | -419 | -560 |
| **DALYs** | -693 | -1,758 | -2,333 | -863 | -1,929 | -2,492 | -551 | -1,398 | -1,856 | -686 | -1,535 | -1,983 |
| **Particulate air pollution** | | | | | | | | | | | | |
| **Premature deaths** | -3 | -11 | -19 | -8 | -15 | -22 | -3 | -9 | -15 | -7 | -12 | -17 |
| **YLL** | -42 | -140 | -236 | -105 | -189 | -271 | -34 | -111 | -188 | -83 | -151 | -215 |
| **YLD** | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | 0 | -1 | -1 |
| **DALYs** | -42 | -141 | -237 | -105 | -190 | -272 | -34 | -112 | -189 | -84 | -151 | -216 |
| **Road traffic crashes** | | | | | | | | | | | | |
| **Premature deaths** | 0 | -11 | -24 | -9 | -19 | -29 | 0 | -7 | -16 | -6 | -13 | -20 |
| **YLL** | -5 | -443 | -945 | -373 | -756 | -1,181 | -3 | -299 | -637 | -252 | -510 | -796 |
| **YLD** | -21 | -117 | -222 | -93 | -177 | -267 | -14 | -79 | -150 | -63 | -119 | -180 |
| **DALYs** | -25 | -560 | -1,168 | -466 | -933 | -1,447 | -17 | -378 | -787 | -314 | -629 | -976 |
| **Total** | | | | | | | | | | | | |
| **Premature deaths** | -53 | -134 | -182 | -83 | -165 | -208 | -42 | -106 | -142 | -65 | -129 | -162 |
| **YLL** | -539 | -1,813 | -2,804 | -1,125 | -2,348 | -3,240 | -428 | -1,389 | -2,116 | -850 | -1,777 | -2,435 |
| **YLD** | -222 | -645 | -933 | -310 | -704 | -971 | -174 | -499 | -716 | -235 | -539 | -740 |
| **DALYs** | -761 | -2,458 | -3,738 | -1,434 | -3,052 | -4,212 | -602 | -1,888 | -2,832 | -1,085 | -2,315 | -3,175 |

*YLL, years of life lost; YLD, years living with disability; DALY, disability-adjusted life years (sum of YLL and YLD)

The sample scenarios that represent higher levels of active transportation modes (bicycling, walking and transit), show corresponding reductions in car and light truck travel. The Portland metropolitan area-adapted ITHIM found that with high levels of active transportation compared to the 2010 baseline, as in sample scenarios 3 and 6, the model predicts:

- 5% fewer premature deaths;
- 6% fewer years of life lost for cardiovascular disease, heart attack and stroke; and
- a 4% reduction in diabetes.

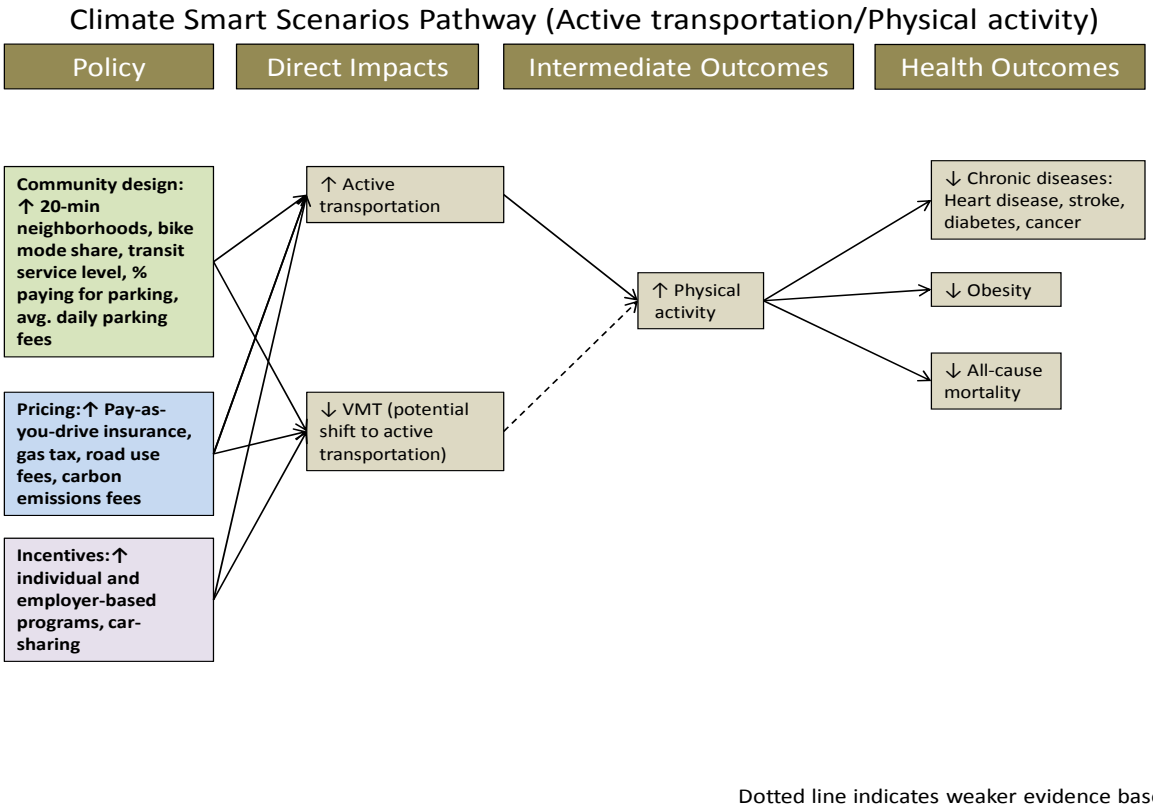
When considering the main health outcome measure (DALYs) between baseline and Scenario 6, the majority (59%) of the health benefit can be accounted for by increased levels of physical activity, followed by decreased road traffic crashes (34%) and decreases in particulate air pollution exposure (7%).

To walk through a specific example from Table 5, under sample scenario 3 the Portland metropolitan region would experience 182 fewer premature deaths in 2035 compared to 2010. In addition 2,804 years of life lost and 933 years living with disability would also be averted. The majority of the health benefits result from increased physical activity, followed by reductions in road traffic crashes and lower exposure to particulate air pollution. Appendix C, Table 2 shows predicted changes in the health of the region's residents due to changes in physical activity under each sample scenario for specific conditions such as heart disease and diabetes.

After accounting for a small increase in the disease burden from fatal and serious traffic injuries to bicyclists (see Appendix C, Table 4), the Portland metropolitan region would still experience 208 fewer premature deaths and 3,240 years of life gained. Strategies for mitigating this increase are discussed in the road traffic injury recommendations below.

# Active Transportation and Physical Activity Results

**Pathway diagram 1 – Active transportation and physical activity**




**Pathway 1 was drafted by OHA and refined with information from the advisory committee.**

## ITHIM findings

Results from the ITHIM model indicate that sample scenarios 3 and 6 have the largest increases in active transportation (Table 5). Averages from these sample scenarios show the largest positive impact on health with reductions of 182-208 premature deaths per year and large reductions in DALYs (scenario 3: 3,738; scenario 6: 4,212). Approximately 60% of the health benefit in these two sample scenarios comes from increased physical activity.

## Health equity findings

Decisions about strategies and their implementation can have different impacts on different populations in the Portland metropolitan region. For example, pricing policies that increase costs, including time costs, associated with transportation may disproportionately impact low-income residents. Increased cost burden may lead to increased stress, which negatively affects health [74-76].

Individuals with physical or mental disabilities may experience worse health status than the non-disabled population. In addition they may have more difficulty accessing improvements to active transportation infrastructure or have different needs related to transportation [77-79].

Prioritizing investments and thoughtful implementation of active transportation policies and programs in vulnerable communities could improve inequitable health outcomes for vulnerable populations of the Portland metropolitan region. For example, since African-Americans experience disproportionately higher rates of heart disease, diabetes, and stroke, active transportation investments in predominantly African-American communities may have greater health impacts.

## Literature review findings

Policies and investments supporting complete neighborhoods and active modes of travel (walking and biking) best promote physical activity. Public transportation service levels and use also effectively promote physical activity. There is some evidence that pricing policies, such as pay-as-you-drive insurance or a direct tax on gasoline, may reduce VMT and shift trips to active modes of travel. However, these policies may simply reduce the number of driving trips without increasing active transportation, and therefore would not be associated with health benefits associated with physical activity. Policies that lead to reductions in VMT in addition to increases in active transportation will likewise impact the prevalence of chronic disease and mortality.

OHA found the least evidence supporting a positive association between policies in the incentives category and increases in physical activity. There is a need for additional studies about this proposed link. The fleet mix and technology policies as well as the percent of households participating in eco-driving programs are not expected to have an effect on physical activity levels.

It is also worth noting that improvements to active transportation infrastructure may increase leisure time physical activity, along with the accompanying health gains.

## Context

When local decision-makers understand the characteristics of their communities that encourage or discourage active transportation, policies and plans can be customized accordingly. For example, a recent HIA in Washington County found a strong preference among residents for bicycle and pedestrian pathways that are separated from traffic, and identified specific barriers to increasing bicycle and pedestrian travel that should be accommodated in local plans and projects [80].

People who commute by walking, bicycling or public transit are more likely to meet physical activity recommendations by engaging in twice as much physical activity (transportation and recreation combined) as those who commute by car [81-88].

Regular, moderate physical activity (at least 30 minutes a day, 5 days a week) provides substantial health benefits, including lower risk of mortality, cardiovascular disease, stroke, cancer, depression, high blood pressure, diabetes, and obesity [89, 90]. Table 6 shows the prevalence of weight-related risk factors and physical activity among adults living in the three counties contributing to the Portland metropolitan region.

**Table 6. Age-adjusted prevalence of selected modifiable risk factors among adults by county, 2006-09**

| Risk factors | Clackamas % | Multnomah % | Washington % | Oregon % |
|---|---|---|---|---|
| **Overweight** | 35.7 | 33.8* | 36.9 | 36.1 |
| **Obese** | 23.6 | 21.8* | 23.2 | 24.5 |
| **Met physical activity recommendations** | 55.6 | 55.1 | 53.8 | 55.8 |

*Statistically significant difference compared to Oregon

Source: Behavioral Risk Factor Surveillance System, 2006-2009

While obesity is traditionally understood to result from an imbalance between calorie consumption and energy expenditure, it is clear from recent studies that the built environment, transportation infrastructure, access to healthy and nutritious food, and other environmental factors strongly influence physical activity and healthy eating [91-100].

These factors also influence children and adolescents, through commutes to school and other destinations important to youth, like community centers and work locations. Table 7 shows the prevalence of weight-related risk factors and physical activity among 8$^{th}$ and 11$^{th}$ graders living in the three counties contributing to the Portland metropolitan region. Children who walk or bike to school are more likely to meet physical activity recommendations and attain healthier body composition and cardiorespiratory fitness [85, 101-106]. However, just 48% of Oregon children who live within one mile of school walk to school at least 3 days per week, and only 8% bike to school at least 3 days per week.

**Table 7. Prevalence of selected modifiable risk factors among 8th and 11th graders by county, 2007-08**

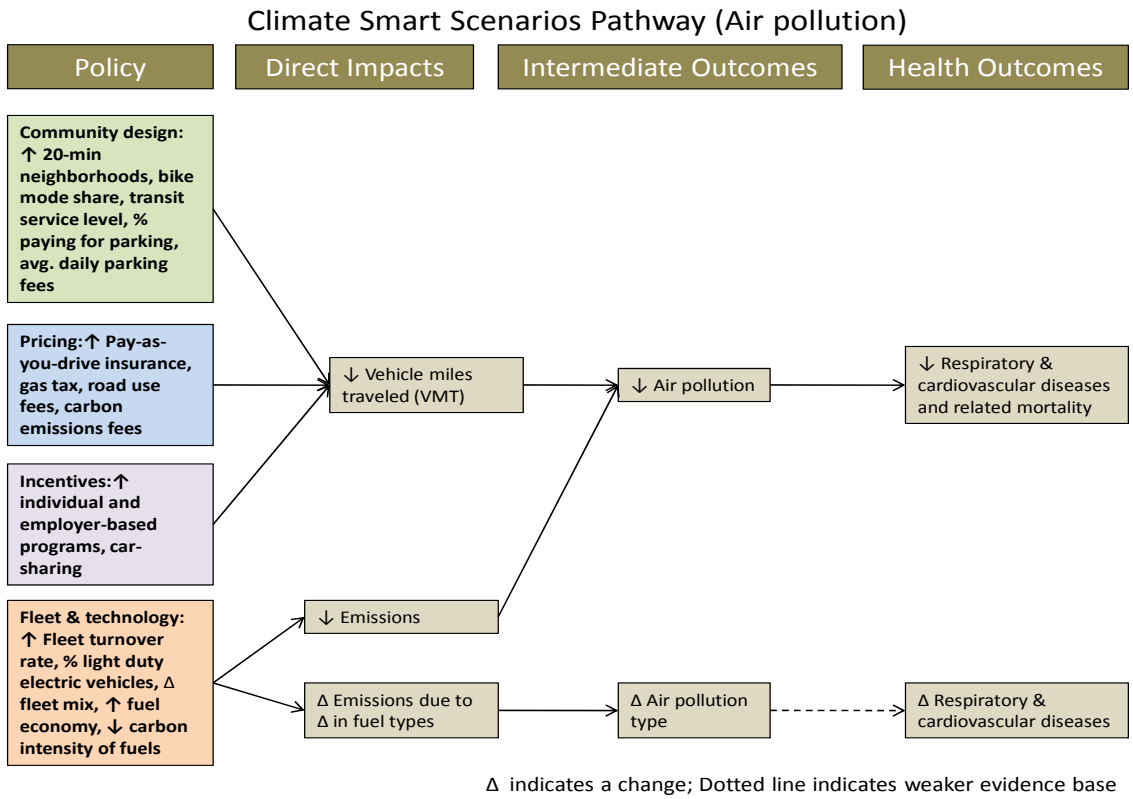
| Grade | Risk Factor | Clackamas % | Multnomah % | Washington % | Oregon % |
|---|---|---|---|---|---|
| **8th** | Overweight | 14.3 | 15.4 | 13.8 | 15.2 |
| | Obese | 9 | 10.9 | 10.2 | 10.7 |
| | Met PA recommendations | 53.9* | 52.7* | 50.8* | 57.1 |
| **11th** | Overweight | 13.3 | 12.8 | 12.2 | 14.2 |
| | Obese | 9.8 | 11 | 10 | 11.3 |
| | Met PA recommendations | 49.8 | 38.4* | 46.2 | 49.2 |

*Statistically significant difference compared to Oregon

Source: Oregon Healthy Teens, 2007-2008

# Particulate Air Pollution Results

**Pathway Diagrams 2 - Particulate air pollution**




**Pathway 2 was drafted by OHA and refined with information from the advisory committee.**

## ITHIM findings

Results from the ITHIM model indicate that sample scenarios 3 and 6 have the largest decreases in VMT (Table 5). These scenarios show the largest positive impact on health due to reduced air pollution exposure, with reductions of 19-22 premature deaths per year and reductions in disability adjusted life years (scenario 3: 237; scenario 6: 272). Approximately 6% of the health benefit in these two sample scenarios comes from decreased exposure to $PM_{2.5}$.

## Health equity findings

The Oregon Department of Environmental Quality (DEQ) has extensively studied the distribution of air toxics in the Portland metropolitan region. DEQ found that low-income and minority communities are disproportionately impacted by higher concentrations of air toxics compared to mid- to high- income, white communities [29].

Low-income communities and communities of color are more likely to live in close proximity to high-traffic roads, and thus have higher exposures to harmful air pollution. These groups may

also live in lower quality housing with poor indoor air quality. Their cumulative exposure to indoor and outdoor air pollution may be significantly higher than other groups.

There is evidence that children, older adults, people with pre-existing cardiopulmonary diseases and people with low incomes are more susceptible to negative health effects from exposure to $PM_{2.5}$ [107].

Children living next to (within 100 meters of) high-traffic roads (>= 10,000 vehicles per day) have worse lung function measures and more respiratory disease symptoms, asthma hospitalizations and doctor visits than children who live further away from high traffic areas [108-110].

## Literature review findings

Policies supporting active modes of travel, including public transportation, would reduce levels of air pollution on and near roadways. There is some evidence that the individuals using active modes could increase their air pollution exposure if they are walking or biking next to busy roads.

There is also some evidence that pricing policies, such as a carbon emissions fee or direct tax on gasoline use, may reduce VMT and related air pollution. OHA found more published evidence linking pricing, fleet and technology policies to air pollution levels than incentive policies.

Shifts to lower carbon-intensity fuels and electric vehicles may change the type of emissions from motor vehicle traffic, and consequently affect changes in health conditions, such as asthma and cancer, that result from exposure. Specifically, nitrogen oxides and aldehydes may increase and benzene and 1,3 butadiene may decrease [111]. However, these changes would require large-scale shifts in the types of fuels and vehicles used in the region. While the link between improved air quality and policies related to fleet turnover and fuel technology has been demonstrated [112-114], the link between different types of emissions and changes in health outcomes has not been adequately described.

The CSCS HIA Advisory Committee asked whether an increase in 20-minute neighborhoods might lead to increased congestion and to increased exposure to air pollutants. OHA did not find any evidence to support this link, and in fact found evidence that 20-minute neighborhoods and similar community design policies decrease congestion and are likely to positively influence health [100, 115-117].

There is evidence that drivers and passengers of cars and buses are exposed to air pollution at levels similar to or exceeding those of pedestrians and cyclists [118-120]. There is also evidence that air pollution exposure is higher for pedestrians and bicyclists along busy roadways than next to roads with less traffic. A study underway in Portland has demonstrated that pedestrian exposure on a high-volume roadway is greater than driving exposure, but less than bus

exposure. Travel along lower-volume roadways significantly reduced pedestrian exposure [121]. In addition, several studies have demonstrated that the health benefits from physical activity outweigh the negative health impacts of air pollution exposures to pedestrians and cyclists [9, 122, 123].

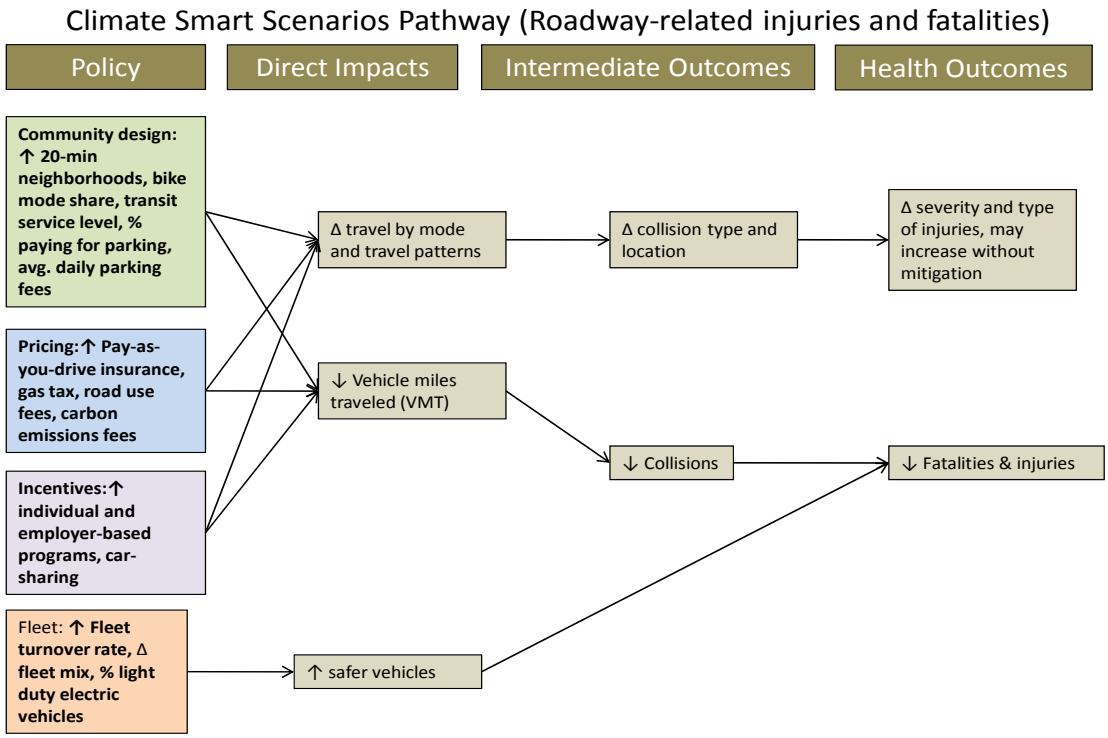
## Context

Vehicle emissions contain a mix of particulate matter, nitrogen oxide, diesel exhaust, benzene, and other air toxics. These toxics are harmful to respiratory and cardiovascular health and are associated with increases in mortality and cancer incidence and mortality [32, 124, 125]. There is evidence of a causal relationship between exposure to emissions from motor vehicle traffic and a number of adverse health outcomes, including lung function impairment, asthma incidence, cardiovascular disease, and cardiovascular and overall mortality [125-130]. These adverse health effects may impact drivers and passengers of vehicles, an impact that increases as length of commute time increases. Those outside of cars may also be impacted, including residents of housing less than 300 meters (~1,000 feet) from a major road (more than 10,000 motor vehicles per day), and bicycle and pedestrian commuters along major roads [32, 125, 131].

The literature review and modeling assessment focused on fine particulate matter that is 2.5 micrometers and smaller in diameter ($PM_{2.5}$). The World Health Organization estimates that $PM_{2.5}$ exposure contributes to as many as 800,000 premature deaths each year, making it the $13^{th}$ leading cause of mortality worldwide [132]. In the U.S., the Environmental Protection Agency estimates that beginning in 2020 approximately 230,000 premature deaths related to $PM_{2.5}$and ozone exposure could be avoided due to implementation of Clean Air Act Amendments [133].

# Road Traffic Injuries and Fatalities Results

**Pathway Diagrams 3 - Roadway-related injuries and fatalities**




**Pathway 3 was drafted by OHA and refined with information from the advisory committee.**

## ITHIM findings

Results from the ITHIM model indicate that sample scenarios 3 and 6 have the largest decreases in VMT (Table 5). These scenarios are associated with the largest positive impact on health due to decreased road traffic crashes, with reductions of 24-29 premature deaths per year and reductions in disability adjusted life years (scenario 3: 1,168; scenario 6: 1,447). Approximately 1/3 of the health benefits from these two sample scenarios come from reductions in motor vehicle crashes. With increased rates of biking, negative health impacts from increased bike injuries and deaths may arise.

## Health equity findings

Children between 5 and 9 years have the highest pedestrian-motor vehicle injury rates [134]. Older adult pedestrians are more likely to die as a result of a motor-vehicle pedestrian crash than younger pedestrians [135].

There is a correlation between lower socioeconomic status and the risk of road traffic injury death for child pedestrians [136]. These socioeconomic differences may result from environmental factors or behavioral differences, or a combination of the two.

## Literature review findings

Policies and investments supporting complete neighborhoods with safer infrastructure, active modes of travel, including public transportation, as well as pricing policies that reduce VMT would best reduce roadway-related injuries and fatalities. There is the least amount of evidence to support a link between incentives and fleet policies and road-related injuries and fatalities. However, fleet policies could have an impact if fleet turnover increases the number of newer and safer vehicles being driven in the region. Technology policies were not found to have an impact on crash injuries and fatalities. While crash-avoidance technologies such as sensory systems that stop a car before a collision, may reduce crash events, currently this technology is still fairly new and has yet to be directly linked to population-level impacts [112-114, 137, 138].

Risks of traffic injury and death vary by age, with higher injury rates for children and youth and higher fatality rates for older adults. Features of the built environment and transportation infrastructure contribute to the risk of motor vehicle, pedestrian and bicycle crashes. One study found that crosswalk markings without signals or stop signs are associated with increased risk of pedestrian-motor vehicle crashes for older pedestrians [135]. There is evidence of a significant positive relationship between traffic volume and the rate of vehicle collisions involving pedestrians [139-141]. One review and analysis found that the highest risk of severe or fatal crashes occurs in areas with low street network density, and that safety outcomes improve as intersection density increases [140].

One researcher has found that for bike and pedestrian crashes, there is safety in numbers; as the number of bicyclists and pedestrians increases, severe and fatal crashes decrease [142]. However, other studies have shown that higher pedestrian and bike activity does not result in increased safety. These studies suggest that other factors such as vehicle volume, speed, and roadway design are the most important contributors to bicycle and pedestrian motor vehicle crashes [139, 143].

Pedestrian and bicycle injuries are typically underestimated. Non-fatal crashes with motor vehicles and bicycle-only injuries are less likely to result in a police report, and therefore end up in official crash statistics. A Portland study found that 20% of bicycle commuters surveyed had experienced a traumatic event and 5% required medical attention during one year of commuting [144]. A San Francisco study found that over 50% of bicycle injuries treated at one hospital were not associated with a police report [137].

## Context

Motor vehicle crashes are the leading cause of injury death in the United States and the second leading cause in Oregon [145, 146]. Motor vehicle crashes are the leading cause of death for individuals between the ages of 5 and 24 [147]. In 2010, the State of Oregon's rate of traffic fatalities per 100 million VMT was .94 [148]. In 2010, the State of Oregon's rate of 1.2 [149]. This was below the national rate of 1.10 and the highest injury rate of 1.2 [148, 149]. Oregon's rate of traffic injuries per 100 million VMT in 2010 was higher than the national MSA average of 8.2 [149, 150].

In 2009, the Portland metropolitan region ranked in the top 15 metropolitan statistical areas (MSA) nationally for lowest annual rate of traffic fatalities per 100,000, with a rate of 6.2 compared to the national MSA average of 8.2 [150]. When injury and fatality data are combined, both Clackamas County (5.2) and Washington County (5.25) had better rates than the statewide (5.51) fatal and injury crash rate per 1,000 [151, 152]. Conversely, Multnomah County was significantly worse (8.03) [153, 154]. Nevertheless, all three counties fared better than the state rate of crash-related deaths for individuals between the ages of 15 and 24 [155]. OHA has set a goal to decrease statewide motor vehicle fatalities by 17% below the 2007 rate of 12.1 per 100,000.

In the Portland metropolitan region, streets with more lanes and higher speeds (arterials such as SE 82$^{nd}$ Ave, SE McLoughlin Boulevard, and SW Beaverton-Hillsdale Highway) have higher serious crash rates, especially for pedestrians. About 40% of all vehicle travel in the Portland metropolitan region between 2007 and 2009 was on arterials. Arterials were the location of 57% of the serious auto crashes, 67% of the serious pedestrian crashes, and 52% of the serious bike crashes [11]. Serious pedestrian and bicycle crashes disproportionately occurred after dark on unlit streets. Travel by transit is relatively safe in the region, with a rate of 0.23 deaths involving a transit vehicle per 100 million transit-passenger-miles, compared to the rate of 0.42 for all traffic [11].

# Conclusion and Recommendations

Significant shifts in the climate are already happening and as the climate continues to warm the impacts to public health will become more apparent. We can expect exposure to more frequent heat waves, an increase in asthma, changes in disease patterns and diminishing water quality and quantity. Curbing climate change is a pressing public health issue, and the Public Health Division strongly supports efforts across the state to reduce greenhouse gas emissions. Reducing greenhouse gas emissions will have In addition to the inevitable health benefits for Oregonians by slowing down climate change and improving air quality.

The changes required to reduce GHG emissions represent a significant investment of resources, many of which have the potential to impact health. To maximize the health benefits of these investments and minimize any potential health risks, OHA makes the following recommendations.

## Findings and Recommendations

### Air quality

*Findings:*
All scenarios that meet GHG reduction goals have potential positive impacts on human health. The most health-promoting scenarios evaluated in this assessment had similar elements:

- The most ambitious levels of community design policies,
- Intermediate and ambitious levels of pricing and incentives,
- Highest levels of active transportation (including transit),
- Lowest levels of single occupancy vehicle driving, and
- Lowest levels of particulate air pollution.

In addition, air pollution has several health equity impacts of concern, such as:

- Children, older adults, people with pre-existing cardiopulmonary diseases and people with low incomes are more susceptible to negative health effects from exposure to $PM_{2.5}$.
- Low-income communities and communities of color are more likely to live in close proximity to high-traffic roads, and thus have higher exposures to harmful air pollution. These groups may also live in lower quality housing with poor indoor air quality. Their cumulative exposure to indoor and outdoor air pollution may be significantly higher than other groups.

*Recommendation:*
**Develop and implement a preferred scenario that meets or surpasses the greenhouse gas emissions reduction target set for the region.** Further:

- Prioritize strategies that lead to decreases in air pollution exposure for all populations in the region; in particular for low income communities, children, seniors, people with low incomes, and people with chronic health conditions or disabilities. An example strategy may be creating and promoting walking and biking routes adjacent to low-traffic roads specifically in lower income neighborhoods).
- Follow through with implementation of the recommendations identified in the Portland Air Toxics Solutions Report**.** The report identifies a number of recommendations that will reduce air pollution from light vehicles and have also been linked to reducing GHG emissions.

## Physical activity

*Findings:*

Scenarios that meet GHG reduction goals by decreasing vehicle miles traveled (VMT) will have the most positive impacts on health. In the most health-promoting scenarios assessed, the majority of the health benefits result from increased physical activity (60%), followed by reductions in road traffic crashes (approximately 33%) and lower exposure to particulate matter in the air (6%).

*Recommendation:*

**To maximize public health benefits and meet the state target, emphasize the types of strategies that best increase active transportation and physical activity: community design, pricing and incentives. Further:**

- Implement active transportation strategies with an understanding of existing local health conditions and inequities.
    a. Increasing the number of people biking and walking could cause a small increase in injuries and deaths from collisions. Therefore Metro and partners should implement strategies in ways that do not worsen these health conditions and inequities, such as planning for necessary safety infrastructure.
    b. Portland metropolitan region residents do not all have equal access to active transportation opportunities. An effort should be made to improve access for all communities.
- Prioritize strategies that lead to increases in active travel for all populations in the region, in particular for children, seniors, people with low incomes, communities of color, and people with chronic health conditions or disabilities. Example strategies include marketing and incentive programs targeted to these populations, improved active travel infrastructure on routes to schools, and improved public transportation service in areas where these populations live.

## Collisions

*Findings:*

The modeling tool used in this assessment shows positive health impacts due to reductions in motor vehicle crashes and potential negative impacts from increased bike injuries.

- Children are more likely to experience pedestrian-motor vehicle injuries and older adult pedestrians are more likely to die as a result of motor-vehicle pedestrian crashes.
- Child pedestrians from lower income families are at higher risk of dying from a road traffic injury.

*Recommendation:*

**Include strategies, such as community design, that can lead to decreases in road traffic injuries and fatalities for all populations in the region, in particular for children. Further:**

- Prioritize strategies that lead to decreases in road traffic injuries and fatalities for all populations in the region; in particular for children and older adults. The community design, pricing and incentives strategies that lead to reductions in VMT may also increase safety in the region.
- Mitigate potential increases in pedestrian and bicyclist injuries and fatalities through proven design strategies, such as increasing the visibility of vulnerable road users; separate facilities like sidewalks, bike boulevards or cycle tracks; and traffic calming or speed control measures [134, 156]. The feeling of safety given by these mitigations may also expand the percentage of the population willing to bike and walk.

## Further assessment

Carry out additional quantitative health impact assessment of the three scenarios that are identified in spring 2013 to further inform development and adoption of a final preferred scenario. OHA recommends the use of ITHIM or a similar health impacts model for this future assessment. Further:

- OHA recommends that when the CSCS Project develops the preferred scenario in 2013-14, health stakeholders (in particular, local health departments) be consulted in order to incorporate local health expertise and to continue building relationships between public health and planning professionals and policymakers**.**
- OHA recommends that future related HIAs include consideration of land use, housing affordability, location relative to employment, gentrification and displacement, or air pollution other than $PM_{2.5}$.

## Appendix A. List of Climate Smart Communities Scenarios HIA Advisory Committee members

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## Appendix B. Population travel and health characteristics of Portland Metro region

Table 1. Metropolitan Region Travel Characteristics Comparison, County and State

| Travel Characteristic | Clackamas County | Multnomah County | Washington County | State of Oregon |
|---|---|---|---|---|
| Commute to Work – Drove Alone | 76% | 62.9% | 73.9% | 72% |
| Commute to Work – Carpooled | 9.6% | 9.8% | 10.2% | 10.8% |
| Commute to Work – Public Transportation | 3.2% | 11% | 5.7% | 4.2% |
| Commute to Work – Walked | 2.4% | 4.8% | 2.9% | 3.9% |
| Commute to Work – Other Means | 1.2% | 5.4% | 2.1% | 3.1% |
| Average Commute Time (minutes) | 26 | 24.3 | 24.1 | 22.1 |

**Source:** 2006-2010 American Community Survey - Oregon, U.S. Census Bureau, 2011.

Table 2. Multnomah County Travel Characteristics Comparison, Cities

| Travel Characteristic | Fairview | Gresham | Lake Oswego | Maywood | Milwaukie | Portland | Troutdale | Wood Village | State of Oregon |
|---|---|---|---|---|---|---|---|---|---|
| Commute to Work Drove Alone (%) | 73 | 73.5 | 76.7 | 79.4 | 74.8 | 60.4 | 76.7 | 74.7 | 72 |
| Commute to Work Carpooled (%) | 10.3 | 12.2 | 6 | 13.2 | 8.9 | 9.4 | 13.7 | 6.8 | 10.8 |
| Commute to Work Public Transport (%) | 4.8 | 7.4 | 3.8 | 1.5 | 8.1 | 12 | 3.3 | 12.2 | 4.2 |
| Commute to Work Walked (%) | 4.5 | 2.5 | 1.7 | 1 | 2.5 | 5.4 | 0.5 | 2.4 | 3.9 |
| Commute to Work Other Means (%) | 0.6 | 1.1 | 1.5 | 2.2 | 1.3 | 6.4 | 2.1 | 0.9 | 3.1 |
| Average Commute Time (minutes) | 22.1 | 26.2 | 21.5 | 24.8 | 24.3 | 23.9 | 27.3 | 26.2 | 22.1 |

Yellow = **Positively** different from state average  Pink = **Negatively** different from state average

**Source:** 2006-2010 American Community Survey - Oregon, U.S. Census Bureau, 2011.

Table 3. Portland Metropolitan Region Health Conditions Comparison, 2006 – 2009

| Health Condition | Clackamas County | Multnomah County | Washington County | State of Oregon |
|---|---|---|---|---|
| Asthma Prevalence | 9.7% | 9.2% | 9.0% | 9.7% |
| Diabetes Prevalence | 6.6% | 6.2% | 5.9% | 6.8% |
| Stroke Prevalence | 2.6% | 1.8% | 1.9% | 2.3% |
| Heart Attack Prevalence | 2.5% | 2.9% | 2.5% | 3.3% |
| Obesity Prevalence | 23.6% | 21.8% | 23.2% | 24.5% |
| Meets CDC Physical Activity Recommendation | 55.6% | 55.1% | 53.8% | 55.8% |
| Fatal/Injury Crash Rate (per 1,000 population) | 5.2 | 8.03 | 5.25 | 5.51 |
| Source: 2006-2009 BRFSS County Combined Dataset | | | | |

## Appendix C. Integrated transport and health modeling (ITHIM) results, detailed tables

Table 1. GreenSTEP model inputs for Base Year (2010) and Scenario Clusters 1-6 (2035)

| | Walk Trips Per Person Per Week | Bike Miles Per Person Per Week | Household Vehicle Miles Per Person Per Week | Roadway Light Duty Vehicle Miles Per Person Per Week | Bus Revenue Miles Per Person Per Week | Rail Revenue Miles Per Person Per Week |
|---|---|---|---|---|---|---|
| **Base Year (2010)** | 2.81 | 2.24 | 129.36 | 139.03 | 0.32 | 0.23 |
| **Scenario Cluster 1** | 3.53 | 2.16 | 122.41 | 131.56 | 0.44 | 0.11 |
| **Scenario Cluster 2** | 3.69 | 3.71 | 99.00 | 106.48 | 0.66 | 0.66 |
| **Scenario Cluster 3** | 3.90 | 4.57 | 76.77 | 82.61 | 1.10 | 1.10 |
| **Scenario Cluster 4** | 3.53 | 2.16 | 107.99 | 116.08 | 0.44 | 0.11 |
| **Scenario Cluster 5** | 3.69 | 3.71 | 87.49 | 94.13 | 0.66 | 0.66 |
| **Scenario Cluster 6** | 3.90 | 4.57 | 68.65 | 73.90 | 1.10 | 1.10 |

Table 2. Premature deaths, years of life lost, and attributable fractions* due to increased physical activity, Scenario Clusters 1-6, Portland metropolitan region

| | Burden of Disease | | | | | | Attributable Fraction, Percent | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Item by Cause** | Scenario Cluster 1 | Scenario Cluster 2 | Scenario Cluster 3 | Scenario Cluster 4 | Scenario Cluster 5 | Scenario Cluster 6 | Scenario Cluster 1 | Scenario Cluster 2 | Scenario Cluster 3 | Scenario Cluster 4 | Scenario Cluster 5 | Scenario Cluster 6 |
| **Premature Deaths** | | | | | | | | | | | | |
| Ischemic Heart Disease | -25 | -58 | -73 | -34 | -69 | -82 | -1.6% | -3.8% | -4.8% | -2.2% | -4.5% | -5.4% |
| Hypertensive Heart Disease | -5 | -11 | -14 | -7 | -13 | -16 | -1.7% | -3.8% | -4.8% | -2.3% | -4.5% | -5.5% |
| Stroke | -12 | -27 | -33 | -16 | -31 | -37 | -1.7% | -3.8% | -4.7% | -2.3% | -4.5% | -5.3% |
| Diabetes | -3 | -8 | -9 | -4 | -9 | -11 | -1.4% | -3.2% | -3.7% | -1.6% | -3.6% | -4.2% |
| Dementia | -3 | -5 | -6 | -4 | -6 | -7 | -0.7% | -1.3% | -1.6% | -0.9% | -1.6% | -1.8% |
| Breast Cancer | 0 | -1 | -2 | 0 | -1 | -2 | -0.3% | -0.8% | -1.0% | -0.2% | -0.6% | -0.9% |
| Colon Cancer | -1 | -2 | -2 | -1 | -2 | -2 | -0.4% | -0.9% | -1.1% | -0.5% | -0.9% | -1.1% |
| Depression | 0 | 0 | 0 | 0 | 0 | 0 | -0.6% | -1.1% | -1.3% | -0.6% | -1.1% | -1.2% |
| Total | -49 | -112 | -139 | -66 | -131 | -157 | -1.4% | -3.2% | -3.9% | -1.9% | -3.7% | -4.4% |
| **Years Life Lost** | | | | | | | | | | | | |
| Ischemic Heart Disease | -247 | -617 | -820 | -335 | -717 | -915 | -1.6% | -3.9% | -5.2% | -2.1% | -4.6% | -5.8% |
| Hypertensive Heart Disease | -53 | -134 | -187 | -73 | -156 | -208 | -1.5% | -3.8% | -5.3% | -2.1% | -4.4% | -5.9% |
| Stroke | -109 | -275 | -354 | -147 | -320 | -395 | -1.6% | -4.0% | -5.1% | -2.1% | -4.6% | -5.7% |
| Diabetes | -47 | -118 | -149 | -55 | -133 | -165 | -1.3% | -3.2% | -4.1% | -1.5% | -3.6% | -4.5% |
| Dementia | -18 | -37 | -43 | -21 | -40 | -46 | -0.7% | -1.4% | -1.7% | -0.8% | -1.5% | -1.8% |
| Breast Cancer | -10 | -28 | -43 | -8 | -20 | -37 | -0.3% | -0.8% | -1.3% | -0.2% | -0.6% | -1.1% |
| Colon Cancer | -7 | -19 | -26 | -7 | -17 | -24 | -0.3% | -0.8% | -1.1% | -0.3% | -0.7% | -1.0% |
| Depression | 0 | 0 | 0 | 0 | 0 | 0 | -0.5% | -1.1% | -1.5% | -0.5% | -1.0% | -1.3% |
| Total | -492 | -1230 | -1623 | -647 | -1403 | -1789 | -1.3% | -3.2% | -4.3% | -1.7% | -3.7% | -4.7% |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Years Living With Disability** | | | | | | | | | | | | |
| Ischemic Heart Disease | -18 | -44 | -56 | -21 | -49 | -61 | -1.4% | -3.4% | -4.3% | -1.6% | -3.8% | -4.7% |
| Hypertensive Heart Disease | -7 | -15 | -17 | -9 | -17 | -19 | -1.5% | -2.9% | -3.4% | -1.8% | -3.4% | -3.9% |
| Stroke | -41 | -107 | -142 | -48 | -118 | -155 | -1.3% | -3.4% | -4.5% | -1.5% | -3.7% | -4.9% |
| Diabetes | -49 | -137 | -182 | -57 | -152 | -200 | -1.1% | -3.1% | -4.2% | -1.3% | -3.5% | -4.6% |
| Dementia | -47 | -109 | -127 | -53 | -110 | -128 | -0.6% | -1.5% | -1.7% | -0.7% | -1.5% | -1.7% |
| Breast Cancer | -3 | -7 | -11 | -2 | -5 | -10 | -0.3% | -0.8% | -1.3% | -0.2% | -0.6% | -1.1% |
| Colon Cancer | -2 | -4 | -6 | -2 | -4 | -6 | -0.3% | -0.8% | -1.1% | -0.3% | -0.7% | -1.1% |
| Depression | -33 | -104 | -168 | -24 | -70 | -124 | -0.2% | -0.7% | -1.1% | -0.2% | -0.5% | -0.8% |
| Total | -201 | -528 | -710 | -216 | -526 | -703 | -0.6% | -1.6% | -2.1% | -0.6% | -1.6% | -2.1% |
| **DALYs** | | | | | | | | | | | | |
| Ischemic Heart Disease | -265 | -661 | -876 | -356 | -766 | -976 | -1.6% | -3.9% | -5.2% | -2.1% | -4.5% | -5.8% |
| Hypertensive Heart Disease | -61 | -149 | -204 | -82 | -173 | -228 | -1.5% | -3.7% | -5.1% | -2.0% | -4.3% | -5.6% |
| Stroke | -150 | -382 | -496 | -195 | -438 | -550 | -1.5% | -3.8% | -4.9% | -1.9% | -4.4% | -5.5% |
| Diabetes | -96 | -255 | -332 | -112 | -285 | -365 | -1.2% | -3.2% | -4.1% | -1.4% | -3.6% | -4.5% |
| Dementia | -65 | -146 | -170 | -75 | -150 | -174 | -0.6% | -1.5% | -1.7% | -0.7% | -1.5% | -1.7% |
| Breast Cancer | -13 | -36 | -54 | -10 | -25 | -46 | -0.3% | -0.8% | -1.3% | -0.2% | -0.6% | -1.1% |
| Colon Cancer | -9 | -24 | -32 | -9 | -21 | -29 | -0.3% | -0.8% | -1.1% | -0.3% | -0.7% | -1.0% |
| Depression | -34 | -104 | -168 | -24 | -70 | -125 | -0.2% | -0.7% | -1.1% | -0.2% | -0.5% | -0.8% |
| Total | -693 | -1758 | -2333 | -863 | -1929 | -2492 | -1.0% | -2.5% | -3.3% | -1.2% | -2.7% | -3.5% |

*The attributable fraction (AF) is the proportional reduction in population disease or mortality that would occur if exposure to a risk factor were reduced to an alternative ideal exposure scenario. Many diseases are caused by multiple risk factors, and individual risk factors may interact in their impact on overall risk of disease. As a result, AFs for individual risk factors often overlap and add up to more than 100 percent.

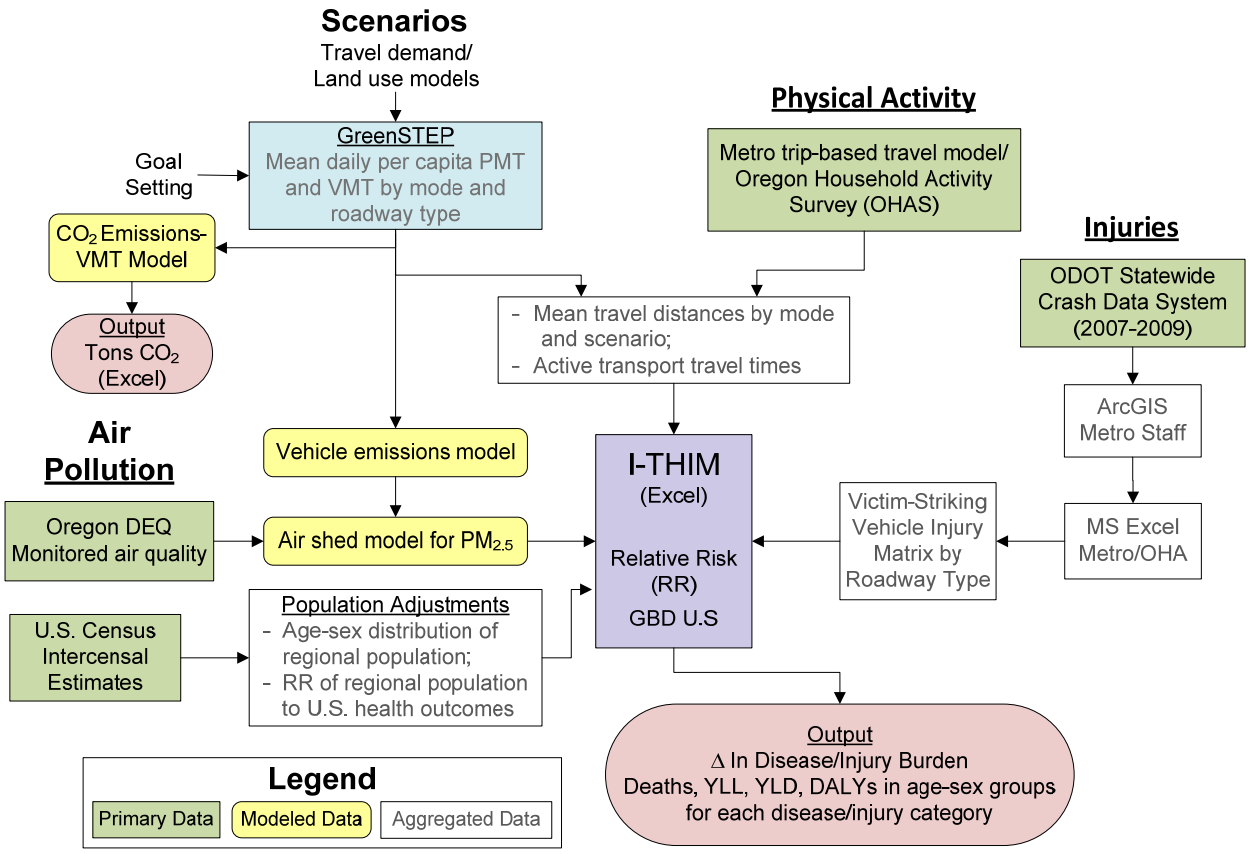
Table 3. Annual mean miles traveled per person by mode and percent mode share for Base Year (2010) and Scenario Clusters 1-6 (2035)

| Scenario | Units | Automobile/ Light Truck | Bus | Rail | Bicycle | Walk | Total |
|---|---|---|---|---|---|---|---|
| **Base Year** | Miles | 6,727 | 17 | 12 | 116 | 70 | 6,942 |
| | % | 96.9 | 0.2 | 0.2 | 1.7 | 1.0 | 100.0 |
| **Scenario Cluster 1** | Miles | 6,365 | 23 | 6 | 112 | 88 | 6,594 |
| | % | 96.5 | 0.3 | 0.1 | 1.7 | 1.3 | 100.0 |
| **Scenario Cluster 2** | Miles | 5,148 | 34 | 34 | 193 | 92 | 5,501 |
| | % | 93.6 | 0.6 | 0.6 | 3.5 | 1.7 | 100.0 |
| **Scenario Cluster 3** | Miles | 3,992 | 57 | 57 | 238 | 97 | 4,442 |
| | % | 89.9 | 1.3 | 1.3 | 5.4 | 2.2 | 100.0 |
| **Scenario Cluster 4** | Miles | 5,616 | 23 | 6 | 112 | 88 | 5,844 |
| | % | 96.1 | 0.4 | 0.1 | 1.9 | 1.5 | 100.0 |
| **Scenario Cluster 5** | Miles | 4,549 | 34 | 34 | 193 | 92 | 4,903 |
| | % | 92.8 | 0.7 | 0.7 | 3.9 | 1.9 | 100.0 |
| **Scenario Cluster 6** | Miles | 3,570 | 57 | 57 | 238 | 97 | 4,020 |
| | % | 88.8 | 1.4 | 1.4 | 5.9 | 2.4 | 100.0 |

Table 4. Total injuries and fatalities by roadway and mode of travel for Scenario Clusters 1-6, Portland Metropolitan ITHIM model

| Roadway/Victim | Baseline | Scenario Cluster 1 | Scenario Cluster 2 | Scenario Cluster 3 | Scenario Cluster 4 | Scenario Cluster 5 | Scenario Cluster 6 |
|---|---|---|---|---|---|---|---|
| **1. Highway** | | | | | | | |
| **Walk** | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.6 | 0.6 |
| **Bicycle** | 0.3 | 0.3 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 |
| **Bus** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Car** | 26.3 | 24.9 | 20.2 | 15.8 | 22.0 | 17.9 | 14.1 |
| **Truck** | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| **Motorcycle** | 6.3 | 6.3 | 6.2 | 6.2 | 6.3 | 6.2 | 6.1 |
| | | | | | | | |
| **2. Arterial** | | | | | | | |
| **Walk** | 39.0 | 42.8 | 39.8 | 36.8 | 40.3 | 37.6 | 35.0 |
| **Bicycle** | 10.3 | 9.9 | 12.0 | 12.1 | 9.4 | 11.3 | 11.6 |
| **Bus** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Car** | 128.0 | 121.2 | 98.5 | 76.7 | 107.2 | 87.2 | 68.7 |
| **Truck** | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| **Motorcycle** | 11.0 | 10.8 | 10.2 | 9.6 | 10.5 | 9.9 | 9.4 |
| | | | | | | | |
| **3. Local street** | | | | | | | |
| **Walk** | 17.7 | 19.3 | 17.8 | 16.3 | 18.2 | 16.8 | 15.5 |
| **Bicycle** | 18.3 | 17.5 | 20.7 | 20.3 | 16.5 | 19.5 | 19.2 |
| **Bus** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Car** | 61.7 | 58.4 | 47.4 | 36.9 | 51.6 | 42.0 | 33.1 |
| **Truck** | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| **Motorcycle** | 12.0 | 11.8 | 11.2 | 10.5 | 11.5 | 10.9 | 10.3 |
| | | | | | | | |
| **Total** | 332.6 | 325.1 | 286.2 | 243.2 | 295.4 | 261.4 | 224.8 |

# Appendix D. ITHIM diagram and data inputs




**Data inputs**

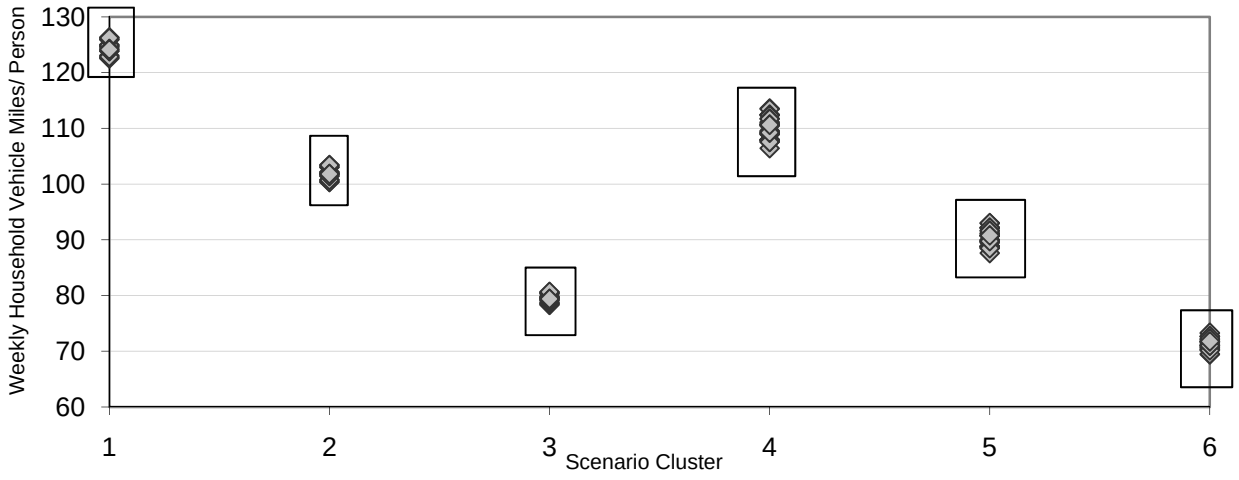
OHA obtained data from various sources for the ITHIM data inputs. These sources and more detailed descriptions of the data follow.

### Selection of sample scenarios for assessment in ITHIM

During Phase One of the Climate Smart Communities Scenarios Planning effort, Metro estimated the GHG-reducing properties of 144 specific scenarios. OHA did not assess the health impacts of each of the Phase One scenarios. Instead, 6 sample scenarios were assessed to provide information about the health impacts of the types of policies and investments decision-makers will consider including as they develop the final three Phase Two scenarios.

The sample scenarios are actually averages of 6 clusters of scenarios for the Portland metropolitan region in 2035 and the 2010 base year. The clusters were identified based on similarities in household travel and emissions characteristics as shown in the figure below and in Appendix C, Table 1.

Figure Household Vehicle Travel By Scenario Cluster




The distinguishing features of the sample scenarios are detailed below:

- Scenario Cluster 1 includes all community design level 1 and pricing level 1 scenarios.
- Scenario Cluster 2 includes all community design level 2 and pricing level 1 scenarios.
- Scenario Cluster 3 includes all community design level 3 and pricing level 1 scenarios.
- Scenario Cluster 4 includes all community design level 1 and pricing level 2 and level 3 scenarios.
- Scenario Cluster 5 includes all community design level 2 and pricing level 2 and level 3 scenarios.
- Scenario Cluster 6 includes all community design level 3 and pricing level 2 and level 3 scenarios.

More detailed descriptions of the scenario assumptions for each policy area level can be found in the Phase One Findings Report [66].

**Road Traffic Injuries**

In 2011, Metro extracted three years of collision data between 2007 and 2009 from Oregon Department of Transportation's (ODOT) statewide crash data system for use in the Metro State of Safety Report. Metro formatted ODOT's crash data to show injury severity by travel mode (motorized vehicles, bicyclists, pedestrians) of injured parties and roadway type where the collision occurred for state of safety report. OHA averaged serious injuries and fatalities for the three years of data used in the report by road type and travel mode of injured parties and applied it in ITHIM's baseline injuries module. Fatal injuries are deaths occurring within 30 days of the collision. Serious injuries are injuries that the victim is not able to walk away from.

**Air Pollution**

Estimates of average, annual airborne concentration of fine particulate matter (aerodynamic diameter of 2.5 microns, $PM_{2.5}$) were based on two sources. Mobile $PM_{2.5}$ from light duty vehicles was calculated inside ODOT's Greenhouse Gas Statewide Transportation Emissions Planning Model (GreenSTEP) from estimated household vehicle travel, fuel consumption by fuel type and emission rates for each scenario. Fluctuations in emissions from heavy vehicle travel were not included in GreenSTEP scenario outputs.

Annual mean ambient $PM_{2.5}$ concentration was calculated from monitors distributed around the Washington and Multnomah Counties. Most $PM_{2.5}$ monitors measure air quality every sixth day, some every third day and a few measure every day. Monitored $PM_{2.5}$ data was not available for Clackamas County, but it is assumed that air pollution is similar to Multnomah County based on input from DEQ. Mobile emissions calculated for existing conditions in GreenSTEP were treated as a percentage of the total annual mean ambient $PM_{2.5}$ concentration and subtracted from the total to estimate stationary $PM_{2.5}$ for the alternative scenarios. Stationary $PM_{2.5}$ was held constant for the alternative scenarios and only mobile emissions fluctuated.

**Census**

US Census data were used to create the demographic profile of the three counties in the Metro region. The 2004 population was estimated from the 2000 and 2010 census population growth trend for populations inside Metro's Urban Growth Boundary geography. Relative risk factors were applied in ITHIM to describe risk reduction for several diseases from physical exercise associated with active travel. Age group and sex determine relative risk factors. Population distribution was also used to adjust U.S. health outcomes from the Global Burden of Disease database for the Metro region.

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**Attachment 2 to**
**Staff Report to Resolution No. 13-4438**

www.oregonmetro.gov/climatescenarios

# Environmental Scorecard Workshop Report

A Summary of the Climate Smart Communities Scenarios Project Workshop of July 17, 2012

November 2012

Oregon Environmental Council
It's Your Oregon

1000 friends of Oregon

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## About Metro

Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy, and sustainable transportation and living choices for people and businesses in the region. Voters have asked Metro to help with the challenges and opportunities that affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to providing services, operating venues and making decisions about how the region grows. Metro works with communities to support a resilient economy, keep nature close by and respond to a changing climate. Together we're making a great place, now and for generations to come.

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Metro collaborated with 1000 Friends of Oregon and the Oregon Environmental Council in planning and executing the Environmental Scorecard Workshop. The opinions, findings and conclusions expressed in this report are not necessarily those of our partner organizations.

The preparation of this report was partially financed the Oregon Department of Transportation and U.S. Department of Transportation. The contents of this report do not necessarily reflect the views or policies of the State of Oregon or U.S. Department of Transportation.

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# Executive summary

## Introduction

This report summarizes what happened at the Environmental Scorecard Workshop held in the Metro Council Chamber from 8:30 a.m. to noon on Tuesday, July 17, 2012. The workshop was part of the 2012 communications and outreach strategy for the Climate Smart Communities Scenarios Project.

### Background

At the time of the environmental scorecard workshop, the scenarios project was nearing completion of engagement with local elected officials to achieve understanding of Phase 1 findings and was making progress into the next period of engagement. During this new period, outreach would involve more detailed communications and more in-depth methods of communicating to strengthen connections with communities and build relationships with key community members. Extending beyond elected officials and local planning staff, this phase mainly targeted leaders of the business, environmental, and equity and environmental justice communities. Workshops with these community leaders were among several activities planned to achieve the communication goals.

For the environmental workshop, Metro partnered with 1000 Friends of Oregon and the Oregon Environmental Council. Partners encouraged their contacts to attend and advised on the workshop agenda and activities. Many workshop attendees were unfamiliar with the Scenarios Project prior to the workshop; others had attended the April 2011 Climate Leadership Summit where summit participants explored ways the Portland area could build vibrant neighborhoods and spread economic growth while reducing emissions that are linked to climate change.

The workshop was intended to inform and engage community leaders and foster collaboration, mutual learning and relationship building between the planning staff and the environmental community. Participants were invited to discuss how to measure the benefits and impacts of land use and transportation policy actions in environmental terms. Pre-workshop materials explained that planning staff would use the input gathered at the workshop to develop a scorecard that could measure how well various combinations of land use and transportation strategies could help maintain clean air and water, among other environmental goals, while also meeting goals for carbon emissions reduction.

### Overview of workshop format

The workshop followed a format of short, engaging presentations by invited guests and project leaders combined with open discussion and question/answer periods involving all 26 attendees, and also small group discussion. The meeting flowed as follows:

- **Welcome and introduction –** Councilor Rex Burkholder welcomed participants and thanked them for their attendance.
- **Workshop description and expectations –** Jeanne Lawson, facilitator of JLA Associates, reviewed the workshop purpose, goals, and tools to be used.
- **Metro staff overview of the CSC Scenarios Project –** Kim Ellis, Metro's project manager for the scenarios effort, summarized activity to date.
- **Examples of environmental indicators –** Mike Hoglund of Metro, Mary Kyle McCurdy of 1000 Friends of Oregon, Chris Hagerbaumer of the Oregon Environmental Council, and Angus Duncan of the Oregon Global Warming Commission each spoke. They commented briefly on the relevance of the Greater Portland Pulse indicators to their organizations and, in some cases, offered other starting points.
- **Open discussion of presentations –** Jeanne Lawson facilitated discussion.
- **Discussion of proposed of outcomes –** A facilitated discussion where messages emerging from attendees regarding the outcomes were noted; Kim Ellis provided further information and clarification on the outcomes.
- **Break**
- **Small group discussion –** Participants organized themselves into three groups focused on (1) Community design and Roads, (2) Marketing and incentives and Pricing, and (3) Fleet and Technology for a facilitated exercise in connecting strategies to outcomes.
- **Group reports –** One member of each group presented a summary of the small group's discussion to the full gathering.
- **Prioritization –** Each attendee completed a prioritization sheet indicating his/her top three priority outcomes.
- **Thank you and next steps –** Kim Ellis thanked participants and explained how the material would be used going forward. Councilor Rex Burkholder closed the meeting, encouraging attendees to stay in touch on the project.

This document provides a description of what happened and what project members heard during each stage of the workshop. The report is followed by five appendices:

- Appendix A: Workshop attendance
- Appendix B: Workshop presentations
- Appendix C: Workshop materials
- Appendix D: Small group discussion charts
- Appendix E: Workshop feedback

## Workshop narrative

### Welcome and introduction

Council Rex Burkholder welcomed participants to the meeting and thanked them for their participation. He provided a brief background of the Climate Smart Communities (CSC) Scenarios Project. Councilor Rex Burkholder noted that the goal of today's meeting is to create an evaluation tool to measure the success of scenarios from an environmental perspective. He then introduced facilitator Jeanne Lawson and Metro staff on the project, and participants introduced themselves.

### Workshop description and expectations

Jeanne Lawson explained the workshop and expectations and reviewed the agenda. She noted that Metro is hosting workshops on public health, the environment, equity and environmental justice, and business. The input gathered at these workshops will be used to develop scorecards to measure scenarios. In an effort to build on work and research that has already been done on environmental indicators and outcomes, Metro has decided to begin with the Greater Portland Pulse environmental outcomes as a starting point for the environmental scorecard.

### Overview of CSC Scenarios Project

Kim Ellis of Metro provided an overview of the CSC Scenarios Project. She made the following main points:

- Project Timeline: The CSC Scenarios Project has three phases in 2011-2014. In Phase 1, Metro looked at 144 combinations of land use and transportation strategies, called "scenarios." These included a wide array of vehicle and fuel technologies, community design, roads, pricing, and marketing/incentives. Phase 1 also produced a list of the most effective greenhouse gas (GHG) emission reduction strategies, which include cleaner fuels, more efficient vehicles, more transit with bike and pedestrian access, and efficient pricing. Currently, the project is in Phase 2, which is focused on shaping and narrowing down to a few scenarios for further testing. It also involves creating a scorecard to evaluate in 2013 how well the scenarios perform in environment, equity/environmental justice, and business terms. In Phase 3, two or three scenarios will be evaluated in greater detail.

- What is a scenario? A scenario is a combination of land use and transportation strategies and levels of effort that describes a possible future condition. Scenarios help inform and compare different ways to meet climate change objectives and other community goals. The CSC Scenarios Project builds on the region's six desired outcomes adopted by the Metro Council in 2010. It also builds on the 2040 Growth Concept and integrates local planning efforts and aspirations. Scenarios are created using adopted community plans and visions, statewide policies, and other strategies tested in Phase 1.

- Target: The target for the CSC Scenarios Project is to reduce light vehicle roadway emissions to 1.2 metric tons of greenhouse gas emissions per capita by 2035. Implementation of local plans already on the books is forecast to reduce emissions to just above 1.2 metric tons, but the CSC Scenarios Project aims to help the region fully achieve the target.

- Scorecard: The purpose of today's workshop is to help develop an environmental scorecard to measure the scenarios and allow comparison among scenarios to see how well they support environmental goals. Kim Ellis presented examples of scorecards used in other regions.

- Next Steps: In the coming months, Metro will host an Equity/Environmental Justice Scorecard Workshop, business focus groups, and an Opt In survey. There will also be a summit later to bring all of these interest groups together.

## Examples of environmental indicators

Four environmental experts presented perspectives on the most important outcomes to include as part of the scorecard.

*Mike Hoglund, Metro*

Mike Hoglund provided a background on the Greater Portland Pulse project. The pulse focused on finding ways to measure a variety of factors that go in to creating a great community. It went through a systematic process to develop indicators with the help of a national expert and an advisory team. The pulse identified nine categories, and used indicator teams to develop outcomes for each category. The environment indicator team developed seven outcomes and drivers for each. From those drivers, the team came up with indicators representing what needs to be measured in order to monitor progress toward the desired outcomes. The pulse's seven environmental outcomes are the starting point for today's conversation.

*Mary Kyle McCurdy, 1000 Friends of Oregon*

Mary Kyle McCurdy explained that 1000 Friends of Oregon is focused on the built environment and protection of farms and forests. The organization will be looking at outcomes and indicators that best achieve those objectives, as well as climate change reduction. 1000 Friends of Oregon was involved with the legislation that led to Metro's scenario planning, and is also involved with the Coalition for a Livable Future's Equity Atlas, which looks at regional indicators for equity. 1000 Friends of Oregon seeks environmental outcomes that link economic, equity and environmental issues. For example, a robust sidewalk and bikeway network has multiple benefits in all three areas, and also reduces GHG emissions, improves air and water quality, improves public health, helps people save money, and connects people to where they need to go.

*Chris Hagerbaumer, Oregon Environmental Council*

Chris Hagerbaumer explained that the Oregon Environmental Council's goals include climate protection, clean and plentiful water, toxic-free environments, sustainable economy, and equity. Chris also described the Mosaic Least Cost Planning (LCP) tool currently being developed by the Oregon Department of Transportation (ODOT). House Bill 2001 directs ODOT to develop an LCP

tool for transportation, which takes into account the social, economic and financial costs and benefits of transportation investments. The LCP tool will quantify data that has not traditionally been quantified and integrate qualitative data to come up with optimal solutions. Through Mosaic, ODOT has developed a set of indicators that includes equity and environment categories, and has identified what kind of data should be used to measure these. [1]

*Angus Duncan, Oregon Global Warming Commission*

Angus Duncan explained that climate change planning is important, but must be implemented well. Metro, ODOT, and various cities, counties, and communities around Oregon are doing climate change planning. It is important that all of these processes link together and reinforce each other, rather than starting from zero every time. Scarce resources should not be spent on short-term, isolated climate change projects. It is important to integrate projects, and to set up a scientific evaluation process to measure and evaluate whether Oregon is hitting benchmarks or not. Benchmarks must have a long life and look beyond the current economic situation. Benchmarks must also be broken down into measurable parts. The benchmarks developed by the Governor's 10-year Energy Strategy last fall are a good example; they include three kinds of outcomes: direct outcomes; indirect outcomes such as economic development; and unwelcome collateral outcomes to avoid, such as disproportionate effect on different communities.

## Open discussion on presentations

Participants had an open discussion on the environmental outcomes, noting which outcomes they felt were most important and adding any missing outcomes. They made the following points and comments:

- The planning timeframe is important. The process should include both short and long term goals. There are also some choices that may help meet the near-term goals, but which would prevent meeting long-term goals. It will be important to be able to measure the short-term impact of strategies.
- Beginning with the Mosaic and Greater Portland Pulse outcomes is a good starting point.
- It is appropriate to include Equity and Environmental Justice as part of the Environmental Scorecard, even though there will be a separate Equity and Environmental Justice Scorecard. However, the goal should be to not create brownfields in the first place—thus the indicator should evaluate whether there is a "reduction of" rather than just "proximity to."
- Participants discussed where "levels of transit service" should fit in to the outcomes. Levels of transit service could be embedded in all of the outcomes. Increased transit service can be both a strategy and an outcome. Increased transit service is a strategy in that it is a means of getting to environment and equity goals. It is also an outcome

[1] More information on MOSAIC can be found on ODOT's website at http://www.oregon.gov/ODOT/TD/TP/pages/lcp.aspx

in that other strategies (such as denser cities) lead to increased transit service. "Access to Transit" could be added as an outcome.

- Participants discussed the role of the economy in the outcomes. The ability to pay for transit service, sidewalks, bicycle facilities, etc. will be very important; thus the economy is an underlying driver that we need to keep in mind. Also, there may be some outcomes that are not cost-effective to measure or are too difficult to measure.
- Participants recommended the addition of an outcome on Water Supply and Quantity, which goes beyond just clean water.
- Participants discussed whether or not GHG Emissions/Climate Change should be added as its own outcome. Some noted that reduction of GHG emissions is a means to get to some other outcome like clean air, but reduction of GHG emissions is not itself an outcome sought. GHG emissions are also different from clean air. Clean air is about good air days, not GHG emissions. Some noted that including GHG emissions as an outcome seems to be circular.
- One participant suggested adding smart buildings to the strategies or outcomes. Metro staff responded that the focus of the CSC Scenarios Project is to focus on roadways and GHG emissions only. While smart buildings are important, they are not part of this scope.
- The process should indicate what the growth rate assumption is. A growth rate assumption of two percent may be too ambitious.

### Small group discussion – "pathways" exercise

Participants broke out into three groups to identify "pathways" between strategies and outcomes. The three groups focused on: 1) Community design and roads, 2) Marketing and incentives and pricing, and 3) Fleet and technology. Nuin-Tara provided an explanation of the pathways exercise, using a similar exercise done as part of the Health Impact Assessment (HIA) workshop as an example. Each small group was facilitated by a staff person and included a technical work group member to help answer questions.

Participants used felt boards to help them arrange links between the identified strategies and outcomes, identifying both direct impacts and intermediate outcomes. Appendix D includes the charts that show their final pathways arrangements. After working in small groups on the pathways exercise, each group provided a brief presentation on the results.

*Pricing*

The participants who worked on the Pricing pathways commented that the impacts of all pricing strategies depend on how the revenue is used. If revenues are used to support public transit, pedestrian and bicycle infrastructure, there could be a positive impact on nearly all of the outcomes. However, if revenues are used to increase roads and highways, there could be a negative impact. If gas tax revenues and road-use fees are spent on roads, this would result in an increase in driving, which is contrary to the outcomes. Participants also noted that pricing strategies can be a burden on bedroom communities commuting to work, and is an equity concern.

They also discussed the carbon fee in British Columbia is an example of a carbon fee that addresses the equity concern. In British Columbia, the carbon fee goes to reducing other taxes, such as the

income tax. One participant suggested adding a strategy to change the Oregon Constitution to broaden the use of the gas tax beyond just road use.

Participants added a new strategy of including a parking lot fee, which could provide revenue for transit. If implemented, the parking lot fee may want to distinguish between pervious and impervious parking lots.

*Marketing and Incentives*

Participants who worked on the Marketing and Incentives pathways commented that there should be more transit-related marketing and incentives. They commented that strategies that lead to decreased car use could lead to less use of natural areas outside of the metro area, if these cannot be easily accessed by transit. Increased statewide transit could lead to more access to nature outside of the metro area. Participants suggested that there should be greater marketing of the urban trail system, so that people know about it and use it, and support expansion of the trail system.

*Fleet and Technology*

Participants who worked on the Fleet and Technology pathways exercise were hopeful that strategies not identified in this category were being addressed in other areas, including: VMT, transit vehicle fleet (newer, less energy consumption, etc.), fewer vehicles on the roads, and including bicycles as part of the fleet. They commented that the Fleet and Technology strategies should consider the age and life cycle of vehicles.

Participants noted that many of the strategies can have negative or positive impacts, depending on how they are implemented and other factors. For example, the impact of less carbon intensive fuels depends on the method of production. Strategies involving changing fuels or changing to more electric vehicles might have a positive impact on reducing GHG emissions locally, but could have a negative impacts at the source of power/fuels production. They asked how the CSC Scenarios Project will capture the whole life cycle of GHG emissions.

Participants suggested that the definition of the Native Species outcome needs to be clarified. They asked if 'Native Species' means a healthy ecosystem in general. They noted that there is a tension between "green power" and some of the environmental outcomes; use of "green power" can contribute to species impacts and soil and water impacts in different land areas, such as rural areas.

In general, the group ended up connecting nearly every strategy to every outcome. Most pathways have either positive or negative impacts, depending on how the strategy is implemented. They also rearranged the outcomes, so that Native Species is an outcome of Clean Water and Healthy Soils; and Resiliency is an outcome of Clean Water, Healthy Soils and Native Species. Access to Nature was the only outcome that was not linked to any of the strategies.

*Community Design*

Participants who worked on the Community Design pathways exercise commented that many of the strategies can have a positive or negative impact on outcomes, depending on how they are implemented. You need to understand the quality of a direct impact in order to understand its pathway to the outcome. For example, increased bike/ped infrastructure and increased transit could have a positive or negative effect on Equity and Environmental Justice, depending on how these strategies are implemented. There needs to be a mediating effort to be *intentional* about affordability and equity. Similarly, an increase in freeways and arterials can be a good thing for all outcomes depending on how it is designed, located and managed.

Participants noted that the strategies, including the mixed use neighborhoods strategies and maintaining a tight UGB, relate to traffic congestion and delay. One participant commented that a dense neighborhood with more people and more buildings does not necessarily mean it is a good and pleasant place to live.

Participants commented that some existing regulations and systems could help meet the outcomes; they just aren't always followed properly. However, some current regulations and systems are unhelpful. For example, fish mitigation done in a cookie-cutter way can be unhelpful and ineffective.

Participants also suggested that local connectivity could be included as a measure. Local connectivity and access to freeways, bike paths, etc. is important.

## Prioritization exercise

Participants were asked to fill out a worksheet to prioritize the environmental outcomes.

*How important is it to evaluate each of the outcomes?*

The worksheet asked participants to indicate *how important* is it to evaluate or measure each of the environmental outcomes as part of the Environmental Scorecard on a scale of 1 to 5. Participants indicated that it will be very important to evaluate Clean Air, Environmental Justice and Equity, Healthy Soils, and Clean Water. It will be important to measure Resiliency, Access to Nature, Water Supply and Quantity, and Native Species.

The following chart indicates how participants rated each outcome:

| Indicator | 1 *(Not Important)* | 2 | 3 | 4 | 5 *(Very Important)* |
|---|---|---|---|---|---|
| A. Access to Parks and Nature | ● | ●●●● | ●● | ●●●●●●●● | ●●● |
| B. Healthy Soils | | ●● | ●● | ●●●● | ●●●●●●●●● |
| C. Clean Water | | ●● | ● | ●●●●●● | ●●●●●●●● |
| D. Environmental Justice and Equity | | | ●● | ●●●● | ●●●●●●●●●● |
| E. Native Species | ● | ●● | ●●●● | ●●●●●●● | ●● |
| F. Resiliency | ● | | | ●●●●●●●● | ●●●●●●● |
| G. Clean Air | | | | ●● | ●●●●●●●●●●●● |
| H. Water Supply/Quantity | ● | | ● | ●●●●● | ●●●●● |
| I. GHG/Climate Change | ● | ● | | ● | ●●●●● |

*Most important outcomes to evaluate*

The worksheet then asked participants to indicate the top three *most important* outcomes to evaluate or measure as part of the Environmental Scorecard. Participants gave the highest priority to Clean Air, Environmental Justice and Equity, Clean Water, and Healthy Soils.

| Indicator | #1 Priority | #2 Priority | #3 Priority |
|---|---|---|---|
| A. Access to Parks and Nature | | | ●● |
| B. Healthy Soils | ● | ●●● | ●●● |
| C. Clean Water | ●● | ●●●● | ●● |
| D. Environmental Justice and Equity | ●●● | ●● | ●●●● |
| E. Native Species | | | |
| F. Resiliency | ●● | | ●●●●● |
| G. Clean Air | ●●●● | ●●●●● | ● |
| H. Water Supply/Quantity | ●● | ● | ● |
| I. GHG/Climate Change | ●● | | |

*Comments on prioritization exercise*

Some participants provided additional comments on prioritization of outcomes.

For the Environmental Justice and Equity outcome, one person indicated that this is not an environmental outcome in the same way as the others. Another person noted that this outcome captures air, water, and soil in relation to people.

One person noted that the Resiliency outcome represents multiple outcomes. The indicator chosen to measure resiliency is linked to it and to water quality and healthy soils.

For the Water Supply/Quantity outcome, one person commented that this should be captured in the Clean Water outcome, and not added as its own outcome. One person suggested that the Benthic Index gets at aquifer health.

For the GHG/Climate Change outcome, a couple of people noted that this should not be added as an outcome because it is captured across the other outcomes. GHG reduction is a means to an end to achieve the other outcomes, but may not be an outcome itself. One person commented that some environmental factors will be reduced outside of the UGB with these measures in order to achieve reduced roadway GHG emissions in the Metro region.

One person commented that, from the local government perspective, especially at the elected level, the direct outcomes will be most important, such as congestion, delay, gas tax revenue, and costs.

A couple of people made comments on the prioritization exercise itself. One person commented that the focus should not be on measuring outcomes, but on measuring indicators that represent the outcome. The outcome itself is often hinged on a value or set of shared interests; people may

have different individual preferences, but all of them are important. Another person commented that, if the project seeks to track progress and anchor strategies to each, then measures are important.

### Thank you and wrap up

Kim Ellis thanked everyone for their attendance and participation. She explained that the ideas from this workshop will be shared with all workshop participants and Metro's advisory committees. She added that Metro will organize a summit in the coming months to combine all of these interest areas, and all participants will be invited to attend.

Councilor Rex Burkholder closed the meeting and encouraged all participants to continue working with Metro in this process. He thanked 1000 Friends of Oregon and the Oregon Environmental Council for their partnership and participation.

**Appendix A: Workshop attendance**

| | |
|---|---|
| Ben Bryant | City of Tualatin |
| Jim Desmond | Metro |
| Chris Hagerbaumer | Oregon Environmental Council |
| Tia Henderson | Upstream Public Health |
| Eric Hesse | TriMet |
| Sarah Higginbotham | Environment Oregon |
| Jim Howell | Association of Oregon Rail and Transit Advocates |
| Stacy Humphrey | City of Gresham |
| Chips Janger | Clackamas County Urban Green |
| Evan Manvel | Willamette Pedestrian Coalition |
| Susan Peithman | Bicycle Transportation Alliance |
| Sean Penrith | Earth Advantage Institute |
| Bruce Roll | Clean Water Services |
| Dan Rutzick | City of Hillsboro |
| Tyler Ryerson | City of Beaverton |
| Jennifer Snyder | Clackamas County |
| Lainie Smith | ODOT |
| Jeffrey Stocum | Oregon Department of Environmental Quality |
| Tara Sulzen | 1000 Friends of Oregon |
| Mike Wetter | The Intertwine |

| Metro Staff | Facilitation Team |
| --- | --- |
| Janna Allgood | Sylvia Ciborowski |
| Kim Ellis | Jeanne Lawson |
| Mike Hoglund | |
| Nuin-Tara Key | |
| Dylan Rivera | |
| Patty Unfred | |

## APPENDIX B: WORKSHOP PRESENTATIONS

# Climate Smart Communities

## Scenarios Project

## Environmental Scorecard Workshop

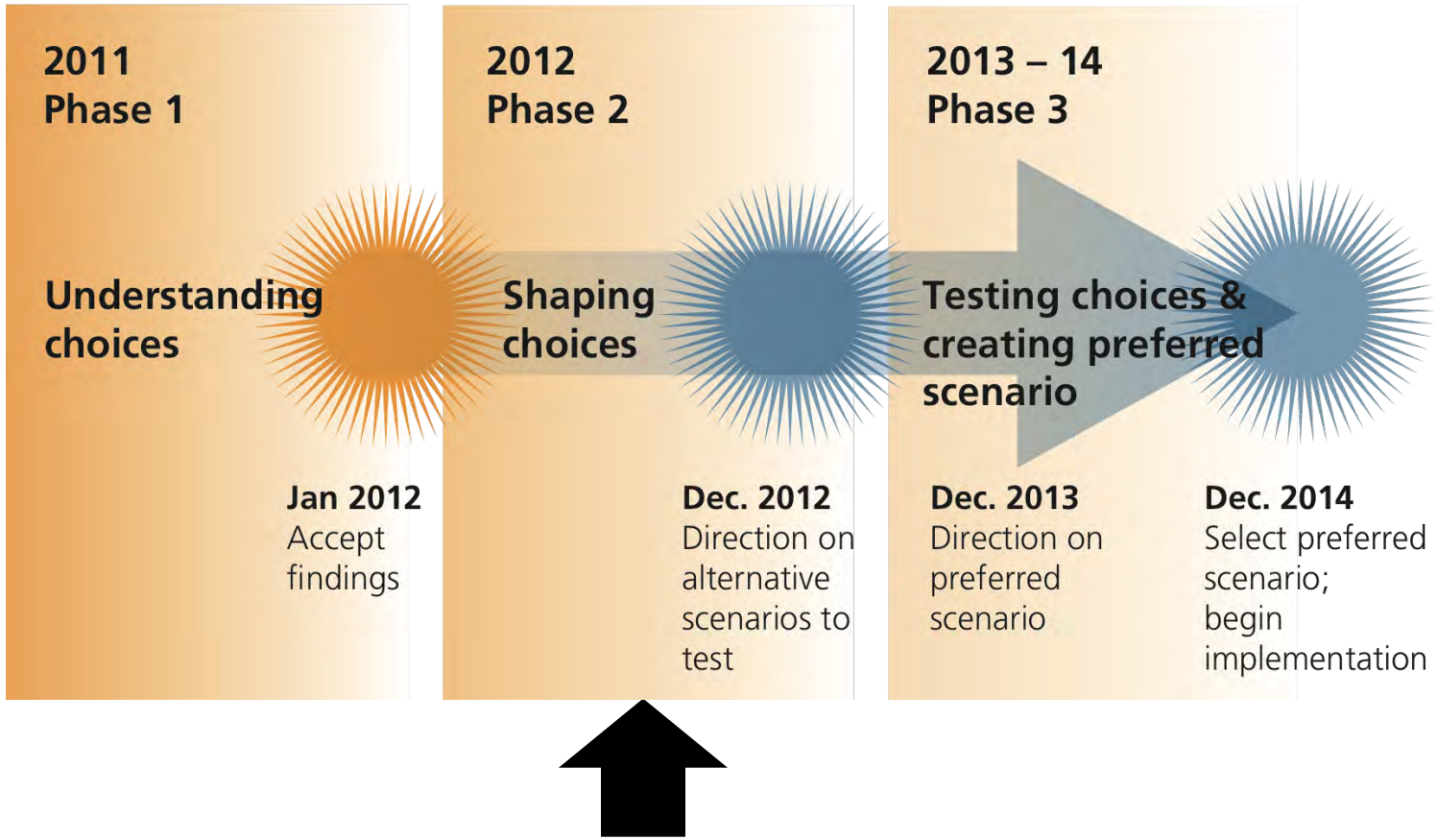
Kim Ellis, project manager

July 17, 2012

Metro | *Making a great place*

## Climate Smart Communities

# Timeline




**We are here.**

Climate Smart Communities

# Building toward six desired outcomes

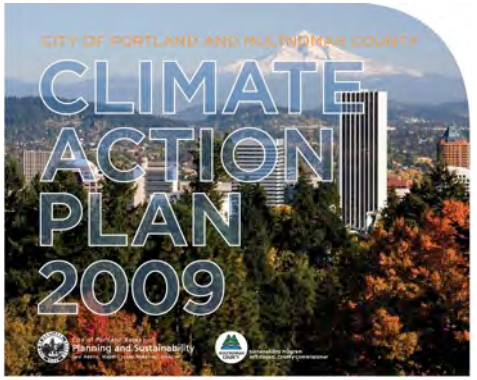
Vibrant communities

Equity

Economic prosperity

Transportation choices

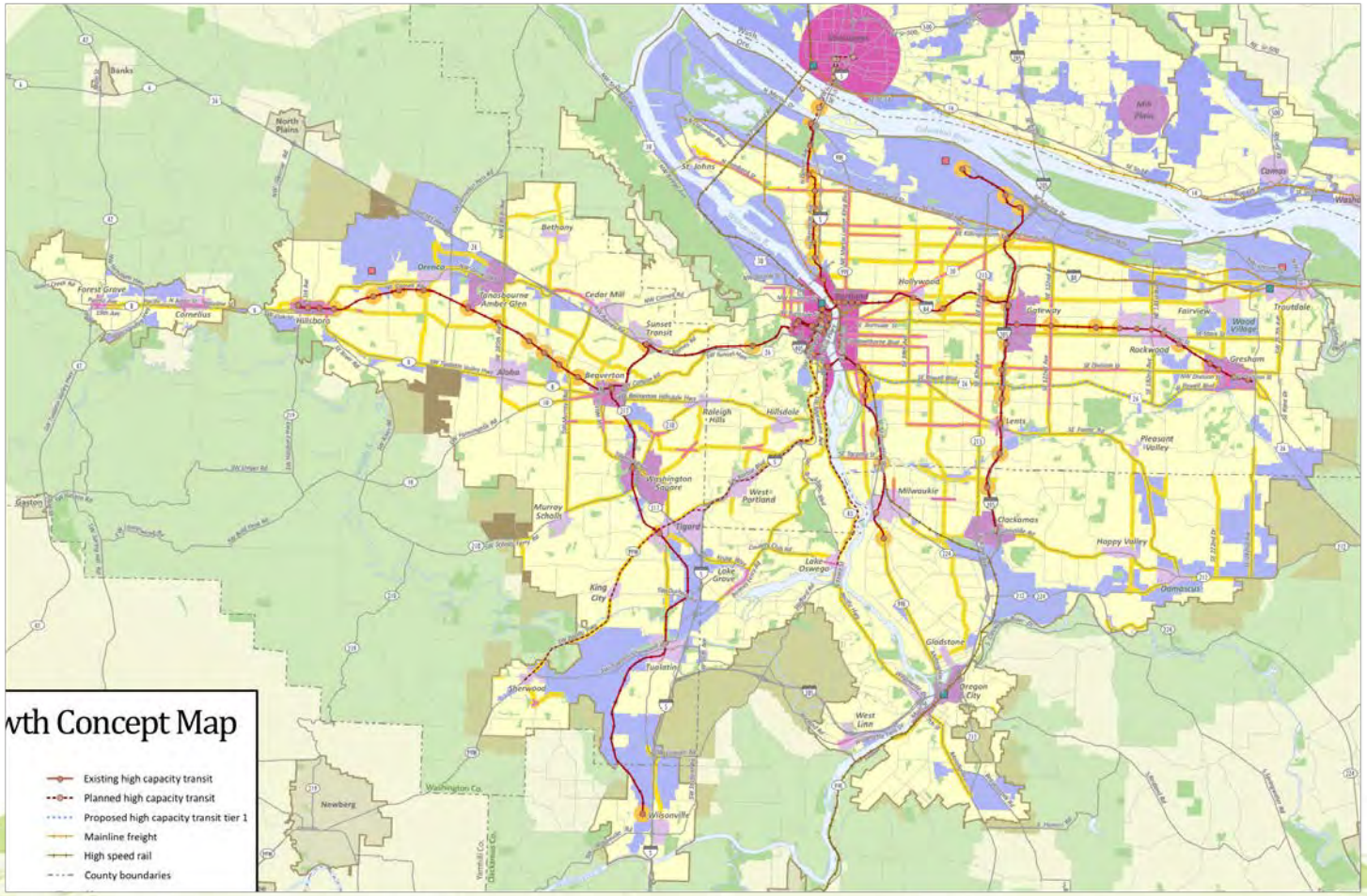
Clean air & water




Climate leadership

Climate Smart Communities

# Unique local approaches to implement regional growth strategy



Climate Smart Communities

# Building on community aspirations

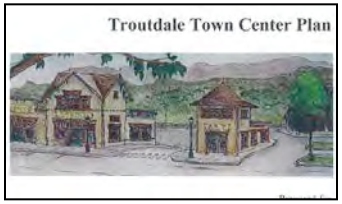
Beaverton Civic Plan
growing together

THE PORTLAND PLAN

envision
Tualatin Tomorrow

DOWNTOWN
TIGARD

Hillsboro 2020




SPRINGWATER
COMMUNITY

IMAGINE
WEST LINN

Complete Communities
FOR CLACKAMAS COUNTY

WE ♡ LO
Planning for People, Places and Prosperity

Climate Smart Communities

# Phase 1 strategies tested

## Vehicle and Fuel Technologies

- More fuel-efficient and lower emissions vehicles
- Cleaner fuels

## Community Design and Roads

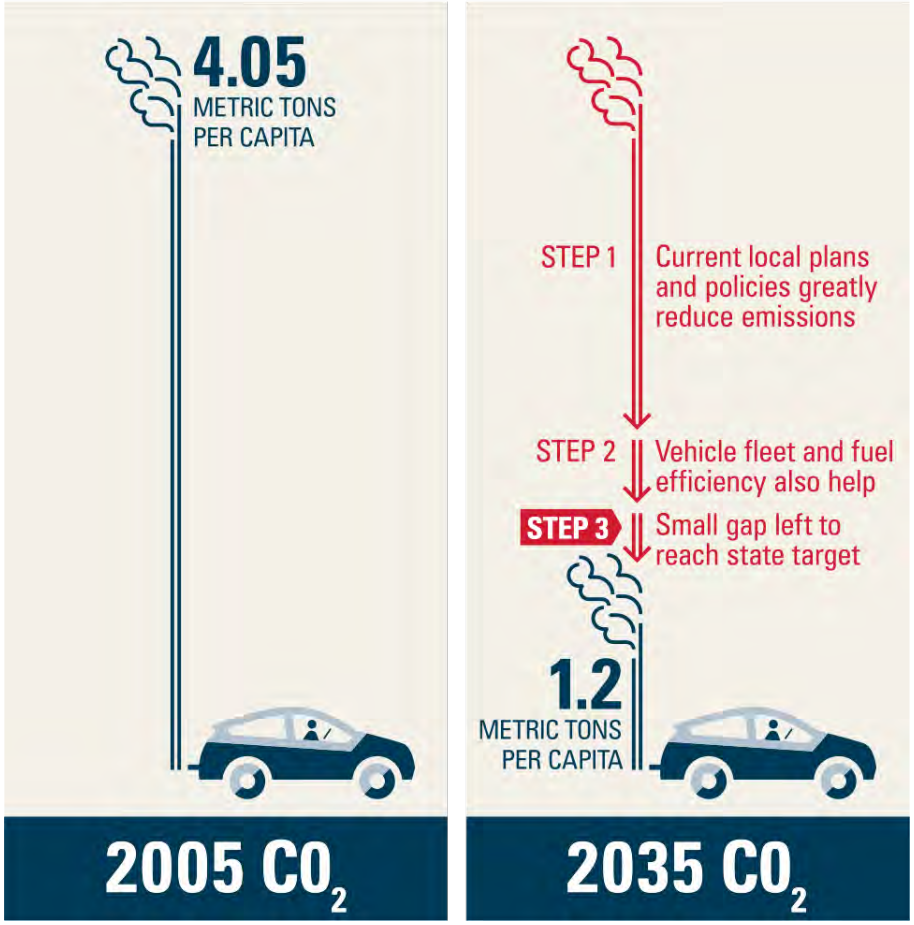
- Compact, mixed-use development
- Limited urban growth boundary expansion
- Transportation system operations optimization *(e.g., ITS, incident management, traffic signal timing)*
- Investments to shift more local trips to low or zero-emission modes *(e.g., transit, bicycling, walking)*
- Road expansion
- Managing supply and cost of parking

## Pricing and Marketing/Incentives

- Ecodriving, carsharing, household marketing and commuter programs
- Market signals to promote and support desired travel behavior (pricing, pay-as-you drive insurance)

Climate Smart Communities – Phase 1 Findings

# Current plans plus cleaner fuels and vehicles get us close




1.2
MT $CO_2e$

**2035 GHG target for region**

*per capita light vehicle roadway GHG emissions reduction below 2005 levels*

# Most effective GHG emissions reduction strategies

- Cleaner fuels and more efficient vehicles
- More fuel-efficient and zero emissions travel
- More transit with supportive land use and bike and pedestrian access
- Efficient pricing: use of market signals to promote and support desired travel behavior

Climate Smart Communities

# Phase 2 Purpose

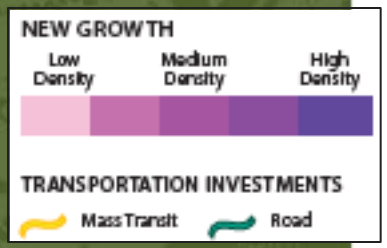
- Define 2-3 scenario options to evaluate in detail
- Create a scorecard to evaluate options

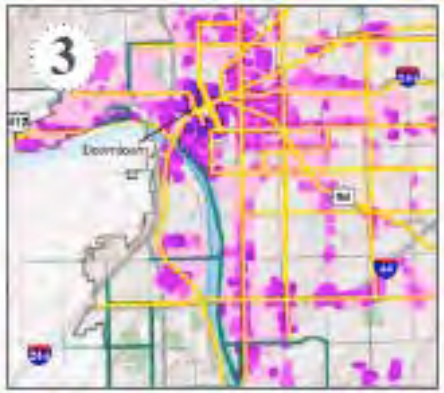
*Shape local and regional choices, not choose a preferred alternative*

Climate Smart Communities – Phase 2

# What is a scenario?

- Shows a possible future
- Combines a variety of strategies and actions
- Compares choices and consequences
- Informs strategies to optimize outcomes
- Allows you to discover new strategies






*from www.PlaniTulsa.org*

Climate Smart Communities – Phase 2

# Framing the scenarios

the ingredients

- Adopted community plans and visions serve as the foundation
- Statewide Transportation Strategy complements adopted plans
- Other strategies tested in Phase 1

Climate Smart Communities – Phase 2

# Creating a scorecard

Community and business leaders provide input on what outcomes are most important to evaluate and compare scenarios

## Outcomes-based Evaluation Framework

### Building toward six desired outcomes

Vibrant communities

Equity

Economic prosperity

Transportation choices

Clean air & water

Climate leadership

### Evaluation framework

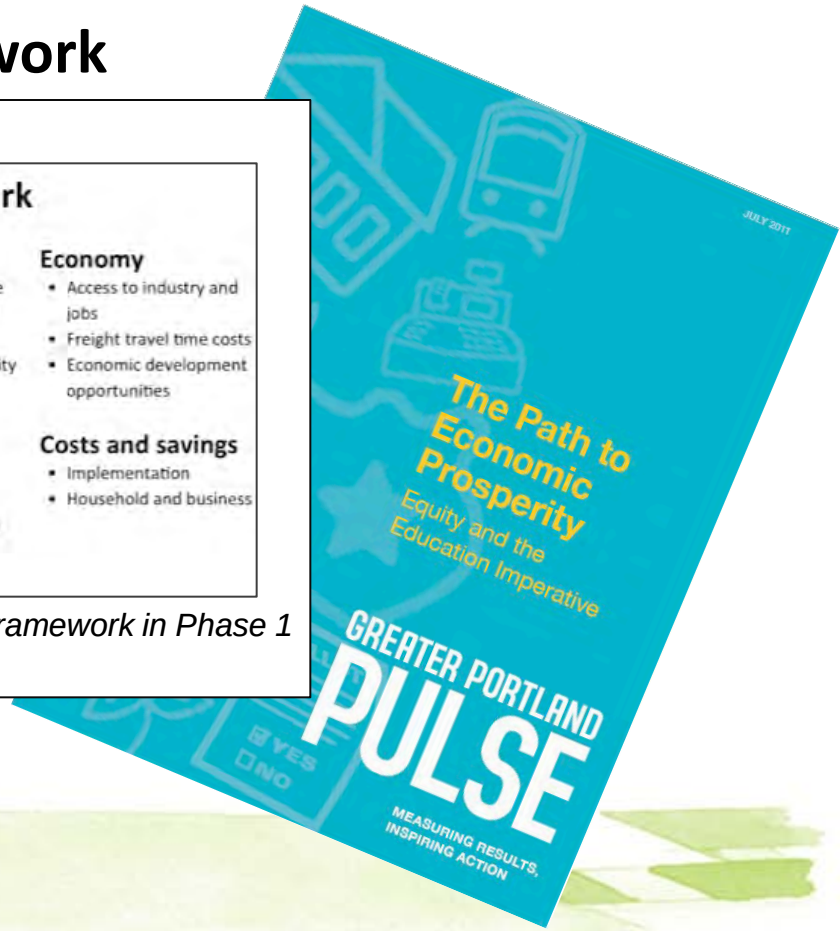
**Equity**
- Access to affordable housing and travel options
- Access to opportunity
- Public health

**Economy**
- Access to industry and jobs
- Freight travel time costs
- Economic development opportunities

**Environment**
- Greenhouse gas
- Air quality
- Access to parks and natural areas

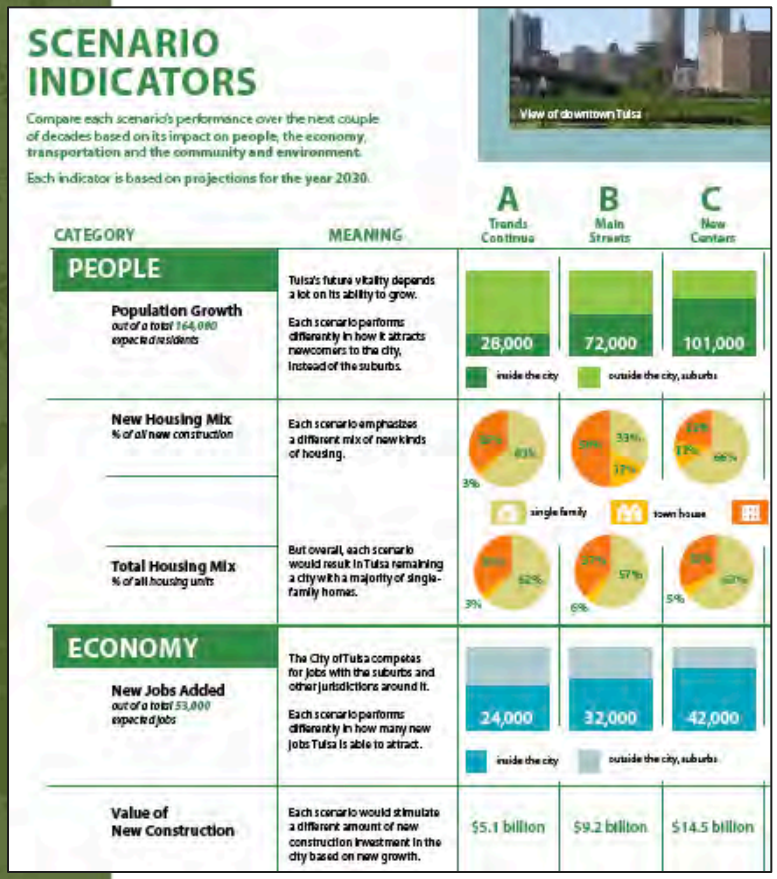
**Costs and savings**
- Implementation
- Household and business

*MPAC, JPACT and the Metro Council endorsed the evaluation framework in Phase 1 (June 2011)*



# What is a scorecard?

priority outcomes/results to communicate tradeoffs



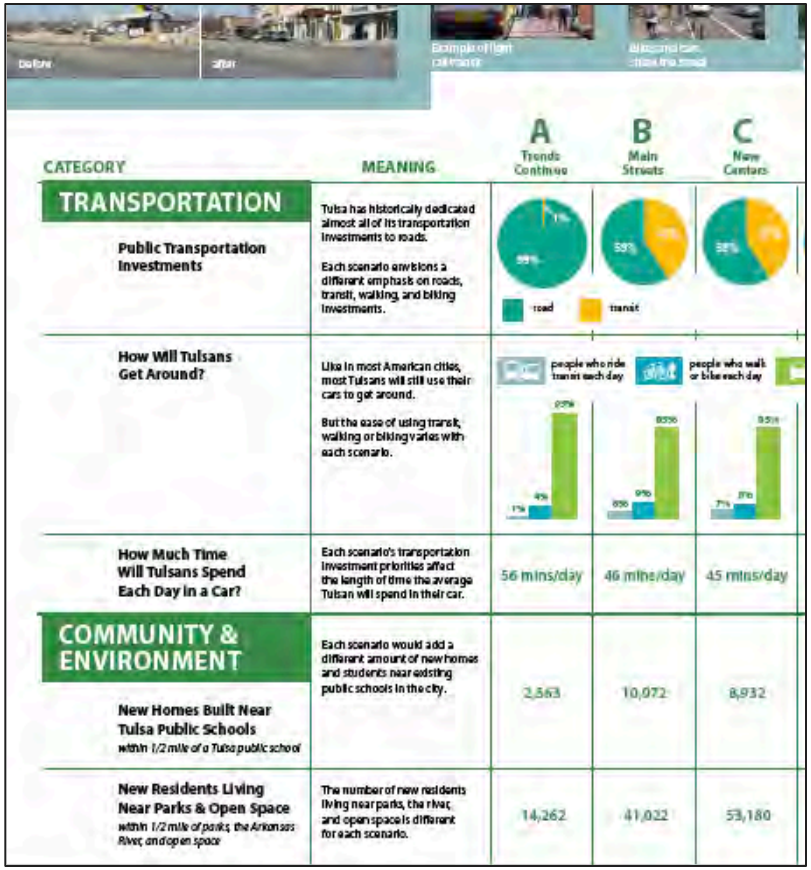
## SCENARIO INDICATORS

Compare each scenario's performance over the next couple of decades based on its impact on people, the economy, transportation and the community and environment.

Each indicator is based on projections for the year 2030.



| CATEGORY | MEANING | A Trends Continue | B Main Streets | C New Centers |
|---|---|---|---|---|
| **PEOPLE** | | | | |
| Population Growth<br>*out of a total 164,000 expected residents* | Tulsa's future vitality depends a lot on its ability to grow.<br><br>Each scenario performs differently in how it attracts newcomers to the city, instead of the suburbs. | 28,000 | 72,000 | 101,000 |
| | | inside the city | outside the city, suburbs | |
| New Housing Mix<br>*% of all new construction* | Each scenario emphasizes a different mix of new kinds of housing. | 3% 40% | 33% 17% | 17% 66% |
| | | single family | town house | |
| Total Housing Mix<br>*% of all housing units* | But overall, each scenario would result in Tulsa remaining a city with a majority of single-family homes. | 38% 62% | 43% 57% | 46% 54% |
| **ECONOMY** | | | | |
| New Jobs Added<br>*out of a total 53,000 expected jobs* | The City of Tulsa competes for jobs with the suburbs and other jurisdictions around it.<br><br>Each scenario performs differently in how many new jobs Tulsa is able to attract. | 24,000 | 32,000 | 42,000 |
| | | inside the city | outside the city, suburbs | |
| Value of New Construction | Each scenario would stimulate a different amount of new construction investment in the city based on new growth. | $5.1 billion | $9.2 billion | $14.5 billion |



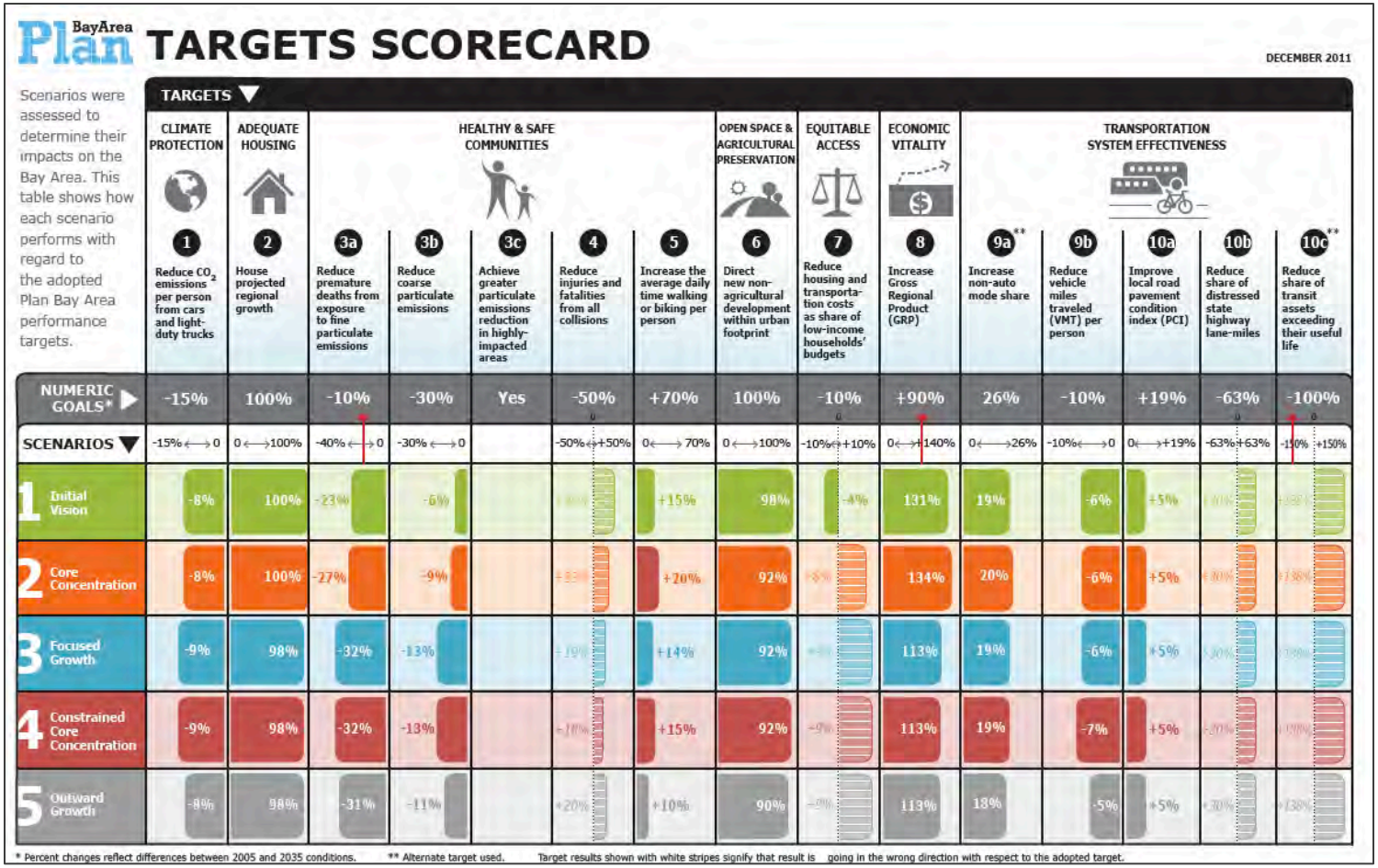


| CATEGORY | MEANING | A Trends Continue | B Main Streets | C New Centers |
|---|---|---|---|---|
| **TRANSPORTATION** | | | | |
| Public Transportation Investments | Tulsa has historically dedicated almost all of its transportation investments to roads.<br><br>Each scenario envisions a different emphasis on roads, transit, walking, and biking investments. | 99% 1% | 59% 41% | 38% 62% |
| | | road | transit | |
| How Will Tulsans Get Around? | Like in most American cities, most Tulsans will still use their cars to get around.<br><br>But the ease of using transit, walking or biking varies with each scenario. | 1% 4% 95% | 6% 9% 85% | 7% 8% 85% |
| | | people who ride transit each day | people who walk or bike each day | |
| How Much Time Will Tulsans Spend Each Day in a Car? | Each scenario's transportation investment priorities affect the length of time the average Tulsan will spend in their car. | 56 mins/day | 46 mins/day | 45 mins/day |
| **COMMUNITY & ENVIRONMENT** | Each scenario would add a different amount of new homes and students near existing public schools in the city. | | | |
| New Homes Built Near Tulsa Public Schools<br>*within 1/2 mile of a Tulsa public school* | | 2,563 | 10,972 | 8,932 |
| New Residents Living Near Parks & Open Space<br>*within 1/2 mile of parks, the Arkansas River, and open space* | The number of new residents living near parks, the river, and open space is different for each scenario. | 14,262 | 41,022 | 53,180 |

*from www.PlaniTulsa.org*

## Climate Smart Communities – Creating the scorecard

# Bay Area example



BayArea Plan **TARGETS SCORECARD**

DECEMBER 2011

Scenarios were assessed to determine their impacts on the Bay Area. This table shows how each scenario performs with regard to the adopted Plan Bay Area performance targets.

| TARGETS | CLIMATE PROTECTION | ADEQUATE HOUSING | HEALTHY & SAFE COMMUNITIES | | | | | OPEN SPACE & AGRICULTURAL PRESERVATION | EQUITABLE ACCESS | ECONOMIC VITALITY | TRANSPORTATION SYSTEM EFFECTIVENESS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 Reduce $CO_2$ emissions per person from cars and light-duty trucks | 2 House projected regional growth | 3a Reduce premature deaths from exposure to fine particulate emissions | 3b Reduce coarse particulate emissions | 3c Achieve greater particulate emissions reduction in highly-impacted areas | 4 Reduce injuries and fatalities from all collisions | 5 Increase the average daily time walking or biking per person | 6 Direct new non-agricultural development within urban footprint | 7 Reduce housing and transportation costs as share of low-income households' budgets | 8 Increase Gross Regional Product (GRP) | 9a** Increase non-auto mode share | 9b Reduce vehicle miles traveled (VMT) per person | 10a Improve local road pavement condition index (PCI) | 10b Reduce share of distressed state highway lane-miles | 10c** Reduce share of transit assets exceeding their useful life |
| NUMERIC GOALS* | -15% | 100% | -10% | -30% | Yes | -50% | +70% | 100% | -10% | +90% | 26% | -10% | +19% | -63% | -100% |
| SCENARIOS | -15% ⟷ 0 | 0 ⟷ 100% | -40% ⟷ 0 | -30% ⟷ 0 | | -50% ⟷ +50% | 0 ⟷ 70% | 0 ⟷ 100% | -10% ⟷ +10% | 0 ⟷ +140% | 0 ⟷ 26% | -10% ⟷ 0 | 0 ⟷ +19% | -63% ⟷ +63% | -150% ⟷ +150% |
| 1 Initial Vision | -8% | 100% | -23% | -6% | | +15% | 98% | -4% | 131% | 19% | -6% | +5% | | | |
| 2 Core Concentration | -8% | 100% | -27% | -9% | | +20% | 92% | -8% | 134% | 20% | -6% | +5% | | | |
| 3 Focused Growth | -9% | 98% | -32% | -13% | | +14% | 92% | -8% | 113% | 19% | -6% | +5% | | | |
| 4 Constrained Core Concentration | -9% | 98% | -32% | -13% | | +15% | 92% | -9% | 113% | 19% | -7% | +5% | | | |
| 5 Outward Growth | -8% | 98% | -31% | -11% | | +10% | 90% | -9% | 113% | 18% | -5% | +5% | | | |

* Percent changes reflect differences between 2005 and 2035 conditions. ** Alternate target used. Target results shown with white stripes signify that result is going in the wrong direction with respect to the adopted target.

*from www.onebayarea.org*

## Climate Smart Communities – Creating the scorecard

# California example

VISION CALIFORNIA | STATEWIDE SCENARIOS SUMMARY

2050 SCENARIO RESULTS

BUSINESS AS USUAL (Trend Policy / Trend Growth) GROWING SMART (Trend Policy / Smart Growth)

**HOUSEHOLD COSTS**

More centrally located homes can dramatically reduce household driving and utility costs. California households in the Growing Smart scenario spend ***$7,250 less per year*** on auto-related costs and utility bills.

*Over $7,250 saved per household on auto costs and utility bills.*

$21,000 $13,750

Annual Costs per Household in 2050

**INFRASTRUCTURE COSTS**

Local infrastructure costs (capital costs and ongoing operations & maintenance costs) rise with land consumption, as dispersed development calls for longer extensions of sewers, water pipes, roadways, and utility lines. Through 2050, the Growing Smart scenario ***saves more than $47 billion*** in total infrastructure costs, over $5,600 per new housing unit.

*Over $1 billion total saved per year.*

Operations & Maintenance $85 bil $70 bil

Capital Infrastructure $165 bil

Cumulative New Infrastructure Costs to 2050

**REVENUES**

Whether on a per-unit or per-acre basis, more compact development patterns produce higher local revenues from property taxes and fees. Through 2050, the Growing Smart scenario ***yields over $120 billion more*** in revenues, or $2.7 billion per year in additional funds.

*Yields $2.7 billion more local revenue per year.*

$744 bil

**WATER**

More compact development patterns, with more smaller lot single family homes, townhomes, and multifamily housing, save water. By 2050, the Growing Smart scenario ***saves 19 million acre-feet of water.***

*Saves enough water to fill Hetch Hetchy more than 50 ti*

**BUILDING ENERGY USE**

The Growing Smart scenario ***cuts annual energy use by 15%*** homes and businesses. This leads to lower household utility bills, g energy security, and lower carbon emissions.

5,600 sq mi 3,800 sq mi

Cumulative Land Consumption to 2050

*Saves more land than Delaware and Rhode Island combined.*

27,560 mi 17,040 mi

Year 2005 average: 27,360 mi

Annual VMT per Household in 2050

117 MMT $CO_2e$ 156 MMT $CO_2e$ 102 MMT $CO_2e$

Buildings Passenger Vehicles

Annual Greenhouse Gas Emissions in 2050

**LAND CONSUMPTION**

Trend development patterns will double California's urban footprint by 2050, consuming more than 8,500 square miles of farmland, open space, and recreation areas. The Growing Smart scenario ***saves over 3,700 square miles*** of this precious and finite resource.

**VEHICLE MILES TRAVELED (VMT)**

Automobile emissions account for about 40% of carbon emissions in California. They are also a primary cause of asthma and respiratory illnesses. How much we drive also impacts how much we spend on fuel, insurance, and maintenance. The Growing Smart scenario, with more walkable, transit-oriented development, reduces VMT by over ***4.2 trillion miles*** to 2050.

*VMT reduction equivalent to taking ALL cars off California's roads for 15 Years.*

**GREENHOUSE GAS EMISSIONS**

More compact development patterns, along with more efficient cars and buildings, cleaner fuels, and a cleaner energy portfolio are all essential in reducing GHG emissions. The Growing Smart scenario prevents the release of ***75 million metric tons*** of carbon dioxide equivalent in 2050, over 25% less than a Business as Usual future.

*Savings equal to emissions offset by 48,000 square miles of trees in a year - a forest covering over 1/4 of California.*

*from www.visioncalifornia.org*

Climate Smart Communities – Creating the scorecard

# Measuring what matters

## Outcomes

*What are the most important results or outcomes to measure for the region?*

## Strategy Pathways

*How do different strategies affect the achievement of those outcomes, positively or negatively?*

## Indicators

*What is the best way to measure progress toward the outcomes when comparing the scenarios?*

**Focus of today's workshop**

# Scorecard next steps

| | |
|---|---|
| Conduct equity/environmental justice workshop | July 31 |
| Conduct business focus groups | August |
| Report results of workshops and focus groups | September |
| Gather input with Opt In survey on scorecard and scenarios | Mid-fall |
| Convene summit | Late-fall |

# Learn more about Climate Smart Communities Scenarios

**Visit www.oregonmetro.gov/climatescenarios**

**Sign-up for updates at climatescenarios@oregonmetro.gov**

## APPENDIX C: WORKSHOP MATERIALS

600 NE Grand Ave.
Portland, OR 97232-2736
www.oregonmetro.gov

Metro | *Agenda*

Meeting: Environmental Scorecard Workshop
Climate Smart Communities Scenarios Project

Hosted by Metro in partnership with
1000 Friends of Oregon and Oregon Environmental Council

Date: Tuesday, July 17, 2012

Time: 8:30 a.m. to noon (light breakfast available 8 a.m.)

Place: Council Chamber, Metro Regional Center, 600 NE Grand Ave., Portland 97232

Purpose: To prioritize measurable outcomes to be later used in the development of a scorecard for measuring the success of scenarios identified in the Climate Smart Communities (CSC) Scenarios Project.

Goals: To inform and engage environmental leaders in the CSC Scenarios Project.

To foster collaboration, mutual learning, and relationship building between CSC Scenario Project planners, technical work group members, and regional environmental leaders.

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**Draft Agenda**

| | | |
|---|---|---|
| 8:30 to 8:35 a.m. | Welcome and introduction | Metro Councilor Rex Burkholder |
| 8:35 to 8: 55 a.m. | Metro staff overview of the CSC Scenarios Project | Kim Ellis, Metro staff |
| 8:55 to 9:00 a.m. | Workshop description and expectations | Jeanne Lawson, facilitator |
| 9:00 to 9:30 a.m. | Examples of environmental indicators | 1. Mike Hoglund, Metro, Greater Portland Pulse<br>2. Chris Hagerbaumer, Oregon Environmental Council<br>3. Mary Kyle McCurdy, 1000 Friends of Oregon<br>4. Angus Duncan, Oregon Global Warming Commission |
| 9:30 to 10:00 a.m. | Open discussion of presentations: Areas of overlap? Common interests? | Facilitated discussion |
| 10:00 to 10:10 a.m. | Break | |

| | | |
|---|---|---|
| 10:10 to 11:15 a.m. | Small Group Discussions<br>*Participants break into three groups to identify "pathways" between strategies and environmental outcomes:*<br>1. *Community design and Roads*<br>2. *Marketing and incentives and Pricing*<br>3. *Fleet and Technology* | Facilitated discussion<br><br>Nuin-Tara Key, Metro staff |
| 11:15 to 11:30 a.m. | Report out: each team summarizes their results in five minutes | Facilitated discussion |
| 11:30 to 11:45 a.m. | Prioritization exercise | Facilitated discussion |
| 11:45 to Noon | Thank you and next steps | |

Metro Council Chamber
600 NE Grand Ave., Portland, OR 97232
503-797-1400.
**Get here by transit:** TriMet bus #6. MAX light rail Northeast Seventh Avenue stop.
**By bike:** Covered bicycle parking is available near the main entrance.
**By car:** Vehicle garage parking is $6 for the day or in metered spaces on street.

For more information, contact Dylan Rivera, 503-797-1551, dylan.rivera@oregonmetro.gov

July 2012

www.oregon**metro.gov/climatescenarios**

**The region's six desired outcomes –** endorsed by city and county elected officials and adopted by the Metro Council in December 2010

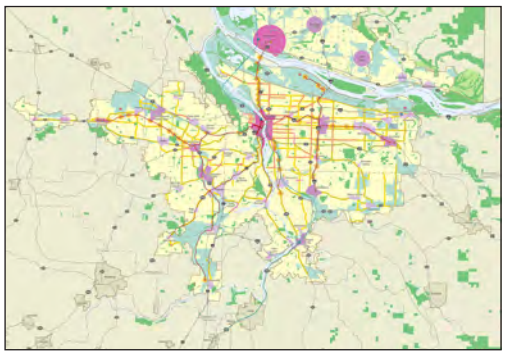
# Climate Smart Communities Scenarios Project

## Background

In 2007, the Oregon Legislature established statewide goals to reduce carbon emissions – calling for an end to increases in emissions by 2010, a 10 percent reduction below 1990 levels by 2020, and a 75 percent reduction below 1990 levels by 2050. The goals apply to all sectors, including energy production, buildings, solid waste and transportation.

In 2009, the Oregon Legislature passed House Bill 2001, directing the region to "develop two or more alternative land use and transportation scenarios" by January 2012 that are designed to reduce carbon emissions from cars, small trucks and SUVs. The legislation also mandates adoption of a preferred scenario after public review and consultation with local governments, and local government implementation through comprehensive plans and land use regulations that are consistent with the adopted regional scenario. The Climate Smart Communities Scenarios Project responds to these mandates and Senate Bill 1059, which provided further direction to scenario planning in the Portland metropolitan area and the other five metropolitan areas in Oregon.

Metro's Making the Greatest Place initiative resulted in a set of policies and investment decisions adopted in the fall of 2009 and throughout 2010. These policies and investments focused on six desired outcomes for a successful region, endorsed by the Metro Council and Metro Policy Advisory Committee in 2008: vibrant communities, economic prosperity, safe and reliable transportation, environmental leadership, clean air and water, and equity. Making the Greatest Place included the adoption of the 2035 Regional Transportation Plan and the designation of urban and rural reserves. Together these policies and actions provide the foundation for better integrating land use decisions with transportation investments to create prosperous and sustainable communities and to meet state climate goals.



The 2040 Growth Concept - the region's adopted growth management strategy

## **State response** Oregon Sustainable Transportation Initiative

The Oregon Department of Transportation and the Department of Land Conservation and Development are leading the state response through the Oregon Sustainable Transportation Initiative. An integrated effort to reduce carbon emissions from transportation, the initiative will result in a statewide transportation strategy, toolkits and specific performance targets for the region to achieve.

## **Regional response** Climate Smart Communities Scenarios Project

The Climate Smart Communities Scenarios Project will build on the state-level work and existing plans and efforts underway in the Portland metropolitan area. The project presents an opportunity to learn what will be required to meet the state carbon goals and how well the strategies support the region's desired outcomes.

A goal of this effort is to further advance implementation of the 2040 Growth Concept, local plans, and the public and private investments needed to create jobs, build great communities, and meet state climate goals. Addressing this multi-faceted challenge will take collaboration, partnerships and focused policy and investment discussions and decisions by elected leaders, stakeholders and the public. Identifying equitable and effective solutions through strategies that create livable, prosperous and healthy communities is essential to the process.

Metro's policy and technical advisory committees will guide the project, leading to Metro Council adoption of a "preferred" land use and transportation strategy in 2014.

Metro

## About Metro

Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy, and sustainable transportation and living choices for people and businesses in the region. Voters have asked Metro to help with the challenges and opportunities that affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to providing services, operating venues and making decisions about how the region grows. Metro works with communities to support a resilient economy, keep nature close by and respond to a changing climate. Together we're making a great place, now and for generations to come.

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Rex Burkholder, District 5

Barbara Roberts, District 6

Auditor

Suzanne Flynn

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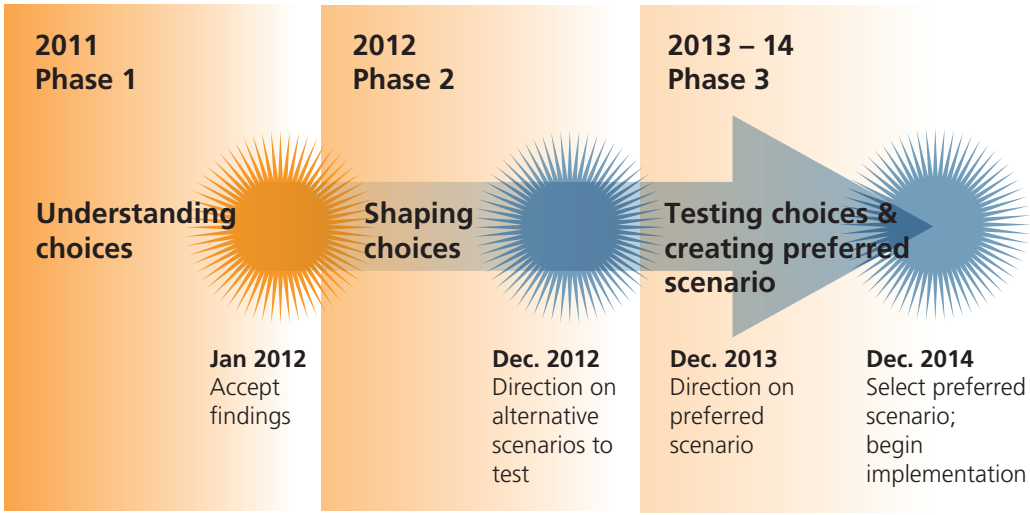
# Climate smart communities scenarios project timeline




## Phase 1
### Understanding the choices

The first phase of regional-level scenario analysis occured during summer 2011 and focus on learning what combinations of land use and transportation strategies are necessary to meet the state greenhouse gas emissions targets. Strategies included transportation operational efficiencies that can ensure faster, more dependable business deliveries; more sidewalks and bicycle facilities; more mixed use and public transit-supportive development in centers and corridors; more public transit service; incentives to walk, bike and use public transit; and user-based fees.

Findings and recommendations from the analysis were reported to Metro's policy committees in fall 2011 before being finalized for submittal to the Legislature in January 2012.

## Phase 2
### Shaping the direction

In 2012, the region is designing more customized alternative scenarios that apply the lessons learned from Phase 1. This phase provides an opportunity to incorporate strategies and new policies that reflect community aspirations identified through local and regional planning efforts already underway in the region (e.g., SW Corridor Plan, East Metro Connections Plan, Portland Plan, and other local land use and transportation plan updates). This work will involve leaders from local governments as well as businesses and communities. By the end of 2012, Metro's policy committees will be asked to provide direction on alternative scenarios to be tested in 2013.

## Phase 3
### Building the strategy and implementation

The final project phase during 2013 and 2014 will lead to adoption of a "preferred" land use and transportation strategy. The analysis in this phase will be conducted using the region's most robust analytic tools and methods – the regional travel demand model, MetroScope and regional emissions model, MOVES. Additional scoping of this phase will occur in 2012 to better align this effort with mandated regional planning and growth management decisions.

This phase will identify needed changes to regional policies and functional plans, and include updates to the Regional Transportation Plan and region's growth management strategy. Implementation of approved changes to policies, investments, and other actions would begin in 2014 at the regional and local levels to realize the adopted strategy.

Metro

# UNIQUE LOCAL APPROACHES, ONE COMMON GOAL – to make our region a great place to live in the years ahead

From downtown Gresham to Orenco Station to Oregon City, the region is rich with unique places to live where parks, schools and jobs are close by. As a result, we drive 20 percent fewer miles a day than most people in urban areas our size, so we spend less time in traffic and more time with our families and friends.

The things we have done to make this a great place are more important now than ever. The same efforts that helped protect farmland and revitalize downtowns and main streets over the last generation are essential to meeting statewide climate goals for the years ahead. Rising energy prices, a state mandate to reduce pollution and a growing eagerness to live in walkable neighborhoods make it essential for us to create places for people to work, shop and play – without having to drive far away. With federal and local resources lagging, we need to work together to make our visions a reality.

The Climate Smart Communities Scenarios Project will help the region's cities and counties define their goals for the next 20 years. It will show how those goals might help the region reduce carbon emissions. There are many ways we can reduce pollution, create healthy, more equitable communities and nurture the economy, too. Investing in main street businesses, expanding transit service, encouraging electric cars and providing safer routes for biking and walking can all help.

A one-size-fits-all approach won't meet the needs of our diverse communities. Instead, a combination of many local approaches, woven together, will create a diverse yet shared vision for how we can keep this a great place for years to come.

**www.oregonmetro.gov/climatescenarios**

Working together with city, county, state, business and community leaders, Metro is researching the most effective combinations of policies and strategies to help us meet Oregon's targets for reducing greenhouse gas emissions.

## MAKING A GREAT PLACE

## COMMUNITY BENEFITS, MANY OPTIONS EMERGE FROM EARLY RESEARCH

**Metro staff researched land use and transportation strategies that are used to reduce emissions in communities across the nation and around the world. In December 2011, this work was summarized in a toolbox describing policies for community design, pricing, marketing and incentives, roads, fleet, and technology.**

These strategies also provide many community benefits:

- Fewer emissions means less air pollution.
- Investment in main streets and downtowns can boost job growth, save public money and make it easier to get to work and entertainment.
- Safe places to walk can improve public health, increase transit use and lower obesity rates.
- Creating vibrant commercial areas combined with transportation options can increase dollars spent locally while taking cars off the road.

Working closely with cities and counties, Metro tested 144 combinations of strategies, called scenarios. No single strategy was enough to meet the state target, but more than 90 combined scenarios met or surpassed it.

## Encouraging findings from early results

- Current local and regional plans provide a strong foundation for meeting our carbon emissions reduction target.
- The cities and counties in our region are already implementing most of the strategies under consideration to achieve other economic, social or environmental goals.
- If the state achieves its own expectations for vehicle fleet and fuel efficiency characteristics, the local plans and policies already adopted in our region will get us very close to our emissions reduction target.

## STRATEGIES EVALUATED

### COMMUNITY DESIGN

Walkable communities, vibrant downtowns, job centers, housing and transportation options, walk and bike-friendly facilities, frequent transit service, urban growth boundary

### PRICING

Gas tax, fees and pay-as-you-drive insurance options

### MARKETING AND INCENTIVES

Education and marketing programs that encourage efficient driving, car sharing and use of travel options

### ROADS

Clearing breakdowns and crashes quickly, adding capacity and using ramp metering, traffic signal coordination and traveler information to help traffic move efficiently

### FLEET

Replacing older cars with more efficient new ones; shifting from light trucks to cars

### TECHNOLOGY

More fuel-efficient vehicles, cleaner fuels, use of hybrid and electric vehicles

# LOCAL INGREDIENTS FOR A REGIONAL VISION

With many options available to the region, the natural next step is to test some potential future ways the region could grow and invest, called scenarios, to see what might work best. In building those alternatives in 2012, Metro will start local, gathering the most recently adopted community plans and visions to serve as the foundation of each scenario. Efforts such as the Beaverton Civic Plan, McLoughlin Area Plan, South Hillsboro Plan, AmberGlen Community Plan, Portland Plan, Gresham Downtown Plan and transportation system plans from across the region are the ingredients that will make up the alternatives we consider going forward. A work group of local planning staff continues to help guide the project.

Since community investment is such a powerful tool for helping grow jobs and protecting our clean air, the region will consider a range of investment levels - low, medium and high – to demonstrate what communities and the region can accomplish on our current path with existing resources and tools, and what could be accomplished with more. Current local plans will comprise the medium option. Each option will consider how we can stretch our dollars for the greatest impact on the things that will make the region a more prosperous, healthy and equitable place for all.

Through a series of case studies, community partner workshops and a regional summit, Metro and local elected officials will decide what should go into the three scenarios. All will be tested in 2013, so cities, counties and community partners can decide which elements of the three should go forward into one scenario for the region to adopt in 2014. As with the 2035 Regional Transportation Plan and the 2040 Growth Concept, the region's preferred scenario will vary from place to place within the metropolitan area, responding to local goals.

One scenario – many options for local communities.

## WHAT'S NEXT?

- Start with common vision
- Shape scenarios to test
- Evaluate scenarios
- Engage public

## Driving less, saving money

By driving just four fewer miles a day, the average car owner driving 10,000 miles a year can save $1,126 a year, according to AAA.

## About Metro

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Suzanne Flynn

# HELP SHAPE THE FUTURE OF YOUR COMMUNITY

Beginning summer 2012, city, county, community and business leaders will be asked to share their community visions. These visions will set the direction for regional scenario options to be tested.

In 2013-14, Metro will engage the public in evaluating the regional scenario options. Leaders from across the region will adopt a regionwide scenario in 2014.

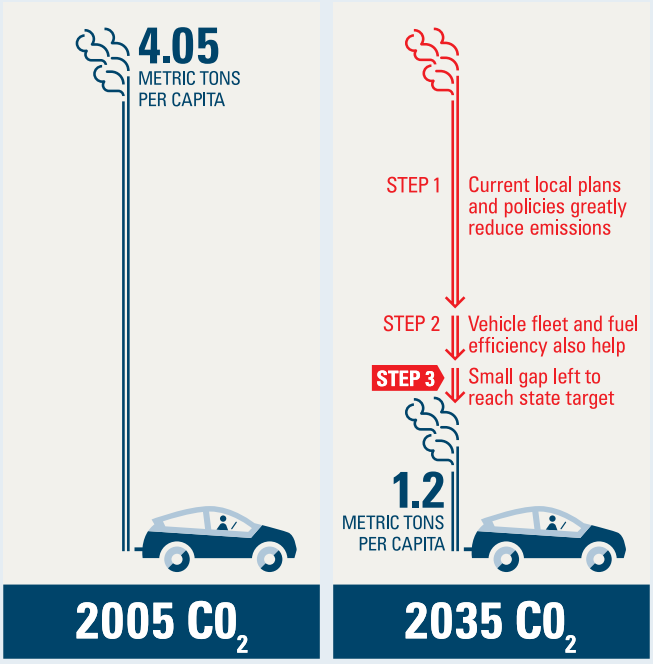
**STAY INFORMED:**
www.oregonmetro.gov/climatescenarios

For email updates, send a message to climatescenarios@oregonmetro.gov

# OREGON'S EMISSIONS TARGET FOR 2035 FOR THE PORTLAND AREA

The Land Conservation and Development Commission established a 2005 baseline for the Portland area: 4.05 metric tons annual, per capita roadway greenhouse gas emissions. (One metric ton $CO_2$ equals 112 gallons of gasoline.)

The 2035 target calls for cutting emissions to 1.2 metric tons. Implementing our local plans and realizing advancements in cleaner fuels and more efficient vehicles reduce emissions to 1.3 metric tons. Additional policy actions will be needed to reach the target (Step 3, on right).




optin ONLINE PANEL

**STAY CONNECTED** Sign up to receive periodic updates about the scenarios project at **www.oregonmetro.gov/connect.**

**SHARE IDEAS** Share ideas or suggestions with your local elected officials and your Metro Councilor.

**OPT IN** Voice your opinion by signing up for Metro's online opinion panel at **www.optinpanel.org.** Upcoming survey topics will include the scenarios project.

Metro

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# TIMELINE FOR ENGAGING CITIES, COUNTIES AND COMMUNITIES

| Description | Participants | Time frame |
|---|---|---|
| **Technical work group** – Meets regularly to review and provide input on analysis | City, county, TriMet, state and Metro planning staff, and community representatives | Ongoing throughout project (2011-2014) |
| **Accept Phase 1 Findings Report** | Metro Policy Advisory Committee, Joint Policy Advisory Committee on Transportation, Metro Council | January 2012 |
| **Discuss findings with local leaders** – Presentations at city councils and county boards | Metro councilors and staff, and city and county elected officials | Spring-Summer 2012 |
| **Envision Tomorrow introductory training** – Learn how to use scenario planning software for regional and local applications | Planning staff from Beaverton, Gresham, Hillsboro, Oregon City, Portland, West Linn, Clackamas County, Washington County, Metro and TriMet | June 2012 |
| **Scorecard workshops and focus groups** – Identify evaluation criteria and outcomes to measure in scenario analysis | Leaders representing the public health, equity and environmental justice, environmental and business communities | March, July-August, 2012 |

Continued on reverse …

| | Description | Participants | Time frame |
|---|---|---|---|
| | **Case studies** – Analysis of five different types of community developments to illustrate community visions and the strategies needed to achieve them | Five local communities TBD | Summer 2012 |
| | **Community partner work sessions** – Use Envision Tomorrow software to assess and affirm community visions for future development; results will inform scenarios options | Elected officials and planning staff from communities around the region | Summer-Fall 2012 |
| | **Southwest Corridor land use vision work sessions** – Use Envision Tomorrow software to assess and affirm community visions for future development; results will inform Southwest Corridor and scenarios projects | Elected officials and planning staff from SW Corridor partners | Summer 2012 |
| | **Online engagement** – Opt In survey tool for input on scenario options and how they will be evaluated | General public | Fall 2012 |
| | **Summit** – Community leaders showcase local actions that are already reducing emissions and provide input on the three scenarios to test in 2013 | JPACT, MPAC, Metro Council, other elected officials and community leaders | Late fall 2012 |
| | **Community partner workshops and online engagement** – Discuss findings, benefits and tradeoffs of choices | Public, elected officials and community leaders | 2013 and 2014 |
| | **MPAC, JPACT, Metro Council** – Direct staff 2011, accept findings January 2012, agree on three scenarios to test December 2012, select a scenario in 2014 | MPAC, JPACT, Metro Council | 2011-2014 |

## STAY INFORMED

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## Healthy, Natural Environment

| Desired Outcomes | Proposed Key Indicators | Drivers (policy considerations) |
|---|---|---|
| HEALTHY SOILS. Maintenance of working lands. Reduction of external food and fiber needs of the region. | **1. LAND COVER**. Acres of land devoted to natural ecological communities, forest, and farm/agriculture. | • Working land management practices (including welfare of the health and safety management practices of farm and forest workers)<br>• Land conversion or preservation of working lands<br>• Land use and development practices and patterns<br>• Local markets for food, fiber and products<br>• Environmental literacy<br>• Policies and programs (conservation, preservation, restoration, regulations)<br>• Economic viability of urban forest and farms<br>• Legacy practices and pollutants (includes environmental justice and cultural practices) |
| CLEAN WATER and healthy aquatic ecosystems. | **2. ECOLOGICALLY HEALTHY WATERWAYS**. Benthic Index of Biological Integrity , a measure of the health of invertebrate species in our waterways. | • Land use and Development patterns (impervious coverage)<br>• Extent and distribution of tree canopy, green streets, ecoroofs and other natural features that provide ecological function<br>• Abundance, diversity, complexity and health of riparian and wetland habitats<br>• Environmental literacy<br>• Individual behaviors (household and landscape chemicals, driving habits)<br>• Infrastructure design and its impacts (Sanitary/stormwater, water supply, transportation)<br>• Working land management practices<br>• Business practices, large and small<br>• Policies and programs (e.g. restoration/conservation/protection programs, institutional barriers)<br>• Legacy practices and pollutants |
| CLEAN AIR | **3. GOOD AIR DAYS**. Percent of days with "good" air quality index and air toxics health risks. | • Environmental Literacy<br>• Individual behaviors: burning wood for home heat; driving choices<br>• Fuel emissions (heavy duty diesel)<br>• Transportation management<br>• Business practices, large and small<br>• Programs and policies (e.g. institutional barriers to working at home)<br>• Extent and distribution of tree canopy, green spaces and vegetation<br>• Availability of alternative fuels, Bio-methane<br>• Land use and development patterns<br>• Sources and efficiency of energy |
| RESILIENCY. Environment of the region is able to avoid, minimize, withstand, or adapt to hazards (fire, floods, earthquakes, infestations and landslides), disasters or climate change so it can | **4. PROTECTED LANDS.** Acres of sensitive lands protected or restored (vs. developed). | • Diversity, complexity and health of habitats (plant and animal species)<br>• Extent /distribution of tree canopy and vegetation<br>• Cumulative effect and extent of climate change (e.g. increased CO2 inputs, deforestation) carbon mgmt resulting in increased rainfall and decreased snow pack and subsequent increased dependence on natural and engineered water storage (e.g., groundwater, cisterns)<br>• Policies and programs (water conservation, energy conservation, emergency response, regional strategic planning and economic investment) |

**Appendix D – Outcomes, drivers and indicators**

| Desired Outcomes | Proposed Key Indicators | Drivers (policy considerations) |
|---|---|---|
| continue to provide ecosystem services necessary to life. | | • Land use and development practices and patterns<br>• Sources and efficiency of energy (where we get energy and how we use it).<br>• Historical influences and affects – hydrology and geology |
| ACCESS TO NATURE. All people can experience nature in their daily lives, and have easy access to parks, natural areas, trails, vegetation and wildlife (in order to enhance their health, sense of place, quality of life, and environmental stewardship). | **5. PROXIMITY TO NATURE AND PARKS.** Percentage of the population within ¼ mile walking distance of dedicated open space; ½ mile walking distance to a public park, trail corridor, or natural area; and ¼ mile of a natural area (public or private). | • Accessibility and proximity of parks, trails, and natural areas (especially for children, seniors, differently-abled and lower income households).<br>• Extent and distribution of tree canopy, green streets, ecoroofs and other natural features that provide ecological function.<br>• Health and diversity of the regional ecosystem.<br>• Affordability of transportation choices to reach community and regional parks, trails and natural areas<br>• Health and environmental literacy<br>• Connectivity of natural areas, trails and parks.<br>• Stewardship and civic engagement in environmental protection (volunteerism and charitable contributions)<br>• Community walkability<br>• Policies and programs<br>• Land use and development patterns |
| ENVIRONMENTAL JUSTICE AND EQUITY. All people have access to clean air and water, to a clean and safe environment and to nature. | **6. PROXIMITY TO COMPROMISED ENVIRONMENTS.** Developmental Indicator. | • Accessibility and proximity of parks, trails, and natural areas (especially for children, seniors, differently-abled and lower income households).<br>• Land use and development practices and patterns • Economic disparities<br>• Working land management practices (including welfare of the health and safety management practices of workers)<br>• Legacy practices and pollutants (includes environmental justice and cultural practices)<br>• Extent and distribution of tree canopy, green streets, ecoroofs and other natural features that provide ecological function.<br>• Stewardship and civic engagement in environmental protection (volunteerism and charitable contributions)<br>• Policies and programs<br>• All residents are fully involved as equal partners in decision making about issues that affect the quality of the environment in their neighborhoods, including clean air and water |
| NATIVE SPECIES. Native Plants and Animals and the habitats/ecological processes that support them.* | • Percent (acres/miles) of **FUNCTIONAL CORRIDORS** as defined by the Regional Conservation Strategy.<br>• Number of **NATIVE VERTEBRATE TERRESTRIAL SPECIES** by watershed. | • Abundance, diversity, complexity and health of habitats • Cumulative effect and extent of climate change<br>• Land use and development patterns (economic pressures) • Altered fire and water regimes<br>• Regional and local scale anchor habitats, connectivity and wildlife corridors<br>• Policies and programs (e.g. restoration/conservation/protection programs, institutional barriers)<br>• Protection, restoration and expansion of special status habitats and plant and animal species (manage invasive plants and animals)<br>• Environmental literacy • Stewardship • Individual behaviors |

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## Climate Smart Communities Scenarios Project

# Understanding Our Land Use and Transportation Choices

PHASE 1 FINDINGS | JANUARY 12, 2012

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Climate Smart Communities: Scenarios Project

# Strategy Toolbox

for the Portland metropolitan region

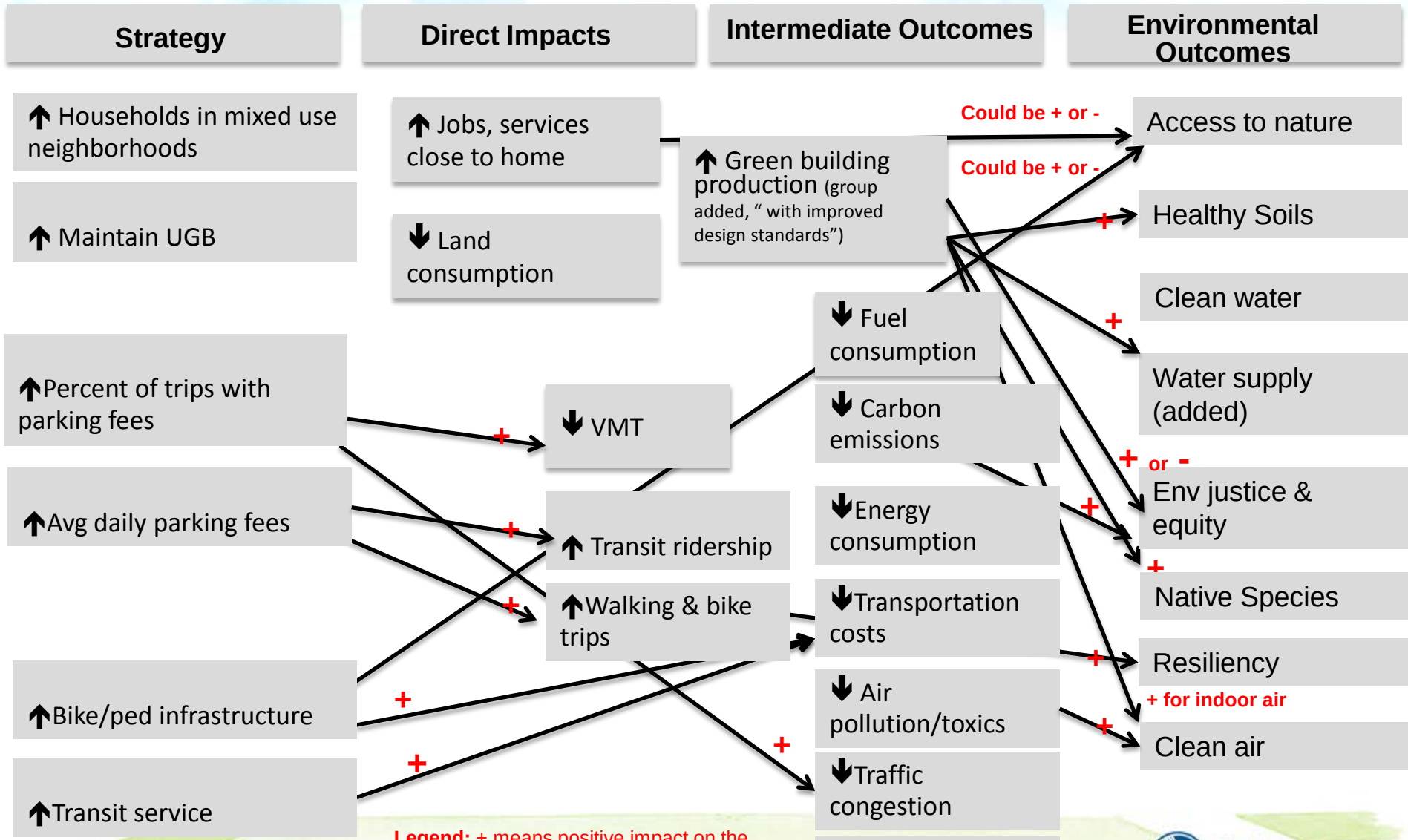
Review of the latest research on greenhouse gas emissions reduction strategies and the benefits they bring to the region

October 2011

Metro | *Making a great place*

## APPENDIX D: SMALL GROUP DISCUSSION CHARTS

# CSC Scenarios Project - Environmental Workshop
## Community Design Pathways

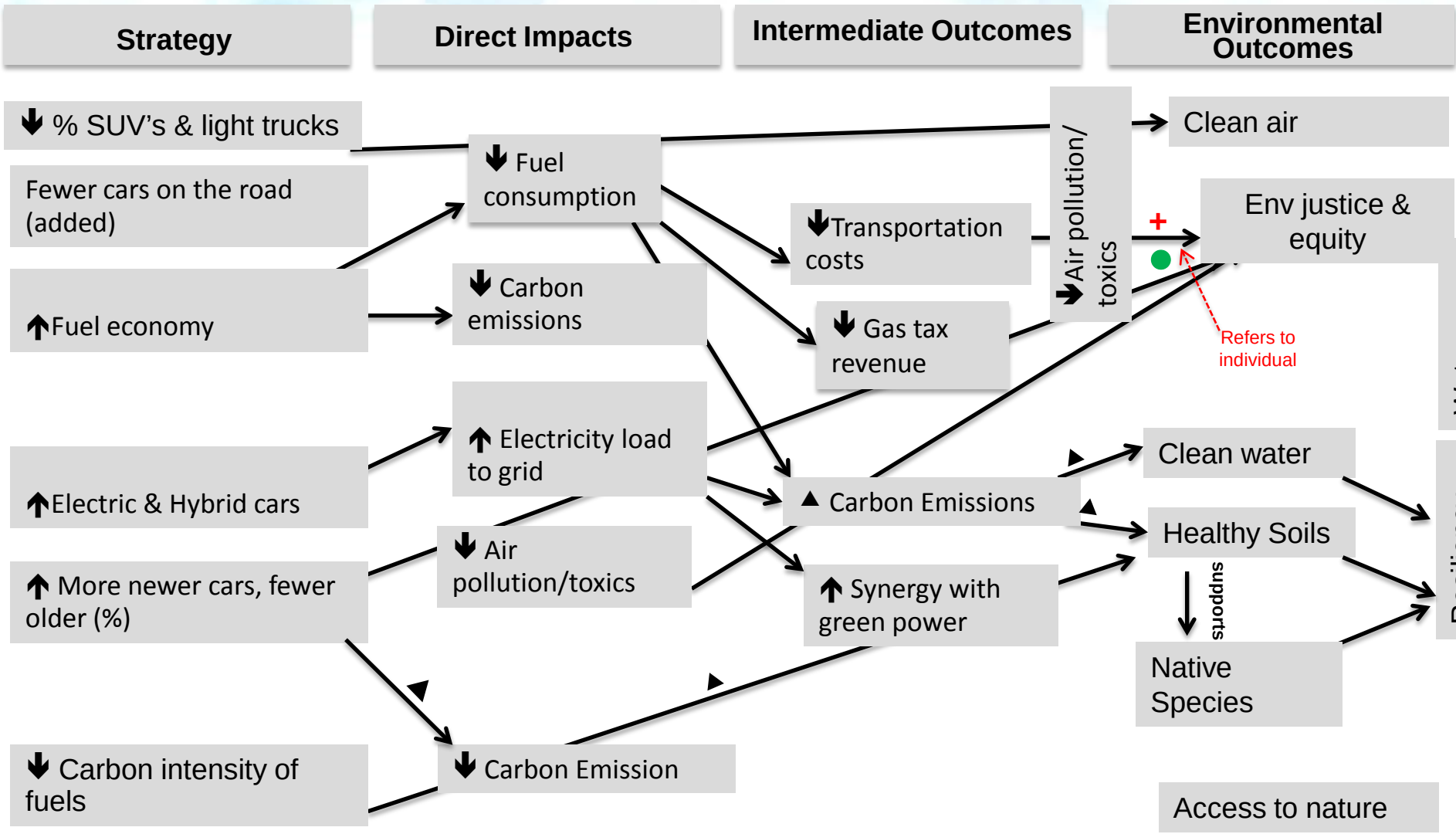



**Legend:** + means positive impact on the outcome; - means negative; both means it could be either depending on design or implementation



Metro

# CSC Scenarios Project - Environmental Workshop
## Fleet & Technology Design Pathways



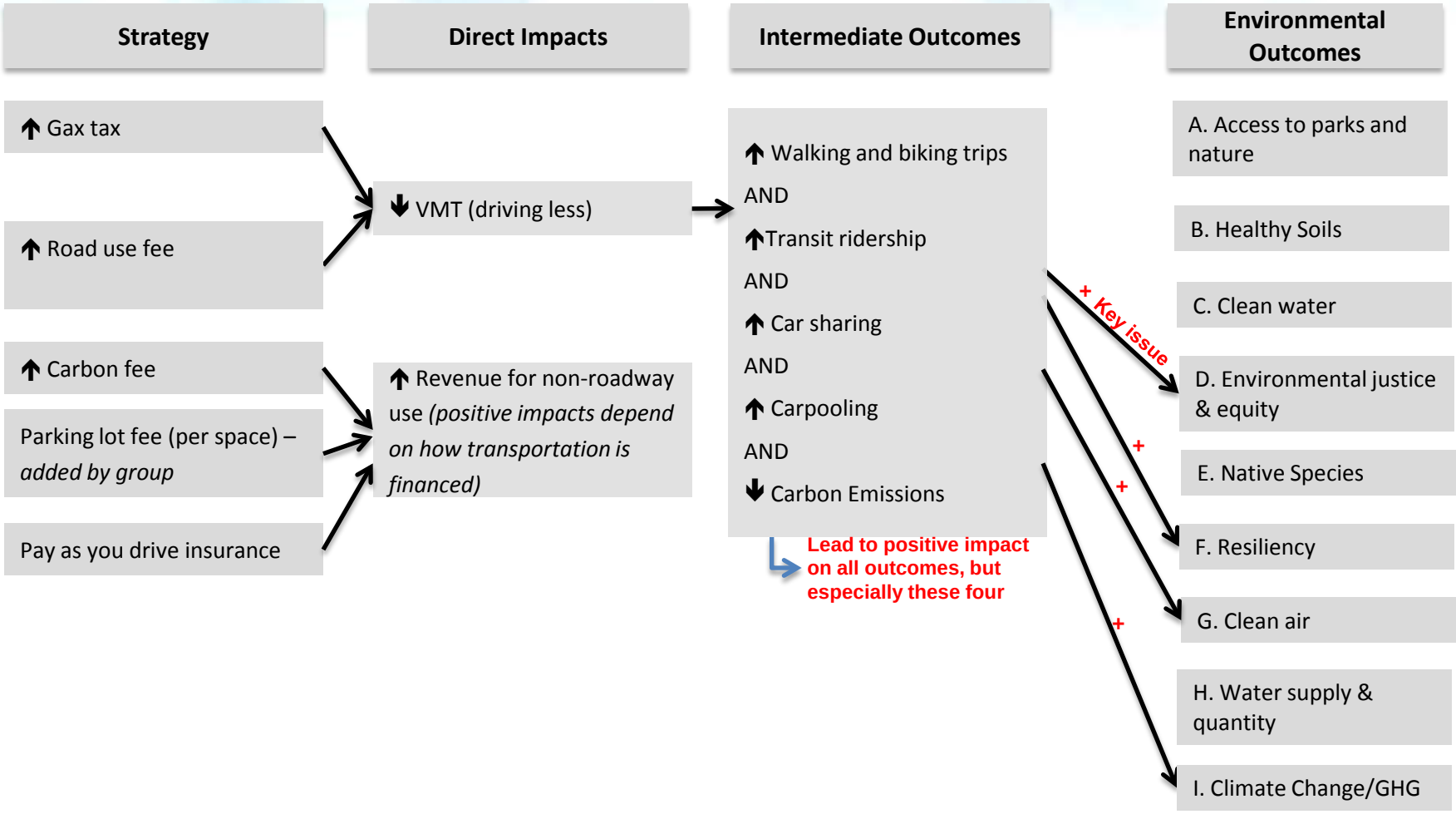

**Legend:** + or ● means positive impact on the outcome; - means negative; ▲ means it could be either depending on design or implementation



Metro

# CSC Scenarios Project - Environmental Workshop

## Pricing Pathways

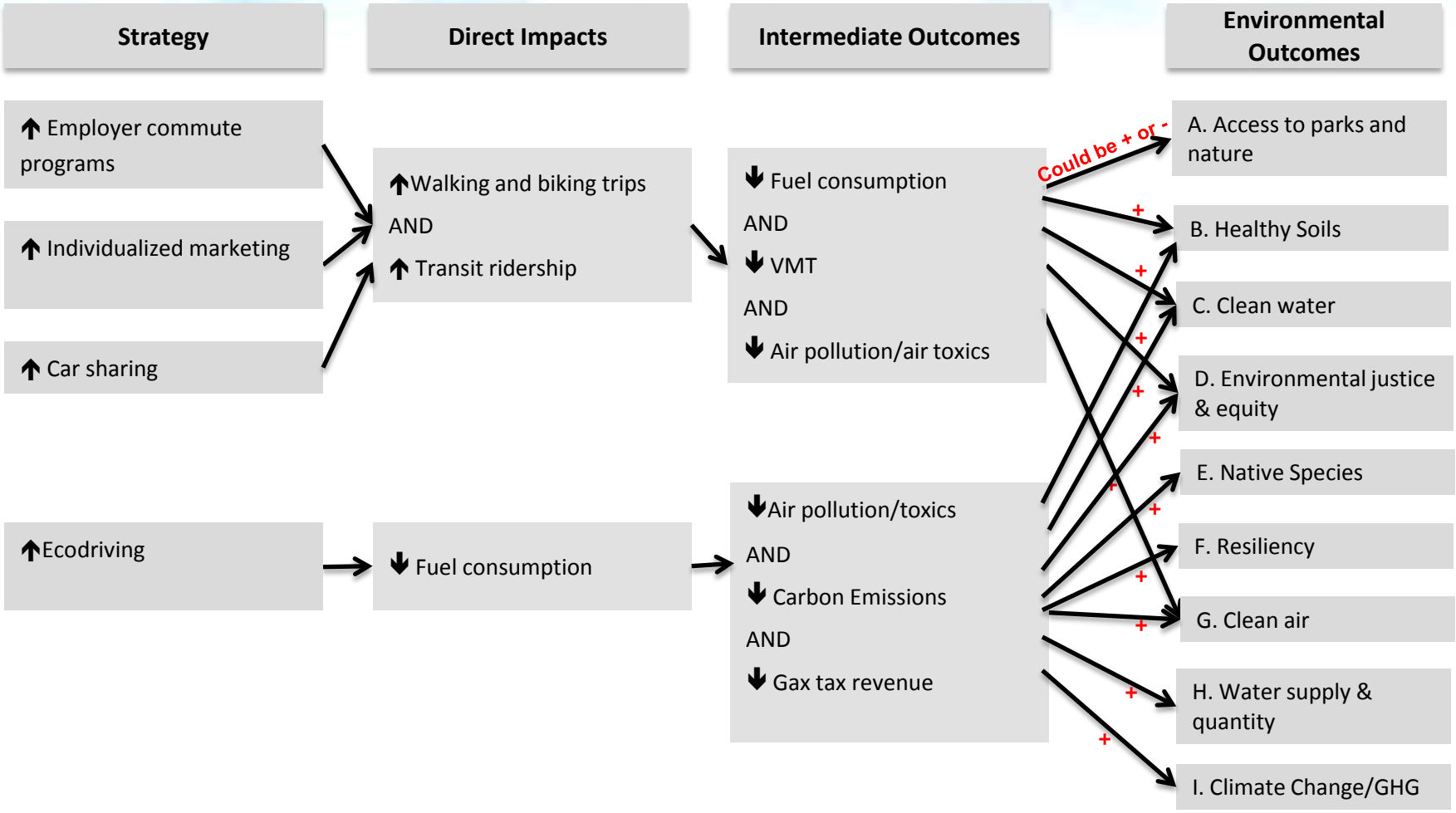



**Legend:** + means positive impact on the outcome; - means negative; both means it could be either depending on design or implementation

Metro

CSC Scenarios Project - Environmental Workshop

# Marketing & Incentives Pathways



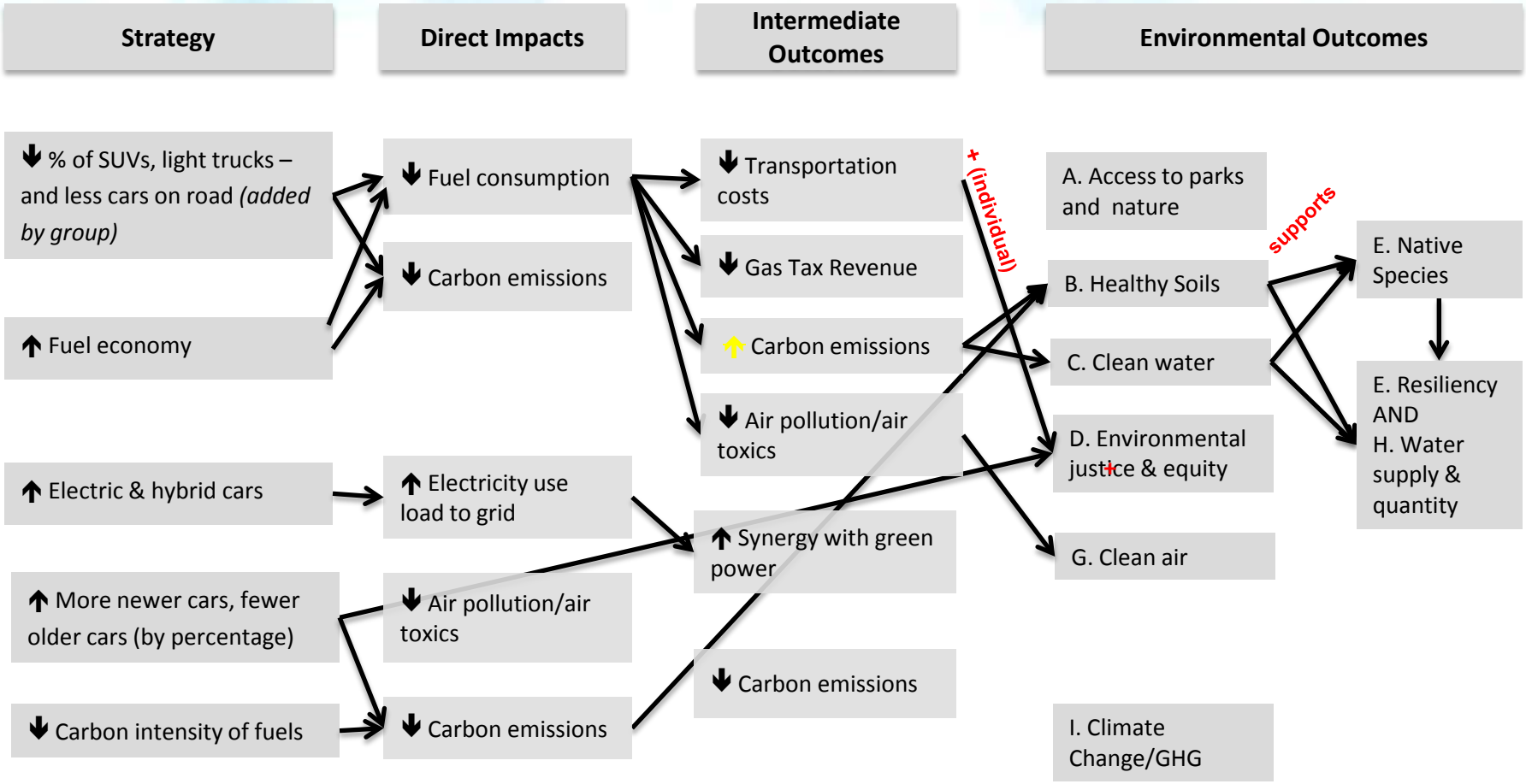

**Legend:** + means positive impact on the outcome; - means negative; both means it could be either depending on design or implementation



Metro

# CSC Scenarios Project - Environmental Workshop

## Fleet & Technology Pathways




**Legend:** + means positive impact on the outcome; - means negative; both means it could be either depending on design or implementation



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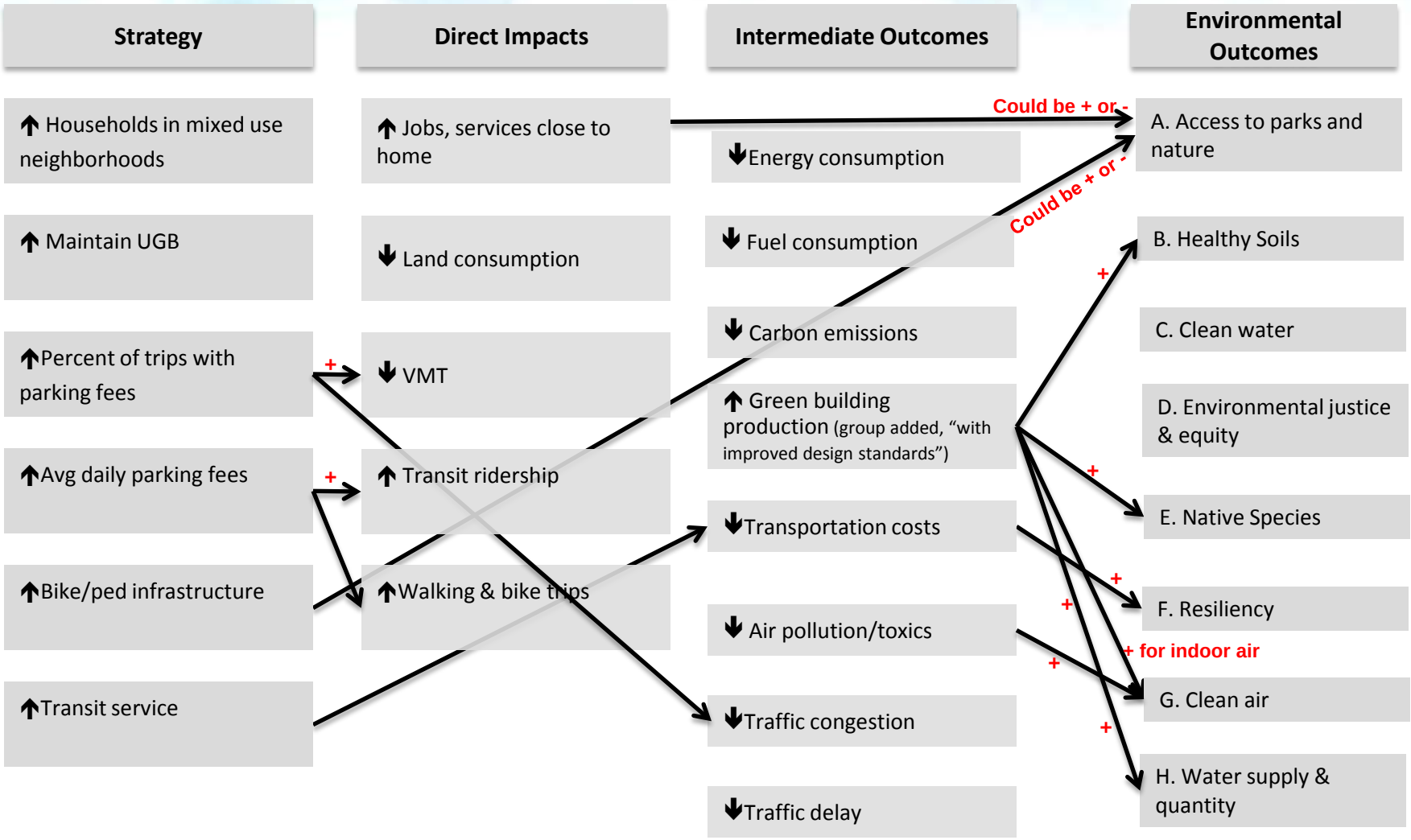
# CSC Scenarios Project - Environmental Workshop
## Community Design Pathways



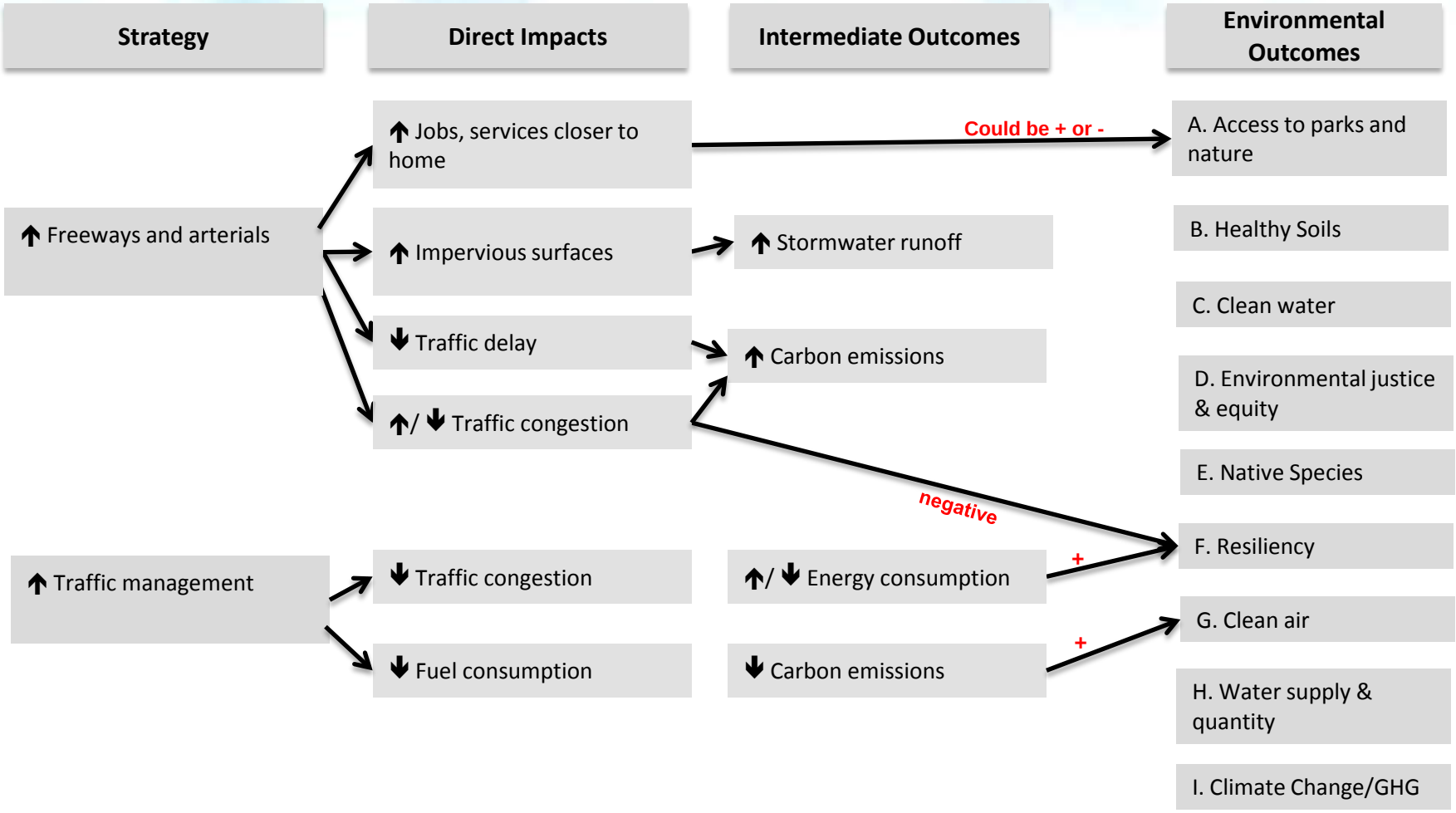

**Legend:** + means positive impact on the outcome; - means negative; both means it could be either depending on design or implementation



Metro

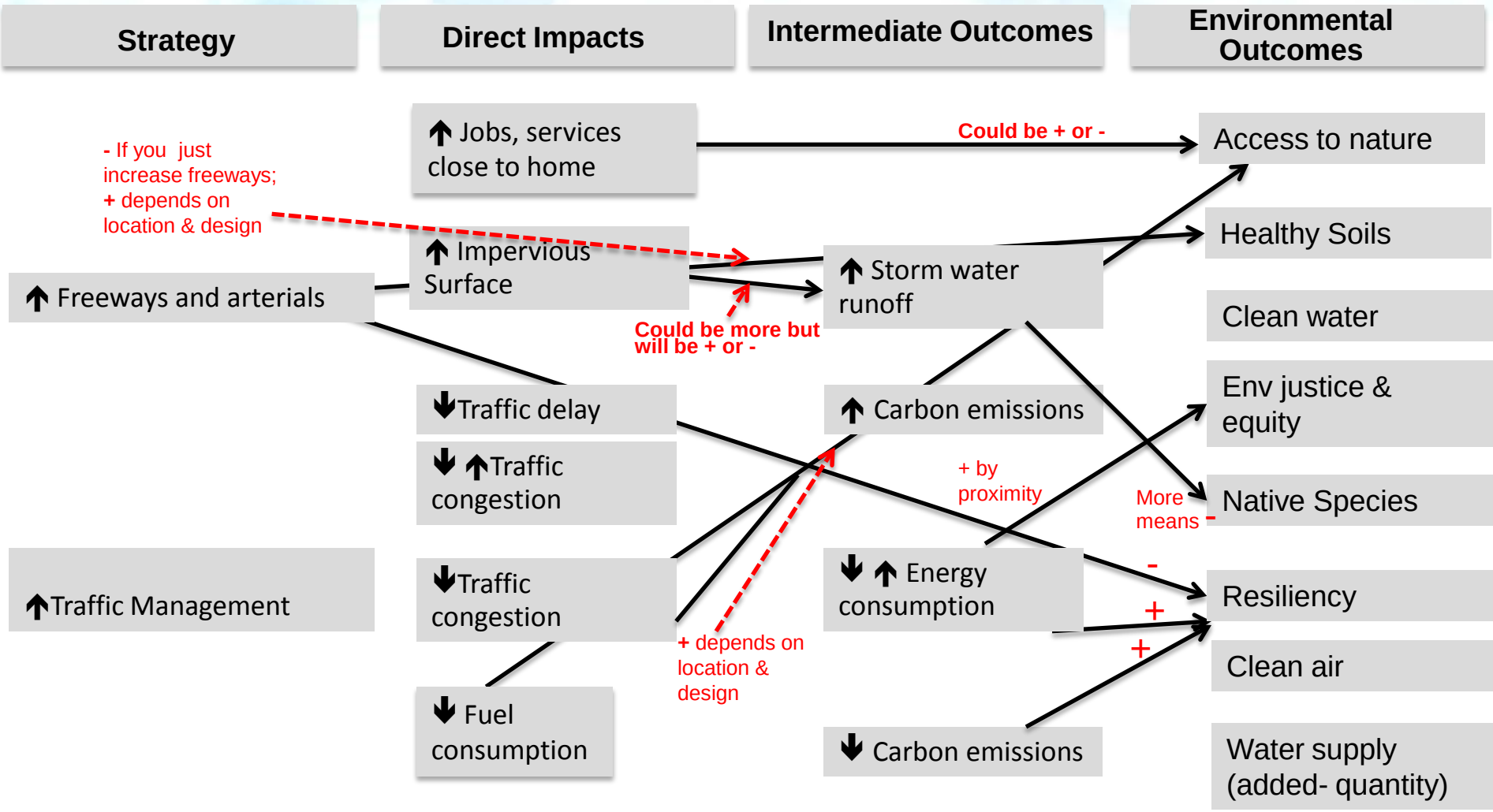
# CSC Scenarios Project - Environmental Workshop

## Roads Pathways




**Legend:** + means positive impact on the outcome; - means negative; both means it could be either depending on design or implementation

# CSC Scenarios Project - Environmental Workshop
## Roads Pathways




**Legend:** + means positive impact on the outcome; - means negative; both means it could be either depending on design or implementation

## APPENDIX E: WORKSHOP FEEDBACK

| Group | Q1 Effectiveness of what was presented to help you understand the project | | | | | | Q2 Effectiveness of the pathway exercise | | | | | | Q 3 Overall effectiveness of workshop | | | | | | Overall comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | Comments | 1 | 2 | 3 | 4 | 5 | Comments | 1 | 2 | 3 | 4 | 5 | Comments | |
| Fleet and technology | | | | | X | | X | | | | | I don't think this exercise added anything that the Metro team working on it couldn't arrive at itself. Spending only 20 minutes thinking about these is quite inadequate. | | X | | | | What was concluded? That air was voted #1 by 4 people? | Rex's invite email said we would provide input on how to measure the benefits and impacts…well, did we really? Did we help develop a scorecard? Walking out I'm not at all sure where each of the 6-8 outcomes fall on a scorecard. |
| | | | | | | Missed first hour. Not sure. | | | | X | | Worthwhile discussion and clarifying of diff. ideas/perspectives | | | | | | ? Hope it was for <u>you</u> | |
| | | | X | | | | | | | X | | | | | X | | | | A more effective overall context would be helpful at the beginning of this workshop. Obviously these are "complex"--difficult to do this "lite"--very much enjoyed the interaction and the excellent participation |
| | | | | | X | may not be best judge as have been heavily involved already. | | | | X | | Probably (?) to get everyone on the same page but I'd like to delve into what the intermediate outcomes could tell us about indicators. | | | | X | | Would like to have seen some cross work (?) with Mosaic outcomes to validate that the GPP outcomes are aligned | Seemed to be some tension between focusing on the outcomes and trying to tease out the pathways. I think we got valuable input but it may have confused folks a bit as (?) were working through the exercises. Glad we're coming back together with all the groups in the fall. |
| | | | | X | | Better explanation and justification of policy strategies necessary. | | | | X | | Synergies could be better emphasized | | | | X | | Brought new people into conversation and expanded project | |
| | | | | | X | | | | | | | I don't know. I won't be using the (?) in your project. | | | | | | I don't know what your measure of effectiveness is. | I found the exercise useful (as many of these are) to review (?) the complexity of these challenges. I think it's beneficial for leaders in the community to discuss tradeoffs collectively; however I can't judge how much you can use/or how effective the workshop was for your process. It was fun! |
| Community Design and Roads | | X | | | | | | | X | | | | | | X | | | | Workshop provided enough time for a <u>cursory</u> review and pathway eval <u>only</u> with extremely minimal consideration. |
| Fleet and Technological | | | | X | | | | | | X | | | | | | X | | | Look forward to seeing the pathways from the breakout groups. |
| Community Design and Roads | | | | | X | | | | | | X | | | | | | X | | I will bang my drum again to say "community design" that advocates vibrant communities should and could include "smart" green homes that have the tangible and positive impacts on the environmental outcomes indentified in the workshop. |
| | | | | X | | On the technical work team so the basis of discussion as already valid. This discussion helped me connect the strategy to environmental outcomes. | | | | X | | See next comment | | | X | | | This helped some with understanding CSC a bit, but it is very complex to say that effectiveness of the workshop was real high but is a very good way to get people thinking about the strategic outcomes | The linkages are difficult (strategies>>outcomes)and can only be touched upon here today Many decisions will have context challenges in order to properly communicate the links. |
| Community Design and Roads | | | | X | | The materials sent out ahead are great handouts; they have the right balance of technical and graphical information | | | X | | | I think for most of the cities involved the elected officials will be less concerned about the environmental outcomes and more interested in the direct outcomes (i.e. congestion, gas tax, revenue, transportation costs, etc.) | | | X | | | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vehicles/Technology | | X | | | | | | | X | | | | | | X | | | Subject/interactions very complex for a short workshop | missing-- metrics: how is the effect measured(not necessarily explicit values); time frame--: near, mid, long term including what is started near term in order to realize a long-term outcome |
| | | X | | | | | X | | | | Focused on roads, public transport was only considered as a subcategory | X | | | | | | | Process does not lead to effective solutions |

**Metro's web site:** www.oregonmetro.gov

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www.oregon**metro.gov/climatescenarios**

# Equity and Environmental Justice Scorecard Workshop Report

A Summary of the Climate Smart Communities Scenarios Project Workshop of July 31, 2012

November 2012

Metro | *Making a great place*

**Attachment 3 to**
**Staff Report to Resolution No. 13-4438**

## About Metro

Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy, and sustainable transportation and living choices for people and businesses in the region. Voters have asked Metro to help with the challenges and opportunities that affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to providing services, operating venues and making decisions about how the region grows. Metro works with communities to support a resilient economy, keep nature close by and respond to a changing climate. Together we're making a great place, now and for generations to come.

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Carl Hosticka, District 3
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Rex Burkholder, District 5
Barbara Roberts, District 6

**Auditor**
Suzanne Flynn

Metro collaborated with the Coalition for a Livable Future and the Coalition of Communities of Color in planning and executing the Equity and Environmental Justice Scorecard Workshop. The opinions, findings and conclusions expressed in this report are not necessarily those of our partner organizations.

The preparation of this report was partially financed the Oregon Department of Transportation and U.S. Department of Transportation. The contents of this report do not necessarily reflect the views or policies of the State of Oregon or U.S. Department of Transportation.

**Attachment 3 to**
**Staff Report to Resolution No. 13-4438**

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## Executive summary

### Introduction

This report summarizes the Equity and Environmental Justice Scorecard Workshop held in the Metro Council Chamber from 8 a.m. to noon on Tuesday, July 31, 2012. The workshop was one of several community engagements for the Climate Smart Communities Scenarios Project in 2012.

### Background

At the time of the equity scorecard workshop, the scenarios project was nearing completion of engagement with local elected officials to achieve understanding of Phase 1 findings and was making progress into the next period of engagement. During this new period, outreach would involve more detailed communications and more in-depth methods of communicating to strengthen connections with communities and build relationships with key community members. Extending beyond elected officials and local planning staff, this phase mainly focused on leaders of the business, environmental, public health and equity and environmental justice communities. Workshops with these community leaders were among several activities planned to achieve the engagement goals and inform the project.

For the equity and environmental justice workshop, Metro partnered with the Coalition of Communities of Color and the Coalition for a Livable Future. Partners encouraged their contacts to attend and advised on the workshop agenda and activities. Many workshop attendees were unfamiliar with the Scenarios Project prior to the workshop; others had attended the April 2011 Climate Leadership Summit where summit participants explored ways the Portland area could build vibrant neighborhoods and spread economic growth while reducing carbon emissions that are linked to climate change.

The workshop was intended to inform and engage community leaders and foster collaboration, mutual learning and relationship building between the planning staff and these communities. Participants were invited to discuss how to measure the benefits and impacts of land use and transportation policy actions in equity and environmental justice terms. Pre-workshop materials explained that planning staff would use the input gathered at the workshop to develop a scorecard that could measure how well various combinations of land use and transportation strategies could advance equity and environmental justice in the region while also meeting carbon emissions goals.

### Overview of workshop format

The workshop followed a format of short presentations by invited guests and project leaders combined with open discussion and question/answer periods involving all 43 meeting attendees. The meeting flowed as follows:

- Welcome and Introduction to Climate Smart Communities Scenarios Project – Jeanne Lawson of Jeanne Lawson Associates, the meeting facilitator, briefly convened the meeting and handed it off to Metro Councilor Carlotta Collette who provided an introductory level overview of the CSC Scenarios Project.
- Meeting Orientation – Jeanne Lawson explained the purpose, structure and steps of the meeting agenda.
- "Measuring and Promoting Regional Equity" - Dr. Manuel Pastor from the University of Southern California gave the keynote address.
- Q&A Discussion – The group engaged in a facilitated discussion following Dr. Manuel Pastor's talk.
- Discussion of Proposed Outcomes – The group participated in a facilitated discussion where messages emerging from attendees regarding the outcomes were noted; Kim Ellis, Metro's project manager for the Scenarios Project, provided further information and clarification on the outcomes.
- Introduction to Transportation and Land Use Strategies – Kim Ellis introduced the 22 strategies that have been analyzed to date. Lawson invited attendees to participate in a dot exercise to indicate the most important strategies to achieving the outcomes.
- Dot Exercise and Break – While taking a coffee break, participants were asked to paste dots on a graphic display of all the strategies, indicating which ones each felt were most important to achieving equity and environmental justice outcomes.
- Reflection on Priority Strategies – A panel consisting of Dr. Manuel Pastor, Mara Gross of the Coalition for a Livable Future, Julia Meier of the Coalition of Communities of Color and Nuin-Tara Key, a Metro staff member, shared observations on the strategies that emerged from the audience dot exercise.
- Getting from Strategies to Outcomes – An open discussion was held with the panel available for guidance, on which strategies appeared to be the most important to achieving the desired equity and environmental justice outcomes.
- Observations and Recommendations – Dr. Manuel Pastor provided his final reflections on the morning's events.
- Individual Feedback – Prioritization form – Kim Ellis explained the project's next steps. Lawson invited attendees to provide feedback on strategies and outcomes, as well as on the workshop.
- Thank You and Next Steps – Councilor Collette thanked participants and invited them to attend a summit on the project to be held in spring 2013.

This document provides a description of what happened and what project members heard during each stage of the workshop. The report is followed by five appendices:

- Appendix A: Workshop attendance
- Appendix B: Workshop presentations
- Appendix C: Workshop materials

- Appendix D: Participant feedback
- Appendix E: Workshop follow up and lessons learned

## Workshop narrative

### Welcome and introduction

Metro Councilor Carlotta Collette welcomed everyone to the meeting and thanked the Coalition of Communities of Color and Coalition for a Livable Future for their partnership in this effort. Metro staff and workshop participants introduced themselves.

Councilor Collette gave a brief presentation of the Climate Smart Communities (CSC) Scenarios Project. She made the following main points:

- Timeline: The CSC Scenarios Project has three phases. In Phase 1 (2011), Metro studied 144 different combinations of land use and transportation strategies that could help reduce green house gas (GHG) emissions. Metro found that current community plans plus cleaner fuels and vehicles would get the region very close to the target of 1.2 metric tons of carbon dioxide equivalent per capita by 2035. There is a small gap left to reach this target, and to achieve it, communities will need to focus on becoming more walkable and having better transit service. The project is currently in Phase 2, and Metro is beginning conversations with communities and groups to get input on how the scenarios project can integrate existing community plans and goals. Phase 2 also includes development of scorecards to evaluate options. In Phase 3 (2013-2014), Metro and local elected officials will narrow down the scenarios and choose and implement one preferred scenario.
- Desired outcomes: Metro started the CSC Scenarios Project with a set of six desired regional outcomes, including vibrant communities, equity, economic prosperity, transportation choices, clean air and water, and climate leadership. In addition, the project builds on community aspirations. Each community has its own vision or plan, and Metro is working with them to see how the CSC project can support their visions.
- Scorecard: The purpose of today's workshop is to gather input from equity and environmental justice community leaders on a draft set of outcomes and how well the land use and transportation strategies studied to date may advance achievement of those outcomes.

  As part of the CSC Scenarios project, Metro is creating a "scorecard" to measure how well the chosen scenarios work to advance environmental justice and equity along with other desired outcomes. The scorecard will include a set of region wide desired outcomes for environmental justice and equity, along with ways to measure each outcome. The input provided will help inform development of the scorecard.

  To this end, Metro staff developed a draft set of equity and environmental justice outcomes as a starting point for the conversation. These outcomes come from various sources, including the Greater Portland Pulse project, Statewide Transportation Strategy, the Oregon Department of Transportation's Mosaic tool, and the Coalition for a Livable Future's Regional Equity Atlas. Today, Metro wants input on which outcomes are missing and which outcomes are most important to measure as part of the equity and environmental justice scorecard.
- Scorecard Next Steps: Metro will create a scorecard that will measure business, environment, equity and environmental justice, and public health outcomes. Metro

conducted a workshop for public health in March and another for the environmental scorecard earlier in July. This winter, Metro will host business focus groups and an Opt In survey. There will also be a summit in spring 2013 to bring regional decision-makers and all of the scorecard workshop participants together.

Workshop partners Coalition of Communities of Color (CCC) and the Coalition for a Livable Future (CLF) briefly introduced their organizations.

Julia Meier explained that CCC's primary mission is to advance racial equity. In the past few years, Metro has acknowledged that planning in the region does not always effectively engage communities of color. To address this, Metro is developing a long-term partnership with CCC to make sure that Metro's work is inclusive of communities of color, to help develop leaders of color in planning, and to create new partnerships with community-based organizations.

Mara Gross explained that CLF has been working with Metro on its long-range planning efforts for many years. She noted that climate change doesn't impact everyone equally, but the CSC Scenarios Project can provide opportunities to start shifting that dynamic. As the Portland metropolitan region becomes more diverse, it is imperative that policy decisions provide opportunity for everyone. CLF is most interested in creating communities where everyone is able to take transit and walk; supporting sustainable transportation and land use planning for underserved communities that does not displace them; making transportation and jobs accessible to communities of color; and enabling everyone to be part of the decision-making process.

### Workshop description and expectations

Jeanne Lawson introduced herself and reviewed the rest of the agenda. She noted that the two main goals of this workshop are to determine which equity and environmental justice outcomes are most important, and which land use and transportation strategies are most important to get us there. She briefly reviewed the draft Equity and Environmental Justice Outcomes before introducing the keynote speaker, Dr. Manuel Pastor.

### Keynote speaker Dr. Manuel Pastor – *"Measuring and Promoting Regional Equity"*

Dr. Manuel Pastor is a Professor of American Studies and Ethnicity at the University of Southern California. As the founding director of the Center of Justice, Tolerance, and Community at the University of California, Santa Cruz, Dr. Pastor currently directs the Program for Environmental and Regional Equity at USC and co-directs USC's Center for the Study of Immigrant Integration.

Dr. Pastor gave a presentation on measuring and promoting regional equity, drawing on his experience in various equity indicator projects. The main points of his presentation include:

- Measuring Equity: Three reports provide examples of ways to measure equity, including: 1) the Bay Area Social Equity Caucus, 2) CAUSE, and 3) immigration reports. These processes show that equity is consistent with and can help advance economic, environmental and sustainability goals.
- Data Collection: Data collection is extremely important in order to measure equity. However, before collecting data, you must show a need for the data. Once data is

collected, it is important to present the data and tell a story with appropriate framing. Then you can identify policy opportunities moving forward.

- Indicators: The purpose of indicators is to measure change; to look forward to identify opportunities; and to shift policy.
- Measuring Change – Dr. Pastor gave examples from the Bay Area Social Equity Caucus and a San Francisco study that tracked gentrification, showing how maps can help tell a visually compelling story when used in indicator reports.
- Looking Forward – It is important to do demographic projections to see what the future will look like, in order to move people to action.
- Shifting Policy – It is important to decide what to do about the data. For example, the Bay Area study showed that toxics were found disproportionately in low-income communities, which motivated these communities to want to organize themselves.

*Lessons Learned about Indicator Projects*:

- Need to start with strong outcomes, to know what the goal is.
- Need to set up why you are measuring the data.
- Should figure out whether the data is available, and whether it can be collected over time to measure progress.
- Indicator projects should surprise people, and teach them something new.
- Try to complicate measures to take into account the real dimensions of vulnerability and other dimensions of equity.
- Connect data to policy choices.
- The process must connect to community. The community members themselves should be involved, and the process should figure out the best way to involve them. In one example, community members performed air monitoring themselves and thus felt ownership over the process.
- The biggest lesson – Yes we can! We can measure regional equity and environmental justice, and if we do, we can have a better transit system and reconnect communities.

### Question and answer with Dr. Manuel Pastor

Participants asked the following questions of Dr. Manuel Pastor:

- **Question:** (inaudible)
  **Answer:** No, because Census data feels unreliable with respect to people with disabilities.
- **Question:** What is "just in time review?"
  **Answer:** When we did environmental justice screening methods in California, we checked in with community members all along the way, which is why we called it "just in time review." The environmental justice organizations around California feel connected to the environmental justice screening method because they have been involved from the beginning, have trust, and feel that they are co-creators.

- **Question:** Have you set some metrics around socioeconomic indicators?
  **Answer:** We use micro-data to produce our own measures, usually using the American Community Survey (ACS) 3-year census sample. We also use power measures, such as homeownership and voting rates as measures of social power and vulnerability.
- **Question:** What are the tensions between smart growth and no-growth environmentalism?
  **Answer:** People sometimes think that all we need is growth, but what we really need is *just* growth. One of the biggest tensions is the suburbanization of communities of color in the US. In those places, the physical, social-services, and civic infrastructure are tired. Special attention needs to be paid to those communities both by governments and by organizers.
- **Question:** How much do you have to look to the past to be able to look forward?
  **Answer:** Americans tend to think that looking backward means whining and complaining. One way of combating this is by first looking forward to see what the future looks like, and then looking back to see why it is like that. People often think that looking forward means ignoring racial disparities, but that is not true.

### Discussion of proposed outcomes

Participants reviewed the draft Equity and Environmental Justice Outcomes, which include:

- Public health and safety
- Access to opportunity
- Mobility
- Affordability
- Inclusive decision-making process
- Healthy soils
- Healthy air
- Clean water
- Resiliency
- Business prosperity
- Community prosperity
- Individual/household prosperity
- Revenues generated

Participants made the following comments on the draft outcomes:

- The outcomes should explicitly address housing.
- The definition of "vulnerable populations" should include people with disabilities.
- The outcomes should include neighborhood stability, which is different from affordability. This is important as a measure against gentrification.
- The outcomes should reference where public and private investments are being made, and whether there is disparity in spending in certain areas.
- The definition of community prosperity should be broadened to include racial prosperity.
- The inclusive decision-making outcome should be broadened to go beyond just decision-making, and include creating civic leaders.

- Participants commented that education should be included as an outcome, either in the healthy communities category or as part of the public health and safety or mobility outcomes.
- The public health and safety outcome should look at the neighborhood level, and look at individual or population-based health. "Healthy people" could be called out as an outcome. The current description of public health might itself be a potential measurement.
- Participants asked whether and how the scorecard will measure geographic areas against one another, to see how well communities across the region score in terms of equity and environmental justice. Kim Ellis, CSC Project Manager, responded that Metro has not yet decided whether the scorecard will drill down to a specific community level or have a broader view. However, Metro will not be able to measure each of the outcomes at a city-level or neighborhood level.
- Participants noted that the strategies look like a very limited set of ways to address a very broad set of outcomes. Kim Ellis responded that the strategies are things that Metro is able to analyze within its current model. But Metro also knows that *how* the strategies are implemented matters a lot for getting to outcomes.

The meeting partners then provided their feedback on the draft outcomes. Mara Gross of CLF explained that the outcomes should be linked to demographics and indicate which populations and communities are being considered. How projects are implemented is also very important to consider.

Julia Meier of CCC commented that aggregating the outcomes by community is important. The outcomes should focus on communities by geography and by other types of identifiers. Education should also be included in the healthy communities category.

Dr. Manuel Pastor commented that for the inclusive decision-making outcome, co-creation of data and collaboration in process is important. He noted that none of the outcomes explicitly reference equity or disparity-reduction. The language should make reduction of disparities a key part of the outcomes. Increased transit and denser cities can reduce the burden on the climate, but can also result in gentrification. Unless equity is built in to the process, climate change work can produce disparities.

### Introduction to transportation and land use strategies

Kim Ellis briefly presented the list of transportation and land use strategies of the CSC Scenarios Project. She asked participants to consider which of these strategies will be most important in advancing equity and environmental justice in the region.

### Dot Exercise

Participants were each given eight dots and asked to put them on the strategies they think are most important to help reach the outcomes. The most favored outcomes included transit service (43 dots), complete neighborhoods and mixed-use areas (41 dots), bike and pedestrian networks (24 dots), and employer programs (23 dots).

| Strategies | Number of Responses |
|---|---|
| **Community Design** | ●● |
| Complete neighborhoods and mixed-use areas | ●●●●●●●●● (41) ●●●●●●●●● ●●●●●●●●● ●●●●●●●●●● |
| • Urban growth boundary | ●●●●●●●●●● (11) |
| • Transit service | ●●●●●●●●● (43) ●●●●●●●●● ●●●●●●●●● ●●●●●●●●●● ●● |
| • Bike and pedestrian network | ●●●●●●●●● (24) ●●●●●●●●●●●●● |
| • Parking | ●●●●●● |
| **Pricing** | ●●●●●● |
| • Pay-as-you-drive insurance | ● |
| • Gas tax | |
| • Road use fee | ●●●● |
| • Carbon fee | ●●●●●● |
| **Marketing & Incentives** | ●●●● |
| • Eco-driving | |
| • Individualized marketing | ●●●● |

| | |
|---|---|
| • Employer programs | ●●●●●●●●● (23) ●●●●●●●●●●●● |
| • Car-sharing | ● |
| **Roads** | |
| • Freeway and arterial capacity | ● |
| • Traffic management | ●●●●●● |
| **Fleet** | |
| • Fleet mix | ●●●● |
| • Fleet age | ● |
| **Technology** | |
| • Light vehicle fuel economy | ●●●●●●● |
| • Carbon intensity of fuels | ● |
| • Electric and plug-in hybrid electric vehicles | ●●● |

### Panel reflection on priority strategies

A panel made up of Dr. Manuel Pastor, workshop partners and a Metro staff person provided their reflections on the strategies. Nuin-Tara Key of Metro commented that any of the strategies may have positive or negative impacts on disparities in the region, depending on the implementation. Metro will need to work on implementation that leads to reduction of disparities. Mara Gross noted that the dot exercise shows that the community design elements will have a huge impact on climate change and equity.

Dr. Pastor commented that he is not surprised that community design got the most dots. In many cities and communities, there is a lot of distrust of pricing strategies by minority communities who have been disadvantaged by the market, and that seems to be the case here.

Julia Meier of CCC expressed concern that the equity and environmental justice community is jumping into a process that is already well under way, and that they are tweaking already proposed strategies and outcomes. Also, the dominant strategies have a technology bias, and of the six categories, only one resonates with this group – community design.

### Discussion: getting from strategies to outcomes

Participants had a discussion on how Metro can better engage with the equity and environmental justice community, and then discussed the transportation and land use strategies.

### Discussion on engagement with the equity and environmental justice community

Jeanne Lawson asked participants to discuss how Metro can better engage the environmental justice and equity community. She noted that the intent of using the list of outcomes today was to honor and build on work that has already been done by the Greater Portland Pulse and other efforts which included many of the participants of today's workshop. Participants made the following comments:

- It is important that meetings like this think about the big picture, and how a process like the CSC Scenarios Project connects with and supports individual families, especially immigrant families and micro-enterprises. It is important to have leaders from these communities forming an integral and visible part of the process and project team.
- Metro should have another workshop on this issue. It would also be helpful to ask community groups to come up with their own strategies to get to the list of outcomes, rather than presenting them with a pre-defined list of strategies. The strategies should also link to what is already being done by communities and organizations and build on existing relationships. Kim Ellis responded that this workshop is not meant to be the only place to provide input. Metro is hoping to work with leaders over the next few years as it develops the CSC Scenarios Project.
- When implementing the strategies, Metro should take steps to make sure low-income communities are part of the system that is paid to implement the strategies. Consideration of who will get construction jobs should also be a part of the process.
- The conversation on this issue needs to be data-driven and look at the specifics and how strategies will be implemented, rather than continuing to look at a high-level discussion on goals and outcomes.

### Discussion on strategies

Participants discussed the transportation and land use strategies and made the following comments.

*General comments on strategies:*

- Participants commented that the strategies should be broadened, and looked at as a whole. The process should go beyond just strategies to reduce vehicle GHG emissions and instead be about creating communities, which implies a larger set of strategies. The strategies also must be looked at as a package to see how they work together to meet outcomes, rather than looking at them individually. It is also important to look at how different strategies leverage and support the removal of disparities.
- Participants noted that the strategies do not seem to be rooted in environmental justice and there seems to be a lack of community voice driving this work. The outcomes look great, but are missing the big piece on reducing disparities.
- The data on disparities in the region needs to be integrated. The work that Dr. Manuel Pastor has done in California is grounded in solid data and Metro's process needs to be

grounded in that data too. Kim Ellis responded that Metro has been getting tools available to do analysis over the past year. The Regional Equity Atlas data will be available soon. Metro recognizes the need to do more work to present more data, which it will do through the fall as the project team develops a report of key trends in the region.

- The strategies are very broad and lack analysis on which strategies could lead to a worsening of the disparities.
- The absences on the dot exercise are very important as well. For example, Dr. Manuel Pastor interpreted the absence of dots in the Pricing category as showing mistrust. That should be part of the conversation going forward.

*Marketing and incentives strategies*

One person noted that marketing and incentives strategies would lead to greater equity only if the most vulnerable communities participate in creating those strategies. These tools need to be given to those who need them most, not to those who already have wealth and power.

*Complete neighborhoods and mixed-use areas strategy*

Dr. Manuel Pastor recommended that a set of equity indicators for the Complete Neighborhoods strategy should look at what is happening with industrial areas, whether disenfranchised communities are being made more walkable, and whether there are incentives for disenfranchised families to remain in their community. Metro should identify what the equity marker is for each strategy and also take into account the community's goals. Indicators should also use data creatively to measure new things that did not seem measurable before.

*Transit service strategy*

- Kim Ellis clarified that transit service strategies could include expanding service, coverage, frequency and type of service. It could also include education programs to teach people to use transit and connectivity to bike/pedestrian networks.
- Dr. Manuel Pastor recommended that a set of equity indicators for the Transit Service strategy should look at who the riders are. It should focus on how to encourage use of mass transit, and keep people using mass transit over time even as they earn more money.
- Participants commented that better data is needed on who is riding transit and who is dependent on transit. We know that people of color are one-third more likely to not have a car and that half of day trip tickets are purchased by low-income people. The strategies should look at whether there are incentives for using transit at the daily-ticket level rather than just for monthly passes and whether transit investments are being steered into poor areas. We have some good data and need to be smart about using it.
- The discussion on transit service strategies must include a discussion on anti-gentrification tactics in transit spending. We need to have honest conversations about inclusionary zoning, tools to reduce gentrification and the effect of light rail expenditures on maintaining bus service.
- A participant asked how Metro will work with other agencies. For example, a lot of transit decisions are made at TriMet, not Metro. Kim Ellis responded that this workshop input will

be communicated back to policymakers, local elected officials and other decision-makers, including TriMet.

*Employer programs strategy*

Someone noted that employer programs traditionally support transit for higher-income people who already have transportation options. There is also a lack of good data on employer programs.

Kim Ellis ended the discussion by explaining that Metro will refine the draft outcomes and strategies based on the input heard today and at the other scorecard workshops. Metro had planned to have the conversation on implementation next year, but will look for opportunities to start some of those conversations earlier because of its importance. Kim Ellis added that Metro is very open to creating partnerships with any interested organizations. If any organizations are willing to be more involved, Metro can help provide tools and materials to do so and to get input from the communities they serve.

### Observations and recommendations

Metro's partners made closing observations on the outcomes and strategies. Julia Meier noted that community specificity must be considered throughout the process; the process must measure how well we are reaching outcomes at a narrower community level, not just at a regional level. Dr. Manuel Pastor added that the 5-year ACS is great for getting data because it allows you to drill down into communities and get very specific with micro-data. He commented that the outcomes seem to be the correct ones, but need to be clearer about reducing disparities within those outcomes. The strategies must ask whether they are reducing disparities or exacerbating disparities. He also encouraged Metro and community organizations to keep working together in this process, and try to get past the historic lack of community involvement in processes such as this one.

### Thank you and next steps

Councilor Collette closed the meeting and encouraged all participants to continue working with Metro in this process. She appreciated the frank discussion and noted that it is helpful for Metro to hear from groups when they feel they have been invited too late. She especially wants participants and their organizations to continue to be involved in the discussion on implementation. Metro would be happy to come and talk to interested communities and organizations.

She added that in the next year, Metro will develop case studies to study the strategies on the ground. Metro may be looking at Rockwood and an employment area as case studies. She encouraged participants to provide other suggestions. She thanked CCC and CLF for their partnership and participation.

### Prioritization exercise

At the end of the workshop, participants were asked to fill out a worksheet to prioritize the strategies and outcomes. Nine participants completed the exercise.

The worksheet asked participants to indicate which of the land use and transportation strategies are most important to evaluate or measure as part of the Equity and Environmental Justice

Scorecard. Participants indicated that the most important strategies are complete neighborhoods and mixed use areas, transit service, and bike and pedestrian networks.

The worksheet then asked participants to indicate which of the outcomes are most important to evaluate or measure as part of the Equity and Environmental Justice Scorecard. The top scoring outcomes include Affordability, Access to Opportunity, Inclusive Decision-Making and Education.

The charts below indicate how participants rated each of the strategies and outcomes:

| Strategies | Number of Responses |
|---|---|
| **Community Design** | ●● |
| • Complete neighborhoods and mixed-use areas | ●●●●● |
| • Urban growth boundary | |
| • Transit service | ●●●●● |
| • Bike and pedestrian network | ●●● |
| • Parking | |
| **Pricing** | ● |
| • Pay-as-you-drive insurance | ● |
| • Gas tax | |
| • Road use fee | |
| • Carbon fee | |
| **Marketing & Incentives** | ●● |
| • Eco-driving | |
| • Individualized marketing | ● |
| • Employer programs | ● |
| • Car-sharing | |
| **Roads** | |
| • Freeway and arterial capacity | |
| • Traffic management | ● |
| **Fleet** | |
| • Fleet mix | |

| | |
|---|---|
| • Fleet age | |
| **Technology** | ● |
| • Light vehicle fuel economy | |
| • Carbon intensity of fuels | |
| • Electric and plug-in hybrid electric vehicles | |

| Outcomes | Number of Responses |
|---|---|
| Public Health and Safety | ●● |
| Access to Opportunity | ●●●● |
| Mobility | ●● |
| Affordability | ●●●●● |
| Inclusive decision-making process | ●● |
| Healthy Soils | |
| Healthy Air | |
| Clean Water | |
| Resiliency | ● |
| Business Prosperity | |
| Community Prosperity | |
| Individual/household prosperity | ● |
| Revenues generated | |
| Education | ●●● |

*Comments on prioritization exercise*

Participants made the following additional general comments:

- I know it is a challenge but please keep trying to engage poor and people of color communities.
- The "education" outcome can overlay each of the outcomes.

- Make sure we don't skip steps to show need and present data.
- Love the concept of an environmental justice screening method.
- There should be more attention paid to disparities (data-driven) and tactics to implement strategies to achieve environmental justice outcomes. Identify specific policy changes necessary to meet outcomes.
- This process is too broad. It is about climate change primarily. It is all about implementation.
- While I agree with participants that we need more community input into the process, I also want to acknowledge the good work that Metro is doing to break out of the "transportation planning" box and bring in issues of healthy people, environment, economy, etc.
- Show me the numbers.
- Metro should use its leverage to get every part of the region to contribute to create community benefits agreements to employ low-income and communities of color on public projects. Replicate the City of Portland's budget mapping throughout the region.

Participants made the following additional comments on the strategies:

- Can't say which strategies are most important without talking more about implementation and tradeoffs. Any of the strategies could or couldn't achieve outcomes. The question is: who will benefit if these strategies are implemented.
- Suggest adding strategies: hiring policies and practices to support minority, low-income, and women workers and contractors.
- For complete neighborhoods, need to invest in low-income neighborhoods.
- For bike and pedestrian network – especially in East Portland.
- For transit service – stop the cuts to bus service.

Participants made the following additional comments on the outcomes:

- Don't feel comfortable picking "favorite" outcomes. Dr. Manuel Pastor said we need to make our outcomes more complicated and not try to pick the perfect one.
- How can we assess how each of the strategies may impact each outcome?

## APPENDIX A: WORKSHOP ATTENDANCE

| | |
|---|---|
| Dr. T. Allen Bethel | Albina Ministerial Alliance |
| Danielle Brooks | City of Portland |
| Jen Coleman | Oregon Environmental Council |
| Lydia Corran | Ride Connection |
| Ann Curry-Stevens | Portland State University |
| Matthew Davis | Multnomah County |
| Tony DeFalco | Verde |
| Noelle Dobson | Oregon Public Health Institute |
| Ronda Chapman-Duer | Environmental Professionals of Color |
| Ben Duncan | Multnomah County |
| Demetria Espinoza | Coalition of Communities of Color |
| Kari Lyons Eubanks | Multnomah County |
| Alison Hill Graves | Community Cycling Center |
| Mara Gross | Coalition for a Livable Future |
| Heidi Guinin | Upstream Public Health |
| Eric Hesse | TriMet |
| Stacy Humphrey | City of Gresham |
| Eddie Lincoln | Portland Community College ETAP Program |
| Julia Meier | Coalition of Communities of Color |
| Jonathan Ostar | OPAL Environmental Justice Oregon |
| Lai-Lani Ovalles | NAYA Family Center |
| Alice Perry | Oregon Tradeswomen, Inc |
| Midge Purcell | Urban League of Portland |
| Alejandro Queral | Northwest Health Foundation |
| Desirée Williams-Rajee | Portland Bureau of Planning and Sustainability |

| | |
|---|---|
| Michael Reyes | Familias en Accion |
| Daniel Rutzick | City of Hillsboro |
| Nick Sauvie | Rose Community Development |
| June Schumann | APANO |
| Tara Sulzen | 1000 Friends of Oregon |
| Bill Tolbert | Metro |
| Anselmo Villanueva | APANO |
| Dee Walsh | Reach Community Development, Inc. |
| Ramsay Weit | Community Housing Fund |
| Lore Wintergreen | East Portland Action Plan |

| **Metro Staff** | **Facilitation Team** |
|---|---|
| Janna Allgood | Sylvia Ciborowski |
| Kim Ellis | Jeanne Lawson |
| Nuin-Tara Key | |
| Dylan Rivera | |
| Patty Unfred | |

## APPENDIX B: WORKSHOP PRESENTATIONS

**Introductory presentation by Councilor Carlotta Collette**

**Key note presentation by Dr. Manual Pastor**

**Strategy Overview presentation by Kim Ellis**

Attachment 3 to
Staff Report to Resolution No. 13-4438

# Climate Smart Communities

## Scenarios Project

## Equity and Environmental Justice Scorecard Workshop

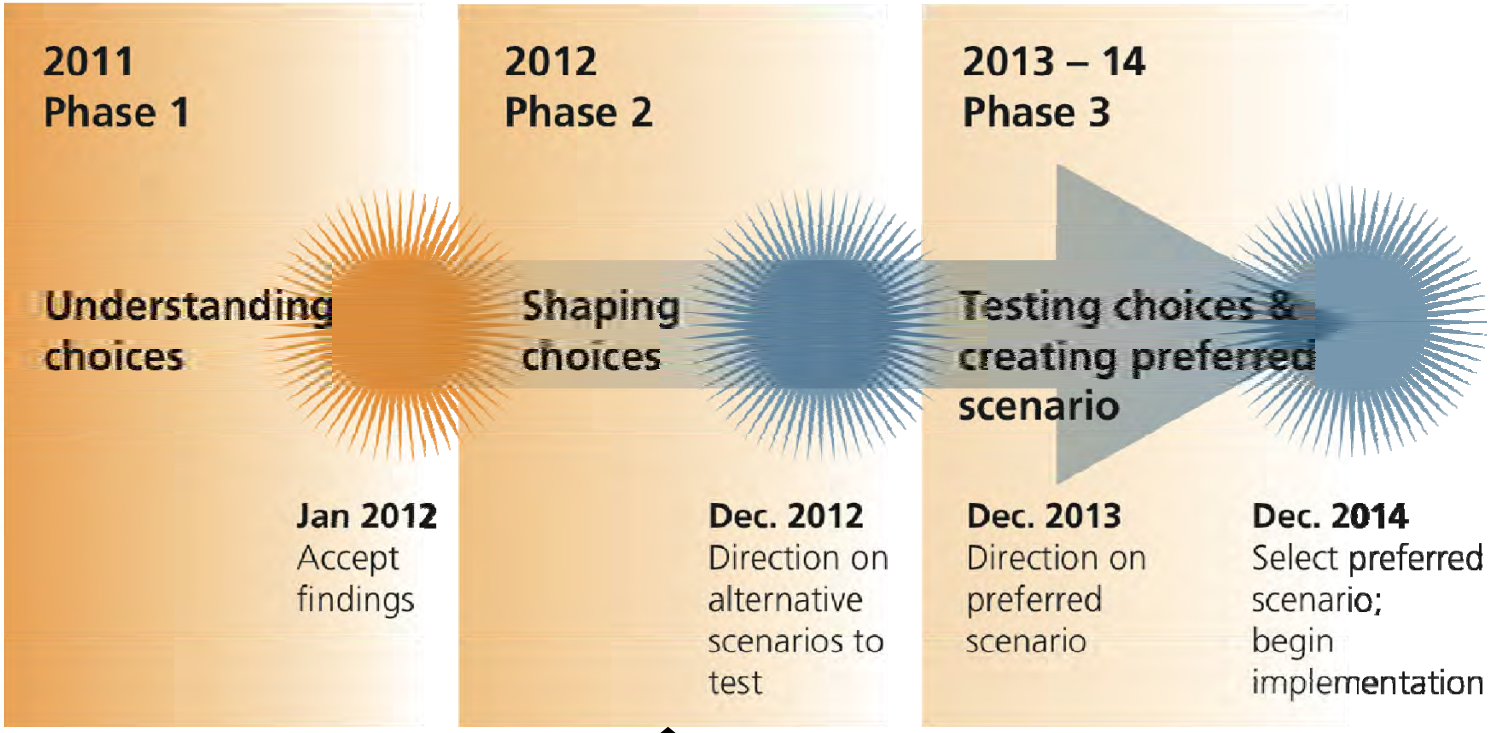
Councilor Carlotta Collette

July 31, 2012

Metro | *Making a great place*

## Climate Smart Communities

# Timeline




**We are here.**

# Building toward six desired outcomes

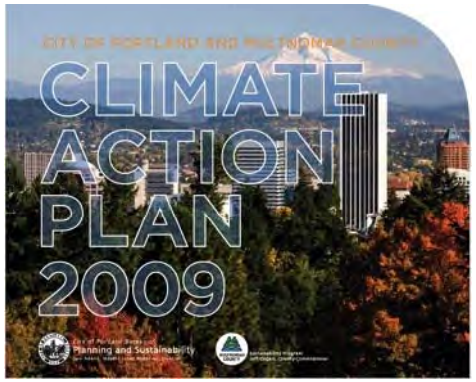
Vibrant communities

Equity

Economic prosperity

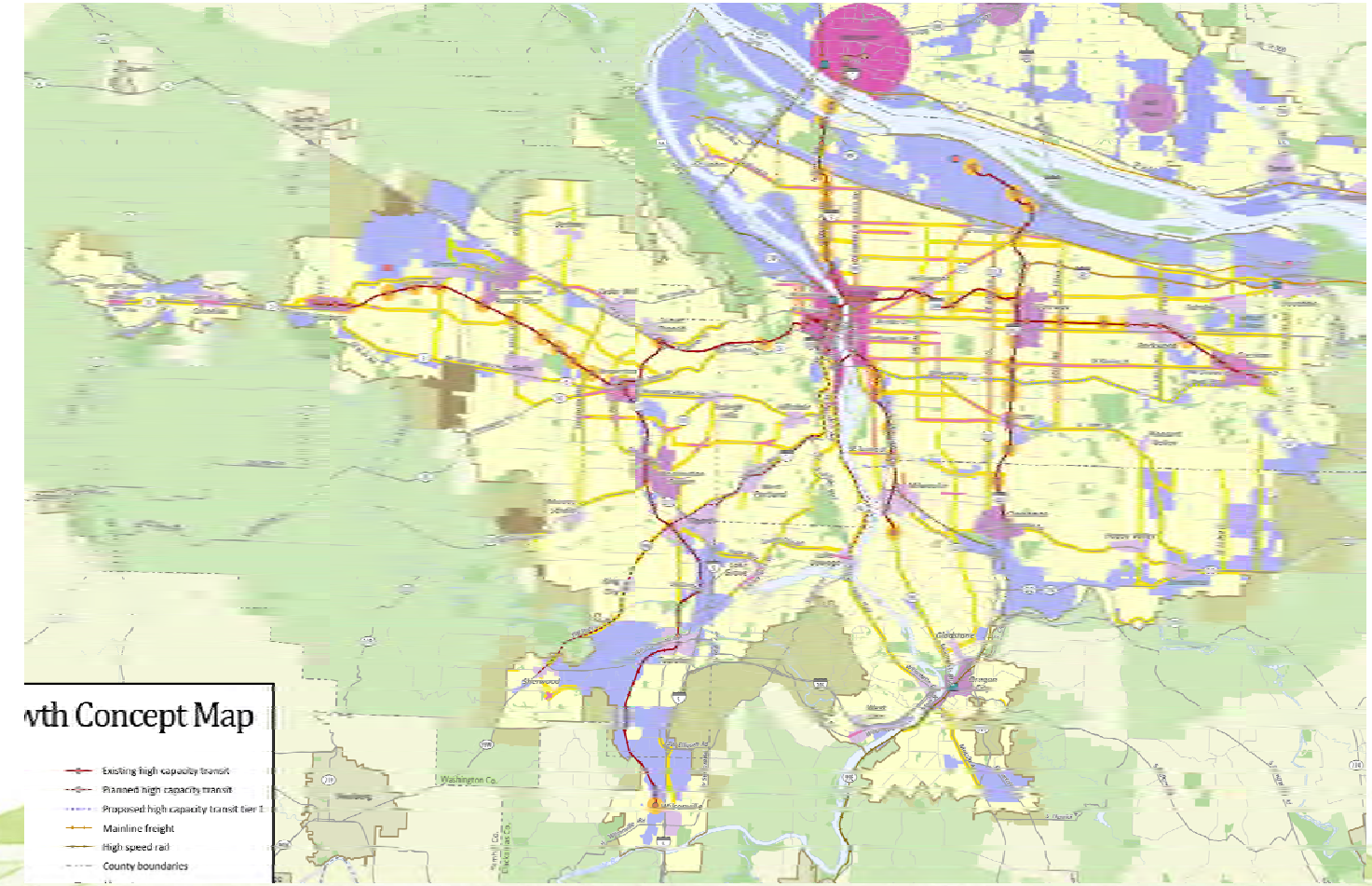
Transportation choices

Clean air & water




Climate leadership

# Unique local approaches to implement regional growth strategy



# Building on community aspirations

Beaverton Civic Plan
growing together

THE PORTLAND PLAN

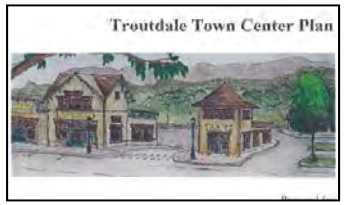
envision
Tualatin Tomorrow

DOWNTOWN
TIGARD

SPRINGWATER
COMMUNITY

IMAGINE
WEST LINN

Hillsboro 2020




Complete Communities
FOR CLACKAMAS COUNTY

WE LO
Planning for People, Places and Prosperity

# Phase 1 strategies tested

## Community design

- Infill, mixed-use development and complete neighborhoods
- Limited urban growth boundary expansion
- Expand transit service
- Increase walking and bicycling
- Manage parking supply and cost

## Roads

- Road capacity and network connectivity
- Traffic management *(e.g., clearing crashes and vehicle breakdowns quickly, traffic signal timing)*

## Marketing and education programs

- Eco-driving, car-sharing, household and commuter marketing and education

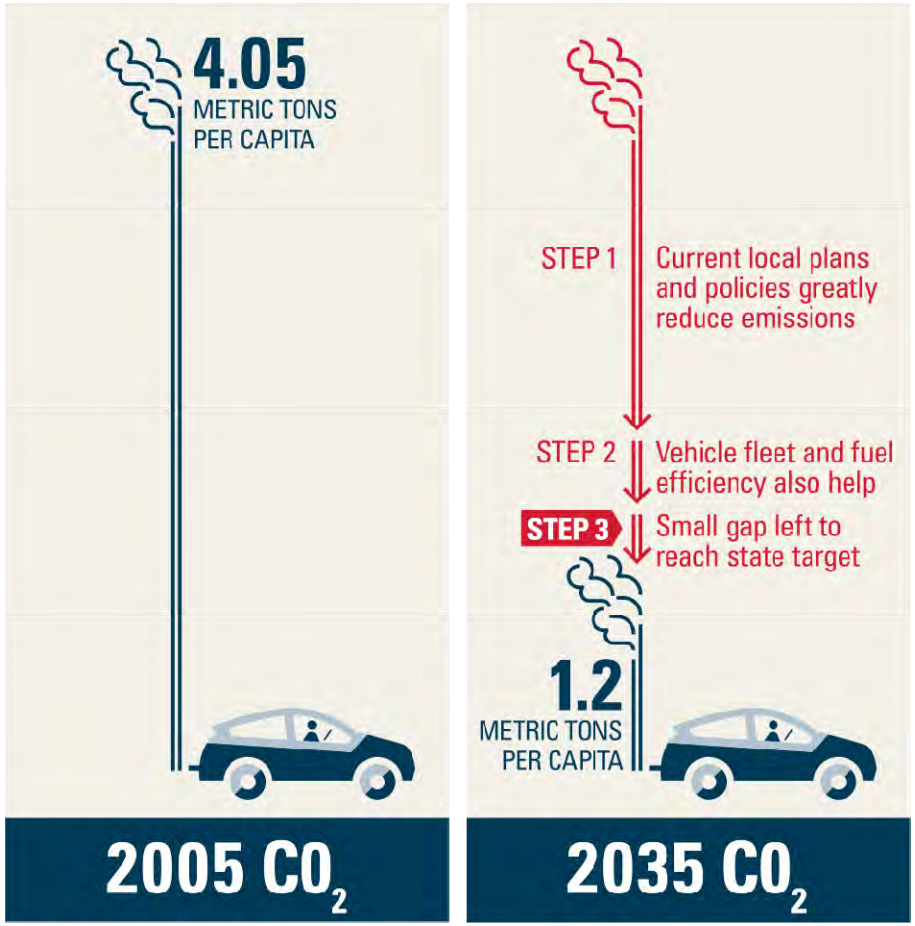
## Pricing

- User-based fees to encourage desired travel behavior *(e.g., gas tax, road fee, carbon fee, pay-as-you drive insurance)*

## Cleaner fuels and vehicles

## Climate Smart Communities Phase 1 Findings

# Current plans plus cleaner fuels and vehicles get us close

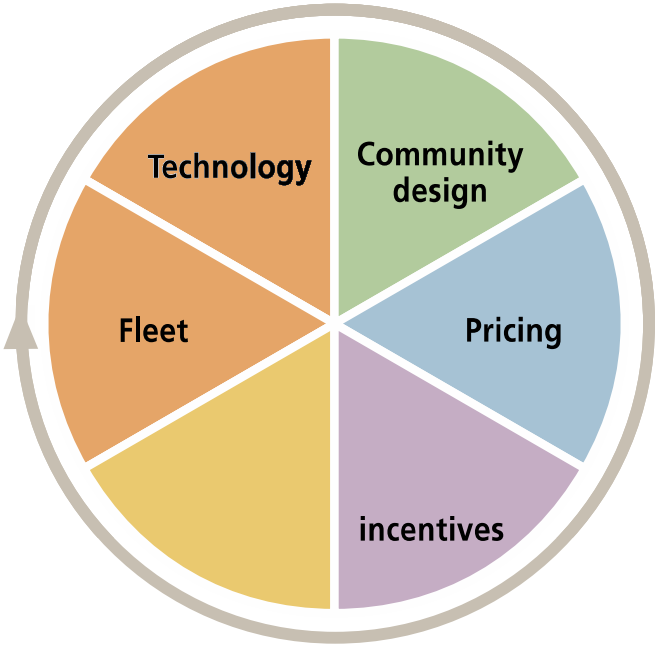


**2035 GHG target for region**

*per capita light vehicle roadway GHG emissions reduction below 2005 levels*

# Phase 2 Purpose

- Define 2-3 scenario options to evaluate in detail
- Create a scorecard to evaluate options



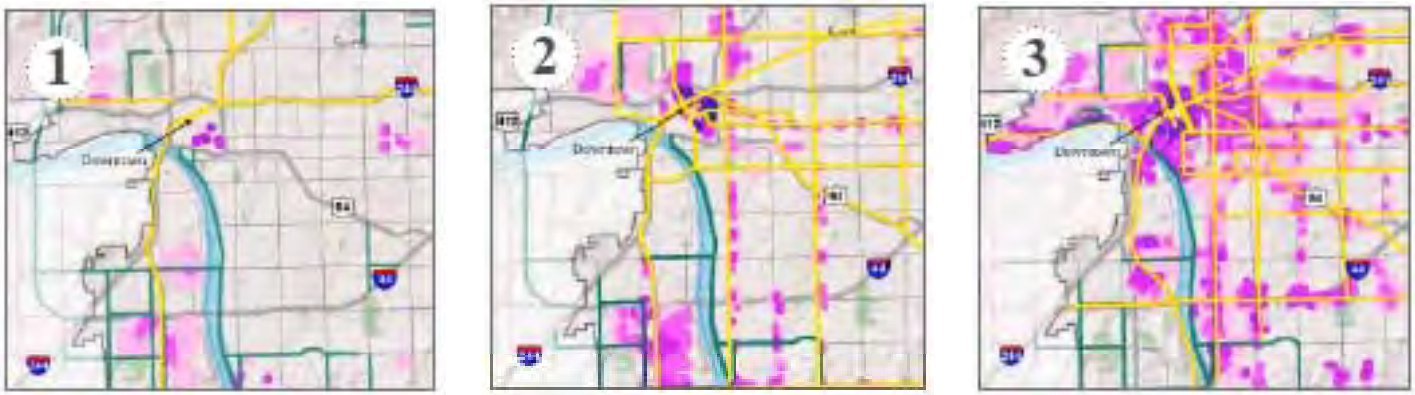

Policy areas tested in Phase 1

*Shape local and regional choices, not choose a preferred alternative*

## Climate Smart Communities – Phase 2

# What is a scenario?

- Shows a possible future
- Combines a variety of strategies and actions
- Compares choices and consequences
- Informs strategies to optimize outcomes
- Allows you to discover new strategies




*from www.PlaniTulsa.org*

# Framing the scenarios

The ingredients:

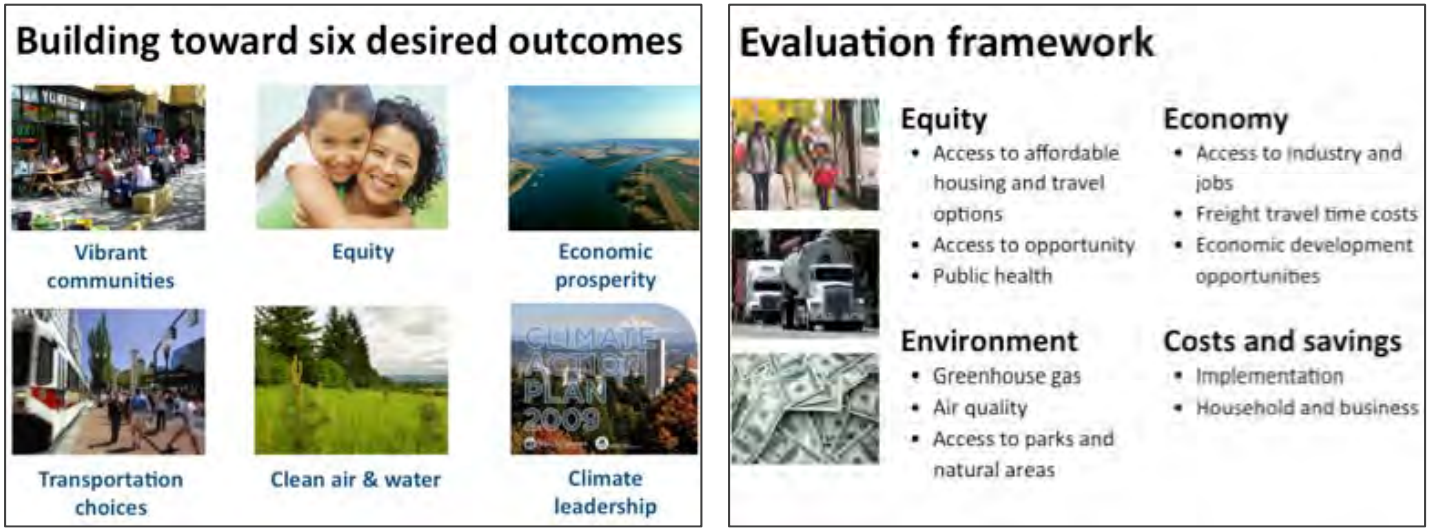
- Adopted community plans and visions serve as the foundation
- Statewide Transportation Strategy complements adopted plans
- Other strategies tested in Phase 1

## Climate Smart Communities – Phase 2

# Creating a scorecard

Community and business leaders provide input on what outcomes are most important to evaluate scenarios

### Outcomes-based Evaluation Framework – our starting point




*MPAC, JPACT and the Metro Council endorsed the evaluation framework in Phase 1 (June 2011)*

## Climate Smart Communities – Creating the scorecard

# Additional outcomes sources

Coalition for a Livable Future

regional equity atlas project
Metropolitan Portland's Geography of Opportunity

*from http://www.equityatlas.org*

MOSAIC
Value and Cost Informed Planning

*from http://www.oregon.gov/ODOT/TD/TP/pages/lcp.aspx*

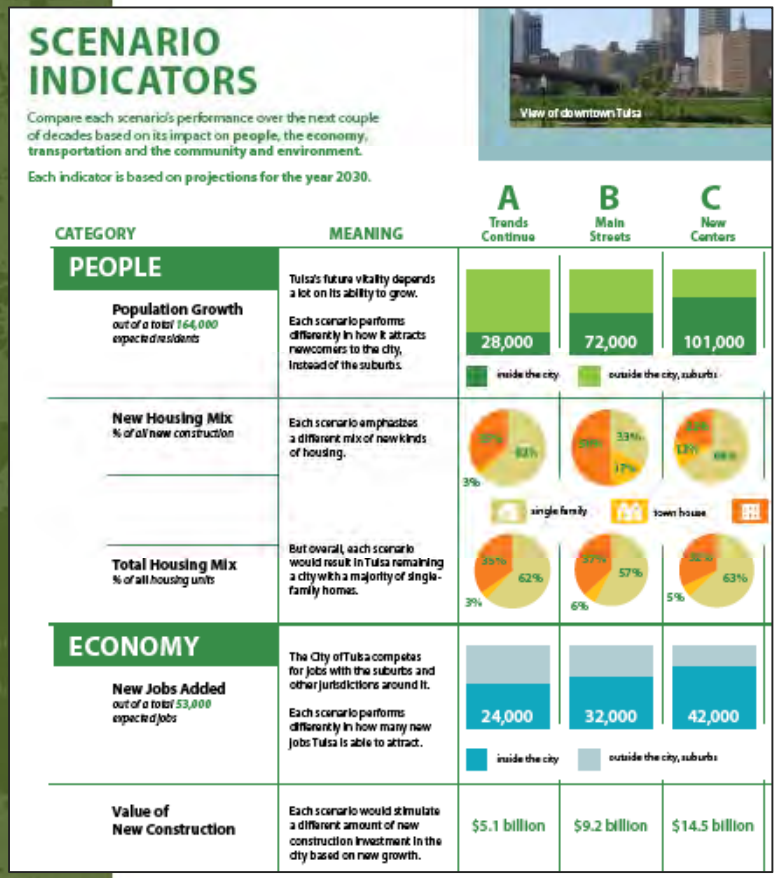
*from http://www.oregon.gov/ODOT/TD/TP/pages/lcp.aspx*

*from http://www.portlandpulse.org*

## Climate Smart Communities – Creating the scorecard

# What is a scorecard?

priority outcomes to communicate tradeoffs



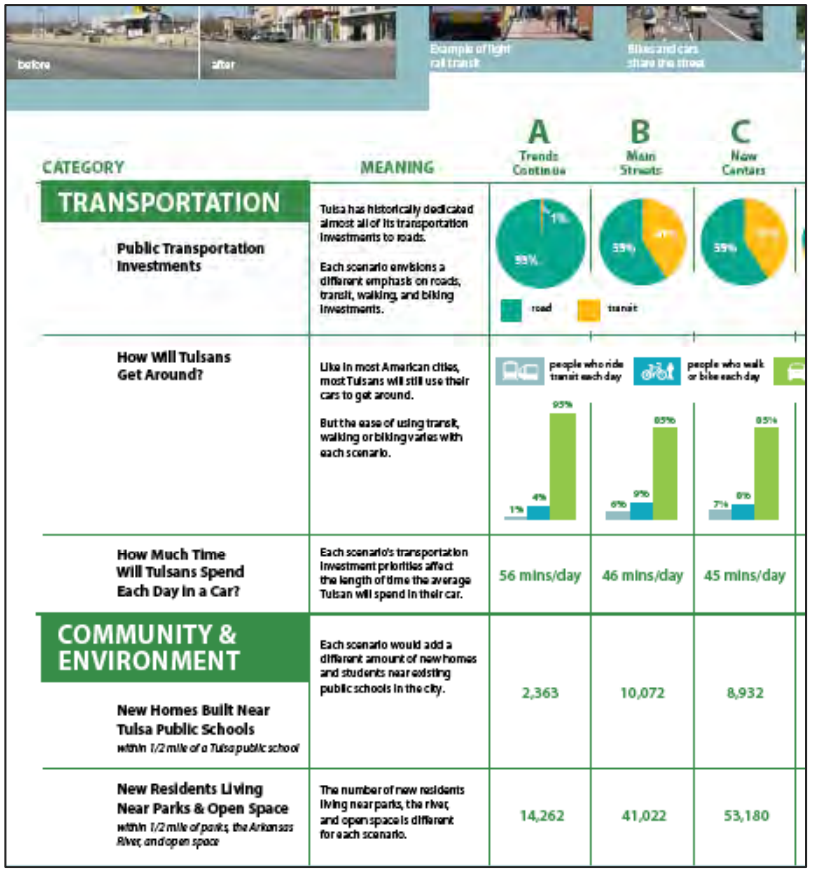
SCENARIO INDICATORS

Compare each scenario's performance over the next couple of decades based on its impact on people, the economy, transportation and the community and environment.

Each indicator is based on projections for the year 2030.

View of downtown Tulsa

| CATEGORY | MEANING | A Trends Continue | B Main Streets | C New Centers |
|---|---|---|---|---|
| **PEOPLE** | | | | |
| Population Growth<br>*out of a total 164,000 expected residents* | Tulsa's future vitality depends a lot on its ability to grow.<br>Each scenario performs differently in how it attracts newcomers to the city, instead of the suburbs. | 28,000 | 72,000 | 101,000 |
| | | inside the city | outside the city, suburbs | |
| New Housing Mix<br>*% of all new construction* | Each scenario emphasizes a different mix of new kinds of housing. | 3% | 33% | |
| | | single family | town house | |
| Total Housing Mix<br>*% of all housing units* | But overall, each scenario would result in Tulsa remaining a city with a majority of single-family homes. | 35% 62% 3% | 37% 57% 6% | 63% 5% |
| **ECONOMY** | | | | |
| New Jobs Added<br>*out of a total 53,000 expected jobs* | The City of Tulsa competes for jobs with the suburbs and other jurisdictions around it.<br>Each scenario performs differently in how many new jobs Tulsa is able to attract. | 24,000 | 32,000 | 42,000 |
| | | inside the city | outside the city, suburbs | |
| Value of New Construction | Each scenario would stimulate a different amount of new construction investment in the city based on new growth. | $5.1 billion | $9.2 billion | $14.5 billion |



| CATEGORY | MEANING | A Trends Continue | B Main Streets | C New Centers |
|---|---|---|---|---|
| **TRANSPORTATION** | | | | |
| Public Transportation Investments | Tulsa has historically dedicated almost all of its transportation investments to roads.<br>Each scenario envisions a different emphasis on roads, transit, walking, and biking investments. | 1% 99% | 41% 59% | 41% 59% |
| | | road | transit | |
| How Will Tulsans Get Around? | Like in most American cities, most Tulsans will still use their cars to get around.<br>But the ease of using transit, walking or biking varies with each scenario. | people who ride transit each day | people who walk or bike each day | |
| | | 1% 4% 95% | 6% 9% 85% | 7% 8% 85% |
| How Much Time Will Tulsans Spend Each Day in a Car? | Each scenario's transportation investment priorities affect the length of time the average Tulsan will spend in their car. | 56 mins/day | 46 mins/day | 45 mins/day |
| **COMMUNITY & ENVIRONMENT** | Each scenario would add a different amount of new homes and students near existing public schools in the city. | | | |
| New Homes Built Near Tulsa Public Schools<br>*within 1/2 mile of a Tulsa public school* | | 2,363 | 10,072 | 8,932 |
| New Residents Living Near Parks & Open Space<br>*within 1/2 mile of parks, the Arkansas River, and open space* | The number of new residents living near parks, the river, and open spaces is different for each scenario. | 14,262 | 41,022 | 53,180 |

*from www.PlaniTulsa.org*

## Climate Smart Communities – Creating the scorecard

# Measuring what matters

**Today's focus**

### Outcomes

*What are the most important results or outcomes to measure for the region?*

### Strategies

*How do different strategies affect achievement of those outcomes, positively or negatively?*

### Indicators

*What is the best way to measure progress toward the outcomes when comparing different combinations of the strategies (scenarios)?*

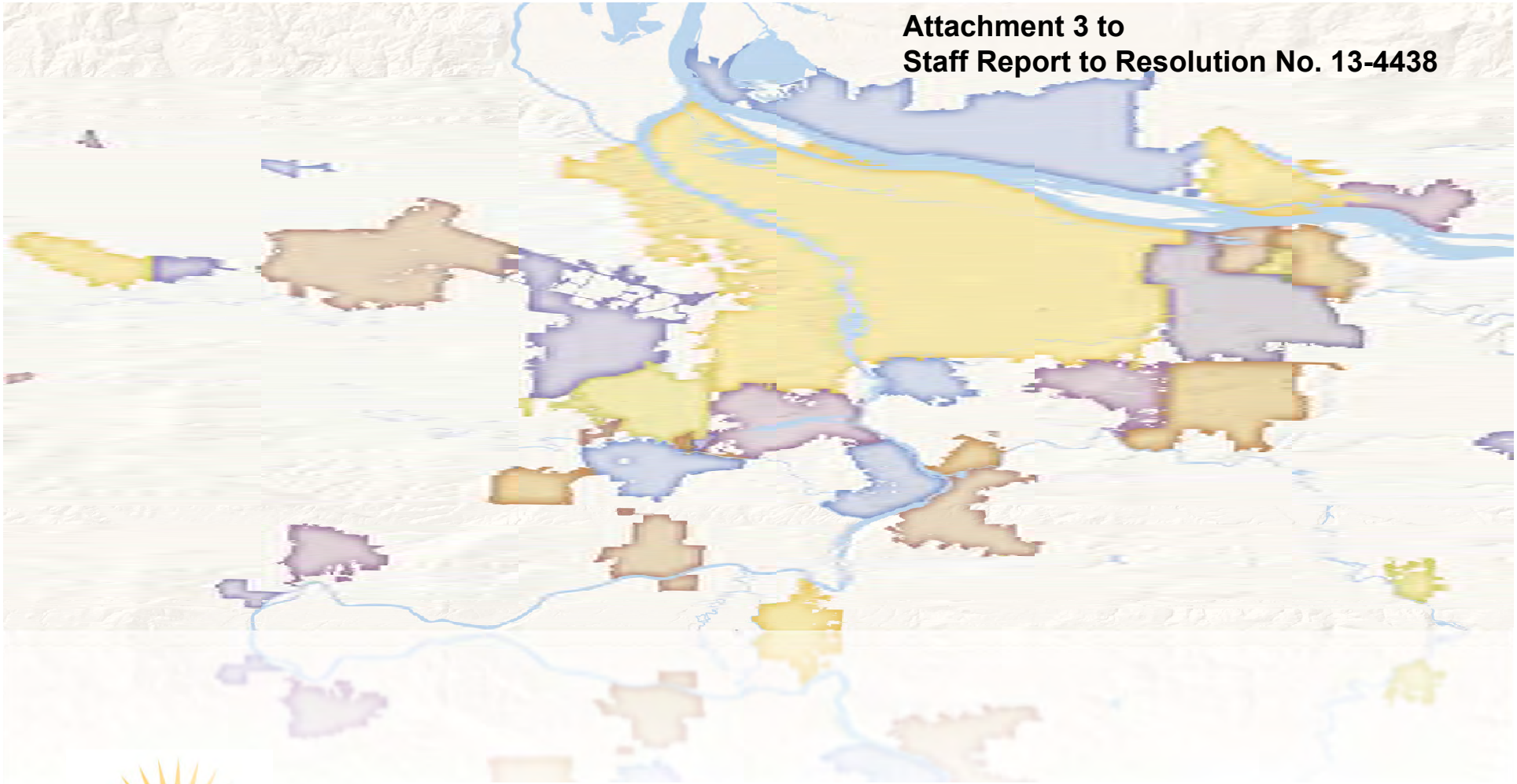
# Scorecard next steps

| | |
|---|---|
| Conduct business focus groups | Summer |
| Report results of scorecard community engagement | Early-Fall |
| Gather input with Opt In survey on scorecard and scenarios | Late-Fall |
| Convene summit | Winter |

# Learn more about Climate Smart Communities Scenarios

**Visit www.oregonmetro.gov/climatescenarios**

**Sign-up for updates at climatescenarios@oregonmetro.gov**



**Attachment 3 to**
**Staff Report to Resolution No. 13-4438**

PERE
USC Program for Environmental & Regional Equity

# Climate Smart Communities Scenarios Project

## Measuring and Promoting Regional Equity

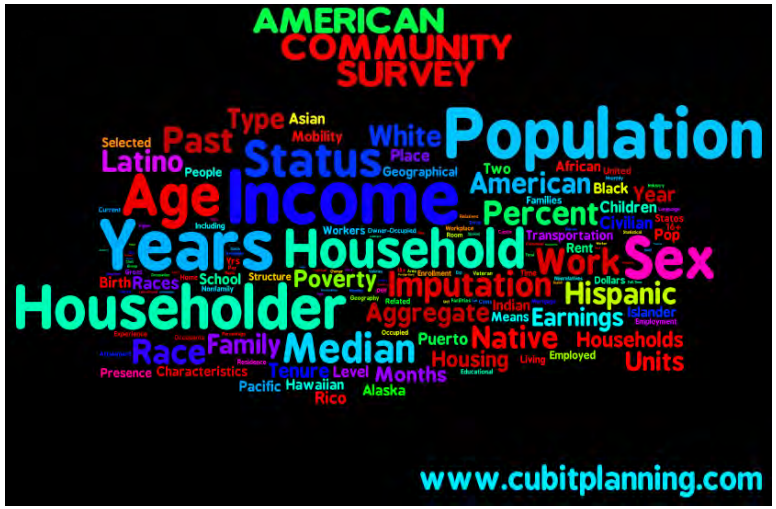
7.31.12

MANUEL PASTOR

# EQUITY AND ENVIRONMENTAL JUSTICE INDICATORS

## WHY DOES IT MATTER?

- Data can, does, and should drive policymaking
- Data can be under threat: consider the effort to cut funding for the American Community survey
- Data is not the only driver: what is not measured will not be achieved but measurement alone is not enough



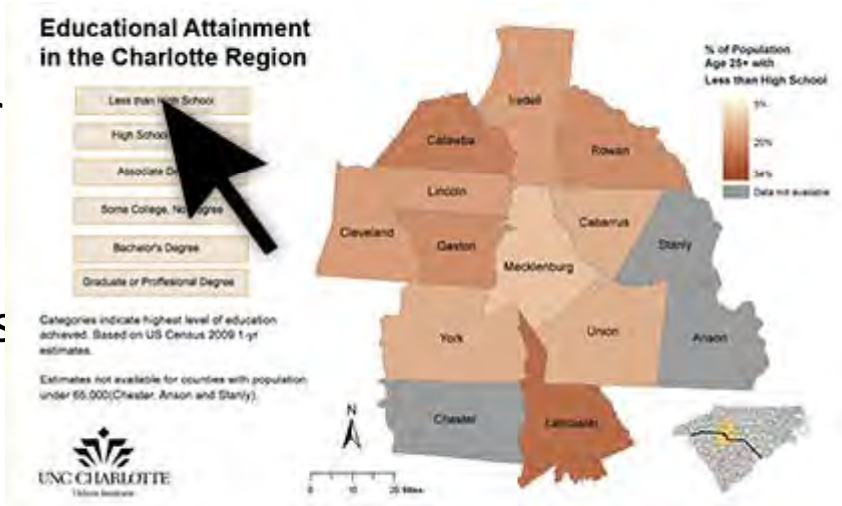
Attachment 3 to
Staff Report to Resolution No. 13-4438

# EQUITY AND ENVIRONMENTAL JUSTICE INDICATORS

## REGIONAL INDICATORS

- Many reports use indicators to measur progress – but not on equity

- Indicators are most often used to meas regional economy and quality of life




- **Different types of reports:**

| | | | | *Report Type* | | | |
|---|---|---|---|---|---|---|---|
| | | | | **Equity** | **Quality of Life** | **Quality of Life / Economy** | **Economy** |
| *Indicator Theme* | **Demography** | *Indicator Group* | Demography | 11.8 | 8.8 | 6.0 | 5.8 |
| | **Economy** | | Workforce and Jobs | 5.3 | 7.3 | 9.1 | 22.7 |
| | | | Housing | 20.2 | 10.1 | 8.1 | 7.5 |
| | | | Private Investment | 1.2 | 2.2 | 10.7 | 21.7 |
| | | | Economic Well Being | 12.4 | 8.7 | 11.0 | 13.0 |
| | | | Public Resources | 7.7 | 2.1 | 4.1 | 5.0 |
| | | | Education | 13.0 | 11.8 | 11.0 | 13.3 |
| | **Environment** | | Environment/Transportation | 12.3 | 20.7 | 19.7 | 7.4 |
| | | | Parks/Natural Environment | 2.2 | 0.8 | 0.4 | 0.0 |
| | | | Health/Public Safety | 10.3 | 14.5 | 11.4 | 2.0 |
| | | | Social Well Being | 0.0 | 6.0 | 2.6 | 0.0 |
| | | | Civic Engagement | 3.6 | 2.6 | 2.1 | 1.7 |
| | | | Arts/Culture/Recreation | 0.0 | 4.5 | 3.8 | 0.0 |
| | | | | 100.0 | 100.0 | 100.0 | 100.0 |

Attachment 3 to
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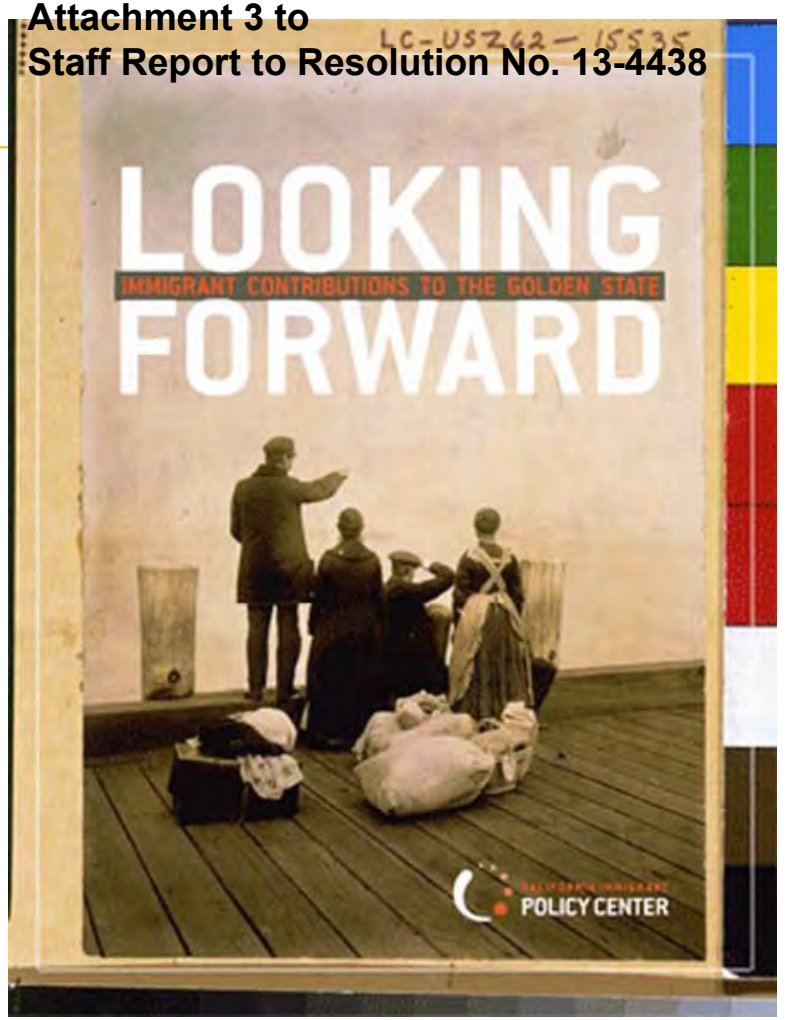
# EQUITY INDICATORS REPORTS

BAY AREA SOCIAL EQUITY CAUCUS
STATE OF THE REGION



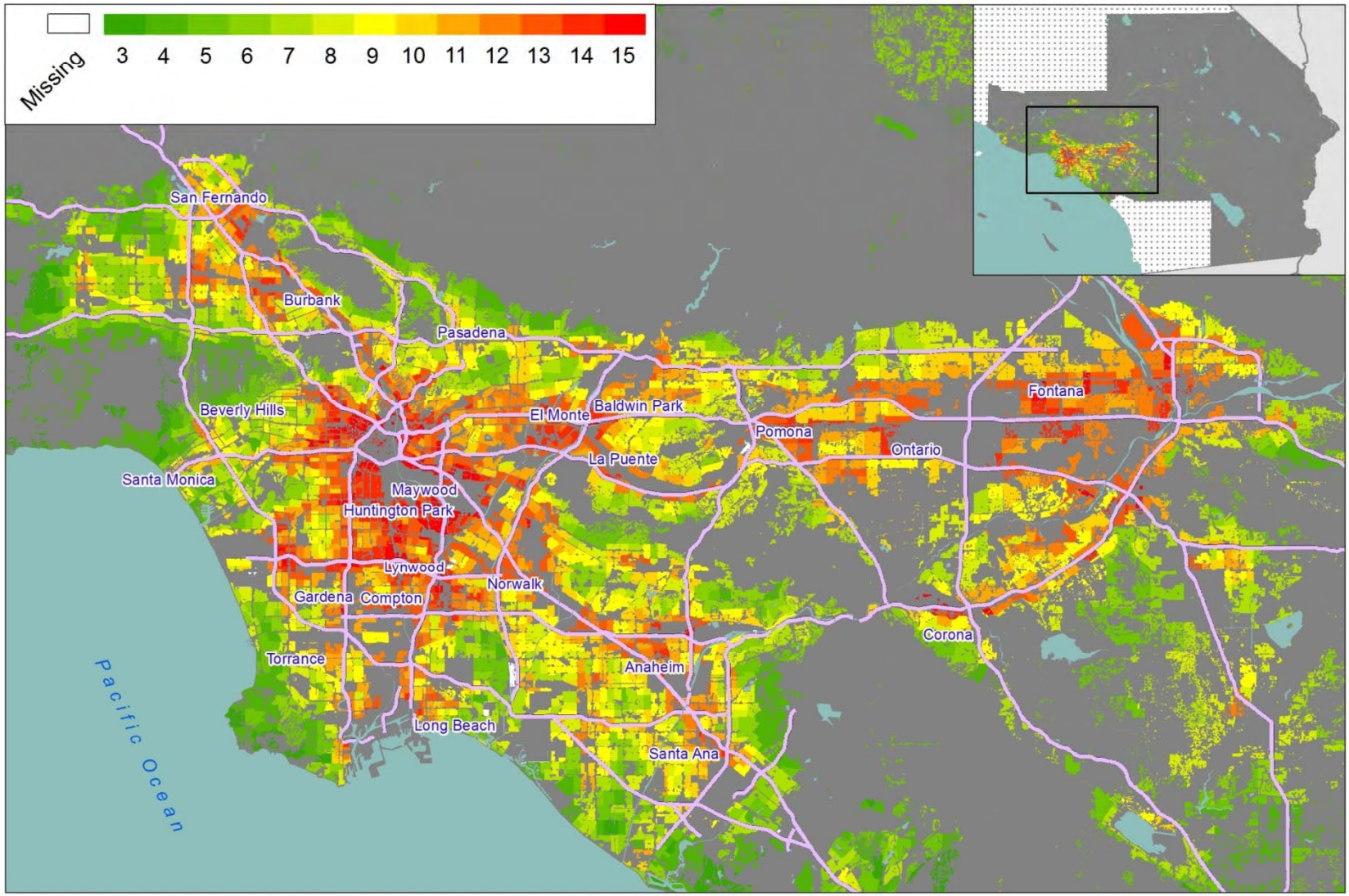
CAUSE
Central Coast Alliance United for A Sustainable Economy

# EQUITY INDICATORS TOOLS

**Attachment 3 to**
**Staff Report to Resolution No. 13-4438**

## TOTAL CUMULATIVE IMPACT (CI) SCORE

### Southern California 6-County Area (Mapped on CI Polygons)



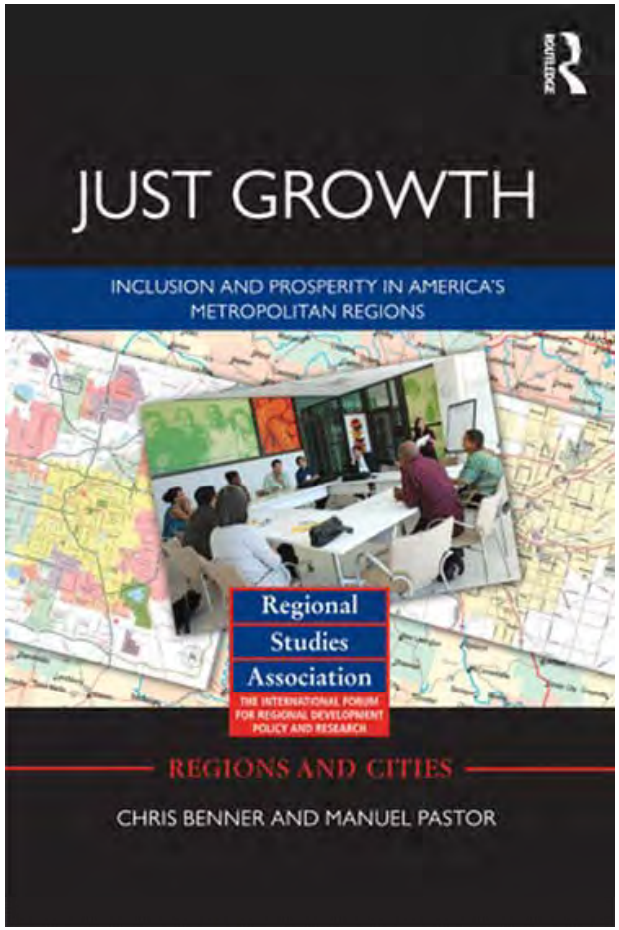
# REGIONAL & ENVIRONMENTAL EQUITY INDICATORS

## WHAT'S COMMON ACROSS OUR PROJECTS

- A stress that equity is actually consistent with other goals – important for both economic growth and environmental sustainable

- A conscious attempt to measure equity, including attention to issues of racial disparities and immigrant inclusion

- A notion that this is part of the creation of new "epistemic communities" of understanding – shared values, visions, and benchmarks



# REGIONAL & ENVIRONMENTAL EQUITY INDICATORS

## WHO USES THEM

- Community groups, regional organizations, business leaders, policymakers for information

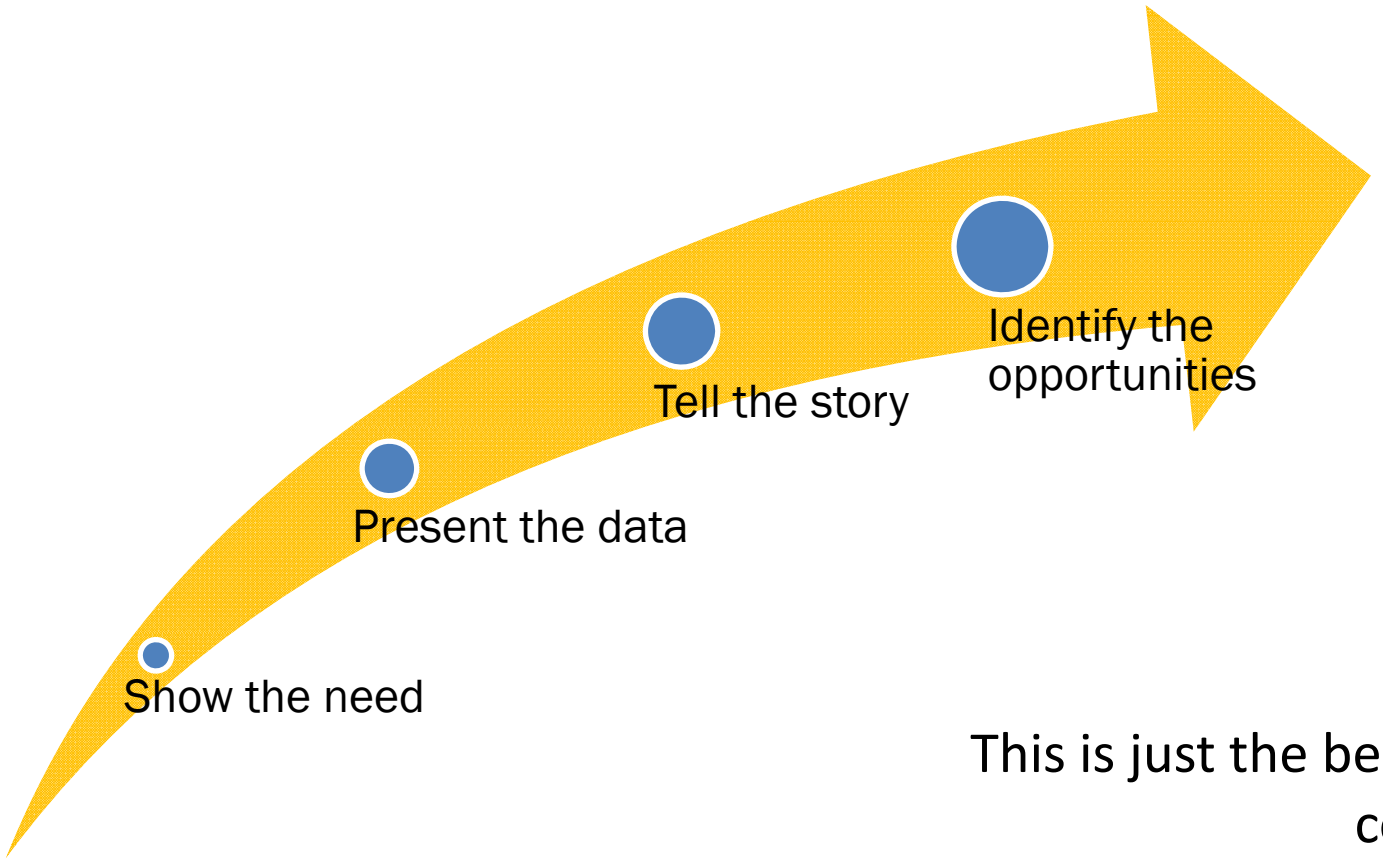
- Foundations, especially community foundations seeking to promote common understandings

- National partners, such as PolicyLink, as part of Sustainable Communities Initiative

- Environmental justice groups and environmental agencies seeking to diminish disparities in exposures

# REGIONAL & ENVIRONMENTAL EQUITY INDICATORS

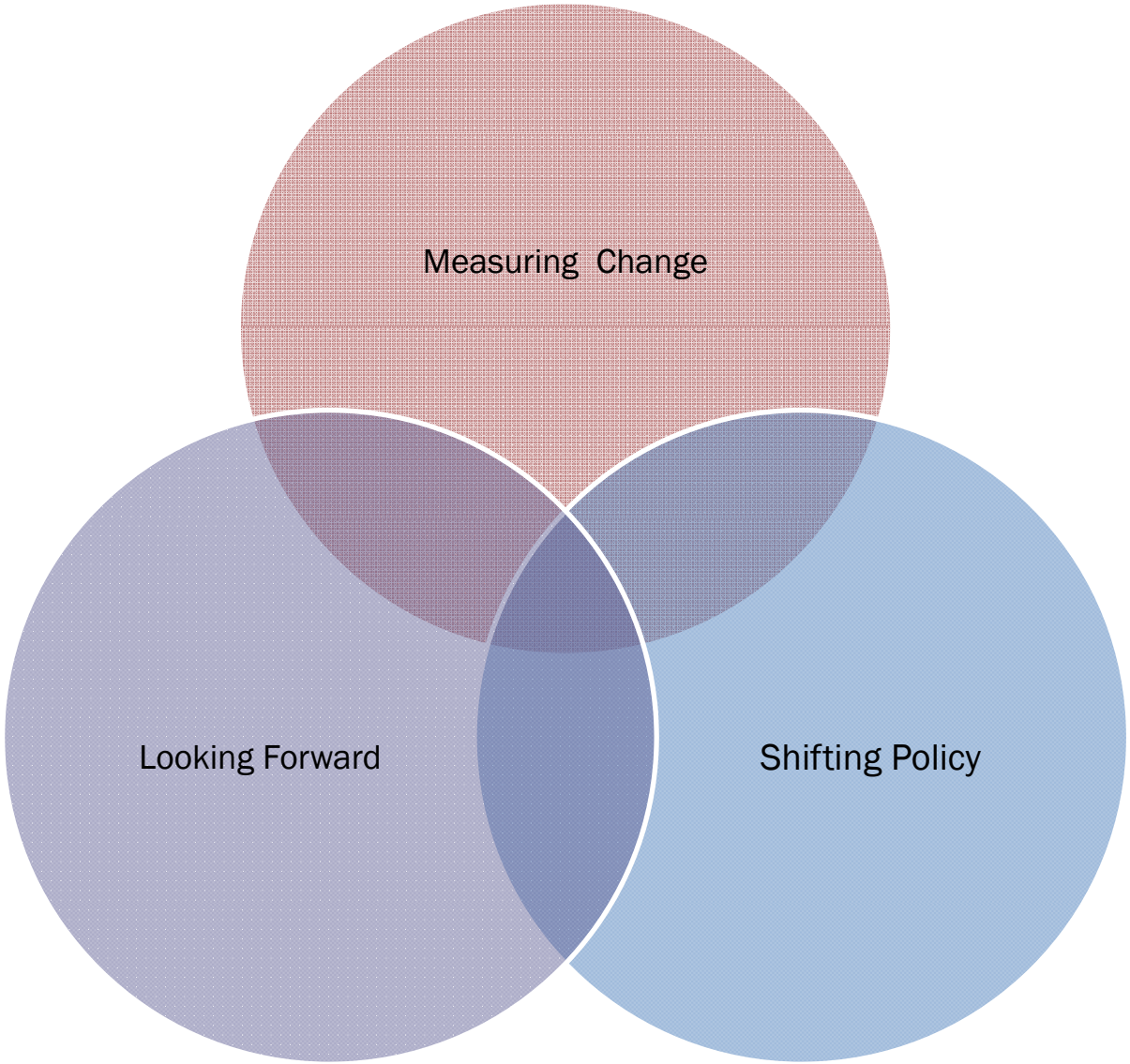
## OUR APPROACH: IT'S NOT JUST NUMBERS




This is just the beginning of a conversation

# REGIONAL & ENVIRONMENTAL EQUITY INDICATORS

## THE PURPOSE OF INDICATORS



# MEASURING CHANGE

**Attachment 3 to**
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DEMOGRAPHIC SHIFTS
ECONOMIC GROWTH
SOCIAL INCLUSION

Image source: Initiative for a Competitive Inner City

# MEASURING CHANGE

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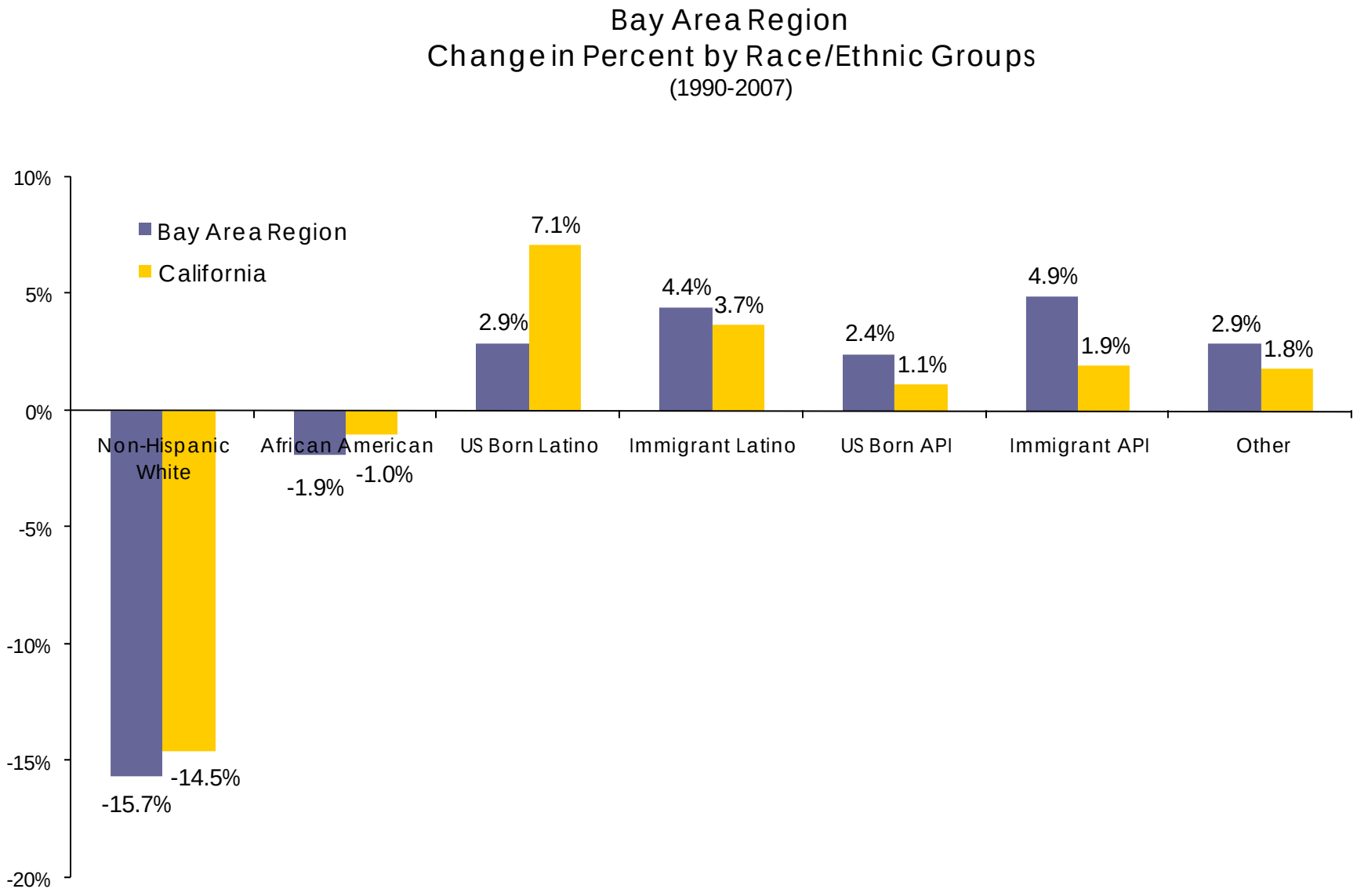


Image source: Initiative for a Competitive Inner City

# MEASURING CHANGE

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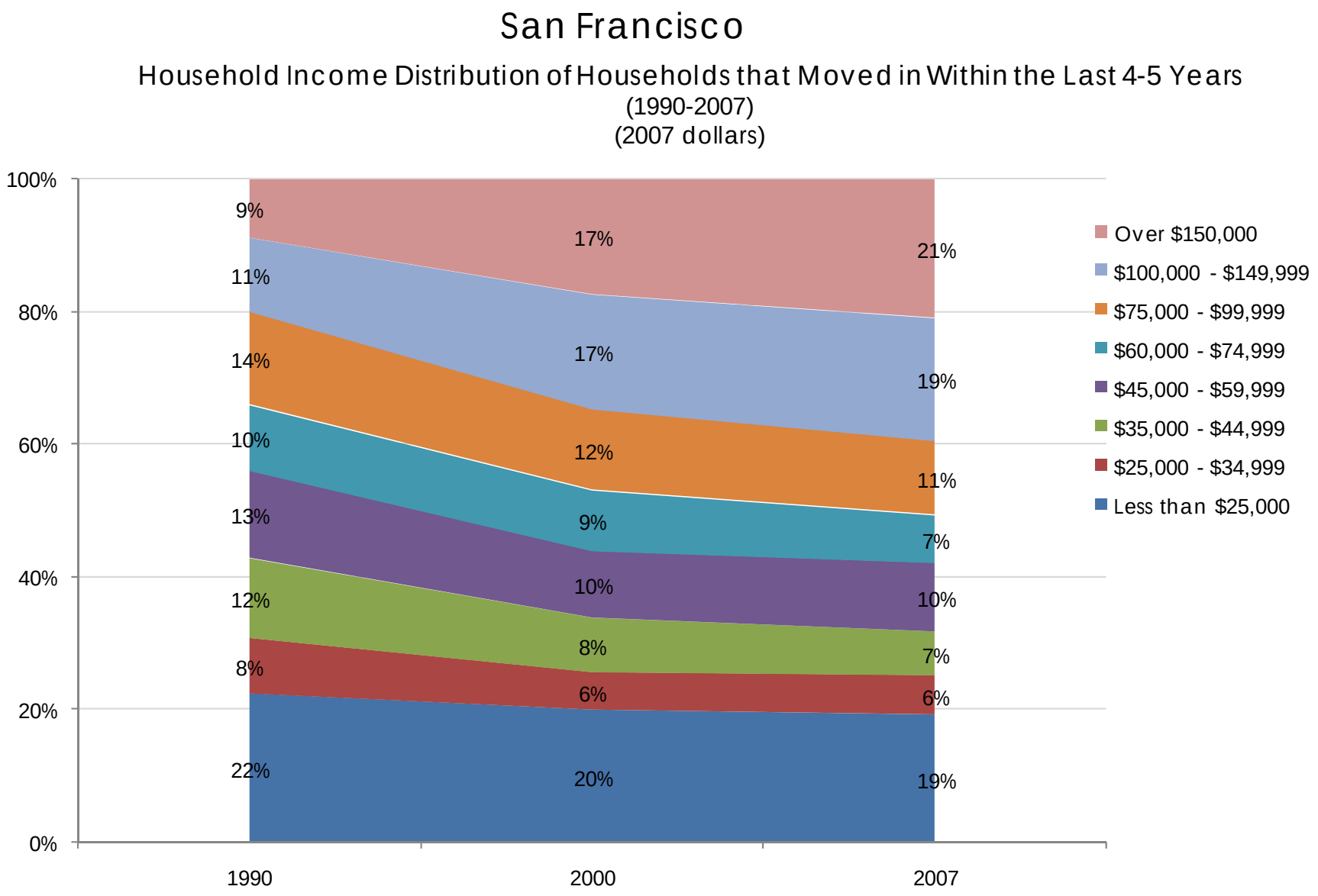


Image source: Initiative for a Competitive Inner City

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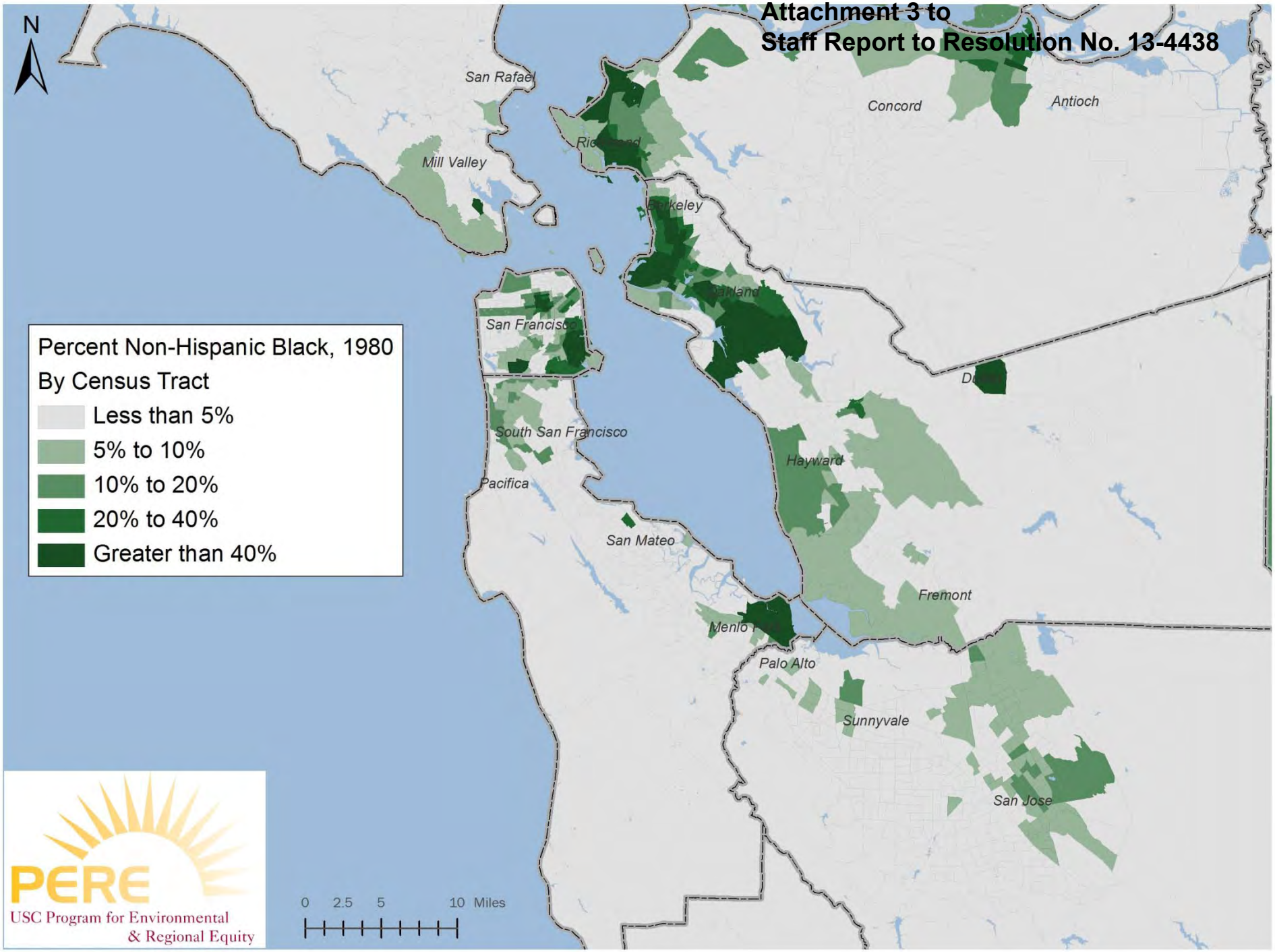

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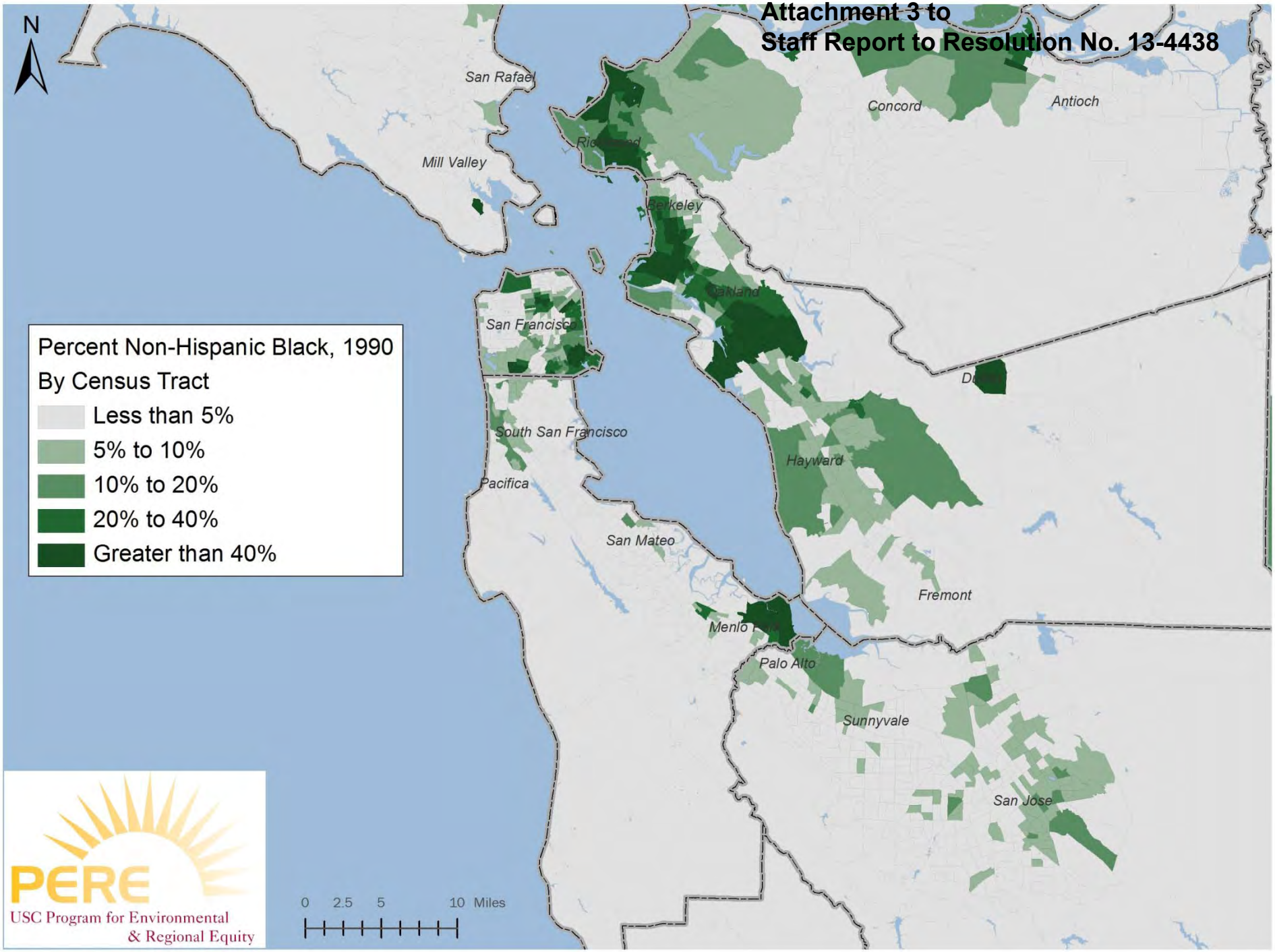

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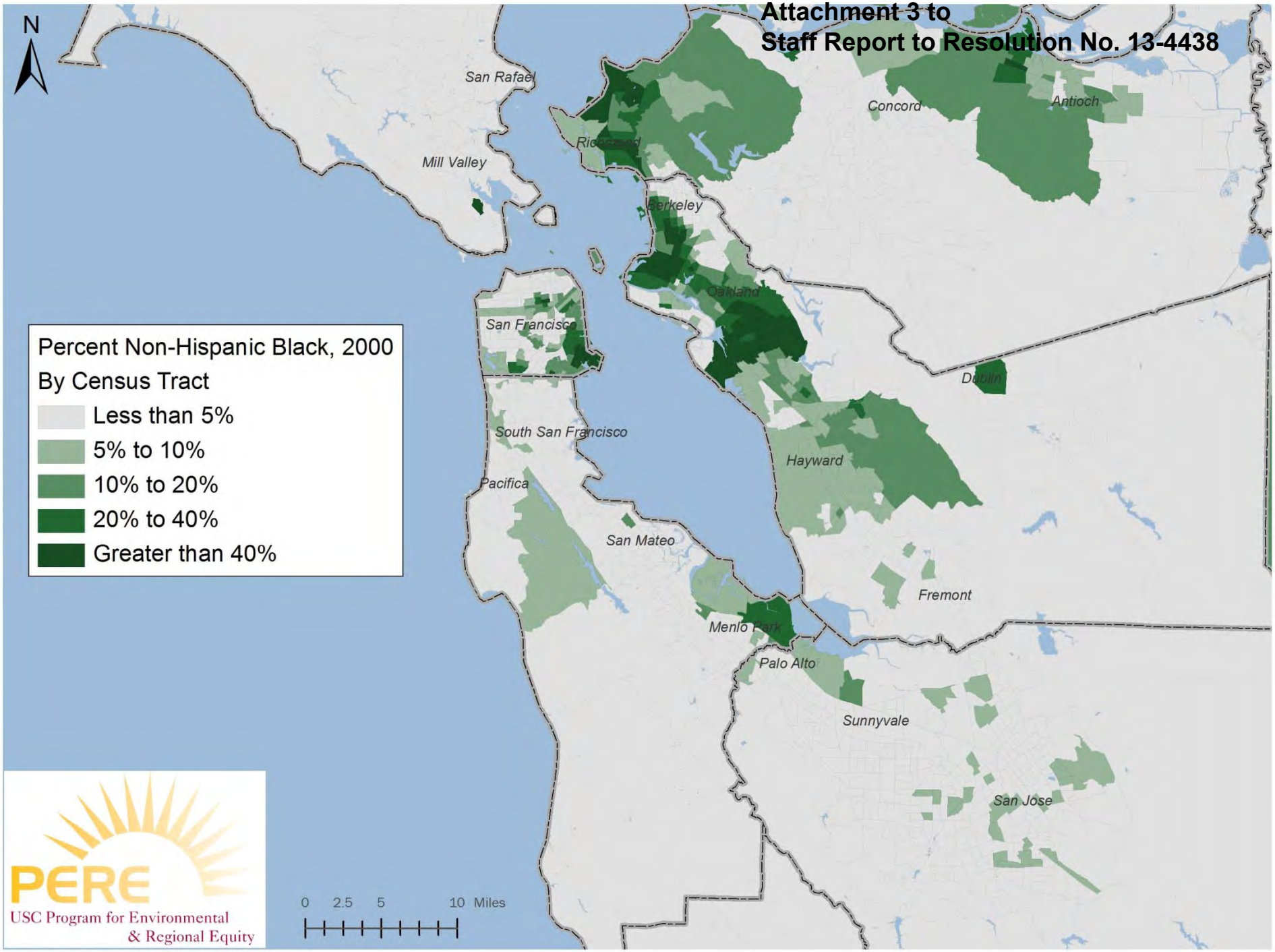

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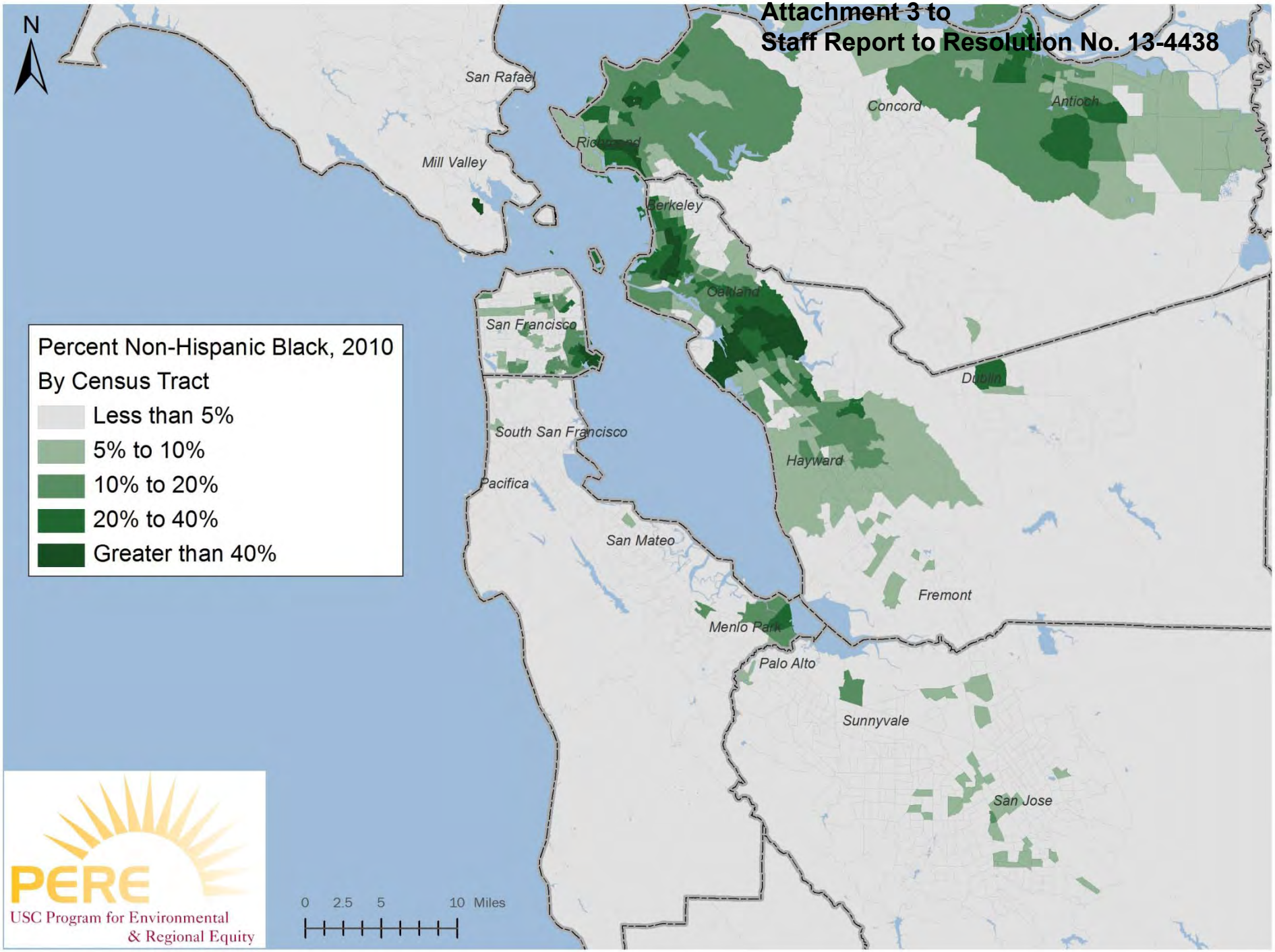

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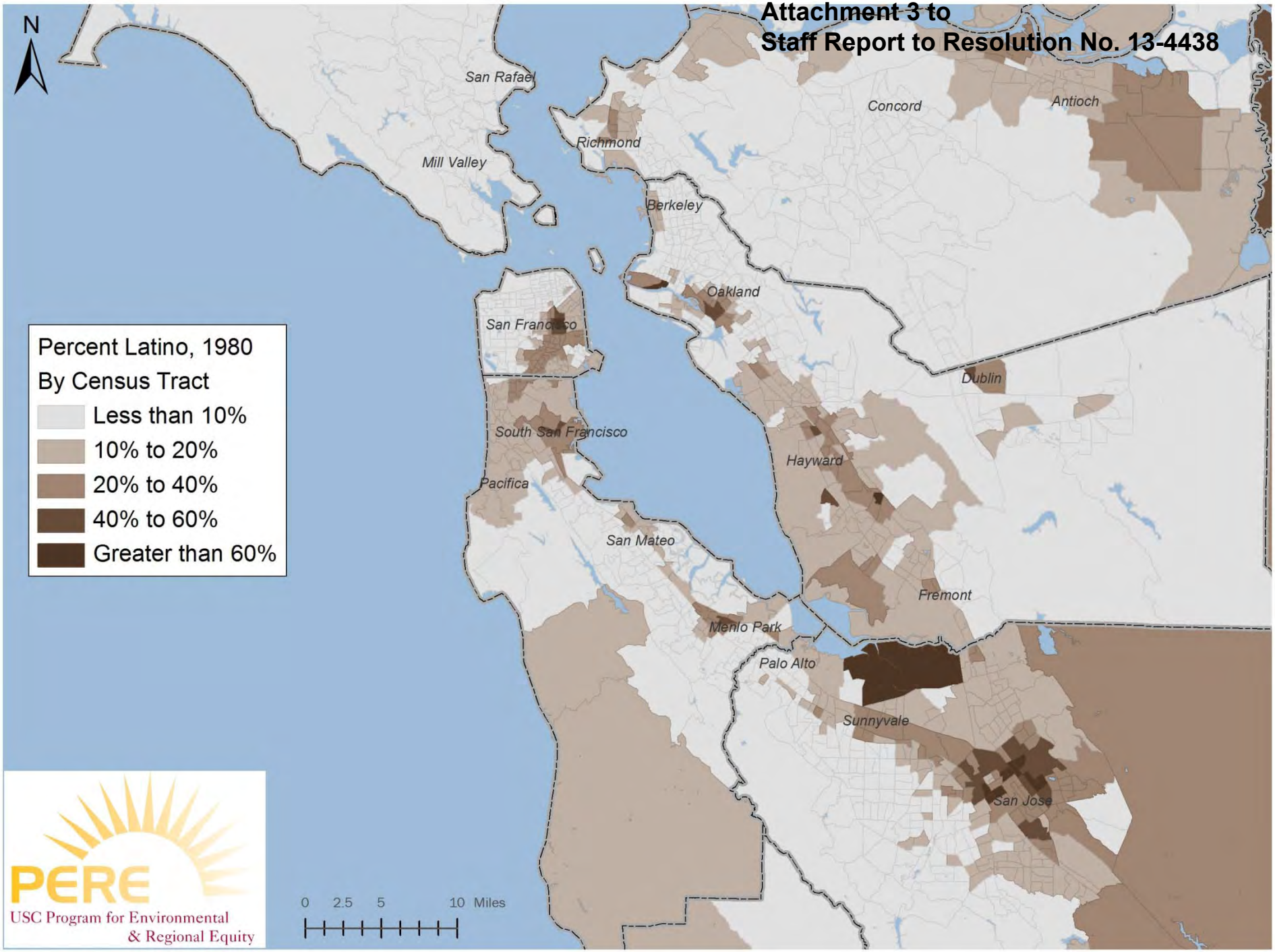

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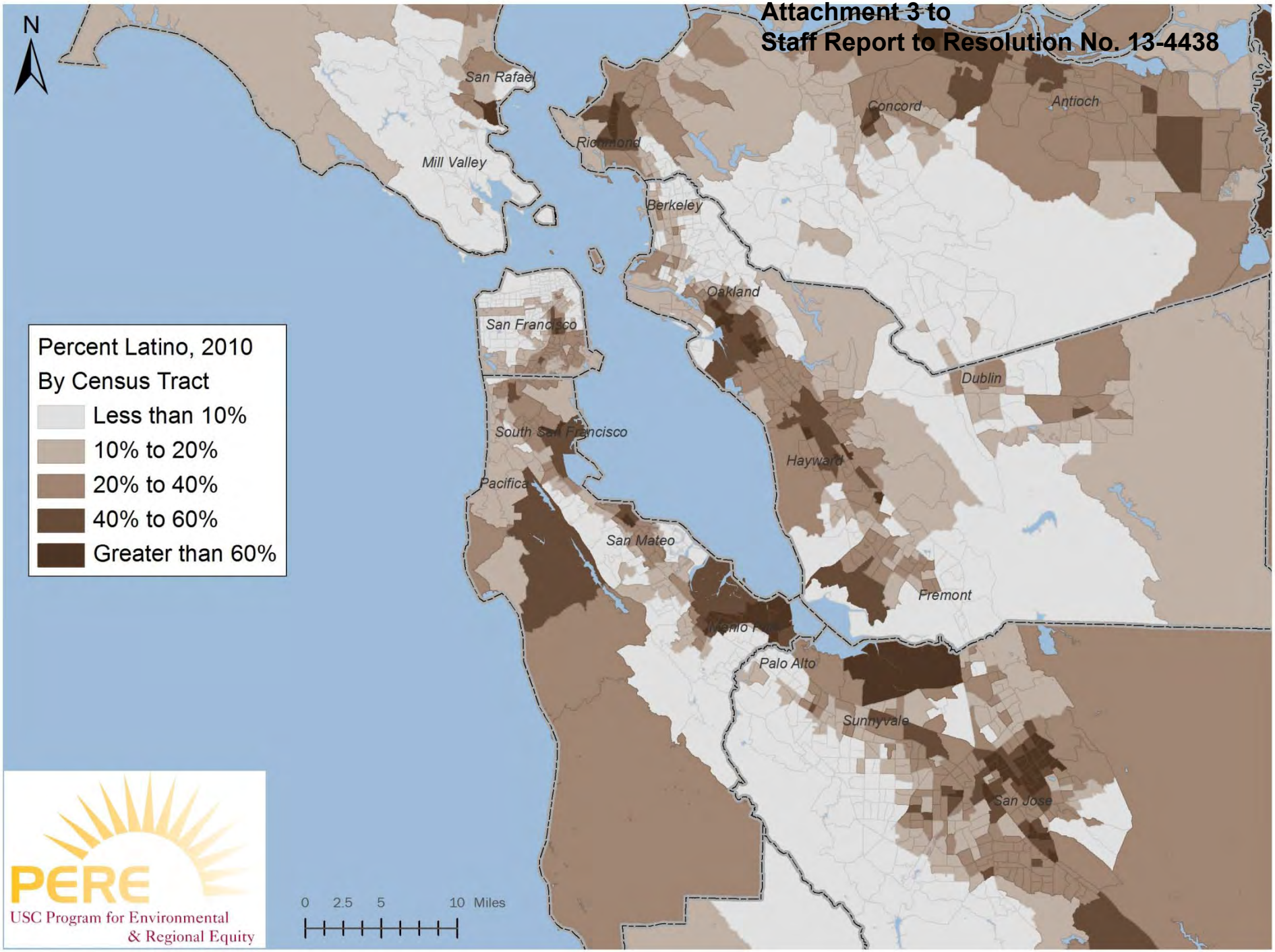

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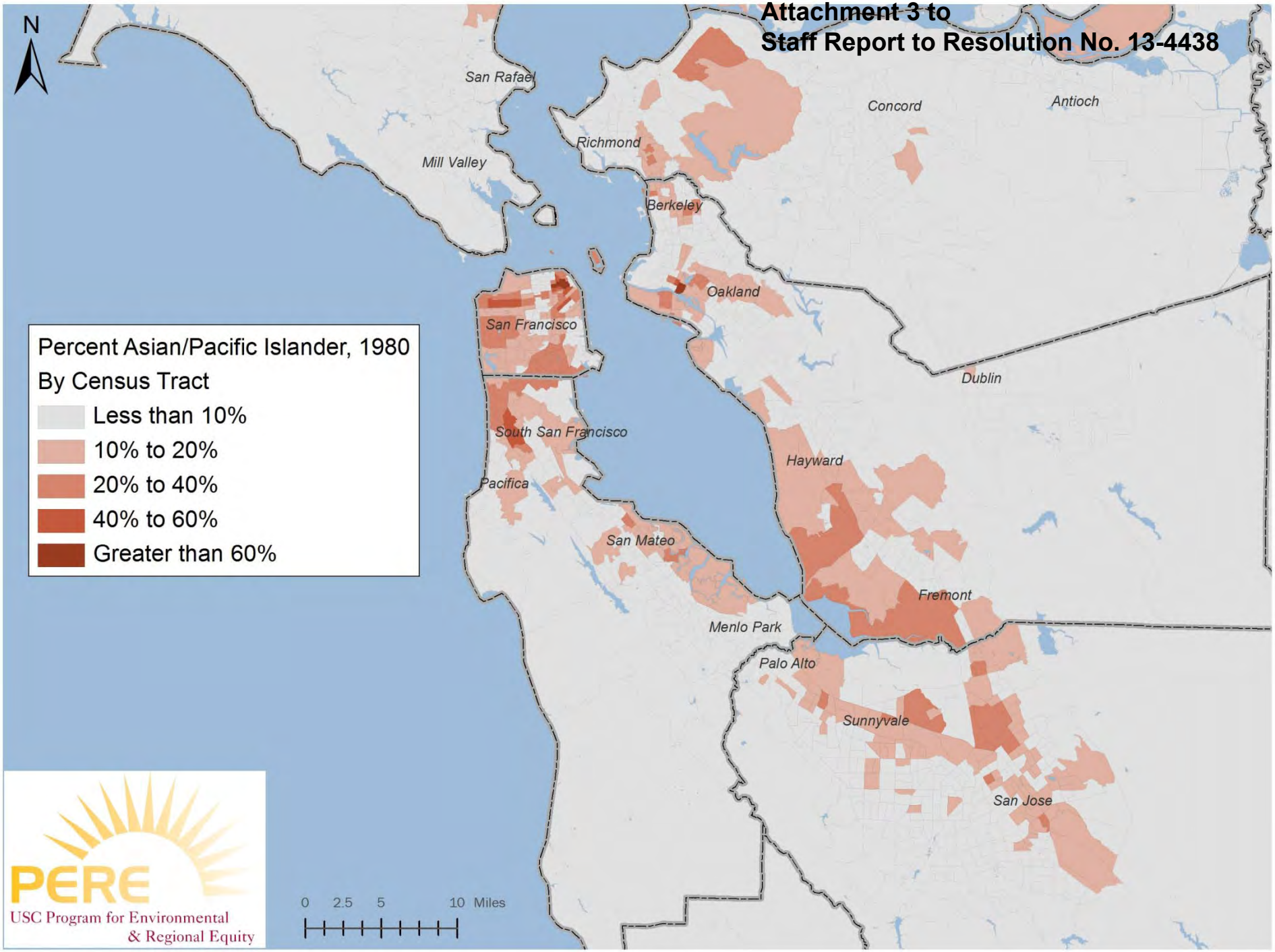

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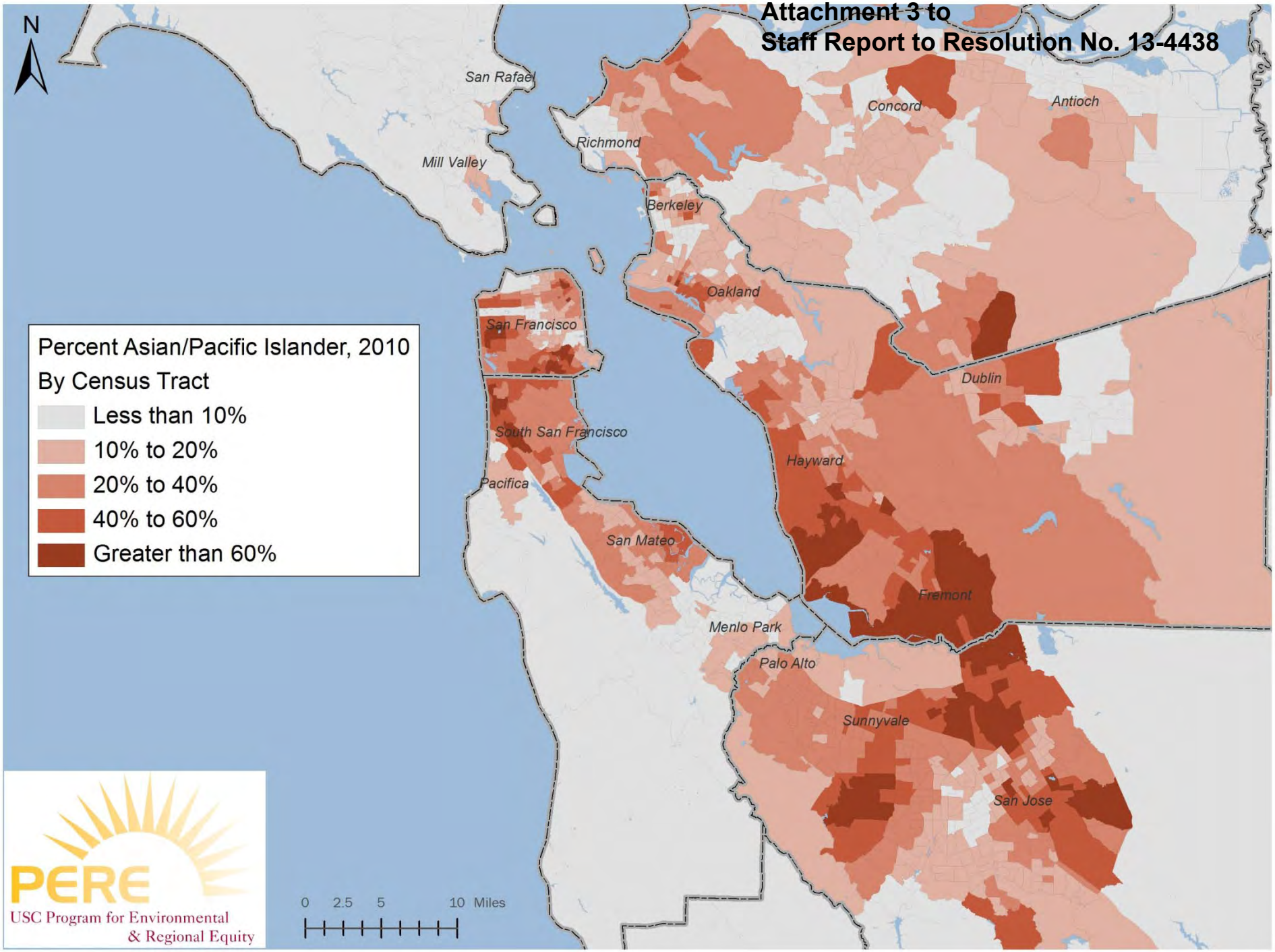

# AND MEASURING DIFFERENCE

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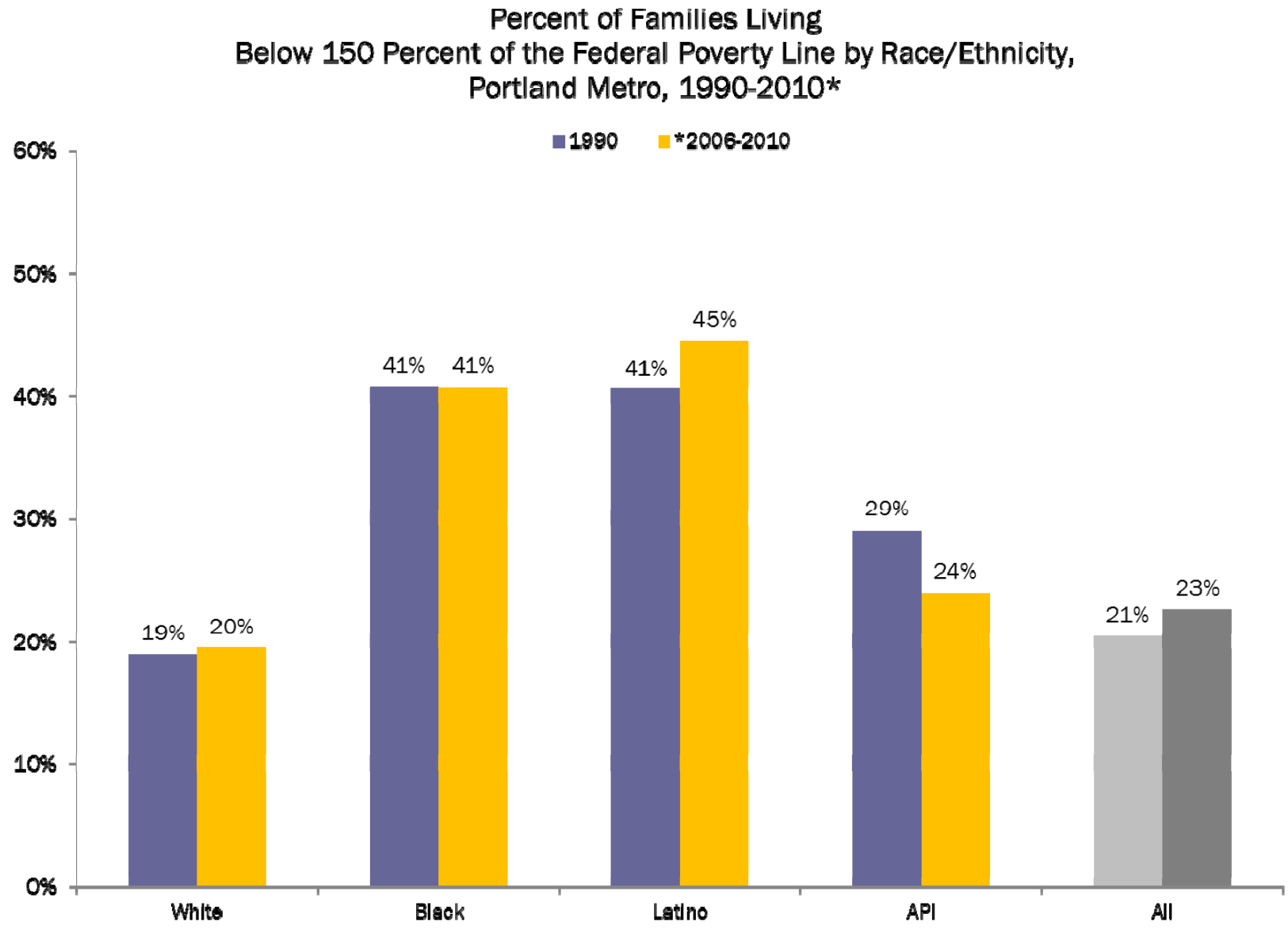

# LOOKING FORWARD

**Attachment 3 to**
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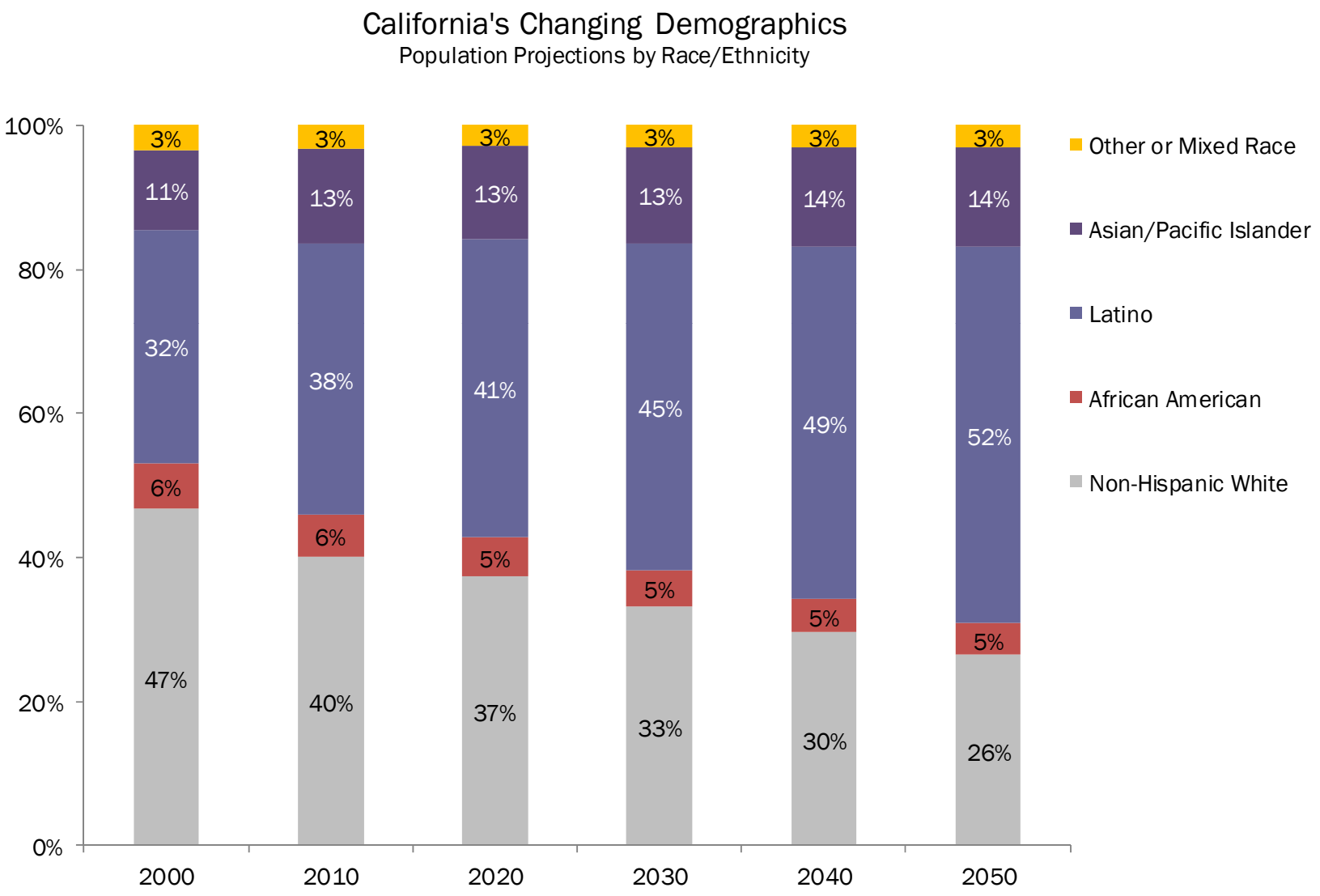


Source: U.S. Census Bureau (2000 and 2010); California Department of Finance (2020-2050).

# LOOKING FORWARD

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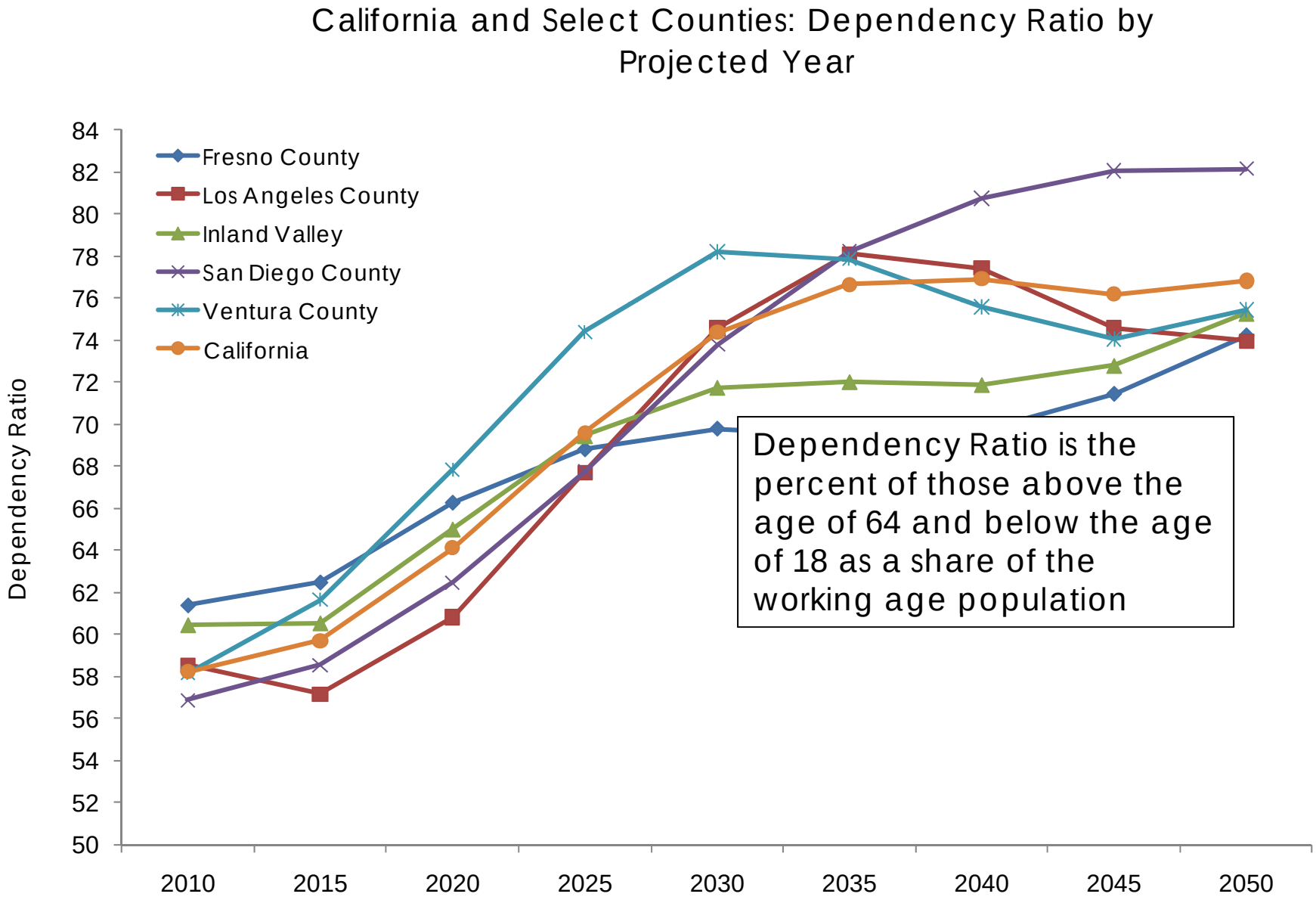

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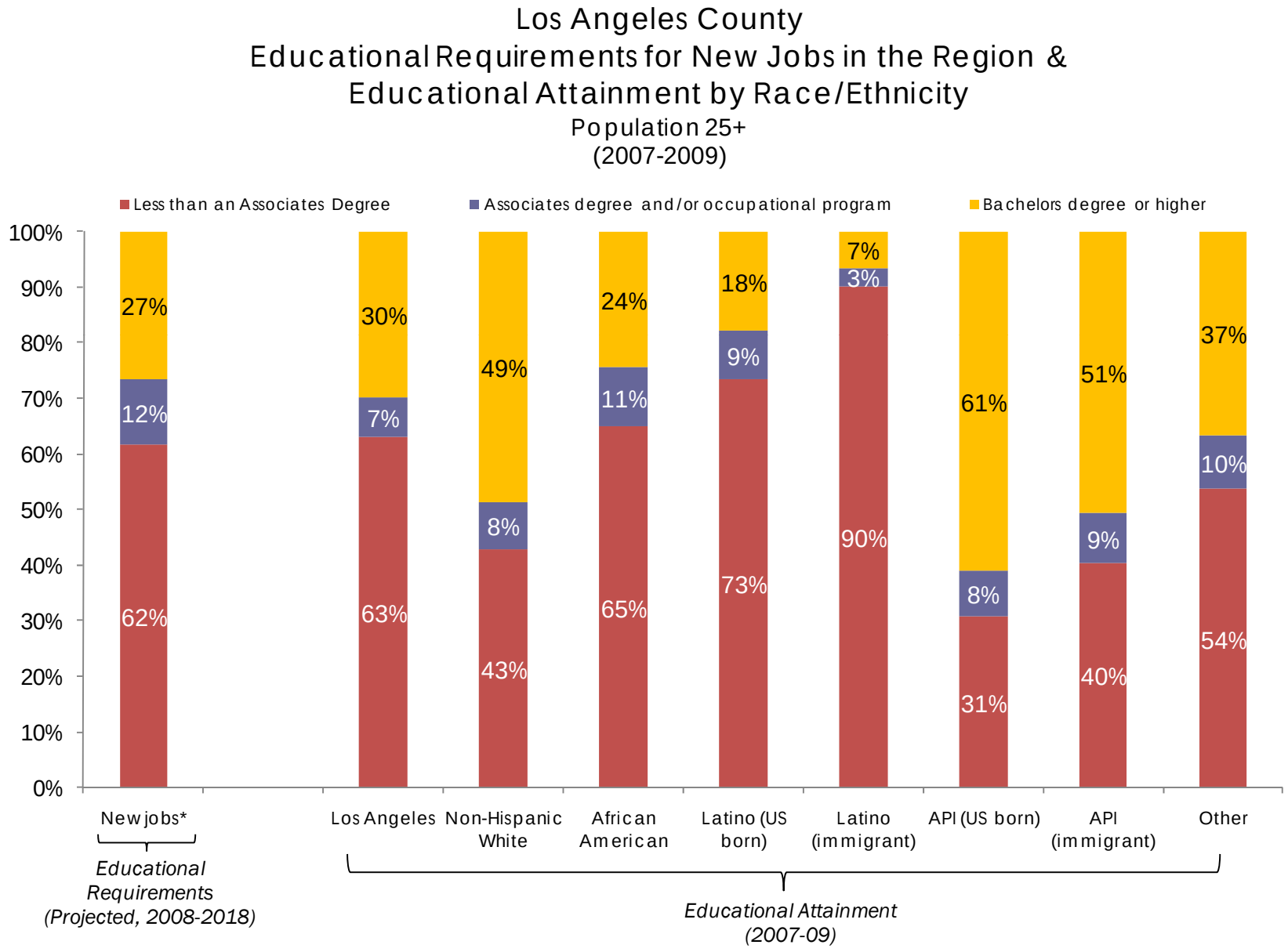


# LOOKING FORWARD

## ECONOMIC VITALITY: *High-Opportunity Occupations Index*

- To identify high-opportunity occupations for the future economy, we examined measures of: occupation size and regional concentration (LQ), job quality, and trajectory for a set of over 90 detailed occupations at the regional level

- A related index IDs opportunities by the occupation's educational requirements

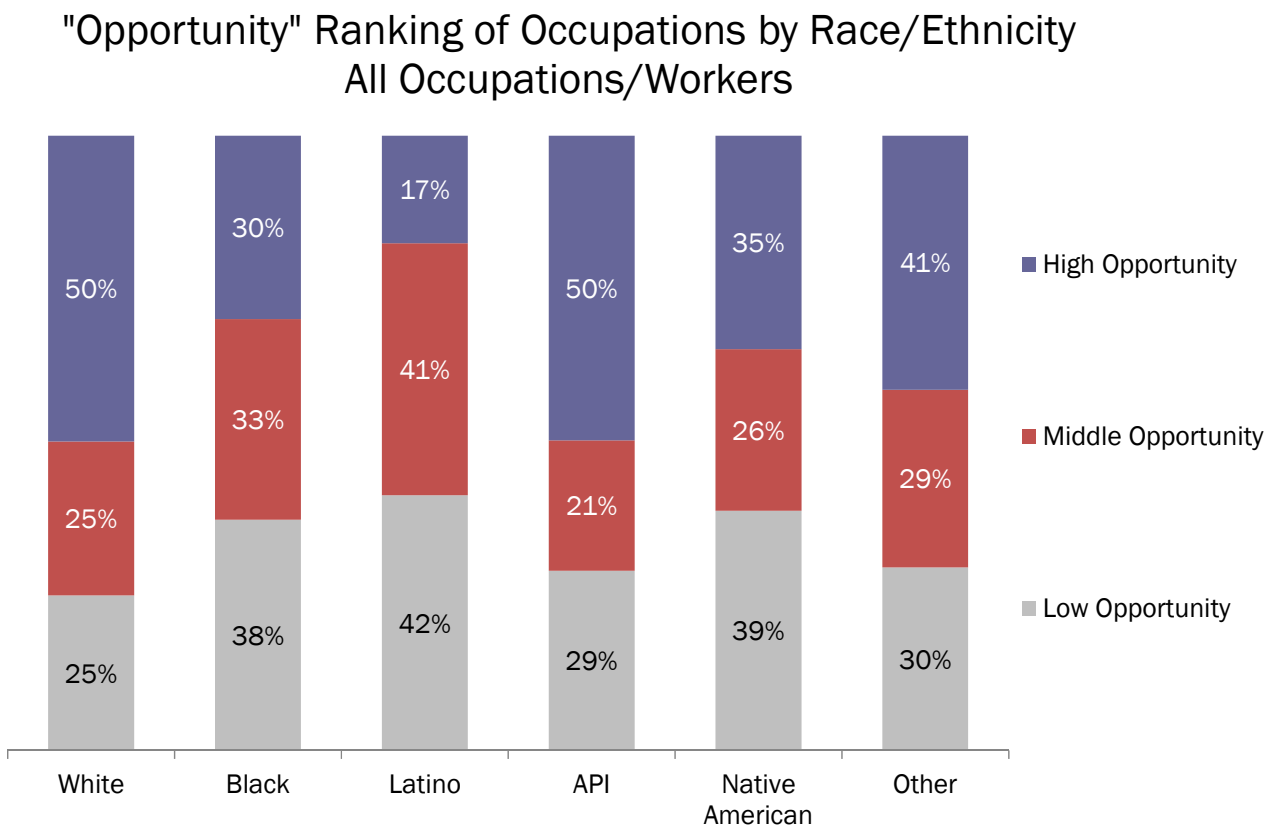
**Top ten "high-opportunity" occupations**

| | *Size* | *Concentration* | *Quality* | *Trajectory* | | | | |
|---|---|---|---|---|---|---|---|---|
| *Occupation* | *Employment, 2011* | *Location Quotient, 2011* | *Med. Ann. Wage, 2011* | *Change in Emp., 2005-2011* | *Emp. Growth, 2005-2011* | *Real Wage Growth, 2005-2011* | *Median Age, 2010* | Final Occupation Index |
| Engineers | 52,260 | 1.8 | $103,075 | 14,900 | 39.9% | 7.4% | 43 | 1.37 |
| Lawyers, Judges, and Related Workers | 10,910 | 0.9 | $152,685 | -590 | -5.1% | 11.3% | 45 | 1.30 |
| Physical Scientists | 11,360 | 2.2 | $102,217 | 3,000 | 35.9% | -3.0% | 47 | 1.07 |
| Top Executives | 49,210 | 1.2 | $104,353 | 6,030 | 14.0% | -3.3% | 47 | 1.02 |
| Water Transportation Workers | 4,860 | 3.3 | $62,336 | 1,000 | 25.9% | 44.5% | 39 | 0.97 |
| Health Diagnosing and Treating Practitioners | 75,760 | 0.8 | $89,005 | 9,470 | 14.3% | 10.9% | 43 | 0.95 |
| Operations Specialties Managers | 29,900 | 1.0 | $108,406 | 4,260 | 16.6% | 8.0% | 43 | 0.92 |
| Other Management Occupations | 35,500 | 0.9 | $97,892 | 810 | 2.3% | 26.9% | 45 | 0.86 |
| Preschool, Primary, Secondary, and Special Education School Teachers | 99,080 | 1.2 | $52,085 | 20,230 | 25.7% | 6.2% | 40 | 0.80 |
| Advertising, Marketing, Promotions, Public Relations, and Sales Managers | 10,810 | 0.9 | $111,558 | 1,180 | 12.3% | 8.7% | 43 | 0.78 |

# LOOKING FORWARD

## ECONOMIC VITALITY: *High-Opportunity Occupations Index*

- Adding an equity lens: Who's accessing high-opportunity jobs?



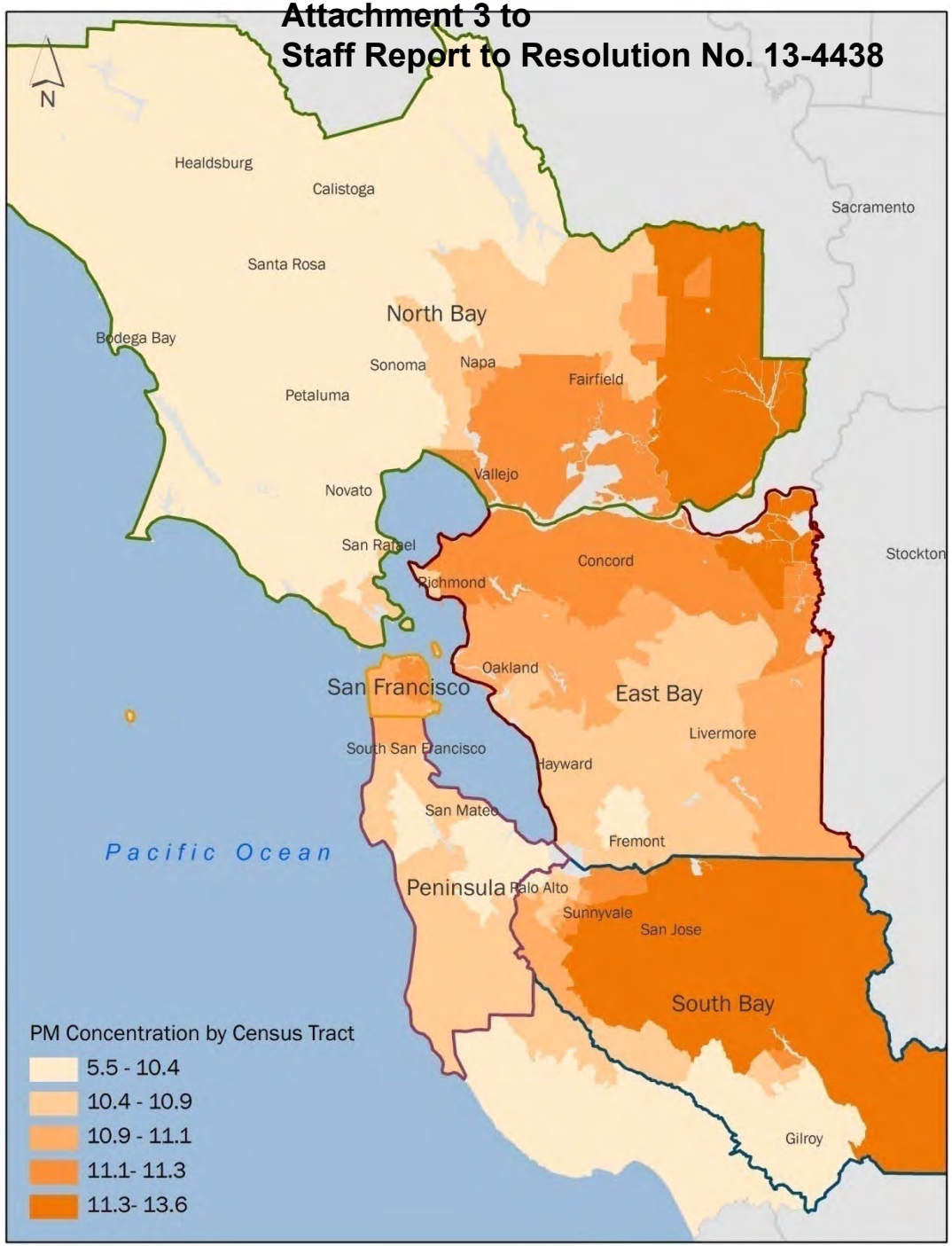

**Overall, whites and Asian/Pacific Islanders are most likely to be in high-opportunity occupations, Latinos are least likely and Blacks and Native Americans are in the middle.**

Notes: Universe is the employed civilian non-institutional population ages 25-64.

# SHIFTING POLICY

## ENVIRONMENTAL JUSTICE

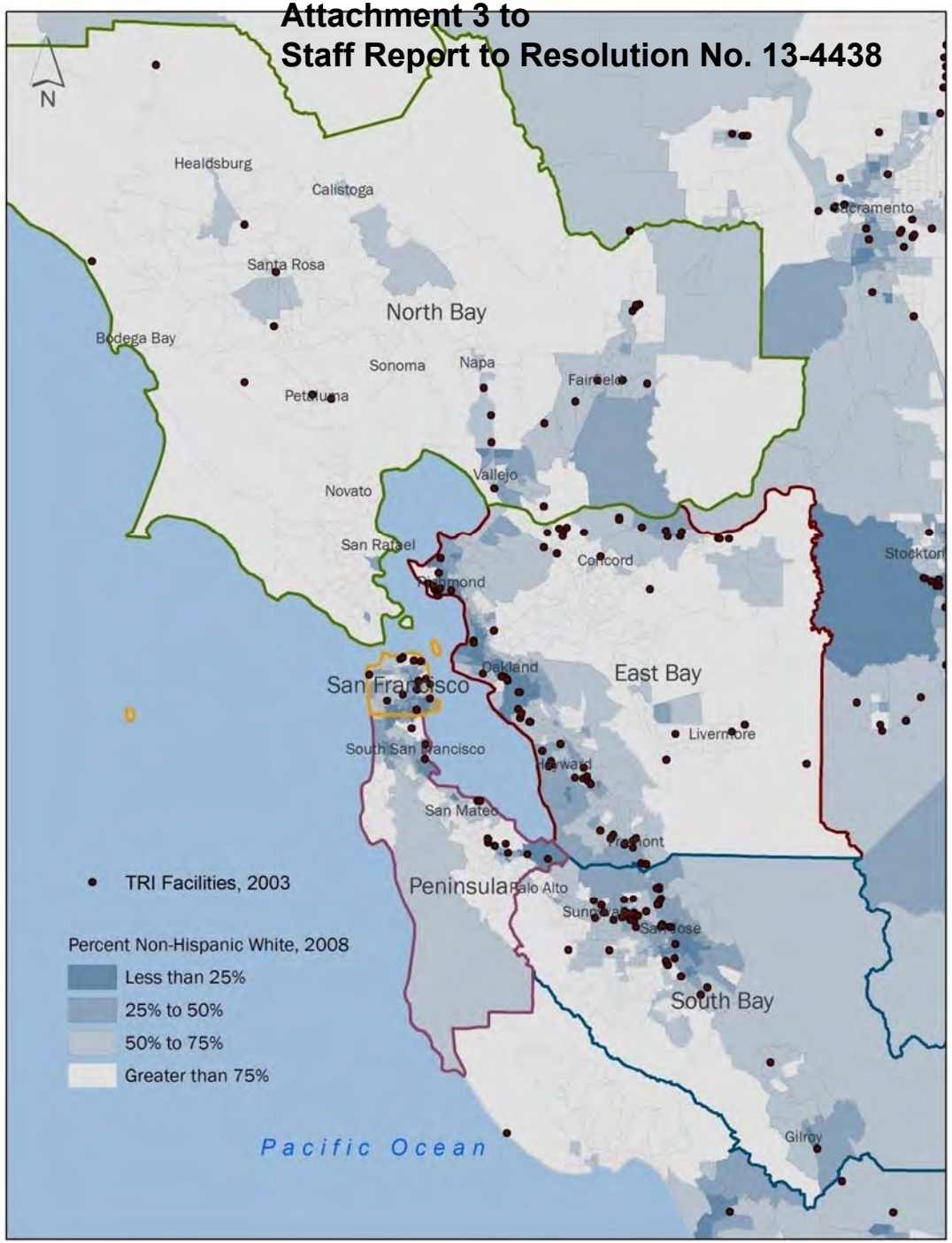
*Bay Area*
Particulate Matter (PM) Concentration
by Census Tract, 2004-2006



# SHIFTING POLICY

## ENVIRONMENTAL JUSTICE

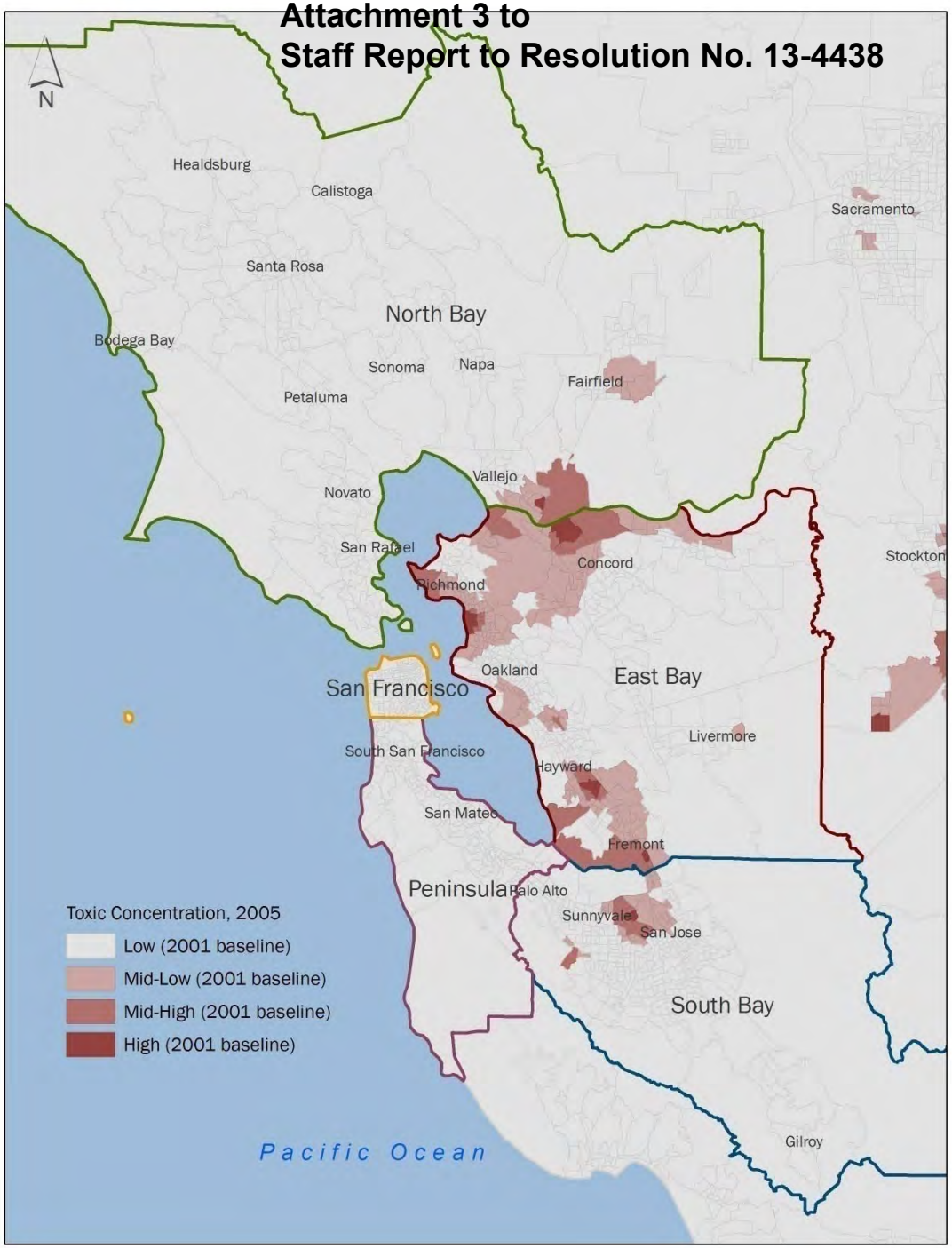
*Bay Area*
Toxic Release Inventory (TRI) Facilities, 2003, and Percent Non-Hispanic White by Census Tract, 2008



# SHIFTING POLICY

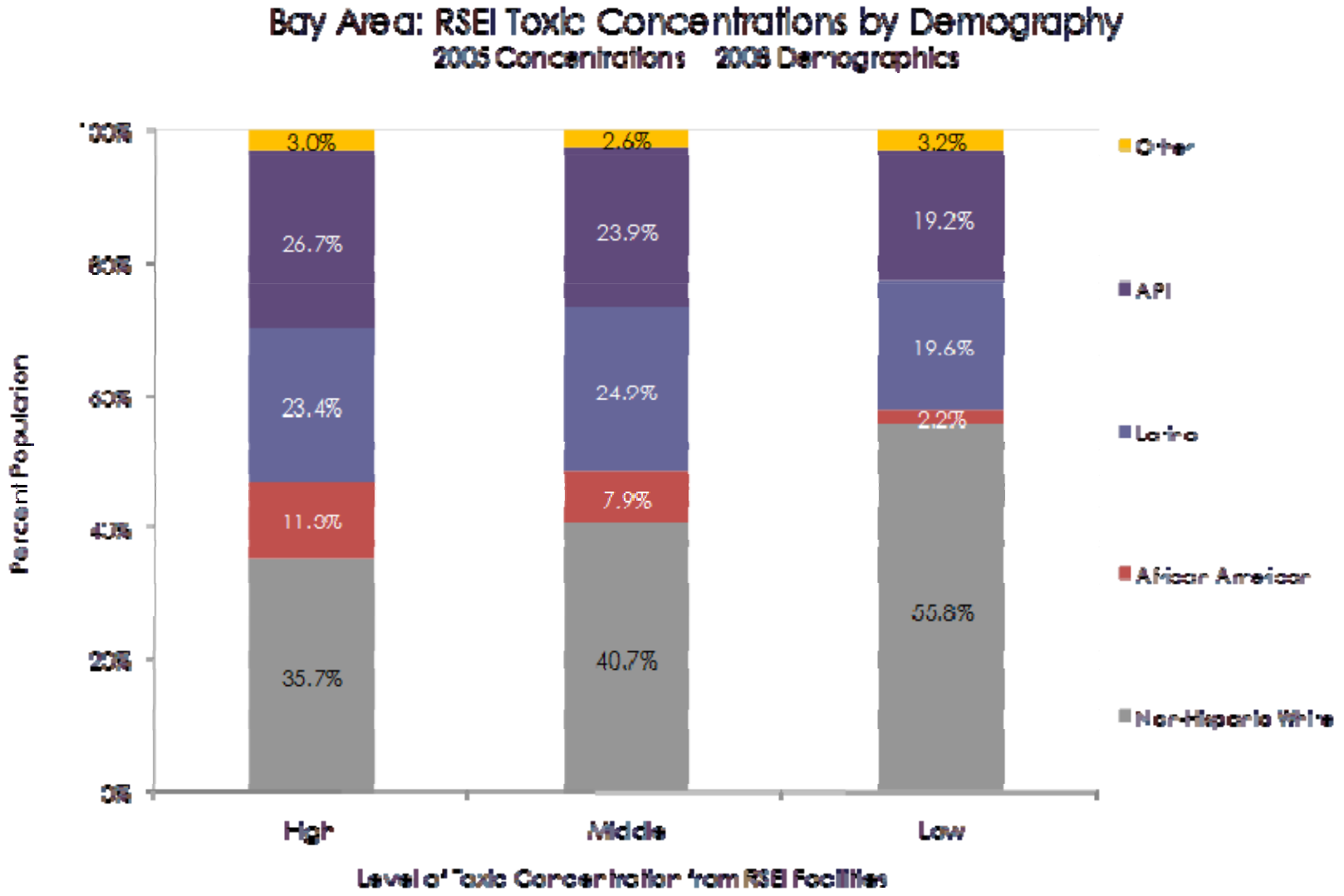
## ENVIRONMENTAL JUSTICE

*Bay Area*
Risk Screening Environmental Indicators (RSEI),
Toxic Concentration from RSEI Facilities
by Census Tract, 2005



# SHIFTING POLICY

## ENVIRONMENTAL JUSTICE



# SHIFTING POLICY

## **Environmental Justice Screening Method**:

*Proximity to hazards & sensitive land uses*

- Air Resources Board land use guidelines (sensitive receptors)
- State data on environmental hazards

*Health risk & exposure*

- Available state and national data
- Modeling from emissions inventories

*Social & health vulnerability*

- Based on epidemiological literature on social determinants of health
- ACS 2005-2009 and state-level data

# SHIFTING POLICY: EJSM

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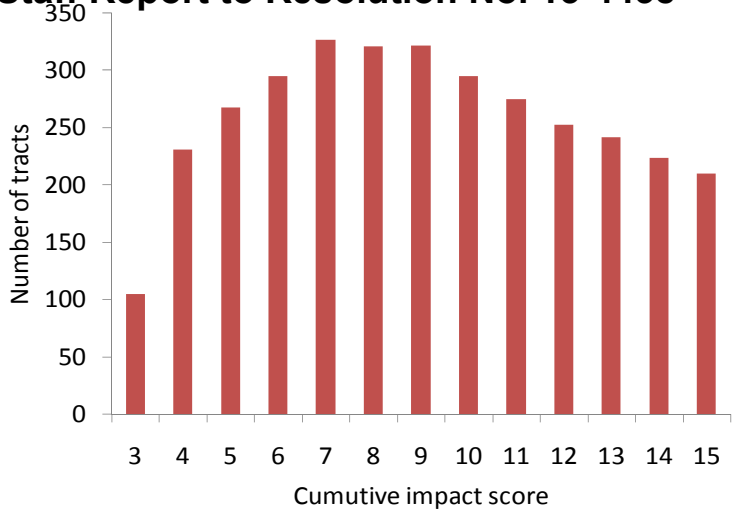
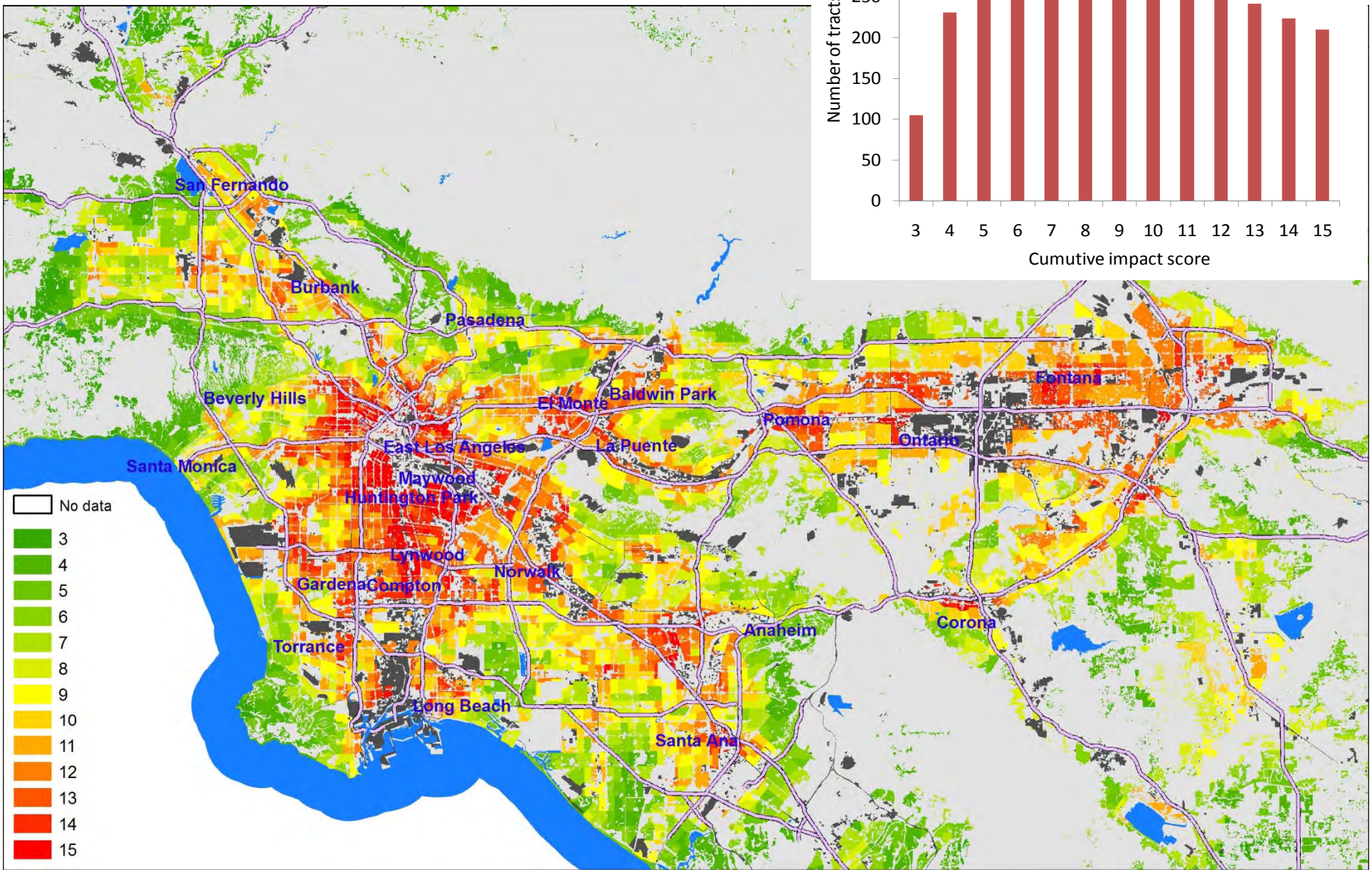


# SOME LESSONS FROM THIS WORK

## START WITH VISION

*Immigrant Integration Scorecard*

**Defining Outcomes:**

1. Economic Mobility
2. Warmth of Welcome
3. Civic Engagement

Lesson: Start with a strong vision for the world you want to see, and work from there.

Source: Migration Policy Institute
Image Source: International Rescue Committee

# SOME LESSONS FROM THIS WORK

## EXPLAIN WHY IT'S IMPORTANT

*Immigrant Contributions to California*

Defining gains from immigrants:

1. Economic potential
2. Regional level analysis
3. Voters & voting

Lesson: Develop a case for indicators as part of a broad frame of making progress together as a community

Source: Migration Policy Institute
Image Source: International Rescue Committee

# SOME LESSONS FROM THIS WORK

## CHOOSE DATA WISELY

*Immigrant Integration Scorecard*

Selecting indicators:

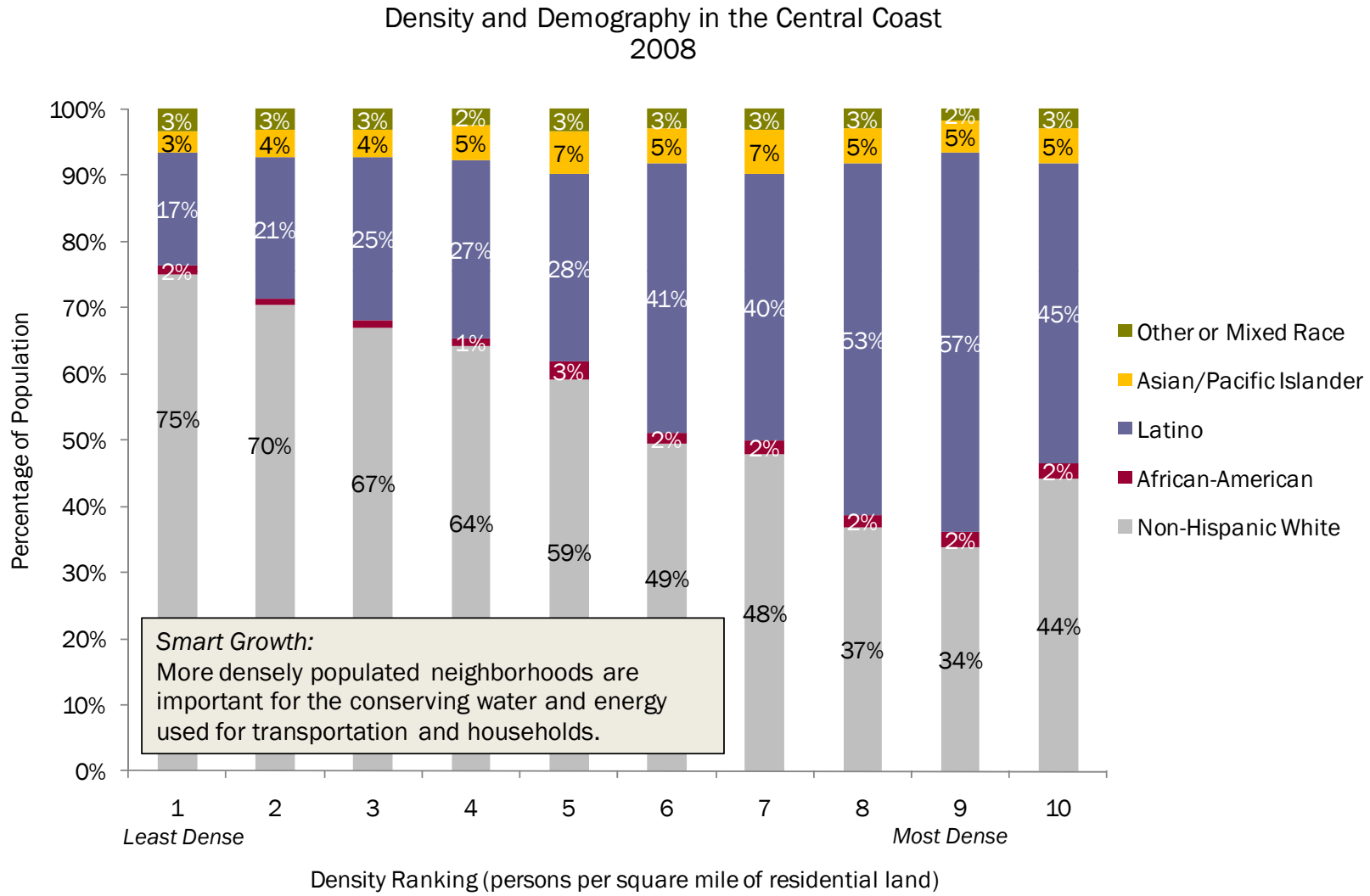
- What data is available?
- At what geography?
- At what cost?
- On a regular basis?
- *Examples: ACS, OIS, Regional GDP, Media Score*

Lesson: Use what's available, get creative where needed, know this is a work in progress.

Source: http://cdn.psfk.com/wp-content/uploads/2010/11/Measuring-the-Universe3.jpg?fedaf9

# SOME LESSONS FROM THIS WORK

## SURPRISE PEOPLE: WHO LIKES SMART GROWTH?




Notes: The Mixteco population is included in the Latino group; while we attempted to show it separately, the information was unavailable.

# SOME LESSONS FROM THIS WORK

## COMPLICATE THE MEASURES

### Social Vulnerability Metrics

**SES**

- % residents of color
- % residents below twice national poverty level
- Home ownership - % living in rented households
- Housing value – median housing value
- Educational attainment – % population > age 24 with less than high school education

**Biological Vulnerability**

- Age of residents (% <5)
- Age of residents (% >60)
- Birth outcomes – % preterm or SGA infants 2001-2006

**Civic Engagement**

- Linguistic isolation - % pop. >age 4 in households where no one >age 15 speaks English well
- Voter turnout - % votes cast among all registered voters averaged for 2000 and 2008 general election

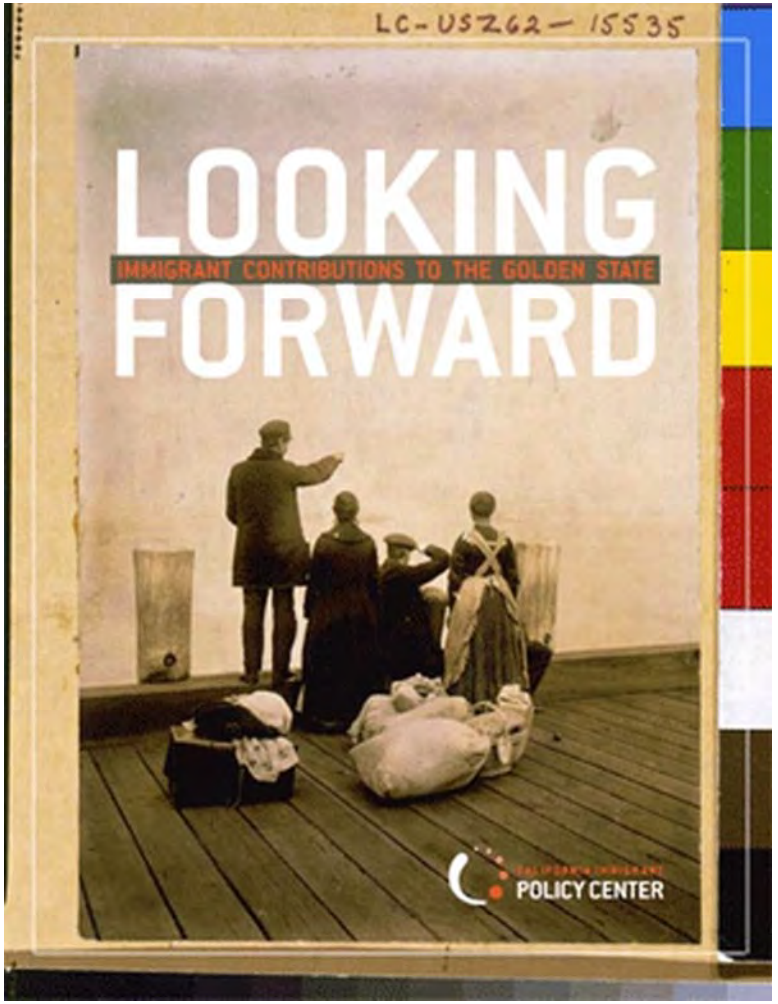
# SOME LESSONS FROM THIS WORK

## CONNECT TO POLICY CHOICES

*CIPC Looking Forward:*
*Immigrant Contributions*

Related Policies and Programs:

- Statewide body for Immigrant Integration
- Advocacy for Low-wage immigrant worker
- AB 2193 (Lata) – Long-term English learners
- AB 1436 (Feuer)- Voter registration
- AB 889 (Ammiano) – Domestic workers



# SOME LESSONS FROM THIS WORK

## CONNECT TO POLICY CHOICES

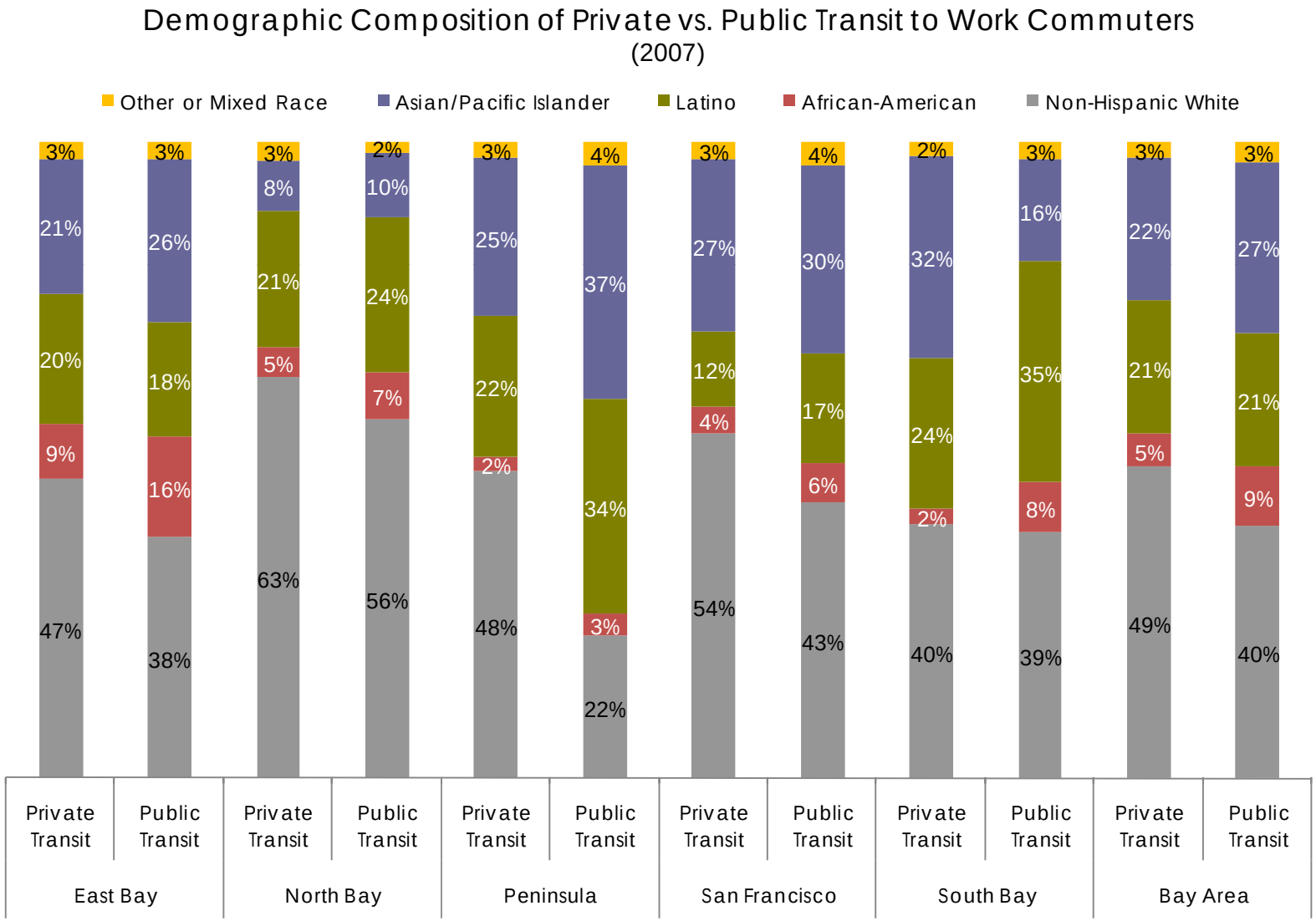
*Bay Area and Central Coast Regional Indicator Projects*

Related Policies and Programs:

- SB375: Sustainable Communities and Climate Protection Act
- ARRA's Green Job Resources
- Community College Resources
- AB32: Global Warming Act and requirements for EJ considerations in policy

# SOME LESSONS FROM THIS WORK

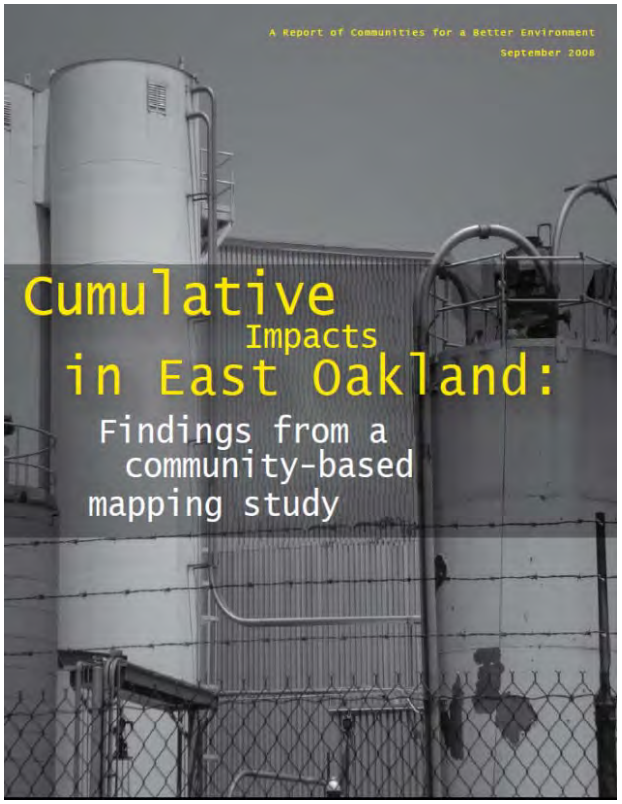
## CONNECT TO POLICY CHOICES



# SOME LESSONS FROM THIS WORK

## CONNECT TO COMMUNITY

- EJSM: Community kept engaged in highly technical product through parallel ground-truthing as well as just-in-time overview of method and input



# SOME LESSONS FROM THIS WORK

## MAKING PROGRESS BY MEASURING AND SHARING

- A way to make sure that regional equity stays on the table is to measure it – what is not measured is usually not targeted

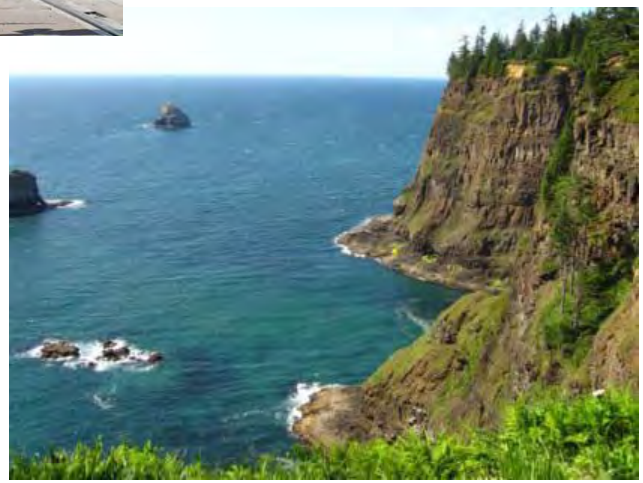
- Indicators have a discursive function – tell a story not a table

# AND THE BIGGEST LESSON?

Yes, We CAN…… measure regional equity

# AND IF WE DO . . .

**Attachment 3 to**
**Staff Report to Resolution No. 13-4438**



# AND IF WE DO . . .

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# Climate Smart Communities

## Scenarios Project

## Introduction to land use and transportation strategies

Kim Ellis, Project Manager

July 31, 2012

## Climate Smart Communities – Phase 1 strategies tested

# Community design

- Complete neighborhoods
- Mixed-use infill and redevelopment in centers and corridors
- Urban growth boundary
- Expand transit service
- Increase walking and bicycling
- Manage parking supply and cost

## Climate Smart Communities – Phase 1 strategies tested

# Pricing

Market signals and user-based fees to incentivize behavior change:

- Pay-as-you-drive insurance
- Gas tax
- Road use fee
- Carbon fee

## Climate Smart Communities – Phase 1 strategies tested

# Marketing and incentives

- Educate drivers on more fuel efficient driving habits
- Educate individual households about their travel options
- Work-place incentive programs to increase transit use, walking, biking and carpools or travel during less congested times
- Car-sharing

## Climate Smart Communities – Phase 1 strategies tested

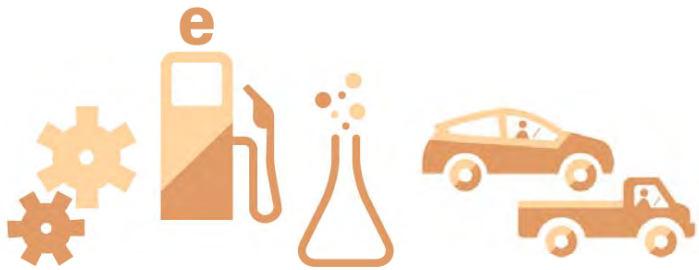
# Roads

- Add freeway and arterial capacity and new street connections
- Actively manage traffic
  - *Electronic message signs to provide traveler information*
  - *Clearing crashes and vehicle breakdowns more quickly*
  - *Traffic signal timing*
  - *Freeway ramp metering*

## Climate Smart Communities - Phase 1 strategies tested

# Fleet and Technology

- Add more fuel-efficient and zero emissions vehicles to fleet
- Replace older vehicles with newer ones
- Improved vehicle fuel economy
- Use cleaner, lower carbon fuels



## APPENDIX C: WORKSHOP MATERIALS

**Agenda**

**CSC scenarios Project fact sheet, July 2012**

**CSC Scenarios Project six-page project summary**

**CSC Scenarios Project Phase 1 findings report and strategy toolbox**

**Definition of regional equity from Regional Equity Atlas 2.0**

**Outcomes Handout**

**Prioritization Exercise Handout**

**Strategies Handout**

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# Agenda

Meeting: Equity & Environmental Justice Scorecard Workshop
Climate Smart Communities Scenarios Project

Hosted by Metro in partnership with Coalition of Communities of Color and Coalition for a Livable Future

Date: Tuesday, July 31, 2012

Time: 8:00 a.m. to noon (light breakfast available 7:30 a.m.)

Place: Council Chamber, Metro Regional Center, 600 NE Grand Ave., Portland 97232

Purpose: To help answer the question: "**How do we measure whether (and how well) the land use and transportation scenarios work to advance equity and environmental justice in our region?**"

The group's deliberations will:

- Help the project partners establish desired outcomes for environmental justice and equity.
- Inform which land use and transportation strategies are most important to help achieve equity and environmental justice outcomes.
- Inform development of a scorecard for measuring the success of the Climate Smart Communities (CSC) Scenarios in achieving those outcomes.

Goals: To inform and engage leaders in the environmental justice and equity fields in the CSC Scenarios Project.

To foster collaboration, mutual learning, and relationship building between CSC Scenario Project planners, technical work group members, and regional environmental justice and equity leaders

| | | |
|---|---|---|
| 8:00 to 8:25 a.m. | Welcome and Introduction to CSC Scenarios Project | Metro Councilor Carlotta Collette |
| 8:25 to 8:30 a.m. | Meeting Orientation | Jeanne Lawson, facilitator |
| 8:30 to 8:50 a.m. | "Measuring and Promoting Regional Equity"<br>• Demographic trends and changes in our region<br>• Experience of setting outcomes and defining how to measure them | Dr. Manuel Pastor, University of Southern California |
| 8:50 to 9:10 a.m. | Q&A Discussion | Facilitated discussion |
| 9:10 to 9:30 | Discussion of Proposed Outcomes<br>• Are these the right ones?<br>• Refining draft list | Facilitated discussion |
| 9:30 to 9:45 a.m. | Introduction to Transportation and Land Use Strategies | Kim Ellis |

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| | | |
|---|---|---|
| 9:45 to 10:05 a.m. | Dot Exercise and Break | Full group |
| 10:05 to 10:30 a.m. | Reflection on Priority Strategies<br>• Results, observations on dot exercise | Panel members:<br>• Coalition of Communities of Color<br>• Mara Gross, Coalition for a Livable Future<br>• Dr. Manuel Pastor<br>• Nuin-Tara Key, Metro |
| 10:30 to 11:30 a.m. | Getting from Strategies to Outcomes Discussion Questions:<br>• Which of the strategies are *most* important to meet environmental justice & equity outcomes? Why?<br>• How do these strategies help achieve the outcomes? | Facilitated group discussion with input from Panel |
| 11:30 to 11:40 a.m. | Observations and Recommendations | Dr. Manuel Pastor |
| 11:40 to 11:50 a.m. | Individual Feedback – Prioritization form | Full group |
| 11:50 a.m. to noon | Thank You and Next Steps | Metro Councilor Carlotta Collette |

Metro Council Chamber
600 NE Grand Ave., Portland, OR 97232
503-797-1700.
**Get here by public transit:** TriMet bus #6. MAX light rail Northeast Seventh Avenue stop.
**By bike:** Covered bicycle parking is available near the main entrance.
**By car**: Vehicle garage parking is $6 for the day or in metered spaces on street.

For more information, contact Dylan Rivera, 503-797-1551, dylan.rivera@oregonmetro.gov

July 2012

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www.oregon**metro.gov/climatescenarios**

**The region's six desired outcomes –** endorsed by city and county elected officials and adopted by the Metro Council in December 2010

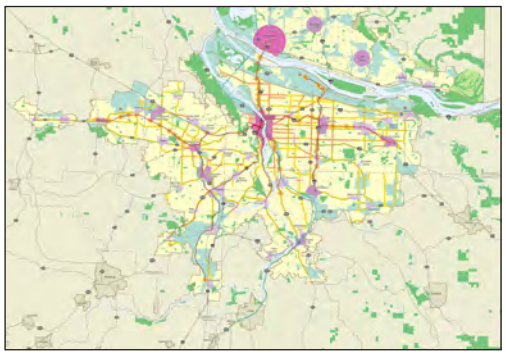
# Climate Smart Communities Scenarios Project

## Background

In 2007, the Oregon Legislature established statewide goals to reduce carbon emissions – calling for an end to increases in emissions by 2010, a 10 percent reduction below 1990 levels by 2020, and a 75 percent reduction below 1990 levels by 2050. The goals apply to all sectors, including energy production, buildings, solid waste and transportation.

In 2009, the Oregon Legislature passed House Bill 2001, directing the region to "develop two or more alternative land use and transportation scenarios" by January 2012 that are designed to reduce carbon emissions from cars, small trucks and SUVs. The legislation also mandates adoption of a preferred scenario after public review and consultation with local governments, and local government implementation through comprehensive plans and land use regulations that are consistent with the adopted regional scenario. The Climate Smart Communities Scenarios Project responds to these mandates and Senate Bill 1059, which provided further direction to scenario planning in the Portland metropolitan area and the other five metropolitan areas in Oregon.

Metro's Making the Greatest Place initiative resulted in a set of policies and investment decisions adopted in the fall of 2009 and throughout 2010. These policies and investments focused on six desired outcomes for a successful region, endorsed by the Metro Council and Metro Policy Advisory Committee in 2008: vibrant communities, economic prosperity, safe and reliable transportation, environmental leadership, clean air and water, and equity. Making the Greatest Place included the adoption of the 2035 Regional Transportation Plan and the designation of urban and rural reserves. Together these policies and actions provide the foundation for better integrating land use decisions with transportation investments to create prosperous and sustainable communities and to meet state climate goals.



The 2040 Growth Concept - the region's adopted growth management strategy

## **State response** Oregon Sustainable Transportation Initiative

The Oregon Department of Transportation and the Department of Land Conservation and Development are leading the state response through the Oregon Sustainable Transportation Initiative. An integrated effort to reduce carbon emissions from transportation, the initiative will result in a statewide transportation strategy, toolkits and specific performance targets for the region to achieve.

## **Regional response** Climate Smart Communities Scenarios Project

The Climate Smart Communities Scenarios Project will build on the state-level work and existing plans and efforts underway in the Portland metropolitan area. The project presents an opportunity to learn what will be required to meet the state carbon goals and how well the strategies support the region's desired outcomes.

A goal of this effort is to further advance implementation of the 2040 Growth Concept, local plans, and the public and private investments needed to create jobs, build great communities, and meet state climate goals. Addressing this multi-faceted challenge will take collaboration, partnerships and focused policy and investment discussions and decisions by elected leaders, stakeholders and the public. Identifying equitable and effective solutions through strategies that create livable, prosperous and healthy communities is essential to the process.

Metro's policy and technical advisory committees will guide the project, leading to Metro Council adoption of a "preferred" land use and transportation strategy in 2014.

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## About Metro

Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy, and sustainable transportation and living choices for people and businesses in the region. Voters have asked Metro to help with the challenges and opportunities that affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to providing services, operating venues and making decisions about how the region grows. Metro works with communities to support a resilient economy, keep nature close by and respond to a changing climate. Together we're making a great place, now and for generations to come.

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**Metro Council President**

Tom Hughes

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Shirley Craddick, District 1

Carlotta Collette, District 2

Carl Hosticka, District 3

Kathryn Harrington, District 4

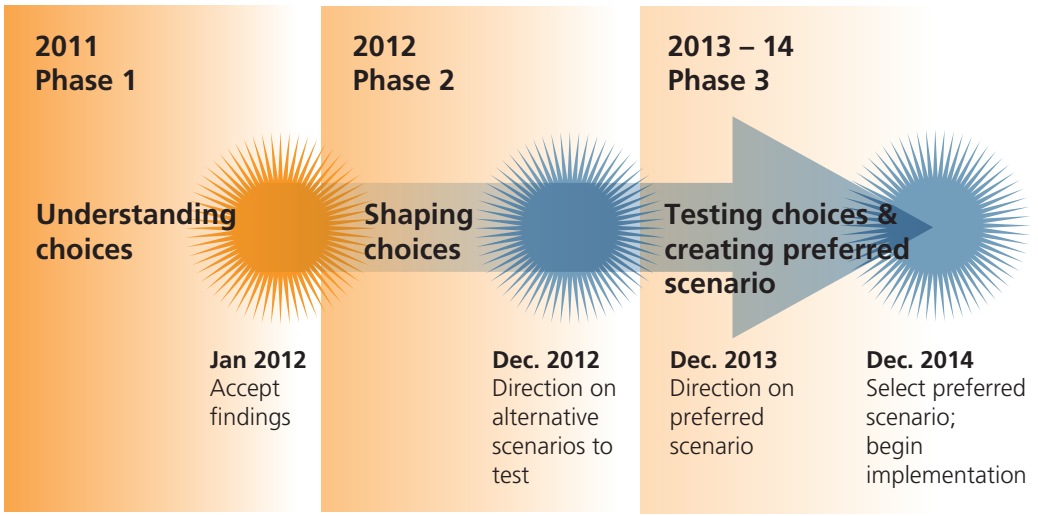
Rex Burkholder, District 5

Barbara Roberts, District 6

Auditor

Suzanne Flynn

# Climate smart communities scenarios project timeline




## Phase 1
### Understanding the choices

The first phase of regional-level scenario analysis occured during summer 2011 and focus on learning what combinations of land use and transportation strategies are necessary to meet the state greenhouse gas emissions targets. Strategies included transportation operational efficiencies that can ensure faster, more dependable business deliveries; more sidewalks and bicycle facilities; more mixed use and public transit-supportive development in centers and corridors; more public transit service; incentives to walk, bike and use public transit; and user-based fees.

Findings and recommendations from the analysis were reported to Metro's policy committees in fall 2011 before being finalized for submittal to the Legislature in January 2012.

## Phase 2
### Shaping the direction

In 2012, the region is designing more customized alternative scenarios that apply the lessons learned from Phase 1. This phase provides an opportunity to incorporate strategies and new policies that reflect community aspirations identified through local and regional planning efforts already underway in the region (e.g., SW Corridor Plan, East Metro Connections Plan, Portland Plan, and other local land use and transportation plan updates). This work will involve leaders from local governments as well as businesses and communities. By the end of 2012, Metro's policy committees will be asked to provide direction on alternative scenarios to be tested in 2013.

## Phase 3
### Building the strategy and implementation

The final project phase during 2013 and 2014 will lead to adoption of a "preferred" land use and transportation strategy. The analysis in this phase will be conducted using the region's most robust analytic tools and methods – the regional travel demand model, MetroScope and regional emissions model, MOVES. Additional scoping of this phase will occur in 2012 to better align this effort with mandated regional planning and growth management decisions.

This phase will identify needed changes to regional policies and functional plans, and include updates to the Regional Transportation Plan and region's growth management strategy. Implementation of approved changes to policies, investments, and other actions would begin in 2014 at the regional and local levels to realize the adopted strategy.

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# UNIQUE LOCAL APPROACHES, ONE COMMON GOAL – to make our region a great place to live in the years ahead

From downtown Gresham to Orenco Station to Oregon City, the region is rich with unique places to live where parks, schools and jobs are close by. As a result, we drive 20 percent fewer miles a day than most people in urban areas our size, so we spend less time in traffic and more time with our families and friends.

The things we have done to make this a great place are more important now than ever. The same efforts that helped protect farmland and revitalize downtowns and main streets over the last generation are essential to meeting statewide climate goals for the years ahead. Rising energy prices, a state mandate to reduce pollution and a growing eagerness to live in walkable neighborhoods make it essential for us to create places for people to work, shop and play – without having to drive far away. With federal and local resources lagging, we need to work together to make our visions a reality.

The Climate Smart Communities Scenarios Project will help the region's cities and counties define their goals for the next 20 years. It will show how those goals might help the region reduce carbon emissions. There are many ways we can reduce pollution, create healthy, more equitable communities and nurture the economy, too. Investing in main street businesses, expanding transit service, encouraging electric cars and providing safer routes for biking and walking can all help.

A one-size-fits-all approach won't meet the needs of our diverse communities. Instead, a combination of many local approaches, woven together, will create a diverse yet shared vision for how we can keep this a great place for years to come.

**www.oregonmetro.gov/climatescenarios**

Working together with city, county, state, business and community leaders, Metro is researching the most effective combinations of policies and strategies to help us meet Oregon's targets for reducing greenhouse gas emissions.

## MAKING A GREAT PLACE

## COMMUNITY BENEFITS, MANY OPTIONS EMERGE FROM EARLY RESEARCH

**Metro staff researched land use and transportation strategies that reduce emissions in communities across the nation and around the world. In December 2011, this work was summarized in a toolbox describing policies for community design, pricing, marketing and incentives, roads, fleet, and technology.**

These strategies also provide many community benefits:

- Fewer emissions means less air pollution.
- Investment in main streets and downtowns can boost job growth, save public money and make it easier to get to work and entertainment.
- Safe places to walk can improve public health, increase transit use and lower obesity rates.
- Creating vibrant commercial areas combined with transportation options can increase dollars spent locally while taking cars off the road.

Working closely with cities and counties, Metro tested 144 combinations of strategies, called scenarios. No single strategy was enough to meet the region's target of 20 percent lower emissions by 2035, but more than 90 combined scenarios met or surpassed it.

## Encouraging findings from early results

- Current local and regional plans provide a strong foundation for meeting our carbon emissions reduction target.
- The cities and counties in our region are already implementing most of the strategies under consideration to achieve other economic, social or environmental goals.
- If the state achieves its own expectations for advancements in cleaner fuels and more efficient vehicles, the local plans and policies already adopted in our region will get us very close to our emissions reduction target.

## STRATEGIES EVALUATED

### COMMUNITY DESIGN

Walkable communities, vibrant downtowns, job centers, housing and transportation options, walk and bike-friendly facilities, frequent transit service, urban growth boundary

### PRICING

Gas tax, fees and pay-as-you-drive insurance

### MARKETING AND INCENTIVES

Education and marketing programs that encourage efficient driving, car sharing and use of travel options

### ROADS

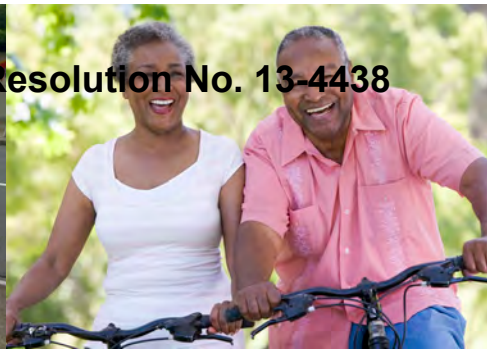
Clearing breakdowns and crashes quickly, adding capacity and using ramp metering, traffic signal coordination and traveler information to help traffic move efficiently

### FLEET

Replacing older cars with more efficient new ones; shifting from light trucks to cars

### TECHNOLOGY

More fuel-efficient vehicles, cleaner fuels, use of hybrid and electric vehicles



# LOCAL INGREDIENTS FOR A REGIONAL VISION

With many options available to the region, the natural next step is to test some potential future ways the region could grow and invest, called scenarios, to see what might work best. In building those alternatives in 2012, Metro will start local, gathering the most recently adopted community plans and visions to serve as the foundation of each scenario. Efforts such as the Beaverton Civic Plan, McLoughlin Area Plan, South Hillsboro Plan, AmberGlen Community Plan, Portland Plan, Gresham Downtown Plan and transportation system plans from across the region are the ingredients that will make up the alternatives we consider going forward. A work group of local planning staff continues to help guide the project.

Since community investment is such a powerful tool for helping grow jobs and protecting our clean air, the region will consider a range of investment levels - low, medium and high – to demonstrate what communities and the region can accomplish on our current path with existing resources and tools, and what could be accomplished with more. Current local plans will comprise the medium option. Each option will consider how we can stretch our dollars for the greatest impact on the things that will make the region a more prosperous, healthy and equitable place for all.

Through a series of case studies, community partner workshops and a regional summit, Metro and local elected officials will decide what should go into the three scenarios. All will be tested in 2013, so cities, counties and community partners can decide which elements of the three should go forward into one scenario for the region to adopt in 2014. As with the 2035 Regional Transportation Plan and the 2040 Growth Concept, the region's preferred scenario will vary from place to place within the metropolitan area, responding to local goals.

One scenario – many options for local communities.

## WHAT'S NEXT?

- Start with common vision
- Shape scenarios to test
- Evaluate scenarios
- Engage public

## Driving less, saving money

By driving just four fewer miles a day, the average car owner driving 10,000 miles a year can save $1,126 a year, according to AAA.

## About Metro

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# HELP SHAPE THE FUTURE OF YOUR COMMUNITY

Beginning summer 2012, city, county, community and business leaders will be asked to share their community visions. These visions will help set the direction for regional scenario options to be tested.

In 2013-14, Metro will engage the public in evaluating the regional scenario options. Leaders from across the region will adopt a regionwide scenario in 2014.

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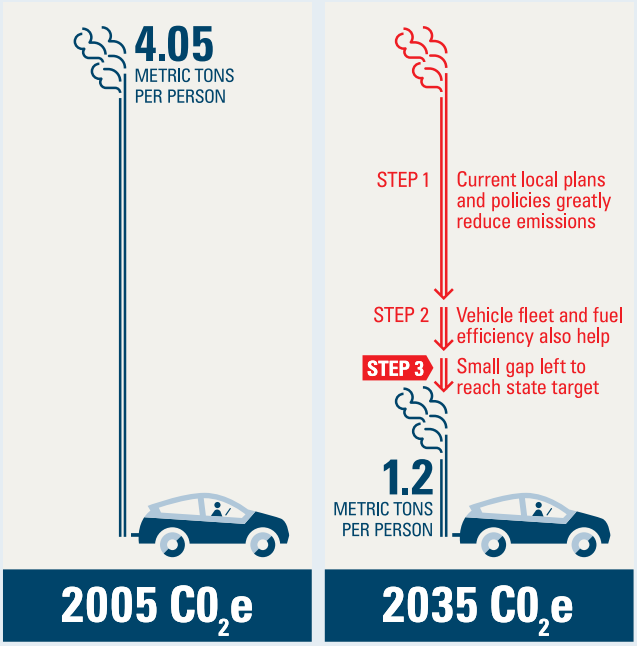
For email updates, send a message to climatescenarios@oregonmetro.gov

# OREGON'S EMISSIONS TARGET FOR 2035 FOR THE PORTLAND AREA

The state Land Conservation and Development Commission established a 2005 baseline for the Portland area: 4.05 metric tons annual, per capita roadway greenhouse gas emissions. (One metric ton $CO_2$ equals 112 gallons of gasoline.)

The 2035 target calls for cutting emissions to 1.2 metric tons. Implementing our local plans and realizing advancements in cleaner fuels and more efficient vehicles reduce emissions to 1.3 metric tons. Additional policy actions will be needed to reach the target (Step 3, on right).




$CO_2e$ stands for the variety of greenhouse gases included in the 2035 target, combined and expressed as an equivalent amount of $CO_2$.

optin ONLINE PANEL

**STAY CONNECTED** Sign up to receive periodic updates about the scenarios project at **www.oregonmetro.gov/connect.**

**SHARE IDEAS** Share ideas or suggestions with your local elected officials and your Metro Councilor.

**OPT IN** Voice your opinion by signing up for Metro's online opinion panel at **www.optinpanel.org.** Upcoming survey topics will include the scenarios project.

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# TIMELINE FOR ENGAGING CITIES, COUNTIES AND COMMUNITIES

| Description | Participants | Time frame |
|---|---|---|
| **Technical work group** – Meets regularly to review and provide input on analysis | City, county, TriMet, state and Metro planning staff, and community representatives | Ongoing throughout project (2011-2014) |
| **Accept Phase 1 Findings Report** | Metro Policy Advisory Committee, Joint Policy Advisory Committee on Transportation, Metro Council | January 2012 |
| **Discuss findings with local leaders** – Presentations at city councils and county boards | Metro councilors and staff, and city and county elected officials | Spring-Summer 2012 |
| **Envision Tomorrow introductory training** – Learn how to use scenario planning software for regional and local applications | Planning staff from Beaverton, Gresham, Hillsboro, Oregon City, Portland, West Linn, Clackamas County, Washington County, Metro and TriMet | June 2012 |
| **Scorecard workshops and focus groups** – Identify evaluation criteria and outcomes to measure in scenario analysis | Leaders representing the public health, equity and environmental justice, environmental and business communities | March, July-August, 2012 |

Continued on reverse …

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| Description | Participants | Time frame |
|---|---|---|
| **Case studies** – Analysis of five different types of community developments to illustrate community visions and the strategies needed to achieve them | Five local communities TBD | 2012 |
| **Community partner work sessions** – Use Envision Tomorrow software to assess and affirm community visions for future development; results will inform scenarios options | Elected officials and planning staff from communities around the region | Summer-Fall 2012 |
| **Southwest Corridor land use vision work sessions** – Use Envision Tomorrow software to assess and affirm community visions for future development; results will inform Southwest Corridor and scenarios projects | Planning staff from SW Corridor partners | Summer-Fall 2012 |
| **Online engagement** – Opt In survey tool for input on scenario options and how they will be evaluated | General public | Fall 2012 |
| **Summit** – Community leaders showcase local actions that are already reducing emissions and provide input on the three scenarios to test in 2013 | JPACT, MPAC, Metro Council, other elected officials and community leaders | Late fall 2012 |
| **Community partner workshops and online engagement** – Discuss findings, benefits and tradeoffs of choices | Public, elected officials and community leaders | 2013 and 2014 |
| **MPAC, JPACT, Metro Council** – Direct staff 2011, accept findings January 2012, agree on three scenarios to test December 2012, select a scenario in 2014 | MPAC, JPACT, Metro Council | 2011-2014 |

## STAY INFORMED

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## Climate Smart Communities Scenarios Project

# Understanding Our Land Use and Transportation Choices

PHASE 1 FINDINGS | JANUARY 12, 2012

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Climate Smart Communities: Scenarios Project

# Strategy Toolbox

for the Portland metropolitan region

Review of the latest research on greenhouse gas emissions reduction strategies and the benefits they bring to the region

October 2011

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Coalition for a Livable Future

# Definition of Regional Equity
# Regional Equity Atlas 2.0

## The case for regional equity[1]

We all have a shared fate and a shared responsibility —as individuals within a community and communities within society. Our region's future depends on the success of all of its populations, but disparities in the distribution of resources and opportunities create imbalances that disadvantage some communities and advantage others. To create a prosperous region, we must ensure that everyone in our region benefits from the opportunities the region provides so that we are all able to thrive.

Building an equitable region will benefit us all by creating a stronger, healthier, and more sustainable community. Equity is not just a moral imperative – it is an economic one. As our region becomes more racially, ethnically, and age-diverse, our shared prosperity depends on our ability to create conditions that will allow everyone to flourish. Consequently, just as the sustainability of our economy depends on a regional strategy, our efforts to increase equity must also be regional in scope.

In an equitable region:

- All people have access to the resources necessary for meeting their basic needs and advancing their health and well-being.
- All people have the power to shape the future of their communities through public decision-making processes that are transparent, inclusive, and engage the community as full partners.
- All communities experience the benefits and share the costs of growth and change.
- All people are able and have the opportunity to achieve their full potential and realize their vision for success.

Inequities are not random; they are the results of past and current decisions, and they can be changed. Creating an equitable region requires the intentional examination of policies and practices (both past and present) that, even if they have the appearance of fairness, may, in effect, serve as barriers that perpetuate disparities. Working toward equity requires the prioritization of policies, infrastructure, and investments to ensure that all people and communities can thrive -- regardless of race, ethnicity, income, age, gender, language, sexual orientation, ability, health status and other markers of identity.

[1] We are indebted to the following organizations for providing some of the language that we have incorporated into this definition: Northwest Health Foundation, Policy Link, Kirwan Institute, King County, Clark County Public Health, Multnomah County Health Equity Initiative, Coalition of Communities of Color, Opportunity Agenda, STAR Community Index, Portland Pulse, and Portland Plan.

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CLIMATE SMART COMMUNITIES SCENARIOS PROJECT **JULY 31, 2012**

# EQUITY AND ENVIRONMENTAL JUSTICE WORKSHOP

## ONE REGION, MANY DESIRED OUTCOMES

We all want a region that provides good jobs, safe and reliable transportation, livable neighborhoods, and access to the opportunities that create the quality of life for which our region is known – for everyone.

Working together with city, county, state, business and community leaders, Metro is researching the most effective combinations of policies and strategies to help us create great communities and meet Oregon's targets for reducing greenhouse gas emissions. Through 2014, Metro and local partners will study scenarios that represent what the area could look like in 2035, if various transportation and land use strategies are pursued.

*Desired outcomes for the region endorsed by city and county elected officials and approved by the Metro Council in 2010.*

The community goals of cities and counties across the region are the building blocks of a single region-wide scenario that reflects those various aims, creating a diverse yet shared vision of how we can keep this a great place for years to come.

## CLIMATE SMART COMMUNITIES (CSC) SCENARIOS SCORECARD

As part of the CSC Scenarios project, Metro is creating a "scorecard" to measure how well the chosen scenarios work to advance environmental justice and equity along with other desired outcomes. The scorecard will include a set of environmental justice and equity outcomes that the region desires, along with ways to measure each outcome.

Think of the measures for each outcome as gauges on a car dashboard, not like grades on a report card. They tell us information about a scenario, but they do not judge the scenario. Chances are, every scenario will have some pros and cons, and there will always be trade-offs to be considered. The trade-offs will be considered during 2013 and 2014, before selecting the region's preferred set of strategies by the end of 2014.

**EQUITY AND ENVIRONMENTAL JUSTICE ARE ISSUES THAT CUT ACROSS ALL OUTCOMES**
The next two pages include a list of outcomes that the project team proposes to use as a starting point for the Equity and Environmental Justice Scorecard.

We didn't want to start from scratch creating a list of outcomes. Instead, we have drawn from the work of many recent efforts to create outcomes and measurement tools, including – outcomes and measures identified by **Metro's policy advisory committees**, the **Greater Portland Pulse**, the Coalition for a Livable Future's **Regional Equity Atlas Project**, and the Oregon Department of Transportation's **MOSAIC** tool and **Oregon Statewide Transportation Strategy** projects.

Together, these efforts produced many outcomes and more than 100 ways to measure them that could be used in the CSC scenarios evaluation in 2013. Several of these outcomes can be measured across population groups (e.g., age, income and race) to identify whether disproportionate impacts are occurring to vulnerable populations in the region. For purposes of the CSC scenarios analysis, vulnerable populations are defined as:

- low-income households
- communities of color
- older adults and children
- households with limited English

The CSC project team needs to make sure we've captured the right set of outcomes and would like your help prioritizing what we measure from an equity and environmental justice perspective in 2013. **As a leader in your community, your input is essential!**

# Draft Outcomes

## HEALTHY COMMUNITIES

### 1) Public Health and Safety

improve public health and safety by providing more safe walking and biking networks and reduce exposure to harmful emissions

### 2) Access to Opportunity

ease with which travelers can reach or use transportation options; access to affordable housing choices and proximity to parks, jobs, goods, services, and other destinations to meet daily needs

### 3) Mobility

improve the availability of transportation choices, system efficiency and travel time reliability for people, goods and services

### 4) Affordability

lower share of income spent on housing and transportation costs

### 5) Inclusive decision-making process

ensure those affected by decisions have had a meaningful opportunity to contribute to their development

# Draft Outcomes (continued)

## HEALTHY ENVIRONMENT

### 6) Healthy Soils
protection of farms, forests and natural areas

### 7) Healthy Air
reduce emissions that affect human and environmental health

### 8) Clean Water
reduce impervious surface and related stormwater run-off

### 9) Resiliency
reduce dependence on foreign oil and enhance capacity of the region's ecosystems to respond to hazards, disasters and climate change-related damage

## HEALTHY ECONOMY

### 10) Business Prosperity
create jobs and lower business-related transportation costs

### 11) Community Prosperity
foster efficient development patterns that optimize transportation, housing, jobs, and infrastructure spending decisions

### 12) Individual/household prosperity
lower share of income spent on housing and transportation costs

### 13) Revenues generated
raise revenues for investments needed

**Attachment 3 to**
**Staff Report to Resolution No. 13-4438**

Climate Smart Communities Scenarios Project

**Land use & transportation**

# Strategies

## Community design

**Complete neighborhoods & mixed-use areas** – areas where jobs and services are accessible with transit, biking and walking
**Urban growth boundary** – expansion
**Transit service** – expansion
**Bike and pedestrian network** – expansion
**Parking** – time limits, pricing and other management of spaces

## Pricing

**Pay-as-you-drive insurance** – discounts for driving fewer miles
**Gas tax** – fee based on fuel consumed
**Road use fee** – fee based on miles driven
**Carbon fee** – fee based on carbon emitted

## Marketing and incentives

**Eco-driving** – education on fuel-efficient driving habits
**Individualized marketing** – one-on-one education on public transit use, biking and walking options
**Employer programs** – workplace-based incentives for transit use, walking, bicycling, carpools and vanpools
**Car-sharing** – self-serve access to a network of vehicles to reduce the amount spent on vehicle insurance, fuel, and maintenance

## Roads

**Freeway and arterial capacity** – adding vehicle lanes, new street connections
**Traffic management** – clearing vehicle breakdowns and crashes quickly, using ramp metering, traffic signal coordination and traveler information to help traffic move efficiently

## Fleet

**Fleet mix** – shifting from SUVs and light trucks to cars
**Fleet age** – replacing older cars with more efficient new ones

## Technology

**Light vehicle fuel economy** – miles per gallon fuel efficiency standards for cars, SUVs and light trucks
**Carbon intensity of fuels** – shifting transportation fuel mix to cleaner fuels and alternative fuels with less carbon
**Electric and plug-in hybrid electric vehicles** – incentives and infrastructure to increase use of these vehicles

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**Attachment 3 to**
**Staff Report to Resolution No. 13-4438**
**Equity and Environmental Justice Scorecard Workshop**
**Climate Smart Communities Scenarios Project**

## Prioritization Exercise

1) **Strategies**
Which of the land use and transportation strategies are ***most important*** to evaluate or measure as part of the Equity and Environmental Justice Scorecard? (List in order of importance)

1. _____
2. _____
3. _____

Why? _____

_____

2) **Outcomes**
Which of the outcomes are ***most important*** to evaluate or measure as part of the Equity and Environmental Justice Scorecard? (List in order of importance)

1_____
2_____
3_____

Why? _____

_____

**Strategies**
Community design:
- Complete neighborhoods and mixed-use areas
- Urban growth boundary
- Transit service
- Bike and pedestrian network
- Parking

Pricing:
- Pay-as-you-drive insurance
- Gas tax
- Road use fee
- Carbon fee

Marketing and incentives:
- Eco-driving
- Individualized marketing
- Employer programs
- Car-sharing

Roads:
- Freeway and arterial capacity
- Traffic management

Fleet:
- Fleet mix
- Fleet age

Technology:
- Light vehicle fuel economy
- Carbon intensity of fuels
- Electric and plug-in hybrid electric vehicles

**Outcomes**
- Public Health and Safety
- Access to Opportunity
- Mobility
- Affordability
- Inclusive decision-making process
- Healthy Soils
- Healthy Air
- Clean Water
- Resiliency
- Business Prosperity
- Community Prosperity
- Individual/household prosperity
- Revenues generated

**Attachment 3 to**
**Staff Report to Resolution No. 13-4438**

Climate Smart Communities Scenarios Project
**Land use & transportation**

# Strategies

## Community design

**Complete neighborhoods & mixed use areas** – areas where jobs and services are accessible with transit, biking and walking
**Urban growth boundary** – expansion
**Transit service** – expansion
**Bike and pedestrian network** – expansion
**Parking** – time limits, pricing and other management of spaces

## Pricing

**Pay-as-you-drive insurance** – discounts for driving fewer miles
**Gas tax** – fee based on fuel consumed
**Road use fee** – fees based on miles driven
**Carbon fee** – based on carbon emitted

## Marketing and incentives

**Eco-driving** – education on fuel efficient driving habits
**Individualized marketing** – one-on-one education on public transit use, biking and walking options
**Employer programs** – workplace-based incentives for transit use, walking, bicycling, carpools and vanpools
**Car-sharing** – self-serve access to a network of vehicles

## Roads

**Freeway and arterial capacity** – adding vehicle lanes, new street connections
**Traffic management** – clearing breakdowns and crashes quickly, using ramp metering, traffic signal coordination and traveler information to help traffic move efficiently

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**Fleet mix** – shifting from SUVs and light trucks to cars
**Fleet age** – replacing older cars with more efficient new ones

## Technology

**Light vehicle fuel economy** – miles per gallon standards for cars
**Carbon intensity of fuels** – cleaner gasoline, alternative fuels
**Electric and plug-in hybrid electric vehicles** – incentives and infrastructure to increase use of these vehicles

## APPENDIX D: PARTICIPANT FEEDBACK

# Attachment 3 to
# Staff Report to Resolution No. 13-4438

**Appendix D: Participant feedback**

*Equity and Environmental Justice Scorecard Workshop*
*Metro comment form verbatim answers*

**1. Effectiveness of information presented to help you understand the Scenarios Project**

When hiring a consultant, please consider the skills in cultural competency. Does Metro have a diversity/equity specialist?

Maybe a quick review of the findings report would have helped people understand. (E. Hesse)

Do not assume audience at same level of understanding, explain more, not so rushed.

Needs to be more clarity about how strategies meet outcomes and what the strategies will do to reduce disparities.

Could have had more background on how the process got to here. M. Pastor was great. (N. Sauvie)

**2. Effectiveness of the panel reflection on prioritized strategies**

The strategies lacked context in which they will be implemented. Thus, not surprising that the panel's comments on the strategies were seemingly superficial.

Lack of inclusion; designed and now invited to join; expectations set but community

Agree with comments about lack of racial and class diversity in the room, process

**3. Effectiveness of the facilitated discussion on potential regional outcomes and measuring them**

Difficult to have a meaningful discussion on outcomes and metrics without having a clearer understanding of existing disparities and root causes.

We needed more time to hear from Kim on strategies.

Implementation of the strategies is an opportunity to include low income and communities of color.

There was a lack of data explaining the impacts of the strategies and how each will reduce disparities AND GHG emissions.

**4. Overall effectiveness of the workshop**

I recommend you take a look at "Popular Education"-Noelle Wiggins of Multnomah County

I rate it 4 as a beginning salvo. ☺

People missing from the room and engagement; too much same person speaking and not listening.

Engaged new voices but more attention should be given to individual follow-up.

*Please provide any other comments you have about the workshop.*

This is my first meeting. I would suggest having all presenters, facilitators, etc. be truly reflective of the communities you are trying to serve. As Dr. Pastor says, communities of color need to see themselves in total and complete process.

Comments on grounding in the data are key. I think there's a gap between the data, and the perception of driving and communities of color. It seems like many people made the assumption that people of color drive more, which I think is counter to the data. Is the data perfect? No, but let's get it out there instead of starting with just assumptions.

Dr. Pastor helpful. It was a long morning, but perhaps because I am new to this process, felt like there wasn't the time to dig deeper into issues.

I really appreciate the change of agenda and the conversation that ensued. This is valuable for CSC and for my efforts at the City. I really appreciate the hopefulness shared by Dr. Pastor- "let's have a second date" and his examples of actions taken in LA cities and the unexpected outcomes for GHG reduction. It makes me wonder if there's a way for participants to share what they are doing already, the successes and acknowledge that first. Everyone begins with the same value to make this community great.

We need more community specificity—we need to better understand whether the data matches the perceived reality for the communities most affected (ground truthing). We also need to have a more explicit "equity" or "EJ" lens that forces objective evaluation of each strategy.

Please include older adults and people with disabilities in your project.

Leadership and project inclusion needs diversity; very apparent lacking in room and those who are leading; this change will be helpful to build trust and participation; now that you have heard comments, tough questions in this sessions, what will you do to change? Make a shift

Discomfort was necessary and hopefully moves the process forward more effectively with more attention to how the strategies could be implemented (range of who benefits and burdens from each).

I was unsure about the outcomes of the workshop. It seems more information seeking than informational, but I didn't know that going in. Would like info and action items we can take back to our organization and communities to contribute to this project.

Poor setting (context climate change) overly broad discussion – poor facilitation in framing the issues – meeting …have cultures and communities of color address climate change - …were talked at rather than listened to…also unclear outcomes and how strategies will be implemented – What will Metro do? Put people of color, other communities, on the panel.

Really enjoyed Dr. Pastor's presentation; disconnect with outcomes, strategies, scorecard, etc. Really focus on Dr. Pastor' closing comments. Strategies can go either way. Focus on EJ principles.

# APPENDIX E: WORKSHOP FOLLOW-UP AND LESSONS LEARNED

# Attachment 3 to
# Staff Report to Resolution No. 13-4438

**Appendix E: Workshop follow-up and lessons learned**

The Equity and Environmental Justice Workshop follow up plan sought to achieve the following desired outcomes:

- An open ended conversation, allowing Metro to continue to build relationships with workshop participants
- An opportunity for Metro staff to learn about participants' priorities, concerns and current work
- The discovery of ways for Metro to meaningfully engage the participants' organizations/ communities
- Suggestions from workshop participants on how Metro can better engage equity and environmental justice stakeholders on the CSC project

**Approach**

The plan called for staff to initiate follow-up conversations, either on the phone or in person, with the following community leaders, chosen based on workshop participation, feedback provided on the event, and involvement before the event:

| | |
|---|---|
| Dr. T. Allen Bethel | Albina Ministerial Alliance |
| Danielle Brooks | City of Portland |
| Ben Duncan | Multnomah County |
| Mara Gross | Coalition for a Livable Future |
| Julia Meier | Coalition of Communities of Color |
| Jonathan Ostar | OPAL Environmental Justice Oregon |
| Midge Purcell | Urban League of Portland |
| Alejandro Queral | Northwest Health Foundation |
| June Schumann | Asian Pacific American Network of Oregon |
| Ramsay Weit | Community Housing Fund |

**Lessons learned**

- More than one stakeholder commented that Metro appears to lack an integrated vision on equity and environmental justice. The Scenarios Project has the potential to build this integrated vision that could include a regional affordable housing approach, transit planning, land use, etc. One stakeholder cautioned that the project needed to be clear about the impacts of the strategies.
- Outreach going forward needs to start with asking communities about themselves, including their histories and their needs. One stakeholder called this 'sharing or providing community knowledge.' Workshop and event leaders need to look like community members.
- Include communities earlier in the project so that planning activity more closely aligns with community needs.
- Scenarios Project staff must continue to reach out, follow through, and build relationships with the community as the project develops; Metro needs to keep its word. This will demonstrate to the community that the agency is serious about equity and it will help Metro build trust.
- Planners need to go beyond bricks, mortar, trees and sidewalks to think about people related things: education, innovation, livability, affordability, gentrification and opportunity.

- Conversations with the community need to be on concrete topics. Even long-term, more abstract planning projects can be covered as long as they are made meaningful in today's terms to community members. The agency needs to consider compensating community members to participate in discussions if they are truly from a community that is focused on day-to-day needs.
- The intended outcome of the event was unclear and it was unclear how the input from the dot exercise and other interaction would translate into Metro's process.

**Next steps**

- Communications staff and the Scenarios Project planning staff will incorporate these lessons learned into outreach plans for the project going forward.
- Communications staff will work to incorporate the lessons learned into Metro public involvement guidelines.
- Input obtained during the workshop will be incorporated into a scorecard to be used to evaluate the three scenarios selected for further analysis in 2014.
- Workshop participants and interested parties will soon hear about a proposed CSC Scenarios Project spring summit and will be encouraged to participate.

**Attachment 3 to**
**Staff Report to Resolution No. 13-4438**

**Metro's web site:** www.oregonmetro.gov

**Metro is the federally mandated metropolitan planning organization** designated by the governor to develop an overall transportation plan and to allocate federal funds for the region. The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and to make recommendations to the Metro Council. The established decision-making process assures a well-balanced regional transportation system and involves local elected officials directly in decisions that help the Metro Council develop regional transportation policies, including allocating federal transportation funds.

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www.oregon**metro.gov/climatescenarios**

# Business Focus Groups Report

A Summary of the Climate Smart Communities Scenarios Project Business Focus Groups Held from December 2012 – April 2013

May 2013

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## About Metro

Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy, and sustainable transportation and living choices for people and businesses in the region. Voters have asked Metro to help with the challenges and opportunities that affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to providing services, operating venues and making decisions about how the region grows. Metro works with communities to support a resilient economy, keep nature close by and respond to a changing climate. Together we're making a great place, now and for generations to come.

Stay in touch with news, stories and things to do.

**www.oregonmetro.gov/connect**

**Metro Council President**

Tom Hughes

**Metro Councilors**
Shirley Craddick, District 1
Carlotta Collette, District 2
Craig Dirksen, District 3
Kathryn Harrington, District 4
Sam Chase, District 5
Bob Stacey, District 6

**Auditor**
Suzanne Flynn

Metro collaborated with the Columbia Corridor Association, East Metro Economic Alliance, Clackamas County Business Alliance, Tualatin Chamber of Commerce, the Portland Business Alliance Small Business Council, and the Home Builders Association of Metropolitan Portland in planning and executing the business focus groups. The opinions, findings and conclusions expressed in this report are not necessarily those of our partner organizations.

The preparation of this report was partially financed by the Oregon Department of Transportation and U.S. Department of Transportation. The contents of this report do not necessarily reflect the views or policies of the State of Oregon or U.S. Department of Transportation.

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# Executive summary

## Introduction

This report summarizes the results of five business focus groups conducted in December 2012 and early 2013. The focus groups were part of the 2012-2013 communications and outreach strategy for the Climate Smart Communities Scenarios Project.

### Background

At the time the focus groups were conducted, the scenarios project was nearing completion of engagement with local elected officials to achieve understanding of Phase 1 findings, and was making progress with engaging leaders of the business, environmental, and equity and environmental justice communities. During this period, outreach involved more in-depth methods of communicating to strengthen connections with communities and build relationships with key community members.

For the business focus groups, Metro partnered with the Portland Business Alliance Small Business Council, the Westside Economic Alliance, the Clackamas County Business Alliance, the Home Builders Association of Metropolitan Portland, the Columbia Corridor Association, the East Metro Economic Alliance, and the Oregon City, North Clackamas, Tualatin, Wilsonville, and Greater Hillsboro chambers of commerce. Partners encouraged their contacts to attend and advised on the workshop agenda and activities.

The goal of the focus groups was to gain an understanding of what business owners viewed as the most significant challenges to the growth of their businesses and the region's future economic growth, and what they considered priorities for investment.

### Overview of focus group format

The focus groups followed a format of a short introduction and explanation of the project by staff followed by questions and discussion. The meeting flowed as follows:

- **Welcome and Introduction** – Welcome participants and thank them for their attendance.
- **Focus group description and expectations** – Jeanne Lawson, facilitator of JLA Associates, reviewed the project background and outlined the goals of the discussion questions.
- **Part 1 Questions** – Focus group participants discussed current actions and challenges to balancing sustainability and economic growth.
- **Part 2 Questions** – Focus group participants provided input on land use and transportation strategies being discussed and outcomes to evaluate.
- **Part 3 Questions** – Focus group participants recorded information about their business and shared additional thoughts and comments on a brief written questionnaire.

- **Thank you and next steps** – Metro staff said that more information will be coming over the next year and a half, providing future opportunities to continue to shape the project. The region's policy committees will make recommendations to the Metro Council in May on three scenarios to test this summer. There will be further discussion in Fall 2013 and Winter 2014 to decide on the best scenario moving forward. Metro staff also invited focus group participants to take part in a public OptIn Survey to share their opinions. The final decision will be at the end of 2014. Jeanne Lawson thanked everyone for their participation and adjourned the meeting.

### Focus group summaries

**Appendix A** – A general summary of all six focus groups is provided in the Business Focus Groups Summary document at the front of this section. The group goal, represented organizations, primary outcome and a set of recommendations drawn from all of the focus groups is provided. This is followed by a list of emergent themes. This is followed by comprehensive summaries of each focus group including a complete list of participants, notes from opening remarks and discussions, and identification of emerging themes. The same four discussion questions were used with all six focus groups. These include:

- What actions is your business taking to be more sustainable, whether it is environmental sustainability or reducing the cost of doing business?
- Aside from the overall state of the national economy, what are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?
- How do the region's policies affect you? What strategies would have a positive or negative impact? What policies or investments are most important?
- What outcomes are the most important to measure when it comes to evaluating choices for the region's future and potential impacts to local businesses and the region's economic growth and prosperity?

### Focus group materials

**Appendix B –** An overview of the Climate Smart Communities Scenarios Project framed for business leaders provides context for the work of the focus groups. Agendas for each of the focus groups are included with an outreach brochure, *Unique local approaches, one common goal* that provides more in depth information about the project including a timeline for engaging cities, counties and communities.

### Focus group feedback

**Appendix C –** Participants completed questionnaires about their business and shared additional thoughts and comments.

# Appendix A: Focus group summaries

CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

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# Business focus groups

**Date conducted** December 2012 and early 2013

**Focus group goal** The goal of the focus groups was to gain an understanding of what business owners viewed as the most significant challenges to the growth of their businesses and the region's future economic growth, and what they considered priorities for investment.

**Participants** Clackamas County Business Alliance, Westside Economic Alliance, Columbia Corridor Association, East Metro Economic Alliance, Portland Business Alliance Small Business Council, Home Builders Alliance of Metropolitan Portland and the Oregon City, North Clackamas, Tualatin, Wilsonville, and Greater Hillsboro chambers of commerce.

**Primary outcome** Participant feedback indicated that the most significant challenges to business growth stem from regulations and policies that hinder efficiency and competitiveness, the region's growing congestion, inefficient use of infrastructure and lack of available financing to improve the existing transportation system. They identified investment in infrastructure, business development and reliable transit options as essential for future business growth.

**Recommendations** Participants suggested potential metrics that Metro can use to evaluate the greenhouse gas reduction strategies and investments under consideration in terms of their ability to help existing local businesses grow and attract new businesses to the region. They highlighted the importance of implementing incentives and strategies that allow for flexibility while maintaining the viability of businesses in the region. Participants encouraged more coordination and cooperation between jurisdictions and developing consensus around a shared set of local and regional goals. They noted the importance of continuing to engage stakeholders in the planning process to carefully think through the consequences of different actions and to ensure support for the preferred scenario selected at the end of the process.

## Emergent focus group themes

### Challenges/barriers to future growth

- Congestion that is in part caused by people living and working in different communities
- Regulations that cause inefficiency and hinder competitiveness
- Inefficient use of the existing transportation system and infrastructure
- Transit connectivity and frequency (service does not connect people directly from home to work or the services hours available do not match the shift schedules for many employees)
- Lack of sustainable long-term financing for transportation – e.g., existing funding sources are not indexed to inflation (e.g., gas tax) or that are tied directly to job growth (e.g., payroll tax)
- Lack of coordination between public agencies
- Health insurance costs for employees
- Workforce does not have the education needed for the types of traded-sector jobs the region has been seeking
- Lower per capita incomes relative to other metropolitan areas
- More diversity of the "business ecosystem" needed – e.g., larger traded-sector businesses rely on more local small and medium-sized businesses

### Evaluation metrics

- Maintaining businesses' viability and competitiveness
- Attracting business to the region
- Consider whether the policy is practical and helps businesses be more sustainable
- Equity, access, mobility
- Cost of doing business
- Number and type of jobs created

### Investment priorities

- Investments in business development
- Creating reliable transportation options
- More coordinated and interconnected planning and implementation
- Maintaining and improving existing infrastructure
- Education, trade programs and training to attract traded-sector businesses and expand work force opportunities
- Expanding supply of development-ready land
- Attracting smaller businesses to business corridors to help expand services available to nearby neighborhoods

## For more information

Sign up to receive email updates about additional public events, forums, and web surveys at www.oregonmetro.gov/climatescenarios or by calling 503-797-1551.

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# Climate Smart Communities Scenarios Project
# Freight Business Focus Group – Summary

Tuesday, December 18, 2012
9:30 a.m. to 11 a.m.
Metro Council Chambers, 600 NE Grand, Portland, OR

### Meeting Attendance

Bill Burgel, Burgel Rail Group
James Dibble, Evraz
Sorin Garber, T.Y. Lin International
Gary Gaussoin, Silver Eagle Manufacturing
Jerry Grossnickle, Bernet Barge Lines
Bob Hillier, PBOT
Lee Johnson, Jet Expedited Transport
Alando Simpson, Rose City Disposal
Jeff Swanson, Portland State University

### Metro Staff

Dylan Rivera, Public Affairs Specialist, Transportation Planning

### Facilitation Team

Corky Collier, Columbia Corridor Association
Jeanne Lawson, JLA Public Involvement

## Welcome and Introduction

Corky Collier thanked everyone for coming. He made the following main points:

- A lot of attendees were involved with the development of the sustainable freight strategy.
- Today's meeting will try to build upon the knowledge in the strategy.
- The freight strategy had a city focus; today's meeting will expand these ideas to broader range solutions for the region.
- A good mix of people are in attendance. Some haul freight; others have freight hauled to them. Some are regional; some are city-based.

Jeanne Lawson introduced herself as the meeting facilitator. She said that attendees had been invited because everyone brings diverse backgrounds and a well-developed understanding of the subject in regards to freight. She said that the region has already reduced passenger vehicle miles driven per day since 1995 and that Metro's goal is to build on this.

Jeanne provided a brief introduction to the Climate Smart Communities project and said that Metro is convening several groups. They have met with health, environmental and environmental justice groups. This is the first of four business-focused groups.

Dylan Rivera reviewed the agenda and meeting materials. He underscored that the Climate Smart Communities project is not just about reducing emissions but about increasing overall community livability. One of the main themes for today is: What strategies do they think will work for freight? What can Metro and its partners do to help them move toward sustainability?

Everyone at the meeting introduced themselves.

***Question and answer***

- Bill Burgel asked whether this discussion includes Vancouver. Dylan replied that Metro is focusing on three counties in Oregon. Jeanne added that they would like to consider the urban area (which is difficult to define with boundaries), but that the project must satisfy Oregon legislative requirements.

## Discussion topic: What actions is your business taking to be more sustainable, whether it is environmental sustainability or reducing the cost of doing business?

A summary of responses included:

- More efficient engines
  - Including "Gen-Set" technology
- "Lean" thinking/efficiency
  - Requires understanding the difference between efficiency and economy
- Timing and synchronization
  - "Just-in-time" delivery
- Optimization requires a larger focus; not too local

***Efficiency***

Gary Gaussoin commented that efficiency is all about reducing waste, which includes understanding what waste is. He said that many things can be waste; for example, waiting, handling goods more than necessary, storing more inventory than is needed, etc. Anything that does not add value to the end customer is waste.

Efficiency is a complex issue. Discussion regarding efficiency included:

- Inefficiencies are always shifted elsewhere; for example, to the consumer.
- Need to consider a larger scale to make things the most efficient.
  - Do not want to achieve these goals at the expense of the broader region.
- Reducing miles travelled is not necessarily being the most efficient.
  - For freight, sometimes more miles is better.
- Just in time deliveries
  - This does not mean fastest, it means at the right time.
  - Limits waiting time.
  - If goods are delivered at night, staff need to be there to receive them.
  - For some, having full loads is the most efficient, not timing.
- Waiting and traffic congestion are huge inefficiencies.
- Synchronization is important.

- Must consider customer needs and the bottom line.
    - Sometimes, they require small, targeted deliveries.
        - More deliveries overall in smaller trucks may mean more emissions.
        - On the other hand, targeted deliveries may limit driver waiting time.
    - Considerations include the value of the transportation versus the value of the product (for example, would not ship load of rock overnight on a plane).
- Need to allow free movement of freight traffic.

## Discussion topic: Aside from the overall state of the national economy, what are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?

A summary of responses included:

- Inadequate infrastructure
    - Workforce issues
- Conflicting and inflexible policies
    - Outdated rules for redeveloping (brownfield)
    - Lack of practical experience in regulation
- Lack of room to expand
    - Sprawling street design
- Congestion and predictability
    - Slower can be ok as long as it is predictable
    - Need to allow free movement of freight
- Government not acknowledging waterways as freight routes

***Infrastructure and workforce issues***

James Dibble commented that Evraz's biggest challenges are inadequate infrastructure and lack of drivers.

Lee Johnson said that there serious workforce issues and that this should have been addressed long ago.

Gary Gaussoin said that the workforce pipeline primarily promotes university programs and intellectual jobs and has abandoned people with craft-oriented skills.

Jerry Grossnickle said that Bernet Barge Lines needs a lot more barge drivers and that this is a job that pays quite well.

***Conflicting and inflexible policies***

There was some discussion about restrictions that exist when trying to correspond to regulations, which often leads to a lack of efficiency. Also, that the rules themselves are not keeping up.

Bob Hillier said that some of the challenges in Portland are conflicting documents for city development. He gave the example of conflicting rules in designing a simple intersection in St. John's because it is in both a designated trucking district and pedestrian district.

Alando Simpson said that one of his biggest concerns is that bureaucrats just go by the book and do not take time to discuss solutions at a human level.

Gary Gaussoin said that enforcers often just follow the rules and lack real life experience in the field.

Sorin Garber provided two anecdotes about regulation processes being too cut-and-dry:

- New Seasons Market has been limited in the amount of parking spaces it builds due to regulation. Thus, it never has enough parking so residents hate having a New Seasons Market in their neighborhood.
- Widmer Brewpub was located in North Portland in an area that required curb extensions. However, the curb extensions made it impossible for its trucks to flow in and out of the facility. Now it has to use a facility in Wilsonville rather than North Portland.

Brownfield development was given as an example of inflexible policies. Lee Johnson said that he had cleaned up a brownfield site in six months, though there was a very long process of testing following this. Regulators could help him by speeding up the process of testing rather than following a rule that was established 15 years ago.

Corky Collier said that it is good to have some separation and conflict between the regulator and the regulated. On the other hand, they need to focus on compromises. He suggested that government should not aim for 100% compliance with rules, since this often is not achievable to begin with. Reducing compliance requirements (for example, to 97% compliance) would greatly increase flexibility.

***Congestion and predictability***

Alando Simpson said that, in order to get to a site fast and not to waste worker hours, Rose City Disposal waste trucks take Portland neighborhood streets rather than highways like I-84 – because the time for these trips is more predictable. I-84 is not predictable due to congestion.

Gary Gaussoin said that Silver Eagle Manufacturing trucks will burn more fuel and go slower on I-84 than by using Martin Luther King Boulevard. Also, its customers are happier with the predictable deliveries.

Lee Johnson said that this might be an issue that could be solved with customer communication. He said that when all of his customers wanted freight picked up at the same time, he explained to them that this would require more trucks and cost a lot more. They were happy to be flexible with pick-up times if they would get much cheaper rates.

***Waterways as freight routes***

Jerry Grossnickle said that the river system is a freight route regulated by the federal government and that he has found a problem with City of Portland recognizing this. For example, one area of the Willamette was filling with sediment and ships could not navigate safely around this, but environmental groups were against dredging. Nobody at the City was interested in taking up this

cause. Waterways need to be recognized as an important freight route, and also one that can be very efficient.

## Discussion topic: How do the region's policies affect you? What strategies would have a positive or negative impact?

Jeanne referred to the list of Climate Smart Communities project strategies and explained that the strategies are various approaches that would be considered and applied differently throughout the region. She asked – as the region's elected officials consider land use and transportation policies and investments, what would be helpful or challenging for future growth?

A summary of responses included:

- Resource allocation
- Land costs and real estate
    - Industrial land supply
- Freight route protection
    - Roads, rail, waterways
- Parking shortage
- Density
    - Means more, smaller deliveries
- Mixed use development
- Congestion
    - The last mile
- Funding technology and equipment solutions
    - Diesel retrofitting
- Intelligent Transportation Systems (ITS)
    - Low cost, high benefit
    - Synchronize lights
- Recognizing differences between freight and commuter traffic
- Depolarizing issues around transportation and freight
- Recognizing the cost of inefficient policies

***Resource allocation***
Bob Hillier said that elected officials need to decide how to allocate resources, including dollars and staff.

***Protecting freight routes***
Sorin Garber gave examples of San Francisco/Oakland and Seattle/outer areas, where land in the major cities was made more attractive to residents and less attractive to freight. Freight was forced to move elsewhere.

James Dibble said that this region is blessed with good river access, as well as north-south-east-west rail and highway access. And yet, the region prices industrial land in such a way as to drive business away. Seattle and Tacoma are not able to expand, but Portland could grow bigger industrially if it wanted to.

Lee Johnson said that this region used to be known for freight and now freight is not as important. He said that they limits are put on freight, then customers will go where they can find the service they need (for example, Los Angeles).

Jerry Grossnickle said that environmental regulations on the river would cut of freight.

***Congestion***
Gary Gaussoin said that when traffic is congested and trucks are idling, it is bad not only for business but also for greenhouse gases.

***Mixed use***
Gary Gaussoin said that the idea of mixed use design is ok for light manufacture, but not so good for industrial. He said that current industrial areas need to be protected. He said that the more mixed use areas are promoted, the more there is a feeling of commercial versus residential.

Corky Collier said that strategies for commuters are different than for freight, and strategies for industrial are different than for commercial.

***Funding technology and equipment solutions***
Sorin Garber said that equipment capital cost is a big issue and that programs should focus more on equipment rather than getting people out of cars. He said the diesel retrofit program is not funded well enough.

Bob Hillier noted California's laws helped improve the rail fleet because they require certain kinds of locomotives.

Gary Gaussoin said that new equipment does not always work as well when first introduced. He said that freight is not "one size fits all." He said instead of requiring specific technology, Metro should try to encourage things that have economic benefit and people will serve themselves and follow the positive behavior, as well.

Jeff Swanson said that Schnitzer Steel bought 30 locomotives for scrap metal a couple of years ago. The locomotives were manufactured in the early 1970s and were very inefficient. Fuel cost savings made it very attractive for companies to replace them because repayment on the new, $2.5-million engines was less than 18 months. He said the decision to buy newer, efficient locomotives was driven by economics and the cost of doing business, but it had a tremendous environmental benefit. He said that Metro needs to figure out how to monetize environmental benefit.

***Freight versus commuter/passenger traffic***
Gary Gaussoin said that many people think diesel engine efficiency is bad, however the majority of emissions come from passenger cars.

Corky Collier said that trucks and commuter cars are using the same pavement so they are often put in the same category, but they are very different. He said it is a cost to the community when

he drives to a meeting, but it is a benefit to the community when industry hauls freight. He said Metro should make a clear distinction between commuters and freight.

Jeff Swanson said that caution should be used to avoid a war on commuters mentality because the workforce must get to work for the supply chain to work efficiently.

***Vilification and depolarizing issues***
Gary Gaussoin said that there is a lot of vilification in "green" discussions.

Bob Hillier said that, working for the City of Portland, he hears a lot of anti-truck sentiment. He said this is a scapegoat and that there should be education around this.

***The cost of inefficient policies***
James Dibble said that if the cost of freight goes up (due to congestion, etc.), then a company's area of delivery goes down.

Sorin Garber said that freight is about the cost of goods. Freight is not going to go away because things are made more difficult for the industry; the extra cost will be passed onto consumers.

## Discussion topic: Evaluation – how should Metro measure potential strategies?

Jeanne explained that Metro will be identifying three strategies that they will test for six months prior to choosing a preferred approach. Metro wants input from the business communities on ways they can measure how strategies are working.

A summary of responses included:

- Monetize strategies and environmental benefits
- Land use
    - Industrial corridors
    - Industrial land supply
    - Monetize time and cost of commuting
- Equity
    - Cost
    - Distance
- Metrics to consider:
    - Predictability
    - Velocity
    - Access
    - Mobility
    - Wages and economic prosperity
    - Loss of service / reduction in mobility
- Consider vehicle miles traveled (VMT) as a metric
    - Consider hours of travel, not just VMT
- Cost of congestion
    - Revisit study
- Use performance measures

- Consider return on investment

***Industrial land supply***
There was some discussion that the government should maintain the necessary industrial land supply and make sure there is access for the work force to get there.

There was also discussion about the need to monetize the reasonable length of time spent for freight and commuters.

Jeff Swanson said that industrial land supply can be an issue of equity. He gave the example: If industry moves to Clark County, the people who work in manufacturing have to commute to Clark County.

***Wages and economic prosperity***
Bob Hillier said that a goal should be to increase wages in trade sector jobs. He said this would best be done through efficiency rather than regulation; jobs will be created because infrastructure is there and business is doing well.

Corky Collier said that economic prosperity feeds into many of the other goals, including equity and clean air.

***Vehicle miles traveled (VMT)***
There was some discussion that the evaluation of road networks has recently been converting from a level of service metric to VMT, but there was disagreement as to whether this is the most valuable metric.

Bob Hillier and James Dibble said that railroads use VMT as their number one metric.

Sorin Garber said that VMT has to do with how successful land use policies are. He suggested a better metric would be vehicle travel hours or hours spent in vehicle.

***Performance measures***
Gary Gaussian said that the strategies listed are not performance measures. He said the strategies should define the end goal rather than defining a specific method. He said this would allow for much more creativity in the methods used to achieve this goal, as well as the ability to measure performance toward the goal.

***Defining return on investment***
Sorin Garber said that strategies need to define the returns on investment; what exactly are the expected benefits?

## Additional comments

- Bob Hillier offered some advice from his work on the Sustainable Freight Strategy: Focus on what you can control. What can be done at our jurisdictional level?
- Gary Gaussoin commented that rules should make it hard to do the wrong thing.

- Sorin Garber made a comment that being sustainable or “climate smart” must be equitable to the bottom line and customer needs.
- Sorin Garber suggested that some of those present could put on a presentation to the Mayor to make him more aware of these issues.

## Thank you and next steps

Dylan Rivera wrapped up the meeting, reminding the group that Metro will be conducting more focus groups in the next month or so. They will have an opt-in survey and Metro would like for them to join that panel and discussion. The region’s political leaders will get together in April to give Metro direction on three strategies to test. There will be further discussion in 2014 to decide on the best scenario moving forward.

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# Climate Smart Communities Scenarios Project
# East Metro Business Focus Group – Summary

Wednesday, December 19, 2012
10:00 a.m. to 11:30 a.m.
Gresham City Hall, 1333 NW Eastman Parkway

### Meeting Attendance

Ken Anderton, Port of Portland
Ron Cazares, FedEx
Kathy Clevenger, Microchip Technology Inc.
Dan Corcoran, McDonald Wetle Roofing
Dave Earnest, NACCO Materials Handling Group
Dave Eatwell , West Columbia Gorge Chamber
Steve Entenman, Harper Houf
Alison Hart, Gresham Area Chamber of Commerce
Matt Miller, Gresham Sanitary
Sue O'Halloran, Kohler Meyers O'Halloran

### Metro Staff

Dylan Rivera, Public Affairs Specialist, Transportation Planning

### Facilitation Team

Travis Stovall, East Metro Economic Alliance
Jeanne Lawson, JLA Public Involvement

## Welcome and Introduction

Travis Stovall thanked everyone for coming and said he partnered with Metro on this event because regional policies and investments help shape transportation infrastructure. He acknowledged that many of the people in attendance worked on the East Metro Connections Plan. Today's meeting will build on those conversations and think about how things might play out at a regional scale. East Metro projects that also meet goals of the Climate Smart Communities project may be able to make a stronger case for funding from the region.

Jeanne Lawson introduced herself as the meeting facilitator. She introduced the Climate Smart Communities project and desired outcomes.

Dylan Rivera explained that today's meeting is about how Metro can combine these strategies to form the best solution for the future – and what the business impacts will be. One of the main themes for today is: What can Metro and its partners do to address the charge from the legislature while supporting economic prosperity?

Everyone at the meeting introduced themselves.

## Discussion topic: What actions is your business taking to be more sustainable, whether it is environmental sustainability or reducing the cost of doing business?

A summary of responses included:

- Sustainable business parks
- Livability and its connection to sustainability
    - Living near work
    - Jobs, payroll, tax base
    - City codes
- Local sourcing
    - Cut transport costs and environmental impacts
- More efficient vehicles
    - Changes to fleet
    - Some technologies work better than others
        - Electric vehicles
        - Natural gas vehicles
        - External combustion engines
        - Hydraulic assist
    - Appropriate technology depends on each business's needs
    - Problem with capacity / weight load of some new vehicle technologies
    - Challenges with financing
    - New technology for trucks and airplanes
- Freight movement
    - Routing trucks to maximize efficiency
- Consumption reduction goals and recycling
    - Electricity monitoring
    - Cardboard, plastics
- Sharing monitoring findings with employees at all levels

***Livability and its connection to sustainability***

Dave Eatwell said that the West Columbia Gorge Chamber has set up the New Work Program to help workers find affordable and suitable housing near their work, near transit and within walking distance of many amenities. This is a free program and offered to individuals through local businesses. The major challenge they face in this program is employer resistance.

***Local sourcing***

Dave Eatwell said that the West Columbia Gorge Chamber is currently working on a program to assist manufacturers in sourcing materials locally. This takes time and distance out of final products.

***More efficient vehicles***

Dave Earnest said that NACCO Materials Handling have developed vehicles that use gas, diesel, electricity, and propane. They are currently developing a more efficient diesel engine. He said

that businesses that operate in closed environments or under the public eye, like theirs, have incentives to make changes towards greener technologies.

Ken Anderton said that the Port of Portland has been transitioning its fleet to part-electric. The port also is retrofitting a 1920s dredge with a clean diesel engine.

Matt Miller said that Gresham Sanitary is familiar with making trucks quicker and more efficient and that they were the first refuse company in Oregon to have a natural gas garbage truck. He said they have a two-fold reason for making changes to their fleet. The first is policy-driven: the City of Portland put out an efficiency mandate. Second, new trucks are more efficient. They chose natural gas powered trucks because diesel trucks with new efficiency filters do not work for garbage trucks.

Ron Cazares said that FedEx is working on reducing fleet sizes and is using new engines from Boeing. They are not yet able to use electric vehicles.

A number of participants have found that the new technologies do not suit their businesses' needs or cannot outperform the current vehicles.

Dan Corcoran said that no alternative fuel vehicles can handle the weight that they haul. This means that the cost-to-fuel savings ratio is a wash.

Travis Stovall said that Dan Corcoran's business, McDonald Wetle Roofing, has 55 vehicles on the road that currently get 8 mpg. They are struggling with the idea of switching to the Mercedes Sprinter vans due to the challenge of financing a whole new fleet of vehicles. Their management is very supportive of sustainable initiatives, but many banks do not see the benefit to capital.

***Consumption reduction goals and recycling***
Ron Cazares said that FedEx uses a lot of electricity. They put a lot of effort into reducing this, including measuring kilowatts per hour on a daily basis. They also put an emphasis on recycling and reducing material consumption, including paper and plastic.

***Sharing monitoring findings with employees at all levels***
Ron Cazares said that measuring electricity helps raise awareness and in itself helps to reduce usage. FedEx shares its monitoring data with every employee and is very open about its monitoring and goals.

## Discussion topic: Aside from the overall state of the national economy, what are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?

A summary of responses included:

- Transportation
    - Moving materials and crews
    - Looking at future of roadways
        - Traffic flow for 223rd

- Financing difficulties and return on investment timeframes
    - Fleet changes
    - Building retrofits and new development
- Business case for sustainability
    - Market acceptance; business prejudice
    - Must show return on investment, not simply environmental benefits
    - Interstate and international competition
- Factors that drive efficiency
    - Regulations
    - Technology problems (filters)
- Livability
    - Living and working in the same area
    - Mixed-use developments

***Transportation***
A number of participants noted that traffic flow on main arteries (particularly 223rd) is a big concern. Choke points and intersections are common issues.

Dan Corcoran said that transportation is the most difficult issue for McDonald Wetle Roofing. He said there are no large roofing companies in Seattle because there is no way to move materials around. He has found that in Oregon, moving materials and people to jobs is becoming more and more prohibitive.

Ron Cazares said that efficient transportation of goods is FedEx's biggest problem. They have departments dedicated to traffic patterns and routing. He wants to Metro to consider traffic patterns and movement of fright in and around cities.

Dave Earnest said that he is concerned about future of the roadways and the kind of traffic flow that his fleet will experience on 223rd.

***Financing difficulties and return on investment timeframes***
Steve Entenman said that many projects start with very good intentions in regards to sustainability, but expectations are lowered when they find out how expensive it is and how long the it takes to make a return on investment.

Sue O'Halloran said that retrofitting commercial buildings is very difficult because the owner must put a lot of money up front and wait a long period of time to get the credits/return. She thinks this is an issue that could be relatively easy to resolve, though there is currently no alternative.

Ken Anderton said that paybacks are often 20 to 30 years for LEED-certified buildings. He said that sometimes tenants are unwilling to pay loading for a LEED-approved space, which increases payback time. He said that some residential buildings are able to do this better and wrap it into financing and show lower monthly costs. He said that some places, such as Utah, have resources that help fill out tax credits – but this is not as common in Oregon.

***Business case for sustainability***
Ken Anderton said that sustainability is seen as having a "green" undertone rather than an economic one. At the Port of Portland, they try to show the economic benefit. They must have market acceptance and be able to show that following sustainable principles is good business.

Dave Eatwell said that they do not mention sustainability in their New Work Program because it has a negative connotation – they emphasize that employees are happier, healthier and more productive when they live close to work.

***Livability***
Sue O'Halloran said that it is important to be able to live and work in the same area. Mixed use developments are one way to achieve this, though financing these projects is close to impossible. She said that this has always been the case, but is even more difficult in the current economy.

Travis Stovall said that a fundamental underlying issue is the need for workforce–development balance and making communities more desirable for people that work there.

## Discussion topic: Looking at the strategies presented, what impressions do you have?

A summary of responses included:

- Housing
  - Replacing mobile home parks with affordable worker housing
- Travel routes
  - Mapping apps to save fuel, reduce trip time
  - Better wayfinding
- Bikes and pedestrians
  - More routes
  - Safety issues
  - Bike storage
  - Freight and bikes
- Transit service
  - Increased service
  - Access to stops from industrial centers
- Congestion
  - 223rd
  - Clear up choke points
- Online retail

***Housing***
Dave Eatwell said that East Metro has a number of very inefficient mobile home parks. He said they are depreciating every day, many of the structures are old, and a program to replace these with affordable, worker cottage housing would be a great step forward.

***Travel routes***

A number of participants noted that travelers (car, bike, truck) often take or suggest routes that are not as efficient as others. Education around this (such as improved wayfinding signage) could help.

Ken Anderton noted that mapping a better route for fuel mileage or biking is often overlooked. Perhaps government can work with major mapmakers to come up with specific routes?

***Bikes and pedestrians***
Kathy Clevenger said she is a bike commuter and thinks the biggest issue is safety. She said that in winter most people commute in the dark, and many in the rain. Also, bike commuters get "stuck" on certain streets and are not able to turn safely because traffic patterns are not very good.

Alison Hart said that there are not many bike-friendly routes in the East Metro area – especially down by Sandy and around industrial areas. The roads are not safe enough for those interested in alternate transportation. She said that it would take a lot of work to change this.

Matt Miller said that the lack of safe bike and pedestrian pathways is a business cost/risk – inadequate sidewalks and bike lanes make freight-related business much more dangerous.

A number of participants thought that bike lockers may encourage people to commute by bicycle. Dave Earnest said that his company has just installed bike lockers. He said that it is a good incentive and employees appreciate it.

Sue O'Halloran said it could be good to require bike parking facilities in buildings of a certain size.

***Transit service***
A number of participants noted that access to transit stops is prohibitive in many industrial areas. Ron Cazares said that FedEx's closest bus stop is across a field and not accessible by sidewalk. Dave Earnest said his facilities do not have a public transit stop nearby.

***Congestion***
Dan Corcoran said that clearing up choke points that happen every day (such as those on 223rd) could achieve significant emissions reductions.

***Online retail***
Ron Cazares said that e-tail (online commerce) could have a significant impact on reducing travel and emissions. He said that travel time spent "shopping around" is reduced and that deliveries are more targeted and allow for smaller sprinter vehicles.

## Discussion topic: Of the strategies presented, are there any that Metro should be cautious about?

A summary of responses included:

- Pricing

    - Competitive global market
    - Price of business also includes cost of deliveries
    - Tolls may not be effective
- Infrastructure
    - Large problems may take a lot of time and be complicated to fix
- Keep in mind where people live
    - Most of East Metro workers do not live in the area
    - Increasing number of commuters from the east
- Focus on low-hanging fruit

***Pricing***
A number of participants considered pricing a dangerous lever because it can act on many levels of business. Also, it can cause difficulties for businesses competing in a competitive global market. Tolls may decrease some business costs, but could also increase the price of in-bound goods.

Kathy Clavenger said that the biggest concern for Microchip Technologies is economic competitiveness with overseas competitors. She gave the example that a tax on gas could force them to build something in Asia rather than Oregon.

***Infrastructure***
Alison Hart said that approximately 85% of people who work in Gresham do not live in the city. She said that charging tolls or taxes is not going to fix the problem or stop people from driving. First, infrastructure must be improved.

***Focus on low-hanging fruit***
Dan Corcoran recommended that Metro focus on low-hanging fruit (i.e. projects with the fastest or easiest results). He said that no commerce takes place on bicycle or transit, and that fixing choke points could have a large impact on emissions.

## Discussion topic: Evaluation – how should Metro measure potential strategies?

A summary of responses included:
- Business costs
- Travel times (time is money)
- Outmigration
- Evaluation timeframes

***Outmigration***
Travis Stovall said that outmigration as a key issue. He said if people lived closer to the communities where they work, a lot of the other problems will be resolved.

***Evaluation timeframes***
Alison Hart said that infrastructure and education are large, complex problems and would be very hard to evaluate within a period of six months.

Kim Ellis talked about Metro's goals in regards to evaluation. Part of Metro's process will identify a monitoring system to track state, regional and local actions, and report back to decision-makers on potential benefits and costs. This will be more about modeling rather than monitoring outcomes within the six months. Outcome monitoring will come later.

## Thank you and next steps

Dylan Rivera wrapped up the meeting, reminding the group that Metro will be conducting more focus groups in the next month or so. They will have an opt-in survey and Metro would like for them to join that panel and discussion. The region's political leaders will get together in April to give Metro direction on three strategies to test. There will be further discussion in 2014 to decide on the best scenario moving forward.

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# Climate Smart Communities Scenarios Project

## Clackamas County Business Focus Group – Meeting Summary

Thursday, February 28, 2013
7:30 a.m. to 9 a.m.
Clackamas County Business Alliance
365 Warner Milne Road, Suite 202, Oregon City

## Meeting Attendance

Chris Brehmer, Providence Health Systems
Duke Castle, The Castle Group
Greg Chaimov, Attorney at Law
Amber Holveck, Oregon City Chamber of Commerce
Cedomir Jesic, Cardno/WRG Design
Maureen Parkin, Parkin Electric
Ernie Platt, Home Builders Association of Metro Portland
Chip Sammons, Holistic Pet Center
Char Shinn, Oregonians Credit Union
Jerry Turner, Pioneer Pump

## Metro Staff

Kim Ellis, Principal Transportation Planner
Robin McArthur, Planning Director
Erin O'Reilly, Communications and Public Involvement Intern
Patty Unfred, Program Communication Manager

## Facilitation Team

Kim Parker, Clackamas County Business Alliance
Jeanne Lawson, JLA Public Involvement

## Welcome and Introductions

Kim Parker welcomed everyone. She said that regional chambers of commerce helped bring this diverse group together. Representatives of North Clackamas and Oregon City Chambers are present.

Jeanne Lawson introduced herself as the facilitator of the meeting. She provided some background to the project, explaining that Oregon had passed legislation to reduce greenhouse gases from transportation. Metro's goal with this project is to find policies around transportation and land use can affect and reduce greenhouse gases.

Patty Unfred talked about the purpose of the project. The state passed legislation in 2009 requiring the Portland metropolitan region to reduce greenhouse gas emissions from cars and small trucks by 20% from 2005 levels. The Climate Smart Communities project's goal is to find a community approach to this. Goals include: growing great communities; being leaders on climate change; providing benefits for everyone; growing the economy; and providing clean air and water. Patty said that vehicle efficiency will achieve part of the 20% reduction. The goal of these community meetings is to talk about how to achieve the rest. She said there had been two previous business meetings with the freight industry and East Metro area, and three upcoming meetings with Westside Economic Alliance and Tualatin, Hillsboro and Wilsonville chambers, the Portland Business Association and the development industry.

Patty said that the Climate Smart Communities project aims to not start from scratch, but instead build on what communities have done or are doing. Metro wants to hear from today's group ideas on what Metro should think about and measure, as well as ways to make sure the policies are not harming business but helping businesses in the region create jobs and remain economically competitive.

Everyone at the meeting introduced themselves. Chris Brehmer noted that he works for a traffic engineering firm in Portland, but is representing the Providence Medical Group at this meeting.

## Discussion topic: What actions is your business taking to be more sustainable, whether it is environmental sustainability or reducing the cost of doing business?

A summary of responses included:

- Encouraging employees/customers not to drive
    - Bus passes to employees
    - LED lights to employees
    - Bicycle facilities
    - Fuel-efficient company vehicle
    - Large campuses – TDM, shuttles
- Reducing work- and service-related travel
    - Working remotely
    - Video conferencing
    - Dispatching employees directly from home to site
    - Scheduling by area
    - Providing services locally (e.g. increasing local health care resources)
    - Sales employees based regionally to reduce travel

- Use of internet and technology
    - In-field technology to reduce paperwork
    - E-statements
    - E-marketing
    - Online services
    - Dispatch technology
    - Electronic filing
    - Paperwork scanned
- Reducing use of resources
    - Two-sided printing
    - LED lights
    - Reducing waste (paper, water, etc.)
- Recycling programs
    - Buy local campaign – incentives
    - Supporting bike loans
- Supporting local transit, e.g. Wilsonville

The group also discussed challenges/barriers to sustainable initiatives that they would like to address:

- Barriers to public transportation use
    - Lack of or infrequent transit service
    - Transit connectivity issues
    - Type of business dictates feasibility of transit
    - Employees come from long distances
- Barriers to recycling
    - Difficult or cost-prohibitive in some circumstances (e.g. not able to recycle wood with nails in it)

***Initiatives – specific comments***

Greg Chaimov said that his business provides bus passes to employees and does not provide parking.

Char Shinn said that the Oregonians Credit Union's sustainability initiatives have been largely market-driven, e.g. such as e-statements. A lot of initiatives are to avoid making customers visit a branch, such as deposits by smart phones and other mobile applications. Others are efficiency-related. All paperwork is now scanned, which gives all branches instant access to information, reduces paper usage and reduces trips to pick up paperwork from branches.

Chris Brehmer said that each of Providence's large hospital campuses have a transportation management plan. Sometimes Providence partners with TriMet, sometimes they run a shuttle to local transit center. At the highest level, Providence is trying to provide more resources within the community such as clinics, and to focus on preventative care.

***Barriers – specific comments***

Jerry Turner said many Pioneer Pump employees come from a distance so it is impractical to take public transportation.

Cedomir Jesic said his business's location on Sylvan Hill makes it inconvenient for mass transit. Bus service is limited and the nearest light rail station is one mile away.

Chip Sammons said he lives in an area with no bus service. All his employees drive to work. His business focuses on sustainability in other ways, but is stuck when it comes to transportation.

## Discussion topic: Aside from the overall state of the national economy, what are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?

A summary of responses included:

- Policies that hinder competiveness
- Increasing congestion
    - Need reliable trips by car and for freight
    - Costs businesses or clients
- Need for better and more widespread high-speed internet
    - Will allow for more remote working, such as video conferences
- Availability of financing to invest in technology or efficiency

***Specific comments***

Jerry Turner said that the more efficient engines mandated by the federal government cost a lot more and can't be used in other countries. This hinders international competitiveness and creates need for outsourcing.

Amber Holveck said that though the Oregon City Chamber of Commerce has taken steps to reduce paperwork, there are four member printing businesses that are currently struggling. There is a catch-22 for the Council; they have to try to support everyone.

Cedomir Jesic said two things could reduce use of single-person vehicles: 1) access to efficient and reliable transportation, and 2) access to reliable and inexpensive high-speed internet.

## Discussion topic: Provide input on land use and transportation strategies being considered.

This discussion included three prompt questions:

- What public policies or investments could be helpful to the future growth of your business?

- What public policies or investments are most important to implement in the next 5 years to help improve the region's business climate and support prosperity? Next 10 years?
- What public policies or investments could create challenges for the future growth of your business?

A summary of responses included:

- Need more coordinated and interconnected planning
- Look for consistency in policy, while allowing for autonomy in different regions
    - Policies that satisfy different needs of urban and rural areas
    - Regulations vary by jurisdiction; inconsistent policies are a problem
    - Sometimes there is conflict across departments
- Policies are not getting people to work close to where they live
    - Workers are driven by employment availability
    - Business location driven by cost and codes, not location
- Codes do not allow home offices
    - Lack of public support for allowing home businesses (particularly neighborhood associations)
    - Codes vary by city, county, unincorporated areas
    - Managers need face-to-face time; can't work from home
- Need investment in business development
- Need reliable transportation options
    - Less congestion, more reliable trips by car and for freight
    - Ability to move goods by road and through ports
    - Wilsonville is an example of public transportation success
    - Invest in infrastructure (roads, bridges, etc.)
- Need to support local participation in global economy
- Need to support innovation
- Must respond to market needs; cannot let targets drive land use policies
- Generational issues
    - Younger people less likely to drive – need to look at trends

***Specific comments***

Char Shinn said that there are too many layers of planning. There needs to be one overall plan that can make everything more coordinated and interconnected.

Cedomir Jesic said he finds it difficult to comply with different sets of regulations (between counties/cities, even between departments within jurisdictions). For example, even trying to implement better storm water standards is very difficult.

Ernie Platt said that people in Wilsonville commute elsewhere and people from elsewhere fill the jobs in Wilsonville.

Greg Chaimov said that Milwaukie needs family-wage jobs so people can work there. He thinks if there were jobs available, people would live and work in Milwaukie.

Cedomir Jesic said that businesses will occupy the place where it is least expensive to do business.

Ernie Platt said that land use regulations should allow people to work from home and telecommute. Numerous City and County codes do not allow for home businesses. For example, a business cannot have customers come to their house and cannot have more than normal domestic traffic.

Greg Chaimov said that he recently served on a city council that decided whether to allow businesses in residential areas, however the majority of constituents did not want this.

Cedomir Jesic said that businesses do not want to locate or invest in an area where they cannot get goods in and out reliably. Need reliable ports and highways.

Chris Brehmer said one impediment to locating a major Providence campus in Happy Valley is lack of transportation infrastructure.

Ernie Platt said that Wilsonville has been very successful in operating a community transportation system and that this could be looked to as a model.

Ernie Platt said that Metro should approach issues from a market standpoint; this is what the development community does. Do not do anything before the market is ready for it.

Duke Castle said that communities and business need to take into account the generational issue. Younger people have higher rates of bicycle and Zip Car use, and lower rates of vehicle ownership. They look at cars as a bad investment and make decisions on where they live based on this. They represent a significant market segment.

## Discussion topic: Evaluation – how should Metro measure potential strategies?

A summary of responses included:

- Consider whether businesses will make more or less money
- Consider whether the policy will attract business to the region
- Consider whether it fosters innovation or hinders it
    - Ensure policies do not define a process, that they allow flexibility to reach a defined end goal
    - Provide rewards for innovation
- Consider whether the policy is practical and helps businesses be more sustainable
    - Example of LEED certification process being cost-prohibitive

***Specific comments***

Greg Chaimov said that an evaluation metric for potential strategies should be whether businesses are making more money or less. He will not care whether emissions are reduced or not, as long as he does well economically.

Cedomir Jesic said that Metro should consider whether policies will attract business to the region or push them away. When a new business locates in an area, a range of other businesses benefit.

Duke Castle said that the Natural Step model takes a non-regulation approach; it defines the end goal but allows businesses to define how to achieve it. Policies should reward innovation that helps move towards the goal and provide flexibility in approaches to get to the goal.

Chris Brehmer said that, anecdotally, a lot of his development clients want to save money and be more sustainable, however they will not pursue LEED certification because it is so expensive. Even though they are working towards sustainability, they do not get recognition, whereas those with LEED certification do.

## Discussion topic: What strategies for investment would be consistent with Clackamas county's needs and values (urban and rural)?

A summary of responses included:

- The public transportation system should be inter-modal with frequent service
- Investments should be used efficiently
- Help people understand the long-term vision
- Investment in new business supports existing businesses
- Balanced investment – not just light rail but roads
- Make sure needs of all parts of community are addressed
    - Each party should be able to see the benefit to them
- Define the audience
- Consider funding mechanisms based on beneficiaries
- Be specific about projects and deliver on them
- Terminology is sometimes a barrier (term "climate change" can turn people off)

***Specific comments***

Jerry Turner said that investments should be used efficiently. The rail station in Oregon City is an example of inefficiency. It is not used very often; if it was run by a private enterprise it would be rented or otherwise put to use.

Char Shinn said that the project team should have a PR/outreach plan to help people understand the vision of the project.

Chip Sammons said that Metro needs to respond to its audience. Many people in Clackamas County do not want light rail to be forced on them, but do want road improvements that will make business and personal trips faster and safer.

Greg Chaimov said that Metro should define their audience and make sure that everyone sees something in the package that will benefit them.

Cedomir Jesic said that people do not like paying for services they do not use (for example, paying for light rail in Oregon City when they live in Eagle Creek). Funding mechanisms should be considered under which people do not pay for services they do not use.

Ernie Platt said that there should be a public list of what Metro is planning to do and the associated costs. Metro should follow through on these plans in order to build credibility and allow for bigger changes in the future. The projects should be diverse geographically to gain support throughout the region.

Jerry Turner recommended using term "pollution control issues" instead of "climate change," which has negative connotations for some people.

## Thank you and next steps

Patty Unfred asked participants to leave their written surveys. For those that would like more time, the project team would be in contact via email to ask for additional thoughts.

Patty talked about the next steps. She said that the final decision on a scenario will be at end of 2014. Before that, Metro will do a public opt-in survey, and the project team would like for all present to participate. The region's political leaders will give Metro direction in May on three scenarios to test this summer. There will be further discussion in Fall 2013 and Winter 2014 to decide on the best scenario moving forward – it is likely to include elements from each of the three tested this summer.

Jeanne Lawson thanked everyone for their participation and adjourned the meeting.

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# Climate Smart Communities Scenarios Project

## Westside Business Focus Group – Meeting Summary

Wednesday, March 6, 2013
7:30 a.m. to 9 a.m.
Century Hotel, 8185 SW Tualatin-Sherwood Road, Tualatin

## Meeting Attendance

Ben Altman, SFA Design Group, LLC
Frank Angelo, Angelo Planning Group
Chris Clemow, Group Mackenzie
Cheryl Dorman, West Coast Bank
Teresa Dunham, Westside Economic Alliance
Allen Goodall, UPS, Inc.
Donna Ragan, TriQuint
David Stead, Langdon Farms
Peter Van Houten, EG Metals, Inc.

## Metro Staff

Ken Ray, Senior Public Affairs Coordinator
Kim Ellis, Principal Regional Planner
Erin O'Reilly, Communications and Public Involvement

## Facilitation Team

Linda Moholt, Tualatin Chamber of Commerce
Jeanne Lawson, JLA Public Involvement

## Welcome and Introductions

Linda Moholt welcomed everyone and explained the purpose of the meeting. The focus group is co-hosted by the Tualatin Chamber of Commerce, Westside Economic Alliance, Wilsonville Area Chamber of Commerce and Greater Hillsboro Area Chamber of Commerce. They are partnering with Metro in this meeting to provide input on land use policies and transportation investments. A main question for this group is: How can the region move freight and people, as well as keep beautiful neighborhoods? It is also important to support the Westside's strong manufacturing companies.

Jeanne Lawson introduced herself as the *facilitator* of the meeting. She provided some background to the project, explaining that Oregon had passed legislation to reduce greenhouse gases from cars and light trucks. Metro's goal with this project is to find policies around transportation and land use that will reduce greenhouse gases and help communities achieve their visions for growth and economic prosperity. Metro wants to hear from today's group about ideas on what Metro should think about and measure, as well as ways to make sure the policies are not harming business but helping businesses in the region create jobs and remain economically competitive. Metro has previously met with freight interests and East Metro and Clackamas County business groups.

## Discussion topic: What actions is your business or organization taking to be more sustainable, whether it is environmental sustainability or reducing the cost of doing business?

A summary of responses included:

- Use of technology to increase efficiency and reduce cost
    - Telematics – more efficient routing; reduction in miles traveled
    - Orion – increased driving efficiency; reduction in unnecessary vehicle servicing
- Pursuit of grants for sustainable initiatives
    - Transit planning
    - Electric vehicles
- Support of policies to address transportation issues
    - Reduce congestion
    - Improve transit, including carpools and vanpools
    - Encourage people to work near where they live (infrastructure)
    - Move freight more efficiently
- Encouragement of alternative transportation options
    - Staff bus passes
    - Commuting by bike
- Reduction of fuel use
- Use of alternatives to noxious chemicals
- Recycling
- No landfill policy
- End-of-life processing
- Reusable packaging

***Specific comments***

Linda Moholt said that Tualatin is pursuing grants from Metro's Regional Travel Options program to implement carpools and vanpools in order to reduce the use of single-occupancy vehicles. TriMet has told the City that a 5% single-occupancy vehicle reduction will help reduce congestion on Tualatin-Sherwood Road.

Allen Goodall said that UPS's most significant sustainability-related initiatives are efficiency in routing, packing and servicing. Improvements provide huge sustainability and economic benefits to UPS. For UPS, economic and environmental activities go hand in hand.

Peter Van Houten said that EG Metals will soon be the only certified end-of-life processing facility in Oregon.

## Discussion topic: Aside from the overall state of the national economy, what are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?

A summary of responses included:

- Regulations that cause inefficiency
- Lack of transportation infrastructure
    - No grid system on Westside; inadequate north-south connections
- Congestion is a major problem for freight and commuters
    - Wastes time
    - Idling increases pollution
    - Difficulty in moving freight (leads to early pick-ups and changing shift times)
- Lack of coordination between stakeholders
    - Local government and organizations not focusing on big picture
    - Higher level government not focusing on local implementation issues
    - Large shippers (such as FedEx/UPS) have control of the distribution networks
    - Coordination between manufacturers and shippers
- People do not live near where they work
    - Need good housing, schools and services to attract people to live closer to where they work
- Inefficient use of existing systems and infrastructure
    - Hillsboro Airport underutilized
- Challenges to transit
    - Difficulty in matching transit hours to manufacturer's shift schedules
    - Diversity of areas involved (75 zip codes represented by the work force in Tualatin)
    - MAX in Hillsboro not directly connected to places of work

***Specific comments***

Allen Goodall said that some policies appear to be a good idea from a high level but do not make sense and/or cause inefficiency/unintended consequences in implementation. To help with this, UPS has a manager tied to each legislator in order to provide input on how policies will play out in the real world.

David Stead said that I-5 is Langdon Farms' greatest asset and worst problem. It provides access to the facility, but congestion causes many problems.

Peter Van Houten said that EG Metals is located on the Westside because trucks have a hard time accessing Portland facilities; they are trying to attract customers from west of the US 26 tunnel.

Donna Ragan said the root cause of transportation problems is that people do not live and work in the same community. It would be better to build infrastructure (including executive housing and better schools) in the Westside, rather than spending money on the I-5 interchange to facilitate people commuting. The outflow of cash from Hillsboro due to people not living there is a problem.

Linda Moholt said that planning is complicated by the variety of different areas and needs. Tualatin's workforce includes 75 zip codes. This is true of many Westside areas.

Linda Moholt said that shift times are starting earlier due to earlier freight pick-up requirements ( caused by congestion). These shift times make workers unable to take transit. There is a flow-on effect.

Ben Altman said that night classes for students do not fit with times that transit is offered.

Donna Ragan said that the Hillsboro airport is underutilized. One of the reasons is lack of cooperation between large commercial distribution houses (FedEx, UPS) with local businesses.

## Discussion topic: Provide input on land use and transportation strategies being considered.

This discussion included three prompt questions:

- What public policies or investments could be helpful to the future growth of your business?
- What public policies or investments are most important to implement in the next 5 years to help improve the region's business climate and support prosperity? Next 10 years?
- What public policies or investments could create challenges for the future growth of your business?

A summary of responses included:

- Clearly state the problem that is being solved
- Focus on most important issues and solve them
    - Congestion
    - Lack of Westside grid system, including inadequate north-south connections
- Encourage cooperation between various jurisdictions
    - Focus on common goals between regional and local organizations
    - Make sure regional interests consider practical local issues
    - Help local governments and organizations to look at a broader regional picture
- Make sure adopted plans reflect what has been discussed with stakeholders
- Get buy-in
    - Help stakeholders understand the policies
    - Ensure policies make sense to those affected

    - Encourage self-implementation
    - Look at who gets regulated; will it be implemented fairly?
- Need appropriate infrastructure
    - Freight – The need to move goods will always be present
    - Housing and schools – Encourage people to live in the community where they work
    - Job/housing balance important
- Need to get serious about funding transportation infrastructure
    - Cannot address infrastructure needs without a funding structure
- Consider gas tax

***Specific comments***

Frank Angelo said that the reason that Westside congestion problems were not solved 20 years ago is because the problem was not clearly defined, and the argument shifted away from the core issues.

Frank Angelo said that lack of a Westside grid system, including a north-south connection, should be the main focus. The wide variety of strategies that Metro is considering could cause conflicting answers. Do not try to solve everything at once. Choose the most important issues and solve them.

Allen Goodall said that Metro should focus on high-level problems, particularly reducing congestion, and this will help solve other problems.

Cheryl Dorman said that she believes in empowering local government. However it is difficult for local organizations to keep a high-level view of what is best for the whole region. How can everyone collaborate without just protecting their backyards? An example of good collaboration is Wilsonville and Tualatin coming together recently over regional road planning.

Linda Moholt said that there needs to be a better filter process before plans are announced. She said that the Tonkin Ice Age Trail had good collaborative support until a concept map was presented that turned off a major player. There seems to be a disconnect between Metro and local issues.

Ben Altman said he thinks Metro's current efforts to engage local stakeholders are important to help Metro evaluate the options and consider what the outcomes of various policies will be. Getting buy-in down the road will also be very important. Metro should encourage self-implementation. If policies make sense to stakeholders, stakeholders can decide how to contribute to the goals. When a policy does not make sense to those affected, then businesses move elsewhere.

Chris Clemow said a more effective gas tax is needed that is better tied to infrastructure improvements. Gas tax is an effective carbon tax – one issue is that it is not indexed to inflation.

Ben Altman said that people choose where to live based on schools, neighborhoods and other things they want to live near, but work where jobs are available. He does not agree with congestion pricing, which penalizes people for doing what they have to do (i.e. get to work).

## Discussion topic: Evaluation – how should Metro measure potential strategies?

A summary of responses included:

- Will the strategy have a positive effect on the viability of existing businesses and overall economic viability of region?
- Will the strategy have unanticipated consequences?
    - In order to evaluate, Metro needs to understand the implications in detail
- Will the strategy get buy-in from all parties?
    - Is the strategy clear and does it make sense?
- Does the policy apply evenly across the board or does it penalize certain industries?

***Specific comments***

Ben Altman said that it is important for policy makers to think through unanticipated consequences of any policy. As is evidenced with Metro's mandate to conduct this current project, legislature often does not figure out how to implement; instead it simply passes high-level policy requirements.

Peter Van Houten said that stormwater is a critical issue for Hillsboro and some industries are more heavily regulated than others. Some, such as metal recyclers, are heavily regulated, whereas other polluters such as auto shops are not. The policies do not make sense. There need to be people that help make a connection between high-level regulation and work on the ground.

## Thank you and next steps

Jeanne said input from this meeting and other focus groups will be considered as Metro develops a scorecard and decides on scenarios.

Ken Ray talked about the next steps. More information will be coming over the next year and half. The final decision on a scenario will be at end of 2014. Metro has provided information about the opt-in survey and encourages everyone present to sign up.

Kim Ellis said that Metro will conduct an opt-in survey for the Climate Smart Communities project in early April. As part of the Climate Smart Communities summer evaluation, Metro will undertake technical modeling work as well as more small group discussions with community leaders on feasibility and unanticipated consequences.

Jeanne Lawson thanked everyone for their participation and adjourned the meeting.

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# Climate Smart Communities Scenarios Project

## Portland Business Alliance Small Business Council Focus Group – Meeting Summary

Wednesday, March 20, 2013
4:00 p.m. to 5:30 p.m.
Portland Business Alliance Conference Room,
200 SW Market St, Portland OR

## Meeting Attendance

Jeff Bodie, Jeffrey C. Bodie P.C.
Andrew Frazier, Frazier Hunnicutt Financial (Small Business Council chair)
Debbie Kitchin, InterWorks LLC
Pete Lennon, Lennon & Associates
Jason Little, PBA
Timm Locke, Pipeline PR & Marketing
Eric Maher, Northwestern Mutual
Char Shinn, Oregonians Credit Union
David Thompson, PBA

## Metro Staff

Ken Ray, Senior Public Affairs Coordinator
Kim Ellis, Principal Transportation Planner
Robin McArthur, Planning and Development Director

## Facilitator

Jeanne Lawson, JLA Public Involvement

## Welcome and Introductions

Jeanne Lawson introduced herself as the facilitator of the meeting. Everyone introduced themselves.

Jeanne provided some background to the project, explaining that Oregon had passed legislation to reduce greenhouse gases from cars and light trucks. Metro is working to define three approaches

and will evaluate how well they will work. This summer Part of this discussion is intended to elicit the ideas that will help them evaluate the strategies.

Ken provided more information on the project and said that Metro has previously met with freight interests; and East Metro, Clackamas County and Westside business groups.

There were a number of comments and questions:

- Pete Lennon asked whether the 20% reduction goal takes into consideration population growth. Kim Ellis replied that it does; it is a per capita reduction.
- Debbie Kitchin said that most strategies are focused on transportation, but not many on buildings, which can also reduce carbon emissions. Jeanne Lawson replied that the Legislature's mandate is for cars and light trucks, but acknowledged that it is difficult to divorce land use from transportation.
- Jeff Bodie asked whether Metro is considering incentives to encourage more businesses to get involved in clean energy/renewable energy? He has a client that re-refines oil and couldn't find any local incentives for them. Jeanne replied that the team will need to research this question and answer later.
- Pete Lennon said the current economy makes it unlikely that businesses will make improvement investments and that timing of these scenarios is very important. Is Metro being held to a strict timeline? Ken Ray answered that Metro has to adopt its scenario by 2014.
- Timm Locke said it seems like focusing on only cars and light trucks is too narrow a focus.

## Discussion topic: What actions is your business or organization taking to be more sustainable, whether it is environmental sustainability or reducing the cost of doing business?

A summary of responses included:

- Energy efficient buildings
    - Various driving factors, including sustainability, cost reduction, future cost certainty, tax credits and incentives
- Alternative modes of transportation to work
    - Various reasons for this
    - Cost of parking in Portland is a disincentive to drive
- Smarter routing

***Specific comments***

Debbie Kitchin said that InterWork's commercial and residential customers are interested in more efficient buildings. Reasons for this are varied; some interested for sustainability reasons, some to bring certainty about costs, some to reduce bills, some because of incentives and tax credits. She

said not everyone does it purely for economic reasons – for example many people install solar even though the financial return is limited; they do it to be more sustainable.

Debbie Kitchin said that InterWorks is using smarter scheduling to coordinate trips.

## Discussion topic: Aside from the overall state of the national economy, what are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?

A summary of responses included:

- Too much regulation
- Oregon's "business ecosystem" is not diverse or healthy enough
    - Not enough big businesses
- Difficulty attracting businesses/employers
    - Lower professional wages here than other metro areas
    - Shorter work weeks than other areas
    - Portland's proximity to nearby state with different taxes, rules, conditions
- Lack of talented workforce
    - Difficult to attract talent
    - Education system is not producing Oregon college graduates that have the skills needed; which affects the region's economic competitiveness
- System Development Charges (SCDs)
    - Expense
        - Expensive to explore projects
        - Sometimes SCDs cost more than project itself
    - Lack of coordination causes uncertainty
    - Often businesses/developers do not see benefits

***Specific comments***

Andrew Frazier said that Oregon is not attracting or retaining a healthy, diverse business "ecosystem" (mix of small, medium and large businesses). The downward trend is extremely worrisome. Oregon must find a way to fit in with corporate needs. This includes considering the tax situation and business climate in Washington (very close to Portland) and nurturing a more business-minded community. Need to encourage job growth in the right areas (medium to large businesses).

Timm Locke said that small/medium businesses depend on larger companies, and big companies rely on good economic environment.

Debbie Kitchin said that often businesses and developers are uncertain in how building codes will be interpreted. Many SDCs are developed in silos – transportation, sewer, parkland, etc. – and conflict with one another. SCDs that do not make sense create disincentives for improvements.

Sometimes SDCs actually cost more than the development itself. Also, businesses often do not see the value in these fees.

## Discussion topic: Provide input on land use and transportation strategies being considered.

This discussion included three prompt questions:

- What public policies or investments could be helpful to the future growth of your business?
- What public policies or investments are most important to implement in the next 5 years to help improve the region's business climate and support prosperity? Next 10 years?
- What public policies or investments could create challenges for the future growth of your business?

A summary of responses included:

- Enhance the business climate
    - Medium and large businesses are very important
    - Consider interrelationships between small and larger businesses
- Be careful not to raise costs for businesses
    - Hard to expect businesses in a down economy to invest in strategies
- Focus on policies that are "win-win"; have benefits to business and reduce carbon
    - Energy efficiency
    - Decreasing congestion
    - Traffic management
- Provide incentives rather than regulation
    - Make sure that actions are economically smart before promoting them
    - Be careful of permanent incentives; incentives should encourage uptake but must self-sustaining in the long run
- Encourage trends that are already happening
    - Community design, hybrid/efficient vehicles, telecommuting, internet shopping
    - Cannot force change; must be market-driven
- Provide resources on best practices and cost-saving measures
    - This will be especially helpful to small businesses
    - Free Energy Trust audits are a good example – they provide a menu of options to choose from
- Take advantage of "positive teachable moments"
    - Highlight business successes
- Consider how to move freight and cars more efficiently through all major corridors
    - Real-time traffic/accident/construction updates
    - Spreading traffic out, do not focus solely on I-5
    - Smarter routing/scheduling
- Support local business associations and neighborhood business corridors

    - Most rely on other nearby businesses and residents
- Look at buildable lot sizes
    - There are pluses and minuses to this
- Address reasons people do not use transit
    - Inconvenience, takes too long, too many transfers, reliability issues
    - Bike capacity on buses limits combing bike and transit trips
    - Long delays in building infrastructure (e.g. Portland-Milwaukie Light Rail has taken nearly 20 years from planning to construction)
    - TriMet funding or mismanagement means they do not encourage ridership
- Focus on areas of synergism – where various counties and areas can agree and move forward
- Articulate the problem Metro is trying to address and illustrate how it is being addressed
- Communicate with the business community; explain why and how strategies will better the economy

***Specific comments***

Timm Locke said Metro should try to enhance the business climate to attract more medium and large sized businesses. Do not focus on small businesses.

Debbie Kitchin said that Metro should provide incentives rather than regulation. Many people want to do these things; offering a tax credit or other incentive will help with uptake. She said there are many trends that people are already doing that can reduce emissions, such as telecommuting, purchasing hybrid vehicles and internet shopping. She said these should be encouraged and allowed to evolve over time, but cannot be forced – must be market-driven.

Timm Locke said to be careful not to become dependent on permanent incentives. Incentives should support ideas that are *first* – economically smart; *second* – that have a positive impacts.

Pete Lennon said that most of Lennon & Associates' clients are small employers, and any strategies that require investing at this point in time will be very difficult.

Debbie Kitchin said that Metro should provide best practices information and resources – this will be especially helpful to small businesses, since they do not have time to become experts on everything.

Timm Locke said that congestion is a major issue. Focus on traffic clogs, cleaner energy technology for vehicles, and incentives that make it possible for the small business community to make those changes.

Andrew Frazier said that spreading traffic out will help; do not focus only on I-5 (third crossing concept).

Pete Lennon said that reducing buildable lot sizes encourages more density within the city, but drives city prices up, which makes real estate unaffordable, particularly small and medium size businesses.

Andrew Frazier said that traffic could be reduced by focusing on neighborhood business corridors (work where you live; live where you work concept).

Jeff Bodie said to take advantage of teachable moments. Provide information in a way and at a time that businesses will be receptive to it.

Timm Locke said that Washington D.C. has very convenient, functional transit system and it is easy not to own a car there. It seems like Oregon takes a long time to do development (example being the PMLR).

Pete Lennon said that Metro should focus on synergism – areas where the various counties can come together on an issue and get collaborative support. The more Metro can move forward with agreed-on strategies, the more political clout they will have.

Jeff Bodie said that one problem is that the principle that is articulated is not supported by the actions. Need to come up with an action plan that shows how the action will be enacted will actually achieve the goals defined.

David Thompson said that the PBA has similar goals to Metro ("building a great community") but coming from a different angle: having employers and jobs is part of having "a great place to live." There is some resistance when it does not feel like a healthy economy is tied in to a project like this.

## Discussion topic: Evaluation – how should Metro measure potential strategies?

A summary of responses included:

- Consider whether the strategy attract business to Oregon
- Consider whether the strategy help businesses already here
- Consider whether the strategy increase the "business ecosystem" (i.e. attract mixture of small, medium and large businesses)
- Consider whether the strategy will accomplish the desired objectives
    - Use PBA benchmark surveys to help monitor progress
    - Plans often have great principles, but actions sometimes undermine those principals – need actions plans to support principles
- Consider whether a reduction in carbon emissions necessarily shows positive change
    - For example, unemployment decreases carbon emissions
- Consider whether the strategy will add burdensome regulation for businesses

***Specific comments***

Andrew Frazier said that an important evaluation criterion is whether the scenario hurts or help the business environment. Also, the preferred scenario selected at the end should clearly show how it will accomplish the objectives.

Eric Maher said that sometimes reduced emissions can be a sign of negative trends. For example, unemployment is naturally reducing carbon emissions.

Timm Locke said Metro should refer to benchmark surveys for business and emissions (PBA has done some). Use these to consider whether the strategies will move us in the right direction.

## Thank you and next steps

Ken Ray talked about the next steps. More information will be coming over the next year and half. The region's political leaders will give Metro direction in May on three scenarios to test this summer. There will be further discussion in Fall 2013 and Winter 2014 to decide on the best scenario moving forward. Metro will do a public OptIn Survey, and the project team would like for all present to participate. The final decision on a scenario will be at end of 2014.

Jeanne Lawson said that it is important for the OptIn Survey to represent a range of opinions, and Metro would like to encourage the business community to participate.

Jeanne thanked everyone for their participation and adjourned the meeting.

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# Climate Smart Communities Scenarios Project

## Residential Developers Focus Group – Meeting Summary

Friday, April 26, 2013
12:30 p.m. to 2:00 p.m.
Home Builders Association,
15555 SW Bangy Rd., Suite 301, Lake Oswego

## Meeting Attendance

Scott Morcom, WFG National Title
Jim Standring, Westland Industries
Steve Heiteen, Portland Remodel
Mimi Doukas, Venture Properties/Stone Bridge Homes Northwest
Karl Finkelnburg, The Legacy Group
Nathan Young, Nathan D. Young Construction
Justin Wood, HBA & Fish Construction
Drake Butsch, First American Title
Jim Chapman, Legend Homes
Dave Nielsen, HBA

## Metro Staff

Ken Ray, Senior Public Affairs Coordinator
Kim Ellis, Principal Transportation Planner
Robin McArthur, Planning and Development Director

## Facilitator

Jeanne Lawson, JLA Public Involvement

## Welcome and Introductions

Jeanne Lawson kicked off the meeting and everyone introduced themselves. She explained that this is the fifth business focus group for the Climate Smart Communities project.

Metro is working to define ways to reduce greenhouse gas emissions from cars and small trucks using land use and transportation strategies. Today, Metro would like to understand how the strategies could affect business vitality positively or negatively, and how the project could best support economic vitality.

Dave Nielsen noted that the residential development industry and Metro have been trying to work together more closely in the past years, and appreciated everyone's participating in the meeting.

Ken Ray provided a background of the project. By the end of 2014, Metro is required by the Oregon Legislature to come up with a preferred set of transportation and land use policies with the aim of reducing greenhouse gases from cars and light duty trucks. Metro is trying to keep an eye on how to sustain and create new great communities as well as improve economic development across the region as it aims to meet that goal. This is in line with Metro's six attributes of a great community, which include both leadership in climate change and economic prosperity.

Metro is on a good path toward meeting the targets in the 2040 Growth Concept. People in the metro area are driving 20% less per capita than people living in similarly sized metropolitan areas of the country.

Ken explained that Metro has conducted focus group meetings with the freight community, business groups across the region, and the Portland Business Alliance. The purpose of these focus groups is to understand business needs in terms of transportation infrastructure and to learn what businesses are already doing that may help the region meet the greenhouse gas emissions reduction goal. Metro will take the input from the business focus groups to help develop a Business Score Card to use to measure the affect of different combinations of strategies on businesses, freight movement and the region's economic prosperity.

There were a number of comments and questions:

- Dave Nielsen asked for clarification on where each of Oregon's six metropolitan areas are in meeting their targets. Ken and Kim Ellis responded that each of the regions have different targets. The Portland metro area is the first to work toward defining what it would take to meet its targets, and is the only area required to do this work and implement the region's preferred approach.

- Ken and Kim clarified the 20% reduction target. The Portland Metro region is required to reduce GHG emissions from cars and light duty trucks by 20% below what is already anticipated to be achieved through advancements in clean fuels and vehicle technologies, which means reducing those emissions to 1.2 metric tons per person by 2035. Metro estimates that the current plans and policies in place plus anticipated advancements in fuels and technology will get us to 1.3 metric tons per person by 2035. The question is how to achieve that last 0.1 metric ton reduction.

- Mimi Doukas commented that congestion likely plays a large factor in GHG emissions.

## Discussion topic: What actions is your business or organization taking to be more sustainable, whether it is environmental sustainability or reducing the cost of doing business?

A summary of responses included:

- Energy Star in homes
- Using alternative fuel vehicles
- Sustainable and energy-efficient technologies in homes

***Specific comments***

Jim Standring said that his company does Energy Star certifications, but customers do not know what that is and are not willing to pay extra for it. There needs to be education associated with the improvements, or else people don't want to pay for it even though it will save money in the long run. He also said that he purchased a flex fuel car, but there are very few places to buy the fuel for it.

Nathan Young said that his company bought some Ford Transits, but use is limited because diesel trucks are much better for hauling.

Dave Nielsen said that the payback period for investing in sustainable technologies is relevant to whether someone will buy the technology. Small priced items like furnaces need payback in one to two years, and high cost items need payback in five to seven years. Only a small percentage of people will buy sustainable technology for environmental reasons; the rest need to see monetized cost savings in a shorter timeframe.

Mimi Doukas added that there is a market component as well. Some buyers have discretion in spending and energy efficient systems must be marketed the right way to the right buyer.

Jim Standring noted that consumer habit is a factor as well. If somebody purchases an efficient home, they will not get the value out of it if they continue their habits from having lived in an inefficient home. The residential development industry is very heavily regulated. It is ahead of the market and buyers in terms of being able to offer efficient technologies, but unless there is a change in culture and an education component, such technologies are not successful.

## Discussion topic: Aside from the overall state of the national economy, what are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?

A summary of responses included:

- Congestion, especially during peak travel times
- Cannot use transit or smaller, more fuel efficient cars for this industry because of the need to haul materials and go to job sites
- Lack of jobs/housing balance in communities, as well as changing work patterns, which requires people to commute long distances and increases traffic
- Government mandates do not consider the market or financing realities
- Lack of quality jobs and burdensome government regulations disincentive large businesses from coming to Portland
- Aggregate of government fees and regulations

- Government regulations that conflict with one another. Government bureaus do not coordinate with one another in their mandates
- Land use shortage
- Metro too focused on urban and high density building in centers, while ignoring suburban and single-family home needs

***Specific comments***

Scott Morcom and others said that the transit travel times and congestion during heavy commute hours is a challenge and wastes time, fuel and produces emissions. Most people in the building industry cannot walk or bike to job sites because they may be far away from one another, and may need to haul materials. There are many professions that rely on traveling to job sites and will never be able to rely on transit.

Jim Standring said that parking requirements in high transit areas are a challenge. When a development project requires parking, it reduces the unit count and therefore affects the pro forma of the project. If we truly are going to help encourage transit behavior in urban areas that make sense, parking requirements and minimums need to encourage that as well.

Drake Butsch noted that good land use planning has led to mixed use areas, but many parts of town do not have such mixed use areas, so there is still a lot of commuting and driving to get to needed services or other destinations. Dave added that the future is unclear in terms of whether there will be reduced reliance on cars. Newer generations tend to change jobs frequently, so it is impractical to expect them to live near their places of work. Metro can create vibrant communities where people can live, shop and play—but whether they work nearby may or may not happen, given the amount people change jobs and the higher percentage of households where two or more people have jobs that may be in different areas.

Mimi commented that Metro can affect people's transportations some of the time, but it is unrealistic to expect people to be 100% car free.

Drake Butsch said one challenge is that jobs and housing growth are not in the same areas. We know that the jobs in the next 20 years are going to be on the West side, but that is not where we are putting growth. Jim Standring and Nathan Young agreed that, in order to reduce traffic, there needs to be a jobs/housing balance in communities. Congestion caused by this lack of balance leads to a lower quality of life.

Jim Standring commented that another challenge is that the government does a poor job of recognizing realities of market place. It makes mandates, but does not consider whether the market actually wants to buy what is being mandated, or whether a financer would finance it.

Steve Heiteen and Nathan Young agreed that that the biggest challenge is the lack of quality jobs. When people have good jobs, they can afford new or remodeled homes. Metro should work on doing everything possible to facilitate new, big businesses coming to Portland, such as opening up industrial lands and making regulations less burdensome.

Steve added that the aggregate of all of the regulations and fees builds up and makes it very difficult for businesses to operate. Governmental bureaus each work in their silo, and don't seem to see the

big picture of regulations and fees increasing across the board and across all bureaus. Dave added that fees and regulations sometimes negatively impact each other. An example is a mandate that requires higher density, another that requires greater tree cover, and another that encourages solar development; the three are in conflict. This all needs to be looked at holistically.

Mimi added that another challenge is that the area is facing a land use shortage.

Nathan Young and Karl Finkelnburg commented that Metro's philosophy focuses on urban areas and density, while excluding the needs of suburban areas. Residential development occurs in both urban and suburban areas, and both need to be taken into account. Metro also has a vision that "vibrant communities" focuses on high density living, but many people are happier in suburban areas with larger, single family homes and family size yards.

Drake Butsch commented that Metro should consider its transit investments. The purpose of light rail is to spur economic development, but it is very expensive. Bus Rapid Transit also spurs economic development, but at a fraction of the cost.

Dave Nielsen said that HBA is working to explore different GPS systems which can be used in delivery trucks to better manage their trucking routes based on congestion. If that kind of technology were used in the construction industry, it could reduce constructed-related transportation and be very helpful.

## Discussion topic: Evaluation – how should Metro measure potential strategies?

A summary of responses included:

- Government regulations limit consumer choice and do not allow for a free market
- Need a way to monetize the value of energy efficient systems
- Cost of operating downtown is very high
- Need for political will to get big employers and industry in Portland
- Measure the rate of homeownership
- Classification of land reserves
- Traditional financers will not finance high-density development
- Lawsuits that arise with high-density development

***Specific comments***

Steve Heiteen said that more government mandates would hurt the construction industry. Portland already has great water, air quality and trees. There is not a need for more restrictive regulations to promote a greener city. The market does better when there are fewer regulations. Regulations also limit consumer choice; government makes the choices instead of consumers.

Nathan Young said that it would be helpful to have a better way to monetize the value of an energy efficient home, which costs more in the short term, but brings value in the long term.

Mimi said that what is needed is a low unemployment rate, high average salary, high education level, and low congestion – if the region is able to achieve that, it will accomplish the other desired outcomes this project and other regional efforts have been working toward.

Drake Butsch commented that operating downtown is at a fragile tipping point. If the cost of operating downtown increased even just a little bit, his company would likely choose to not operate downtown at all. Vancouver and other outer areas have lower regulatory costs and easy, free parking, and they would choose to work there.

Dave said there is a lack of political ability to get big employers and industry to Portland. For example, despite the combined efforts of Metro, PBA, the Port and other groups, environmental interests stamped out the industrial lands legislation that Metro was supportive of.

Dave said that Metro should measure and set desirable outcomes for the rate of home ownership. Generally, more home ownership means better communities – more commitment to home maintenance/upkeep, engagement in schools, involvement in communities, etc. The homeownership rate has dropped and there are more apartments due to economic recession, but as we come out of this, we should be encouraging and making policies that help keep homeownership affordable. Karl Finkelnburg commented that some of the choice between home ownership and rentals is a market choice that has little to do with what Metro does.

Robin McArthur explained that Metro is not only concerned about housing in centers and transit corridors. The 2040 Concept Map shows that a large swatch of the region is protecting single-family home areas. Metro tries to create sufficient land for single family homes. Dave responded that the key is in how Metro classifies land reserves coming in and whether that balance is able to be kept in new UGB areas.

Karl Finkelnburg commented that the focus should be on fixing the land use process rather than focusing on our carbon footprint. A land shortage is coming up.

Jim Chapman said that traditional financers will not fund huge high-density housing complexes. This has a huge impact on home builders because we cannot get loans to build the type of units that are mandated, and so we have to get very creative in trying to spread the cost. The addition of growth boundaries has not provided more space in which to do traditional housing, which can be financed.

Dave added that building high density structures also implicates lawsuit problems. No matter how well constructed homes are, the common ownership nature of condos and townhomes invites class action lawsuits. This is not a problem Metro can solve, but as the economy improves, it will be a challenge again for the industry.

Dave asked whether the transportation pricing strategies will raise taxes on those who already pay them or whether they are meant to be revenue neutral while capturing fees from people who are not using gas-fueled vehicles. Kim Ellis responded that, because the gas tax is not keeping pace with inflation and less revenue will be raised as vehicles become more fuel efficient, Metro is looking at different ways to fund the system. Metro is just studying pricing strategies, not necessarily endorsing them. A couple of members added that bicyclists and electric vehicle owners do not pay

the gas tax, but benefit from the system.

## Thank you and next steps

Ken Ray talked about the next steps. Today's input will help Metro develop the Business Scorecard. Metro will define the three selected scenarios this spring and test them in the summer, 2013. The results of the analysis will be released in the fall 2013. Metro will keep participants informed as the project moves forward.

Robin ended the meeting by thanking everyone for their time.

# Appendix B: Focus group materials

**Climate Smart Communities**
**FOCUS GROUP | Winter 2013**

# Climate Smart Communities Scenarios Project:
## An overview for business leaders

### A diverse, growing region

We all want a region that provides good jobs, livable neighborhoods, safe and reliable transportation choices that connect people to jobs and goods to market.

Nearly two decades ago, the leaders in this region set a wise course for growth with the adoption of the 2040 Growth Concept – a plan for how the region grows over the next 50 years. The 2040 vision calls for a coordinated approach to land use and transportation planning that makes the most of the urban land we have by encouraging growth in downtowns, main streets and employment centers, while preserving farms, forestland and natural areas.

### New challenges call for new choices

Since the 1995 adoption of the 2040 Growth Concept, we've created an enviable quality of life, but an unstable economy, dwindling resources and rising energy prices have brought new challenges.

- In 2009, the Legislature passed **House Bill 2001**, directing the Portland metropolitan region to develop a preferred scenario for reducing greenhouse gas emissions from cars and small trucks. The region must adopt a preferred scenario by **December 2014.**
- Rising energy prices and a growing desire to live in walkable neighborhoods with services close by make it essential for us to create communities where people can work, shop and play near where they live.

Because we've planned for the future, we're not starting from scratch – but we have choices to make about where we go from here.

### Our land use and transportation choices

Working together with city, county, state, business and community leaders, Metro is researching the most effective combinations of policies and investments to help us create great communities and meet Oregon's targets for reducing greenhouse gas emissions. Through 2014, Metro and local partners will study scenarios that represent what the region could look like in 2035 depending on the policy choices that are made.

The goal of the project is to select a preferred combination of land use and transportation strategies and investments that will keep our communities livable and prosperous, while also helping our region meet state targets to reduce greenhouse gas emissions from light duty vehicles.

## Many ways to reduce emissions

Many policies or investments could reduce emissions. Here are some of the strategies under consideration:

### COMMUNITY DESIGN

Walkable communities, vibrant downtowns, job centers, housing and transportation options, walk and bike-friendly facilities, frequent transit service, urban growth boundary

### PRICING

Gas tax, mileage-based fees, parking fees and pay-as-you-drive insurance options

### MARKETING AND INCENTIVES

Education and marketing programs that encourage efficient driving, car sharing and use of travel options

### ROADS

Clearing breakdowns and crashes quickly, adding capacity and using ramp metering, traffic signal coordination and traveler information to help traffic move efficiently

### FLEET

Replacing older cars with more efficient new ones; shifting from light trucks to cars

### TECHNOLOGY

More fuel-efficient vehicles, cleaner fuels, use of hybrid and electric vehicles

## Have your say

We need your help thinking through the possible choices we can make and how these choices could affect your business and the region's economy.

### Upcoming activity:

**Winter 2013**
Opt In survey to gather public input

**May**
Summit for leaders to discuss scenario options

**Summer**
Study three scenario options

**Fall-Winter**
Regional conversation to discuss findings and develop draft preferred scenario

**Fall 2014**
Public review of preferred scenario

**December**
Reach agreement on preferred scenario

Metro

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**Climate Smart Communities**
**FOCUS GROUP | December 2012**

# Business focus group:
## How can the region create business friendly, climate smart communities?

### Freight and freight-dependant industry representatives

9:30 to 11 a.m., Dec. 18, 2012
Metro Council Chamber
600 NE Grand Ave.

### Today's agenda

**Welcome 9:30 a.m.**
Corky Collier, Columbia Corridor Association
Jeanne Lawson, JLA Public Involvement

**Introductions 9:35 a.m.**
Focus group participants

**Part 1 Questions 9:40 a.m.**
**Identify current actions and challenges to balancing sustainability and economic growth**

Focus group participant discussion

**Part 2 Questions 10:10 a.m.**
**Provide input on land use and transportation strategies being considered and outcomes to evaluate**
Focus group participant discussion

**Part 3 Questions 10:50 a.m.**
**Brief written questionnaire**
Participants record information about their business and share additional thoughts and comments

**Wrap up and next steps 10:55 a.m.**
Jeanne Lawson

**Why are you here today?**
Your input will help Metro and regional partners consider the effects on business and the economy that could result from land use and transportation strategies intended to reduce greenhouse gas emissions from cars and light trucks.

COLUMBIA CORRIDOR ASSOCIATION

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**Climate Smart Communities**
**FOCUS GROUP | December 2012**

# Business focus group:

## How can the region create business friendly, climate smart communities?

### East Metro Business Focus Group

10 to 11:30 a.m., Dec. 19, 2012
Oregon Trail Room
Gresham City Hall
1333 NW Eastman Parkway

### Today's agenda

**Welcome 10 a.m.**
Travis Stovall, East Metro Economic Alliance
Jeanne Lawson, JLA Public Involvement

**Introductions 10:05 a.m.**
Focus group participants

**Part 1 Questions 10:10 a.m.**
**Identify current actions and challenges to balancing sustainability and economic growth**
Focus group participant discussion

**Part 2 Questions 10:40 a.m.**
**Provide input on land use and transportation strategies being considered and outcomes to evaluate**
Focus group participant discussion

**Part 3 Questions 11:20 a.m.**
**Brief written questionnaire**
Participants record information about their business and share additional thoughts and comments

**Wrap up and next steps 11:25 a.m.**
Jeanne Lawson

**Why are you here today?**
Your input will help Metro and regional partners consider the effects on business and the economy that could result from land use and transportation strategies intended to reduce greenhouse gas emissions from cars and light trucks.

East Metro Economic Alliance

Metro

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**Climate Smart Communities**
**FOCUS GROUP | February 2013**

# Business focus group:
## How can the region create business friendly, climate smart communities?

### Clackamas County Business Focus Group

7:30 to 9 a.m., Feb. 28, 2013
Clackamas County Business Alliance
365 Warner Milne Road, Suite 202, Oregon City

### Today's agenda

**Welcome 7:30 a.m.**
Kim Parker, Clackamas County Business Alliance
Jeanne Lawson, JLA Public Involvement

**Introductions 7:35 a.m.**
Focus group participants

**Part 1 Questions 7:40 a.m.**
**Identify current actions and challenges to balancing sustainability and economic growth**
Focus group participant discussion

**Part 2 Questions 8:10 a.m.**
**Provide input on land use and transportation strategies being considered and outcomes to evaluate**
Focus group participant discussion

**Part 3 Questions 8:50 a.m.**
**Brief written questionnaire**
Participants record information about their business and share additional thoughts and comments

**Wrap up and next steps 8:55 a.m.**
Jeanne Lawson

**Why are you here today?**
Your input will help Metro and regional partners consider the effects on business and the economy that could result from land use and transportation strategies intended to reduce greenhouse gas emissions from cars and light trucks.

Clackamas County Business Alliance
Lake Oswego Chamber of Commerce
North Clackamas Chamber of Commerce
Oregon City Chamber of Commerce

Metro

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**Climate Smart Communities**
**FOCUS GROUP | March 2013**

# Business focus group:
## How can the region create business friendly, climate smart communities?

### Westside Business Focus Group

7:30 to 9 a.m., March 6, 2013
Century Hotel,
8185 SW Tualatin-Sherwood Rd., Tualatin

### Today's agenda

**Welcome 7:30 a.m.**
Linda Moholt, Tualatin Chamber of Commerce
Jeanne Lawson, JLA Public Involvement

**Introductions 7:35 a.m.**
Focus group participants

**Part 1 Questions 7:40 a.m.**
**Identify current actions and challenges to balancing sustainability and economic growth**
Focus group participant discussion

**Part 2 Questions 8:10 a.m.**
**Provide input on land use and transportation strategies being considered and outcomes to evaluate**
Focus group participant discussion

**Part 3 Questions 8:50 a.m.**
**Brief written questionnaire**
Participants record information about their business and share additional thoughts and comments

**Wrap up and next steps 8:55 a.m.**
Jeanne Lawson

**Why are you here today?**
Your input will help Metro and regional partners consider the effects on business and the economy that could result from land use and transportation strategies intended to reduce greenhouse gas emissions from cars and light trucks.

Greater Hillsboro Area Chamber of Commerce
Tualatin Chamber of Commerce
Westside Economic Alliance
Wilsonville Area Chamber of Commerce

Metro

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**Climate Smart Communities**
**FOCUS GROUP | March 2013**

# Business focus group:
## How can the region create business friendly, climate smart communities?

### Portland Business Alliance Small Business Council
4 to 5:30 p.m., March 20, 2013
200 SW Market St., Suite 150, Portland

### Today's agenda

**Welcome 4 p.m.**
Andy Frazier, Small Business Council Chair
Jeanne Lawson, JLA Public Involvement

**Introductions 4:05 p.m.**
Focus group participants

**Part 1 Questions 4:10 p.m.**
**Identify current actions and challenges to balancing sustainability and economic growth**
Focus group participant discussion

**Part 2 Questions 4:40 p.m.**
**Provide input on land use and transportation strategies being considered and outcomes to evaluate**
Focus group participant discussion

**Part 3 Questions 5:20 p.m.**
**Brief written questionnaire**
Participants record information about their business and share additional thoughts and comments

**Wrap up and next steps 5:25 p.m..**
Jeanne Lawson

**Why are you here today?**
Your input will help Metro and regional partners consider the effects on business and the economy that could result from land use and transportation strategies intended to reduce greenhouse gas emissions from cars and light trucks.

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**Climate Smart Communities**
**FOCUS GROUP | April 2013**

# Business focus group:
## How can the region create business friendly, climate smart communities?

### Home Builders Association of Metropolitan Portland
12:30 to 2 p.m., April 26, 2013
15555 SW Bangy Rd., Suite 301, Lake Oswego

### Today's agenda

**Welcome 12:30 p.m.**
Dave Nielsen, Chief Executive Officer, HBA
Jeanne Lawson, JLA Public Involvement

**Introductions 12:35 p.m.**
Focus group participants

**Part 1 Questions 12:40 p.m.**
**Identify current actions and challenges to balancing sustainability and economic growth**
Focus group participant discussion

**Part 2 Questions 1:10 p.m.**
**Provide input on land use and transportation strategies being considered and outcomes to evaluate**
Focus group participant discussion

**Part 3 Questions 1:50 p.m.**
**Brief written questionnaire**
Participants record information about their business and share additional thoughts and comments

**Wrap up and next steps 1:55 p.m..**
Jeanne Lawson

**Why are you here today?**
Your input will help Metro and regional partners consider the effects on business and the economy that could result from land use and transportation strategies intended to reduce greenhouse gas emissions from cars and light trucks.

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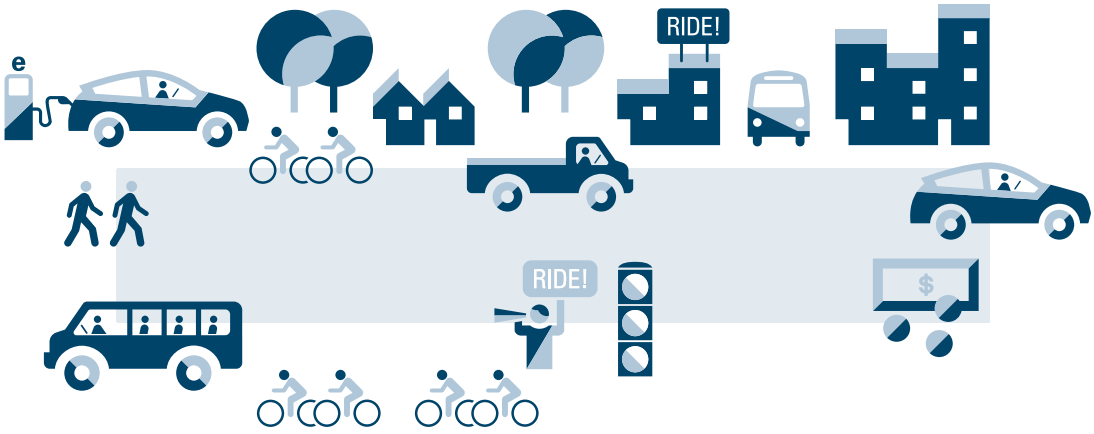
CLIMATE SMART COMMUNITIES SCENARIOS PROJECT




# UNIQUE LOCAL APPROACHES, ONE COMMON GOAL – to make our region a great place to live in the years ahead

From downtown Gresham to Orenco Station to Oregon City, the region is rich with unique places to live where parks, schools and jobs are close by. As a result, we drive 20 percent fewer miles a day than most people in urban areas our size, so we spend less time in traffic and more time with our families and friends.

The things we have done to make this a great place are more important now than ever. The same efforts that helped protect farmland and revitalize downtowns and main streets over the last generation are essential to meeting statewide climate goals for the years ahead. Rising energy prices, a state mandate to reduce pollution and a growing eagerness to live in walkable neighborhoods make it essential for us to create places for people to work, shop and play – without having to drive far away. With federal and local resources lagging, we need to work together to make our visions a reality.

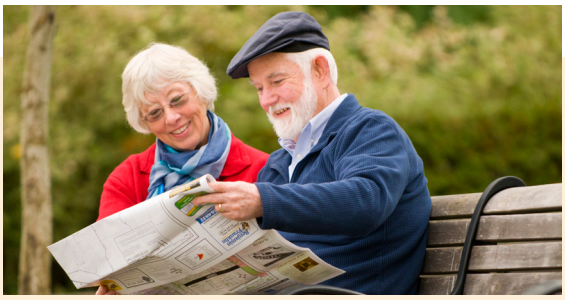
The Climate Smart Communities Scenarios Project will help the region's cities and counties define their goals for the next 20 years. It will show how those goals might help the region reduce carbon emissions. There are many ways we can reduce pollution, create healthy, more equitable communities and nurture the economy, too. Investing in main street businesses, expanding transit service, encouraging electric cars and providing safer routes for biking and walking can all help.

A one-size-fits-all approach won't meet the needs of our diverse communities. Instead, a combination of many local approaches, woven together, will create a diverse yet shared vision for how we can keep this a great place for years to come.

Working together with city, county, state, business and community leaders, Metro is researching the most effective combinations of policies and strategies to help us meet Oregon's targets for reducing greenhouse gas emissions.

MAKING A GREAT PLACE

**www.oregonmetro.gov/climatescenarios**



## COMMUNITY BENEFITS, MANY OPTIONS EMERGE FROM EARLY RESEARCH

**Metro staff researched land use and transportation strategies that reduce emissions in communities across the nation and around the world. In December 2011, this work was summarized in a toolbox describing policies for community design, pricing, marketing and incentives, roads, fleet, and technology.**

These strategies also provide many community benefits:

- Fewer emissions means less air pollution.
- Investment in main streets and downtowns can boost job growth, save public money and make it easier to get to work and entertainment.
- Safe places to walk can improve public health, increase transit use and lower obesity rates.
- Creating vibrant commercial areas combined with transportation options can increase dollars spent locally while taking cars off the road.

Working closely with cities and counties, Metro tested 144 combinations of strategies, called scenarios. No single strategy was enough to meet the region's target of 20 percent lower emissions by 2035, but more than 90 combined scenarios met or surpassed it.

## Encouraging findings from early results

- Current local and regional plans provide a strong foundation for meeting our carbon emissions reduction target.
- The cities and counties in our region are already implementing most of the strategies under consideration to achieve other economic, social or environmental goals.
- If the state achieves its own expectations for advancements in cleaner fuels and more efficient vehicles, the local plans and policies already adopted in our region will get us very close to our emissions reduction target.

## STRATEGIES EVALUATED

### COMMUNITY DESIGN

Walkable communities, vibrant downtowns, job centers, housing and transportation options, walk and bike-friendly facilities, frequent transit service, urban growth boundary

### PRICING

Gas tax, fees and pay-as-you-drive insurance

### MARKETING AND INCENTIVES

Education and marketing programs that encourage efficient driving, car sharing and use of travel options

### ROADS

Clearing breakdowns and crashes quickly, adding capacity and using ramp metering, traffic signal coordination and traveler information to help traffic move efficiently

### FLEET

Replacing older cars with more efficient new ones; shifting from light trucks to cars

### TECHNOLOGY

More fuel-efficient vehicles, cleaner fuels, use of hybrid and electric vehicles

# LOCAL INGREDIENTS FOR A REGIONAL VISION

With many options available to the region, the natural next step is to test some potential future ways the region could grow and invest, called scenarios, to see what might work best. In building those alternatives in 2012, Metro will start local, gathering the most recently adopted community plans and visions to serve as the foundation of each scenario. Efforts such as the Beaverton Civic Plan, McLoughlin Area Plan, South Hillsboro Plan, AmberGlen Community Plan, Portland Plan, Gresham Downtown Plan and transportation system plans from across the region are the ingredients that will make up the alternatives we consider going forward. A work group of local planning staff continues to help guide the project.

Since community investment is such a powerful tool for helping grow jobs and protecting our clean air, the region will consider a range of investment levels - low, medium and high – to demonstrate what communities and the region can accomplish on our current path with existing resources and tools, and what could be accomplished with more. Current local plans will comprise the medium option. Each option will consider how we can stretch our dollars for the greatest impact on the things that will make the region a more prosperous, healthy and equitable place for all.

Through a series of case studies, community partner workshops and a regional summit, Metro and local elected officials will decide what should go into the three scenarios. All will be tested in 2013, so cities, counties and community partners can decide which elements of the three should go forward into one scenario for the region to adopt in 2014. As with the 2035 Regional Transportation Plan and the 2040 Growth Concept, the region's preferred scenario will vary from place to place within the metropolitan area, responding to local goals.

One scenario – many options for local communities.

## WHAT'S NEXT?

- Start with common vision
- Shape scenarios to test

## Driving less, saving money

By driving just four fewer miles a day, the average car owner driving 10,000 miles a year can save $1,126 a year, according to AAA.

## About Metro

Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy, and sustainable transportation and living choices for people and businesses in the region. Voters have asked Metro to help with the challenges and opportunities that affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to providing services, operating venues and making decisions about how the region grows. Metro works with communities to support a resilient economy, keep nature close by and respond to a changing climate. Together we're making a great place, now and for generations to come.

Stay in touch with news, stories and things to do.

www.oregonmetro.gov/connect

**Metro Council President**

Tom Hughes

**Metro Council**

Shirley Craddick, District 1
Carlotta Collette, District 2
Craig Dirksen, District 3
Kathryn Harrington, District 4
Sam Chase, District 5
Bob Stacey, District 6

**Auditor**
Suzanne Flynn

# HELP SHAPE THE FUTURE OF YOUR COMMUNITY

In 2013-14, Metro will engage cities, counties and regional partners in evaluating three scenario options. Leaders from across the region will decide what should be included in a preferred scenario in 2014.

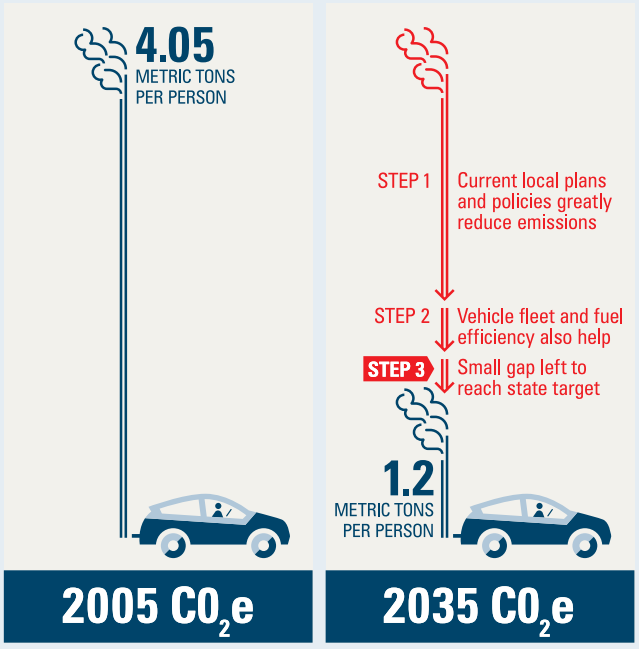
**STAY INFORMED:**
www.oregonmetro.gov/climatescenarios

For email updates, send a message to climatescenarios@oregonmetro.gov

# OREGON'S EMISSIONS TARGET FOR 2035 FOR THE PORTLAND AREA

The state Land Conservation and Development Commission established a 2005 baseline for the Portland area: 4.05 metric tons annual, per capita roadway greenhouse gas emissions. (One metric ton $CO_2$ equals 112 gallons of gasoline.)

The 2035 target calls for cutting emissions to 1.2 metric tons. Implementing our local plans and realizing advancements in cleaner fuels and more efficient vehicles reduce emissions to 1.3 metric tons. Additional policy actions will be needed to reach the target (Step 3, on right).




$CO_2e$ stands for the variety of greenhouse gases included in the 2035 target, combined and expressed as an equivalent amount of $CO_2$.

optin ONLINE PANEL

**STAY CONNECTED** Sign up to receive periodic updates about the scenarios project at **www.oregonmetro.gov/connect.**

**SHARE IDEAS** Share ideas or suggestions with your local elected officials and your Metro Councilor.

**OPT IN** Voice your opinion by signing up for Metro's online opinion panel at **www.optinpanel.org.** Upcoming survey topics will include the scenarios project.

Metro

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Spring 2013

# CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

# TIMELINE FOR ENGAGING CITIES, COUNTIES AND COMMUNITIES

| Description | Participants | Time frame |
|---|---|---|
| **Technical work group**<br>Meets regularly to review and provide input on analysis | City, county, TriMet, state and Metro planning staff, and community representatives | Ongoing throughout project (2011-2014) |
| **Accept Phase 1 Findings Report** | Metro Policy Advisory Committee, Joint Policy Advisory Committee on Transportation, Metro Council | January 2012 |
| **Discuss findings with local leaders**<br>Presentations at city councils and county boards | Metro councilors and staff, and city and county elected officials | Jan.-Sept. 2012 |
| **Scorecard workshops and focus groups**<br>Identify evaluation criteria and outcomes to measure in scenario analysis | Leaders representing the public health, equity and environmental justice, environmental and business communities | Spring-Fall 2012 and Winter 2013 |
| **Case studies**<br>Examples to showcase communtiy visions and strategies that have been implemented to achieve them | Beaverton, Clackamas County, Gresham, Hillsboro, Portland and Wilsonville | 2012-2013 |


Continued on reverse …

| Description | Participants | Time frame |
|---|---|---|
| **Southwest Corridor land use vision work sessions** Use Envision Tomorrow software to assess and affirm community visions for future development; results will inform Southwest Corridor and scenario projects | Elected officials and planning staff from SW Corridor partners | Fall 2012 |
| **Community partner work sessions** Use Envision Tomorrow software to assess and affirm community visions for future development; results will inform three scenario options | Planning staff from communities around the region | Nov. 2012-Jan. 2013 |
| **Online engagement** Opt In survey tool for input on strategies being considered for preferred scenario | General public | March 2013 and Winter 2014 |
| **Community partner workshops** Scope implementation of three scenarios | Elected officials and community leaders | Summer 2013 |
| **Discuss findings with local leaders** Findings report released for regional discussion of benefits and tradeoffs; develop preferred scenario | JPACT, MPAC, Metro Council, other elected officials and community leaders | Oct. 2013-March 2014 |
| **Online public comment period** 45-day public comment period on preferred scenario | General public, elected officials and community members | Fall 2014 |
| **MPAC, JPACT, Metro Council** Select a preferred scenario in Dec. 2014 | MPAC, JPACT, Metro Council | Dec. 2014 |

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# Focus Group questions

Your name: _____ Affiliation: _____

Please use the space below to provide additional answers to the questions that were discussed at today's event:

1. What **actions is your business taking** to be more sustainable, whether it's environmental sustainability, or reducing the cost of doing business?

2. Aside from the overall state of the national economy, what are the **most significant challenges** to the future growth of your business and future economic growth and prosperity in the region?

3. As the region's elected officials consider **land use and transportation policies and investments** that could reduce carbon emissions:

    - What public policies or investments could **be helpful to the future growth of your business?**

    - What public policies or investments are **most important** to implement **in the next 5 years** to help improve the region's business climate and support prosperity? **Next 10 years**?

    - What public policies or investments could create **challenges for the future growth of your business**?

4. If you could tell policymakers across **the region how best to evaluate** whether they're helping or hurting business and the econo**my with these sorts** o**f policies, w**hat would you tell them? **What are the most important outcomes to measure** when it comes to evaluating choices for the region's future and the potential **impacts** to local businesses and the region's economic growth and prosperity?

5. **Which of the following best describes the industry or sector in which your business operates?**

___Professional Services ___Manufacturing ___Construction ___Retail
___Distribution ___Transportation ___Insurance ___Software
___Food Service ___Real Estate ___Fabricated Products ___Health Care
___Finance ___Printing and Publishing ___Biotech
___ Other: Please specify_____

6. **How many full-time personnel are currently employed by your business in the Portland area?**

___1 to 5 ___6 to 19 ___20-99 ___100-499 ___500+

7. What else would you like the region to consider as this effort moves forward?

8. Do you have other suggestions for how to effectively engage with the business and freight community on this project?

9. Would you like to receive periodic email updates about this project?

___ YES
___ NO

**Thank you very much for participating in today's discussion!**

# Appendix C: Focus group feedback

# Focus Group questions

Your name: Jeff Swanson Affiliation: Adjunct Faculty, Portland State University; Economist/Consultant in private practice (I will respond to these questions drawing on perspectives of my consulting experience and occupational experience in supply chain management and freight transportation)

Please use the space below to provide additional answers to the questions that were discussed at today's event:

1. What **actions is your business taking** to be more sustainable, whether it's environmental sustainability, or reducing the cost of doing business?

   Firms I've worked with, both as an employee and as a consultant, have undertaken projects primarily for their profitability benefits (this could be described as being fiscally sustainable). Non-monetized sustainability benefits such as environmental and/or social sustainability, are recognized (if at all) secondarily to the profitability contribution of a project.

   An example of a major capital investment program that yielded significant profitability and environmental sustainability benefits (with which I am personally familiar) involved replacement of a fleet of locomotives at a regional short-line railroad. The older locomotives were replaced by newer, higher-horsepower locomotives, reducing fuel consumption per ton-mile. The new EMD SD70 locomotives were equipped with modern particulate emission control systems, meeting EPA requirements. These replaced EMD SD 45-2 locomotives, manufactured in the early 1970s. Each new SD70 represents an investment of approx. $2.5 million, an investment reportedly returned within 18 months on fuel consumption savings alone.

   The primary driver of this capital investment program was profit motive/efficiency, but yielded significant environmental benefits. The challenge for both business/industry and policy-makers seems to be in developing a way to monetize these benefits (considered generally as "non-market") in some way.

   Speaking generally, firms are constantly working to improve inventory velocities, reduce handling, and otherwise make supply chain operations more efficient to improve profitability first, and secondarily to realize some kind of environmental sustainability benefit.

2. Aside from the overall state of the national economy, what are the **most significant challenges** to the future growth of your business and future economic growth and prosperity in the region?

   Pertaining to the Metro Region, the feedback I receive from clients with respect to the most significant impediments to business growth, and regional growth and prosperity are:
   - Inadequate supply of industrial lands

- Challenges with respect to remediation and redevelopment of brownfield sites, particularly with regard to financial risks and uncertain investment returns (including major cleanup issues such as Portland Harbor Superfund process)
- Transportation system congestion (increasing) and variability/volatility with respect to freight transit/dwell times and labor force commute times (lack of predictability for freight transportation; lack of reliability for labor force and production efficiency)
- Uncertainty with regard to local land use regulation (City of Portland), projected changes over time, and how these may impact the performance of long-run, multi-stage capital investment projects

3. As the region's elected officials consider **land use and transportation policies and investments** that could reduce carbon emissions:

    - What public policies or investments could **be helpful to the future growth of your business?**

      My clients indicate that adding lane capacity, clearing accidents/incidents/breakdowns rapidly, investing in wider deployment of ITS and other system management tools, and addressing specific system bottlenecks (such as on-ramps and merges on the interstate system) would be the most beneficial transportation policies. Land use policies should establish industrial sanctuaries in order to limit encroachment/conflicting uses and protect freight movement/system capacity, and limit the conversion of already scarce industrial land to commercial uses (where such a policy makes sense with long-run planning objectives – there are some areas of exception).

    - What public policies or investments are **most important** to implement **in the next 5 years** to help improve the region's business climate and support prosperity? **Next 10 years**?

      In the next 5 years:
      1. Fund the Columbia River Crossing; begin construction
      2. Continue to deploy ITS in key freight corridors (Columbia Blvd, other regionally-significant industrial areas)
      3. Study the potential effectiveness of congestion pricing to manage transportation system congestion
      4. Identification of areas for development/expansion of regionally-significant industrial employment to meet growth demand and address industrial land shortfall

      In the next 10 years:
      1. Complete (or near completion of) Columbia River Crossing
      2. Resolve bottlenecks in key freight corridors (I-5/I-84; I-205/I-84; I-205/Airport Way)
      3. Deploy congestion pricing mechanism(s) per study outcome(s)
      4. Expand UGB to support growth of industrial/traded-sector employment in areas identified as regionally-significant

- What public policies or investments could create **challenges for the future growth of your business**?

  Top-down, prescriptive approaches to transportation system management and/or climate change/environmental policy which exclude stakeholder perspectives (business, industry, and broader scientific community) in order to promote aspirations of particular interests would significantly constrain the environment for economic growth damage the prospects for capital investment in the region. For instance, creating a market to monetize the benefits of reducing GHG emissions, while a worthwhile objective, should not be undertaken without the comprehensive insight of the business and financial community, even though some input from that community is likely to be negative/opposed to such policy. Likewise, policy approaches that paint commuters in a negative light (particularly those from Clark County), discourage transportation system investments that would increase roadway capacity (benefitting freight movement and commuter traffic as these are difficult to parse), and otherwise "wage war" on single occupancy vehicle commuters are out of touch with the realities businesses face (especially the high tech sector in Washington County driving a major portion of the State and regional economy) in securing sufficiently-qualified labor to operate their production facilities. A different, more enlightened approach is called for on the part of policy makers that both recognizes this fact, and is progressive in continuing to pursue transportation options.

4. If you could tell policymakers across **the region how best to evaluate** whether they're helping or hurting business and the economy **with these sorts of policies,** what would you tell them? **What are the most important outcomes to measure** when it comes to evaluating choices for the region's future and the potential **impacts** to local businesses and the region's economic growth and prosperity?

   Simply, go out and talk to businesses. Spend time in the field. Take plant tours. Spend time working to understand how the supply chain operations of the region's major employers work, and what factors impact their performance (and consequently how policymakers' decisions and daily work impacts these employers, and thus the quality of life of the people who elected them: it is all connected). Some proportion of a policymaker's time each week should be spent in the field touring plants and meeting constituents.

   When evaluating choices and measuring outcomes, the most important question to ask with respect to local businesses is: how much will it cost them? This can, with some finesse, be translated into a trade-off they will have to make in terms of reducing employee hours (and potentially overall headcount) and other costs. Depending on the policy choice and its associated cost imposition, low-margin businesses could be put into a position of insolvency. Policymakers should also be concerned with the issues of uncertainty signaling that this raises: anytime a policy is adopted which results in an unanticipated increase in costs for a business (thereby a reduction in profitability), this increases the level of uncertainty with respect to making capital investments, and thereby affects regional growth and employment. Policy affecting the business/investment environment should not be undertaken lightly.

**5. Which of the following best describes the industry or sector in which your business operates?**

_X_Professional Services ___Manufacturing ___Construction ___Retail
___Distribution ___Transportation ___Insurance ___Software
___Food Service ___Real Estate ___Fabricated Products ___Health Care
___Finance ___Printing and Publishing ___Biotech
___ Other: Please specify_____

**6. How many full-time personnel are currently employed by your business in the Portland area?**

_X_1 to 5 ___6 to 19 ___20-99 ___100-499 ___500+

7. What else would you like the region to consider as this effort moves forward?

   Meet with groups that have specific land use and transportation access requirements such as Washington County's high tech sector manufacturers (Hillsboro Chamber could facilitate) and the Working Waterfront Coalition (need for harbor access lands, rail terminals, etc).

8. Do you have other suggestions for how to effectively engage with the business and freight community on this project?

   Identify specific freight and business sectors to engage and work with/through local chambers of commerce and trade associations (Oregon Trucking Association) to reach the intended groups.

9. Would you like to receive periodic email updates about this project?
   _X_ YES
   ___ NO

**Thank you very much for participating in today's discussion!**

Name: Duke Castle
Affiliation: (None Identified)
Type of business: Professional Services
Size of business: 1 to 5 employees

**What actions is your business taking to be more sustainable?**

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

- **What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**

- **What public policies or investments could create challenges?**

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

- Cars won't go away, but they may go more electric. Frequent recharging stations may help.

Name: Cedomir Jesic
Affiliation: Cardno Inc.
Type of business: Professional Services
Size of business: 100-499 employees

**What actions is your business taking to be more sustainable?**

- Provide TriMet bus passes to employees.
- Provide 3 vehicles so that employees can use them to go to meetings.
- Water efficiency.
- Lighting efficiency.

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

- Access to reliable transportation infrastructure.
- Better high speed internet, which would provide far better video conferencing.

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

- **What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**

  - Investment in infrastructure.
  - Transportation in next 5 to 10 years.

- **What public policies or investments could create challenges?**

  - I think that the biggest need is access to reliable infrastructure.
  - More consistent regulations throughout the region.

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

- Will the policies attract business to the region.
- Will the policies hurt or help business financially.

- I think that some of the current policies across the region are not consistent.
- Have more specific focus groups for each major business.

Name: Char Shinn
Affiliation: North Clackamas Community College; Oregon City Community College; and Oregonians Credit Union
Type of business: Finance
Size of business: 20-99 employees

**What actions is your business taking to be more sustainable?**

- Bus passes.
- Mobile apps/online apps.
- Scanning paperwork systems.
- Video conferencing –meetings and training.
- Discounts on rates for green autos.
- Bike loans.
- Email marketing/e-statements.
- Weekly rounds to branches.

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

- Regulatory burden and cost of compliance.

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

- **What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**

  - There are rules about using a house as an office (city zones, update—have more businesses in residential).
  - Not policies—need investments.
  - Get family wage jobs where people want to live.
  - Reliable codes and highways.

- **What public policies or investments could create challenges?**

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to**

**measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

- Do I make more money?
- How do we reward innovation?
- Not high speed—it's frequency, plus ease.
- Natural Step defines end game (but not regulated). Doesn't dictate how you get there.
- LEED Certification is too expensive.
- What strategies for investment are consistent with county values.

Name: Chip Sammons
Affiliation: Holistic Pet Center
Type of business: Retail
Size of business: 6-19 employees

**What actions is your business taking to be more sustainable?**

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

- **What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**
- **What public policies or investments could create challenges?**

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

Name: Greg Chaimov
Affiliation: N. Clackamas Chamber; Davis Wright Tremaine, LLP; and Clackamas Community College
Type of business: Professional Services
Size of business: 100-499 employees

**What actions is your business taking to be more sustainable?**

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

- **What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**
- **What public policies or investments could create challenges?**

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

Move forward with a conservative-leaning business advisory group—will help with ensuring broader support for final product if you have that group's support.

Name: Jerry Turner
Affiliation: Pioneer Pump (Founder and President)
Type of business: Manufacturing
Size of business: 100-499 employees (including employees in U.K. & South Africa)

**What actions is your business taking to be more sustainable?**

- Sourcing from other parts of the world to be competitive worldwide.
- Supporting car pools and promoting bikes, etc.

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

- Legislative regulations that negatively impact manufacturing.

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

- **What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**

  - I-5 connector at Aurora Airport.
  - Open lands South of Wilsonville for industrial purposes and provide transportation.

- **What public policies or investments could create challenges?**

  - Regulations!

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

- Regulations that are not constructive.
- Improved transportation.
- Meetings that listen to business leaders' suggestions.

Name: Maureen Parkin
Affiliation: Parkin Electric Inc.
Type of business: Construction
Size of business: 6 to 19 employees

**What actions is your business taking to be more sustainable?**

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

- GPS technology for scheduling.
- Scheduling by region—dispatching.
- Buy local campaign. Encourage customers to buy local. Reduce costs on both sides.
- Technology for paperwork reduction.

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

- **What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**

  Funding for investment in technology for efficiency.

- **What public policies or investments could create challenges?**

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

Name: Ben Altman
Affiliation: Wilsonville Chamber; SFA Design Group; and Planning Commission
Type of business: Professional Services
Size of business: 6 to 19 employees

**What actions is your business taking to be more sustainable?**

- Employ smart growth, with low impact development alternatives in project design.
- Encourage incorporation of transit/pedestrian access in project design.
- Promote good street/transit design facility (TSP) and promote multiple route options, as well as mode options.
- Upgrade to low energy use products to reduce costs.

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

- For SFA, our major focus is residential development, so housing market strength is critical.
- Managing health care costs and other operating costs to maintain profitability is probably our major challenge.
- Another constant concern is ever increasing taxes, such as Measures 66 and 67, and other operating costs.
- Managing staff time to be able to actively participate in local government activities that lead to regulations impacting our clients.

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

- **What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**

  - Make sure any policy or strategy is economically feasible to local businesses and individuals to help implement.
  - Promote self-implementation through understanding how they can contribute to the solution.

- **What public policies or investments could create challenges?**

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

Name: Chris Clemon
Affiliation: WEA/Group Mackenzie
Type of business: Professional Services
Size of business: 100 to 499 employees

**What actions is your business taking to be more sustainable?**

- A large number of measures, from building to transportation efficiencies:
    - Recycling programs
    - Significant paper use reduction
    - Water recycling
    - Bicycle programs
    - On-site showers/changing facilities
    - Car sharing
    - Company cars
    - Electronic file deliveries vs. paper deliveries

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

- General goods and freight movement. Lack of connections, congestion and interface/connectivity of modes (Truck-Rail-Air-Water-Interstate and higher order roadway connectivity.
- We need to think about, and pursue economic measures (funding) of our infrastructure, because if we are not willing to pay for this, what does it say about what we really want??

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

- **What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**

- **What public policies or investments could create challenges?**
    - A focus on freight mobility. Movement of goods and services. Less focus on personal commuting.
    - We need to get serious about funding our system and paying for it.

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

- GET SERIOUS ABOUT A GAS TAX!! Then, focus on long-term funding via other revenue generating sources.
- While always contentious, we need to figure out how to pay for this and tax ourselves. For too long, we have given away our transportation system. We need to funds and pay for it.
- Public-private partnerships.

Name: Frank Angelo
Affiliation: Angelo Planning Group/Westside Economic Alliance
Type of business: Professional Services
Size of business: 6-19 employees

**What actions is your business taking to be more sustainable?**

- Paying for transit passes.
- Encouraging biking to work.
- Car-share.

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

- Education—paying for it.
- Funding infrastructure.

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

- **What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**

- **What public policies or investments could create challenges?**

  - Vehicle mileage travel fee.

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

- Clearly describe the problem that's trying to be solved.
- How does the solution impact existing and future employment in the region.
- Stay engaged with business organizations and listen to their comments.

Name: Peter VanHouten
Affiliation: EG Metals
Type of business: Recycling
Size of business: 20-99 employees

**What actions is your business taking to be more sustainable?**

- Becoming an end of life processor/recycling of electronics, ferrous and non-ferrous metals.

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

- Land use/storm water regulations.
- Transportation infrastructure.

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

- **What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**

- **What public policies or investments could create challenges?**

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

- I call, email or meet individually with them.

Name: Debbie Kitchin
Affiliation: InterWorks, LLC
Type of business: Construction
Size of business: 1 to 5 employees

**What actions is your business taking to be more sustainable?**

- Energy savings in buildings.
- Saving trips by combining trips.
- Planning trips to avoid known congestion times.
- Driving high mpg vehicles where possible (project manager drives to jobs in a small car, rather than a pickup truck).
- Walking to work and meetings occasionally.

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

- Region is not friendly to business.
- Ecosystem of business relies on large businesses and small business growth.
- Reduce costs of government through managing costs of benefits and PERS for government employees.
- Reducing regulations on businesses.

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

- **What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**

  - Reduce congestion.
  - Provide real time information on road construction and traffic delays.
  - Support CRC, especially with light rail. This is a bottleneck that causes congestion and increases in costs.

- **What public policies or investments could create challenges?**

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

- Use incentives, rather than regulation.
- Promote actions that save businesses costs, as well as reduce carbon.

- Promote demonstration and education projects, so that businesses can learn from best practices—what has been successful and save money for businesses that others can adopt.
- Promote economic growth.
- Recognize that different types of businesses have different requirements.

Name: Pete Lennon
Affiliation: Lennon and Associates; Small Business Council
Type of business: Insurance
Size of business: 1 to 5 employees

**What actions is your business taking to be more sustainable?**

- Intense recycling.
- Limiting use of utilities.
- Healthy snacks/packaging.
- Ride sharing.

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

- Health care; benefits; sick leave.

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

- **What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**

  - Reduce buildable lot size.
  - City: Fix the streets to reduce wear and tear on vehicles.

- **What public policies or investments could create challenges?**

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

- Sick leave—very bad timing is an example.
- Move forward on areas of agreement between the cities/counties.

Name: Timm Locke
Affiliation: Pipeline PR and Marketing
Type of business: Professional Services
Size of business: 1 to 5 employees

**What actions is your business taking to be more sustainable?**

- Moved into a home office.

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

- Changing nature of business in Portland—too many small businesses; not enough medium to large businesses.
- Ten businesses with 200 employees are better than 1000 businesses with 2 employees.

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

- **What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**
  - Enhance the business climate to attract more medium and large businesses.
  - Improve public schools.
- **What public policies or investments could create challenges?**
  - Regulations, etc., that discourage the growth of mid-size and large businesses.

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

- Use economic benchmarks—job, wages, employment, etc.
- Be cognizant of economics—not just the environment.

Name: Scott Morcom
Affiliation: WFG Title/Builder Dept
Type of business: Construction, Insurance
Size of business: 100-499 employees

**What actions is your business taking to be more sustainable?**

- Digital and paperless system.

**What are the most significant challenges to the future growth of your business and future economic growth and prosperity in the region?**

- Lack of new housing and jobs.

**As the region's selected officials consider land use and transportation policies and investments that could reduce carbon emissions:**

**What public policies or investments could be helpful or are most important to support future growth of your business and future economic growth and prosperity in the region?**

- Transportation.

**What public policies or investments are most important to implement in the next five years to help improve the region's business climate and support prosperity? Next 10 years?**

- Better jobs and easier commutes.

**What public policies or investments could create challenges for the future growth of your business?**

- Lack of land for housing.

**If you could tell policymakers across the region how best to evaluate whether they're helping or hurting business and the economy with these sorts of policies, what would you tell them? What are the most important outcomes to measure when evaluating choices and the potential impacts to local businesses and the region's economic growth?**

- Hurting—allow the consumer to make choices without.
- Government mandates.

**What else would you like the region to consider as this effort moves forward?**

- Public education and awareness
- Increased outreach

**Metro's website:** www.oregonmetro.gov

**Metro is the federally mandated metropolitan planning organization** designated by the governor to develop an overall transportation plan and to allocate federal funds for the region. The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and to make recommendations to the Metro Council. The established decision-making process assures a well-balanced regional transportation system and involves local elected officials directly in decisions that help the Metro Council develop regional transportation policies, including allocating federal transportation funds.

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**Attachment 5 to**
**Staff Report to Resolution 13-4438**

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# Community Case Study Series

A series of eight case studies to showcase actions that communities in the Portland metropolitan region are already taking to help reduce greenhouse gas emissions from cars and small trucks

May 2013

Metro | *Making a great place*

SPRING 2013

# CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

## COMMUNITY CASE STUDY SERIES

This case study showcases actions that communities in the Portland metropolitan region are already taking to help reduce greenhouse gas emissions from cars and small trucks.

This is one of eight in a series developed for the Climate Smart Communities Scenarios Project.

- Beaverton
- Clackamas County
- Gateway (Portland)
- Hillsboro
- Rockwood (Gresham)
- Wilsonville
- Employer-based commuter programs
- Neighborhood-based travel options

## Strategies

- **Mixed-use development**
- **Active transportation**
- **Traffic management**

# Beaverton
## Community case study

### Beaverton builds economic opportunity

Beaverton is revitalizing its downtown with targeted investments and partnerships to create jobs and civic destinations, increase housing choices, provide access to nature and expand travel options for residents and visitors. These actions are helping the city grow in a sustainable manner, create a healthy, livable community and reduce greenhouse gas emissions from transportation.

Downtown Beaverton is served by three state highways, one commuter rail line, two light rail lines and one freight rail line that connect Beaverton to other communities in the region. Since opening in 1998, TriMet's MAX light rail stations have attracted housing, employment and retail development to the area. A project known as The Round, featuring a mix of office and housing, was built around the Beaverton Central station surrounding a circular plaza that includes the MAX station.

Old Town, south of Farmington Road, offers a well connected street grid and historic buildings with small businesses and pedestrian-oriented retail. The Beaverton Central Library, Beaverton City Park and the Beaverton Farmers Market are gathering places that serve nearby neighborhoods and visitors from across the region.

The city has built strong public support for and remains committed to expanding housing and transportation choices, creating parks and natural areas, and supporting local businesses to spur downtown revitalization.

## Key challenges

- Major transportation corridors divide the north and south parts of downtown Beaverton.
- An incomplete street network, high traffic volumes, long blocks and inadequate bike and pedestrian crossings limit access and mobility.
- The Round remains incomplete, contributing to the lack of downtown housing choices and job opportunities.
- Aging infrastructure and empty or underutilized development sites limit the vibrancy of the area.

**The Oregon Legislature has required the Portland metropolitan region to reduce per capita greenhouse gas emissions from cars and small trucks by 2035.**

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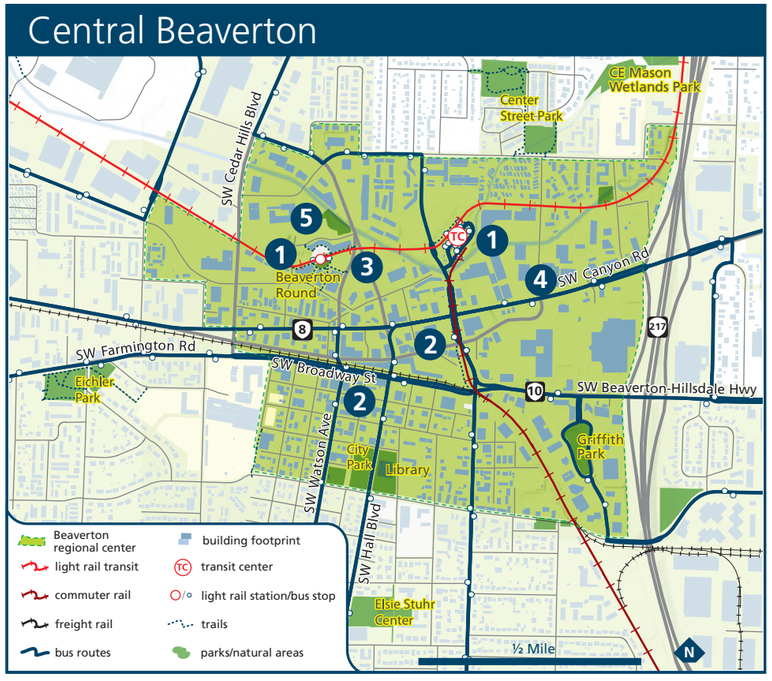
# Investments and partnerships revitalize downtown Beaverton

The City of Beaverton is leveraging its existing transportation system, infrastructure, land and financial resources to build a prosperous and vibrant community that will also help reduce greenhouse gas emissions, especially from transportation. The city has targeted policies, financial incentives and investments to support local businesses, grow local jobs, encourage more people to live and work in downtown, manage parking, make the area safer and more convenient to walk and bike, improve traffic operations, and transform Canyon Road to be more pleasant and attractive. Hosting activities such as the Beaverton Farmer's Market, regular arts and culture events like the expanded Old Town Festival, the annual International Festival, Flicks by the Fountain, and painting downtown murals attracts residents and customers to the area. The city's actions leverage local, regional, state and federal partnerships and resources that further catalyze downtown revitalization efforts.




## 1 Growing the economy with jobs, housing and transit

Nearly 1,100 businesses and more than 14,000 jobs exist within one mile of downtown Beaverton. The Beaverton Transit Center serves as the primary transit hub of Washington County and has one of the highest ridership rates in the TriMet system with two light rail lines, a WES commuter line, and eleven bus lines. While housing options in the downtown area are limited, the city is leveraging public and private investments and innovative tools to encourage people to live and work in the downtown core and attract new restaurants, shops and services that people want to visit.

Community and economic development efforts currently underway include:

- policies and investments that encourage new housing and businesses to locate downtown near transit
- an inventory of brownfield sites for potential redevelopment
- business programs and incentives for microenterprises, start-ups and target industries, including tax credits, storefront improvement grants and workforce development assistance
- financial incentives and partnerships with nonprofit organizations to build affordable housing choices
- allowing businesses to share parking spaces and removing minimum parking requirements in designated areas, including areas located near transit, to encourage efficient use of available parking
- installing electric vehicle charging stations downtown.

## 2 Making way for biking and walking

The city has prioritized investments to:

- implement a wayfinding system that provides directional guidance to area destinations for biking, walking and taking transit
- create bicycle boulevards on low-traffic streets, add east-west bike corridors that parallel Canyon Road, increase bicycle parking, and fill gaps in the bicycle network
- improve pedestrian access to area businesses and transit service by making street crossings safer, filling sidewalk gaps, and adding curb ramps, benches and lighting to make walking safer, more convenient and pleasant.

## 3 Improving traffic operations

Congestion along major travel corridors causes delays that increase vehicle idling and emissions. To address this, the city:

- constructed multi-modal streets that parallel state highways to provide an alternative for local traffic
- installed adaptive traffic signals that are synchronized to optimize traffic flow.

## 4 Transforming Canyon Road

Canyon Road emerged as a high priority during Beaverton's Community Vision and Civic Plan process. It is a noisy and intimidating place to walk with few crossings and heavy traffic. Beaverton is collaborating with the Oregon Department of Transportation to redesign Canyon Road to be pedestrian-friendly and more attractive for development. Key investments identified to transform the corridor include:

- safer pedestrian and bicycle crossings at key intersections
- sidewalk improvements, landscaping, transit stop improvements, pedestrian-scale lighting and stormwater treatment facilities
- an off-Canyon Road bicycle boulevard network, providing parallel routes for biking
- new street connections to provide multiple routes for travel.

## 5 Connecting people with nature

The Beaverton Creekside District, comprising nearly 50 acres in the downtown area, is located near Beaverton's downtown creeks. It sits at the core of the area's transit system, providing a focal point for revitalization efforts.

Restoring and enhancing the downtown creeks will improve water quality and provide places for residents and visitors to enjoy the natural environment.

## Timeline

| 2010 | 2011 | 2012 | 2015-2020 | 2020-2040 |
|---|---|---|---|---|
| Beaverton Community Vision calls for creating a vibrant downtown and improving mobility | Beaverton Civic Plan emphasizes greater connectivity, economic opportunity, and environmental sustainability<br><br>Voters adopt $150 million Beaverton Urban Renewal Plan | $1 million HUD Sustainable Communities Challenge Grant awarded to help implement Beaverton Civic Plan | Improvements made to Canyon Road streetscape and downtown creek, park and plaza<br><br>Off-Canyon Road bicycle boulevard network launched | Completion of the Beaverton Urban Renewal Plan projects attracts business and housing, improves traffic flow and public safety, and spurs private investment |

## Climate benefits

| | |
|---|---|
| **Mixed-use development** | ★ ★ ★ ★ ★ |
| **Active transportation** | ★ ★ ☆ ☆ ☆ |
| **Traffic management** | ★ ★ ★ ☆ ☆ |

These greenhouse gas emissions reduction strategies are an important part of what the City of Beaverton is already doing to realize its vision for the future, and provide a strong foundation for meeting state climate goals for 2035. The climate benefits shown represent the relative effectiveness of each strategy.

For more information on greenhouse gas emissions reduction strategies, refer to the Climate Smart Communities Scenarios Project website at **www.oregonmetro.gov/climatescenarios**.

## Keys to success

**Develop a broad strategy for revitalization**
In addition to promoting a mix of new housing and businesses within a well-connected street, bicycle and sidewalk network, revitalization efforts should also provide opportunities for recreation and enjoying art. Marketing and economic development are enhanced by projects that improve storefronts and signage.

**Combine community investment tools**
Beaverton continues to build its toolbox of policies and investments to grow local jobs and expand downtown housing choices, provide needed infrastructure, and demonstrate the city's commitment to sustainability and revitalization efforts.

**Leverage partnerships and resources**
Downtown revitalization requires the cooperation of public agencies, chambers of commerce, local businesses and civic organizations, as well as leveraging local, regional, state and federal resources to build needed investments.

**Build community and business champions**
The ideas borne out of the Beaverton Community Vision and refined through the Beaverton Civic Plan have helped achieve successes with residents and businesses.

## Regional partner

Working together to help meet Oregon's target for reducing greenhouse gas emissions from cars and trucks

Beaverton OREGON
The Best of Oregon

## About Metro

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## Strategies

- **Vehicle technologies and fuels**
- **Fleet mix**
- **Traffic management**

# Hillsboro

## Community case study

### Addressing greenhouse gas emissions with 21st century technology

Home to more than 90,000 residents, host to dozens of high tech firms, and an employment area supporting 55,000 jobs, Hillsboro attracts more than 40,000 commuters to the city every weekday. To create a healthy, livable community where residents, visitors and employees have access to everyday needs, area attractions, and employers, the City of Hillsboro has invested in new technologies to accomplish these goals and reduce greenhouse gas emissions.

Building on a strong history of community, collaboration and leadership, Hillsboro has installed electric vehicle charging stations around the city, incorporated alternative fuel vehicles in its fleet mix, and invested in traffic signal coordination and other traffic management systems. The City of Hillsboro is using these and other new technology strategies to meet its aggressive, long-term (2030) operational sustainability goals, including an 80 percent reduction in GHG emissions and 100 percent fossil fuel-free city fleet vehicles (except for those vehicles with no fossil fuel alternative).

This case study highlights accomplishments and challenges to be addressed as new technologies, such as charging station networks, continue to grow in Hillsboro and throughout the region.

## Key challenges

- The cost of new technology such as traffic signal coordination and system management is high.
- The expense of electric vehicle infrastructure relative to the number of electric vehicles in use is difficult to justify.
- There's insufficient funding for widespread electric vehicle infrastructure such as charging stations.
- There's a hesitancy to assume the risks that come with early adoption of new electric vehicle technology.

**The Oregon Legislature has required the Portland metropolitan region to reduce per capita greenhouse gas emissions from cars and small trucks by 2035.**

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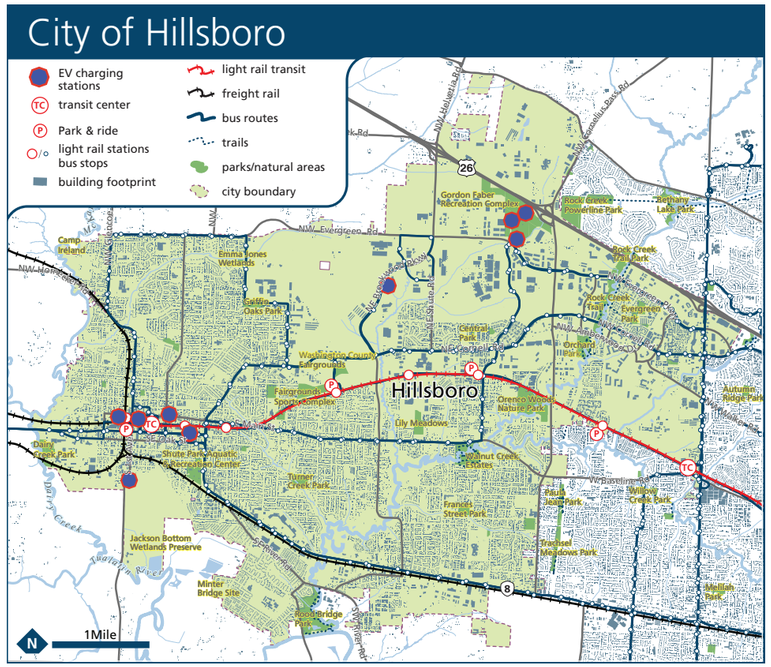
# Leading the way through installation of new technologies

The City of Hillsboro has made sustainability a high priority, demonstrated by the Hillsboro 2020 Vision and Action Plan, the city's sustainability plan and a five-year organizational strategic plan that supports these initiatives.

Since 2000, the Hillsboro 2020 Vision and Action Plan has engaged the broader community in developing and implementing projects that strengthen the community, create economic opportunity and protect the environment. In 2010, a 10-year review of this plan resulted in two new strategies and ten new actions for protecting the environment. This same year, the city completed its first comprehensive greenhouse gas inventory, which provided a critical baseline to measure how effective the city is in reducing greenhouse gas emissions over time. Below are three examples that help support the city's sustainability policies.




## 1 Installing electric vehicle charging stations

Electric vehicle (EV) charging stations are necessary to support what is expected to be a growing fleet of EVs throughout Oregon. But their popularity will only increase to the degree that there are charging stations available for owners to re-charge their cars. The charging stations must be conveniently located to ensure that EV owners have the confidence to travel around the region without the fear of being stranded with no power. Hillsboro's commitment to achieving the goals set out in its guiding documents can be seen in its EV charging infrastructure, the largest in the state.

In 2009, Hillsboro installed the first of its 35 electric vehicle charging stations in the downtown area to support existing EV users, encourage the widespread use of EVs, and spur economic development. Since then, the city has installed many more units, including the first Level III Fast Charger in Washington County which can charge an electric vehicle to 80 percent battery capacity within 30 minutes. Located near major employers and civic destinations, most of the stations are available to the public. Recently, Washington County, Clean Water Services, and several businesses have installed EV charging stations at their sites, with over 50 available in Hillsboro.

In 2012, Hillsboro's Electric Vehicle Program was one of 27 programs nationwide recognized for their innovative practices at the National League of Cities conference in Boston.

## 2 Diversifying fleet mix

Over a ten year period beginning in 2000, Hillsboro maintained a substantial fleet of natural gas powered vehicles. One of the city's sustainability goals is to achieve a fleet of 100 percent fossil fuel-free vehicles by 2030. With EV charging stations installed at the Civic Center, two electric vehicles were purchased for the city fleet in 2011 and 2012. Hillsboro will continue to work toward this sustainability goal by adding EVs and other alternative fuel vehicles to its fleet.

## 3 Installing traffic signal coordination/system management

Hillsboro has made a strong commitment to improving the efficiency of traffic flow within the city by installing street signal timing technology. These improvements benefit operations and have a positive impact on reducing traffic delay, idling, fuel consumption and greenhouse gas emissions.

Funded in part with U.S. Department of Energy grant funds, in 2011 the city completed several traffic signal upgrades including the first use of the InSync adaptive signal system on the West Coast. The InSync system consists of coordinated traffic signals and video detection to optimize real time traffic flow through nine intersections on a major arterial. Also completed was the retiming of all 28 city intersection signals and a comprehensive re-work of the 185th Avenue and Baseline Road intersection. The results of these measures include an annual savings of 26,400 gallons of fuel, a reduction of carbon dioxide by 232 metric tons per year, a 10 percent reduction in traffic delays and a significant cost savings.

### Next Steps

In 2012, the City of Hillsboro hosted a New Energy Cities Community Partners workshop with Climate Solutions to map the flow of energy and emissions in the community and identifying action areas for reducing fuel consumption and greenhouse gas emissions. The outcome included a community energy map and Climate Action Plan Opportunities Framework. These tools will be used in conjunction with an energy sector analysis to identify opportunities for implementation. In 2013, a Hillsboro Sustainability Task Force will be convened to take this work forward.

## Timeline

### 2009

Hillsboro installed the first of 35 electric vehicle charging stations in the downtown area next to the Civic Center

### 2010

Hillsboro's award-winning intermodal transit facility opened with 13 electric vehicle charging stations and solar panel energy production

### 2011

Major traffic signal timing upgrades are completed throughout the city

Additional Level II electric vehicle chargers installed

Hillsboro purchased its first electric vehicle complementing the city's existing fleet of alternative fuel vehicles

### 2012

The first Level III Fast Charger in Washington County is installed at the Hillsboro Civic Center

### 2013

As a finalist for the national Bloomberg Philanthropies Mayors Challenge, Hillsboro proposed a GoPoint Mobility Hub concept at light rail stations which included installation of EV charging stations to better connect neighborhoods and employment centers with more travel choices

## Climate benefits

| | |
|---|---|
| **Vehicle technologies and fuels** | ★ ★ ★ ★ ★ |
| **Fleet mix** | ★ ★ ★ ☆ ☆ |
| **Traffic management** | ★ ★ ★ ☆ ☆ |

These greenhouse gas emissions reduction strategies are an important part of what the City of Hillsboro is already doing to realize its vision for the future, and provide a strong foundation for meeting state climate goals for 2035. The climate benefits shown represent the relative effectiveness of each strategy.

For more information on greenhouse gas emissions reduction strategies, refer to the Climate Smart Communities Scenarios Project website at **www.oregonmetro.gov/climatescenarios**.

## Keys to success

**Demonstrate innovation** Test the barriers and opportunities of cutting edge technologies to influence similar investment by other public entities, the private sector, and residents.

**Promote public education** Help make cutting edge technologies more accessible to the public through education about their locations, operations and efficiencies.

**Form partnerships** Public-private partnerships encourage widespread use of cutting edge technologies.

**Build community champions** Base goals and policies on community visions that make it more politically feasible to create financing mechanisms for investments and facilitate community action.

## Regional partner

Working together to help meet Oregon's target for reducing greenhouse gas emissions from cars and trucks

Hillsboro OREGON

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# CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

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## Strategies

- **Mixed-use development**
- **Active transportation**
- **Transit**

# Rockwood
## Community case study

### Investing in a community vision

The Rockwood area is the western gateway to the City of Gresham. It is served by the MAX light rail line and five stations, and provides a variety of housing options. Most of Central Rockwood was developed after World War II when land use patterns were driven by auto-oriented development. To some extent, the area evolved from farmland and open space to a suburban land use pattern with high-volume arterial streets. Most of the older buildings and landmarks that provided a visual link to Rockwood's origins as a rural community were removed.

The result has been an auto-oriented, low-profile patchwork of land uses and activities that are often poorly integrated and visually unappealing. While the addition of light rail has provided increased opportunities for Rockwood, there are few mid-station MAX line crossings, resulting in less connectivity within Rockwood. For these and other reasons, the Central Rockwood area has suffered from a lack of focus, identity, and investment. A series of planning efforts currently underway are providing direction for the Rockwood area to grow and develop in a sustainable manner to help create healthy, livable neighborhoods and reduce greenhouse gas emissions.

## Key challenges

- The design quality for new construction needs to better enhance the community aesthetic.
- New investment in the area is needed to encourage new business and private developers.
- Available amenities don't meet the needs of the area's changing population.

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# Planning for sustainable development in Rockwood

Gresham annexed the Rockwood area in the mid-1980s. Since then, several planning efforts have occurred including the Central Rockwood Plan adopted in 1998, the Rockwood-West Gresham Renewal Plan adopted in 2003, Design District guidelines and standards adopted between 2010 and 2012, and the East Metro Connections Plan completed in 2012. The Central Rockwood Plan was designed to be a bold yet practical guide to long-term development. It was innovative for its time as it required more urban development patterns such as two-story minimum heights for new construction with no height maximums and transit-oriented, mixed-use buildings. At the same time, a human-scale was sought to reinforce walking and community engagement. The city is currently performing an assessment of the plan to determine whether it is performing as intended and if not, what barriers to implementation exist. Changes will be made as needed to ensure implementation of the community's vision for a vibrant Rockwood.

## Central Rockwood

## 1 Investing in revitalization

The voter-approved 2003 urban renewal plan is a 20-year plan that covers approximately 1,200 acres, extending from the central area of Rockwood to the city's industrial area north of Interstate 84. Its intent is to improve the economy and community of Rockwood through a partnership among the area residents, property and business owners, and the City of Gresham. The overall goals are to support the development of businesses that create living-wage jobs and improve the quality of housing for residents. A combination of revenue sources are used, including tax increment financing, to invest public resources to promote industrial, commercial and residential development and rehabilitation that supports the community's vision for revitalization of the area.

## 2 Launching Rockwood in Motion

In 2010, the Gresham Redevelopment Commission initiated Rockwood in Motion, which improved the appearance of Rockwood, made access to the MAX light rail safer and more pleasant, and jump-started investment in the Rockwood Triangle. Elements of Rockwood in Motion include:

- improved alignment of Southeast 187th Avenue through the Rockwood Triangle to provide better and safer connectivity from the MAX station to residential neighborhoods south of Stark Street
- addition of a traffic signal at the intersection at Stark Street and 187th Avenue
- boulevard treatments along Stark Street and Burnside Road, including landscaped medians, pedestrian refuge islands, wider sidewalks, planter strips with street trees, bus shelters, and some green street amenities
- redesign and construction of the 188th Avenue MAX station by bringing the eastbound and westbound platforms together, introducing dramatic public art, and adding major upgrades for riders' safety and comfort.

## 3 Creating development opportunities

A former Fred Meyer grocery store site located in the heart of Rockwood was purchased by the Gresham Redevelopment Commission to guide development opportunities at this strategic location. With the economic downturn occurring shortly after the purchase, no private party has stepped up to invest in the site. In the meantime, the city developed the area as a community gathering place with a plaza, playground and wildflower field. In 2012, the commission initiated a project to define objectives and a preferred land planning and development approach with the intent of soliciting requests for a development partner in 2013.

## 4 Ensuring public safety

The Gresham Redevelopment Commission is constructing the new two-story Public Safety Facility, located on the northern boundary of Central Rockwood. This project fulfills long-standing community objectives including:

- improving police presence and visibility in Rockwood
- creating a facility that is welcoming to residents
- attracting new private investment to the area
- creating opportunities for new community partnerships.

## 5 Expanding transportation options

Numerous activities are occurring to expand transportation options in the Rockwood community. Groundbreaking is anticipated in 2014 for a trail along the MAX line connecting the Ruby Junction station to points further east. Additionally, a segment of the Gresham-Fairview Trail was recently completed, connecting Central Rockwood to the Springwater Trail. As the trail system grows, people will have more opportunities to travel throughout their community without using an automobile.

## 6 Designing for sustainability

In 2011, the city adopted the Rockwood Design District for new multi-family, mixed-use and commercial developments in the Rockwood area. A design district is an approach that applies site and building design criteria by using discretionary guidelines and objective standards. Site criteria address elements such as sustainability, safe design, and multi-modal design. Building criteria address elements such as architectural quality, sustainable design, housing variety, and the use of high-quality materials. The overall vision for the Rockwood Design District is for a high-quality, long lasting development where residents meet their everyday needs within a 20-minute walking radius of home.

## Timeline

| 1998 | 2003 | 2010 | 2012 | 2013 |
|---|---|---|---|---|
| Central Rockwood Plan adopted by Gresham City Council | Gresham residents voted to approve the Rockwood-West Gresham Renewal Plan | Rockwood Design District guidelines and standards adopted<br><br>Rockwood in Motion begins | East Metro Connections Plan completed to identify safe connections between I-84 and Highway 26 | Groundbreaking for the Public Safety Facility |

## Climate benefits

| | |
|---|---|
| **Mixed-use development** | ★ ★ ★ ★ ★ |
| **Active transportation** | ★ ★ ☆ ☆ ☆ |
| **Transit** | ★ ★ ★ ★ ★ |

These greenhouse gas emissions reduction strategies are an important part of what Central Rockwood in Gresham is already doing to realize the community's vision for the future, and provide a strong foundation for meeting state climate goals for 2035. The climate benefits shown represent the relative effectiveness of each strategy.

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## Keys to success

**Continue channeling and attracting investment to Central Rockwood** The Urban Renewal District has been successful in making substantive changes to the transportation network and services in Rockwood that help attract new investments in the community.

**Ensure the development code supports new investment** The development code is being assessed to determine if it presents barriers to new development or redevelopment.

**Expand travel options** Ongoing expansion of travel options – such as the MAX Trail and extensions of the Gresham-Fairview Trail – enhance non-vehicle mobility in the community.

**Foster design excellence** Implementation of the Rockwood Design District will continue to elevate the quality of the built environment in Rockwood, cultivating renewed energy in the community.

**Include quality of life amenities** The city continues efforts to grow its parks system and partner with community organizations to address quality of life issues in Rockwood.

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## Regional partner

Working together to help meet Oregon's target for reducing greenhouse gas emissions from cars and trucks

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## Strategies

- **Transit**
- **Active transportation**
- **Employer-based commuter programs**
- **Public education and marketing**

# Wilsonville
## Community case study

### A vision for a connected community

Wilsonville's transportation system has been shaped by the vision of city and business leaders over the last twenty-four years to create a healthy community where people have easy access to transportation to meet everyday needs. The development of SMART (South Metro Area Regional Transit) in 1989, and TriMet's WES (Westside Express Service) Commuter Rail service in 2009 are examples of transportation investments that support this vision.

Over the years, SMART has evolved into a full service, dependable transit system offering a safe and convenient way to travel within Wilsonville and to other areas, including Canby and Salem. At SMART Central Station, TriMet's WES Commuter Rail offers train service to Tualatin, Tigard and Beaverton where it connects with other bus lines and the MAX light rail system. The city also made important investments to improve community walking and biking connections to transit and expand the information available to residents, visitors and businesses about their travel choices. These investments help reduce the number of vehicle miles traveled by the more than 18,000 commuters who come to Wilsonville from other communities every day to work.

As a result, people of all ages choose SMART for travel to work, the grocery store, appointments, and nearby parks and natural areas. These choices help support sustainable development in the region and meet the state mandate to reduce greenhouse gas emissions for cars and small trucks.

## Key challenges

- Increasing congestion and frequent traffic backups on I-5 hamper freight movement and access to Wilsonville jobs and impacts the city's economy.
- I-5 and the Willamette River are major barriers to developing connected walking and biking networks within the community.
- Ninety percent of the employees working in the city live in other communities.

**The Oregon Legislature has required the Portland metropolitan region to reduce per capita greenhouse gas emissions from cars and small trucks by 2035.**

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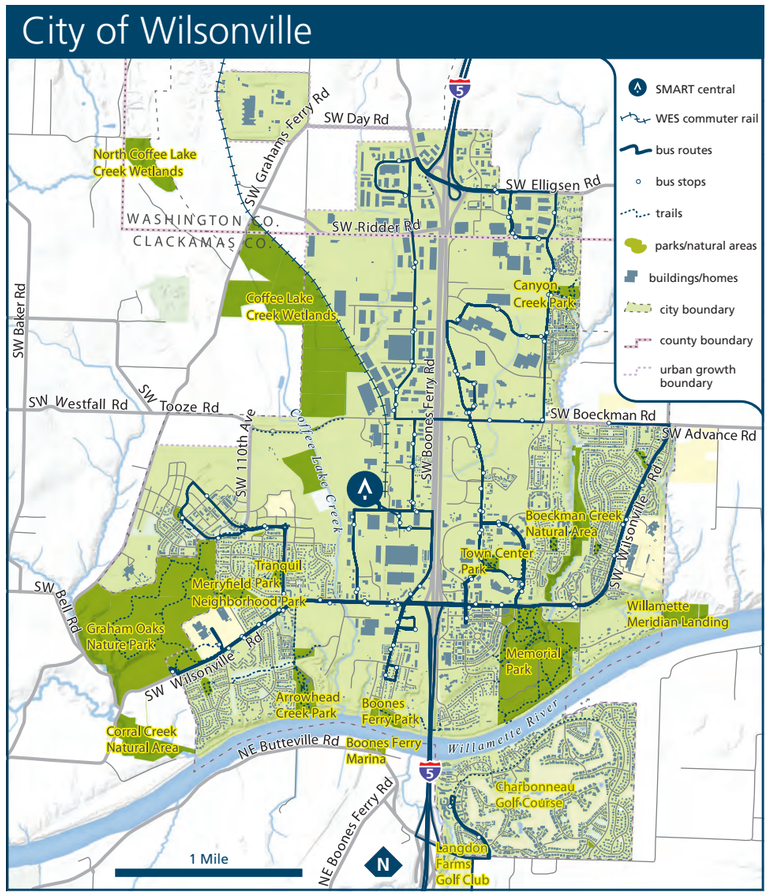
# Investing in smart travel options and public education

The community vision for city-operated SMART is to provide convenient, safe and reliable transportation services to meet the needs of Wilsonville residents, commuters, and visitors of all ages, income levels, and points of travel origin. SMART is dedicated to providing mobility for those who do not drive and creating a viable, attractive transportation option for those who do.




## 1 Connecting SMART and TriMet mobility options

SMART provides a variety of services with its fleet of over thirty-five vehicles ranging from 40-foot buses to minivans and a trolley-bus. The services are free within Wilsonville, but a fee is charged for service between Wilsonville and other cities. SMART also operates a Dial-a-Ride program that provides door-to-door service within Wilsonville, and medical transport services to Portland and other nearby cities for the elderly and disabled.

In February 2009, TriMet's Westside Express Service Commuter Rail, a self-propelled diesel rail line servicing five stations from Beaverton to Wilsonville, began operation. Wilsonville leverages this service by having SMART buses take WES commuters to businesses and neighborhoods throughout the city as well as offering transfers to Salem and Canby.

## 2 Expanding commuter information

The SMART Options program promotes alternatives to driving alone such as taking the bus or commuter train, car/vanpooling, walking, biking or telecommuting. The program provides free assistance to employers for setting up employee commuter programs. This includes help with compliance with state commuter laws and providing bus service from the WES station to businesses throughout the city. SMART also provides buses for special city-sponsored events and pre-scheduled senior lunches, shopping, and other trips.

## 3 Expanding resident and visitor information

SMART provides information to help area residents get around in healthy, fun ways and to promote its creative education programs for students. These include Bike Smart, Walk Smart and Wilsonville Sunday Streets.

**Bike Smart** Bike Smart is a one-stop shop for information about biking in and around the Wilsonville area. It helps residents and visitors plan commute and recreational trips, and provides maps and other information to make biking more convenient and fun.

**Walk Smart** Walk Smart is a free program that encourages participants to walk more by providing tools and inspiration. It provides maps, educational resources, "walk to lunch" group walks, and monthly rewards for participants.

**Wilsonville Sunday Streets** This event helps connect neighborhoods, parks, and people. Adults, children and seniors who bike, walk and run enjoy traffic-free streets filled with fun and interactive entertainment, music, physical activities and food.

## 4 Connecting art with transportation

SMARTArt works with Wilsonville students to link artistic creativity and transportation. Students are asked to depict a Wilsonville road with heavy congestion and how that road looks when other travel options are used. This project helps student artists see the connection of transportation choices to their health, the environment, their community, and traffic. The winning projects are displayed on the outside of a SMART bus and other entries are displayed on the interior of buses.

**Beauty and the Bridge** When the Wilsonville Road interchange area was expanded to increase vehicle capacity, walking and biking also benefited from better east-west crossings under I-5. In 2012, Wilsonville's student artists created tile art that was installed as part of the project to make it an inviting, comfortable, and aesthetically pleasing environment with the goal of improving mobility and encouraging biking and walking.

## 5 Financing SMART services and programs

The city's public transportation system is funded by a payroll tax paid by Wilsonville businesses and based on total payroll or self-employment income. The tax rate is currently .5 percent (.005) of gross wages. Despite the closure of high-profile businesses in Wilsonville during the recession that resulted in the loss of nearly 1,000 jobs, a number of other businesses have either expanded or announced plans to increase employment, which has helped keep SMART ridership numbers and revenue relatively steady over the last few years.

Intergovernmental grants help pay for special transportation programs, bus operations and bus purchases. The amount of grants received varies from year to year based upon grant awards. Over the past decade, SMART has successfully competed for more than $10 million in federal and state grants. The primary funding sources are supplemented by fare-box revenues and sale of surplus properties.








## Timeline

**1988**
Wilsonville Innovative Transportation Association creates independent city-owned transit system and begins service in 1989 as Wilsonville Area Rapid Transit (WART)

**1997**
Now operating as SMART, the transit agency begins offering express service to Salem

**2002**
The SMART Options program begins helping employers promote commuter benefits to employees

**2009**
SMART changes bus routes and expands service for WES commuter rail; all routes now transfer at the SMART Central Station

**2013**
SMART moves into brand new operations and fleet facility located near SMART Central Station

## Climate benefits

| | |
|---|---|
| **Transit** | ★ ★ ★ ★ ★ |
| **Active transportation** | ★ ★ ☆ ☆ ☆ |
| **Employer-based commuter programs** | ★ ★ ☆ ☆ ☆ |
| **Public education and marketing** | ★ ★ ★ ☆ ☆ |

These greenhouse gas emissions reduction strategies are an important part of what the City of Wilsonville is already doing to realize its vision for the future, and provide a strong foundation for meeting state climate goals for 2035. The climate benefits shown represent the relative effectiveness of each strategy.

For more information on greenhouse gas emissions reduction strategies, refer to the Climate Smart Communities Scenarios Project website at **www.oregonmetro.gov/climatescenarios**.

## Keys to success

**Cultivate community involvement and support** A community should develop a vision in partnership with government agencies, residents and businesses. Wilsonville's Parks and Recreation, Bicycle and Pedestrian, and Transit master plans were all created under the umbrella of one advisory committee.

**Develop and foster public-private partnerships** Many Wilsonville businesses are proud sponsors of public programs such as Walk Smart, Movies in the Park, and Wilsonville Sunday Streets.

**Support local businesses with transportation options** Wilsonville businesses employ a skilled, diverse workforce from throughout the Portland metropolitan and North Willamette Valley regions. SMART provides a crucial service for many of the 9 out of 10 Wilsonville workers commuting from elsewhere to jobs in Wilsonville.

**Leverage location within the region** The southern-most city in the region, Wilsonville is located halfway between Portland, Oregon's largest city, and Salem, the state capital. With ongoing planning and investment in its transportation system, the city can continue to serve its residents, businesses and the northern Willamette Valley.

## Regional partners

Working together to help meet Oregon's target for reducing greenhouse gas emissions from cars and trucks

City of WILSONVILLE OREGON

SMART SOUTH METRO AREA REGIONAL TRANSIT

## About Metro

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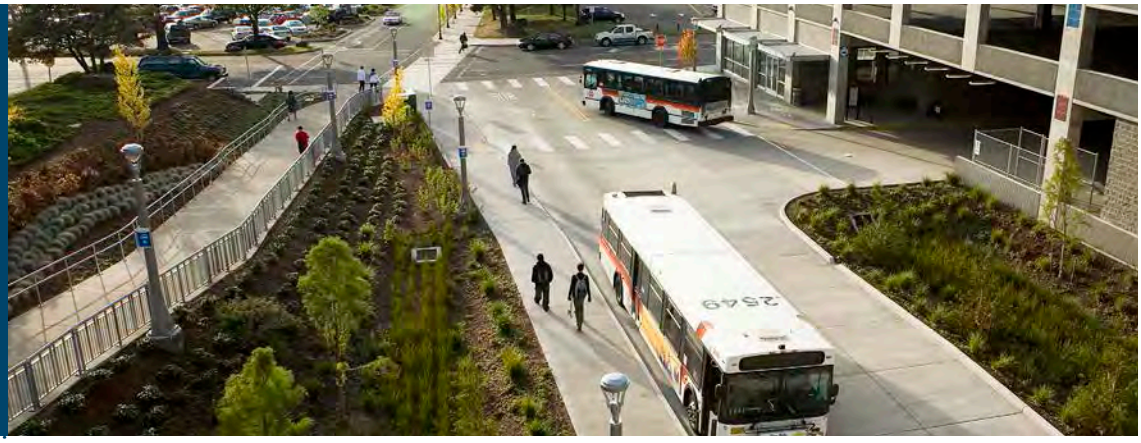
SPRING 2013

# CLIMATE SMART COMMUNITIES SCENARIOS PROJECT



## COMMUNITY CASE STUDY SERIES

This case study showcases actions that communities in the Portland metropolitan region are already taking to help reduce greenhouse gas emissions from cars and small trucks.

This is one of eight in a series developed for the Climate Smart Communities Scenarios Project.

- Beaverton
- Clackamas County
- Gateway (Portland)
- Hillsboro
- Rockwood (Gresham)
- Wilsonville
- Employer-based commuter programs
- Neighborhood-based travel options

## Strategies

- **Mixed-use development**
- **Active transportation**
- **Traffic management**

# 82nd Avenue corridor

## Community case study

### Revitalizing a 1950s commercial corridor in Clackamas County

The 82nd Avenue corridor in Clackamas County is a major commercial activity center serving a large portion of urban Clackamas County. The corridor extends from Johnson Creek Blvd on the north end to Sunnyside Road on the south. While 82nd Avenue serves as a primary connection between neighborhoods and commercial and industrial centers, it also functions as a key arterial street to move people and goods. For this reason, the area is well-positioned for revitalization through the development of mixed-use neighborhoods with nearby services.

The 82nd Avenue corridor originally emerged as a distinct retail and local business hub. In 1980, the county created a revitalization plan through the Clackamas Town Center Urban Renewal District to encourage private investors to build thousands of housing units and millions of square feet of retail and commercial space in the area. Over the years, the concentration of development resulted in a rise in daily use of commercial services and traffic volume. In 2006, the North Clackamas Revitalization Area Urban Renewal District was established to promote affordable housing and development around the northern portion of the corridor. These major programs help address the transportation and land use challenges that contribute to greenhouse gas emissions.

## Key challenges

- The existing multi-lane arterials (82nd Avenue and Sunnyside Road) are barriers for pedestrian crossing.
- While the backbone of the transit system is in place, there is need for a local shuttle or additional transit service to provide access to local business and jobs.
- While the zoning would allow for multi-family or more intense mixed-use commercial, redevelopment is expensive and the market is not supporting the transition at this time.

**The Oregon Legislature has required the Portland metropolitan region to reduce per capita greenhouse gas emissions from cars and small trucks by 2035.**

Metro

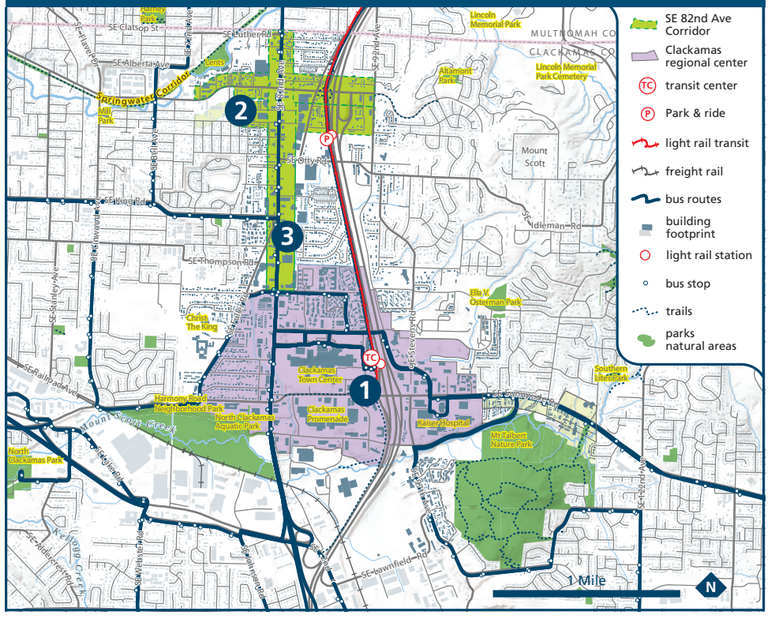
**www.oregonmetro.gov/climatescenarios**

# Balancing access with jobs, housing, amenities and livability

In 2009, the MAX Green Line was extended into Clackamas County, providing access to light rail at both the Fuller Road Station and the Clackamas Town Center Station. The light rail line parallels the I-205 freeway and is located about one-half mile from 82nd Avenue. In addition, fairly regular bus transit service is provided along 82nd to Clackamas Town Center. Other investments have been made to complete the road network in the area including the boulevard treatment along Monterey Avenue and beautification improvements along Sunnybrook Boulevard.

The Clackamas Town Center mall anchors the southern portion of the corridor and is an established hub for commercial activity in the area and the region. Other relatively large employers and services in the area include the North Clackamas Aquatic Park, Clackamas Community College and the Kaiser Permanente Sunnyside Medical Center. As one of the fastest growing business centers in the region, it is vital to the economic health of Clackamas County to ensure the area's long-term success by achieving a balance of good access and amenities that attract residents, businesses and future development. This includes providing access to nearby parks, open space and public spaces, as well as transportation improvements to encourage bicycling and walking, to promote and maintain a vibrant, healthy and safe community.

## 82nd Avenue corridor




## 1 Improving transportation access and connections

Improvements in the Clackamas Town Center Urban Renewal Area, created in 1980, are guided by the Clackamas Town Center Development Plan that identifies projects that address traffic circulation and capacity issues and community infrastructure needs including utility upgrades, landscaping, parks, biking pathways, and parking and transit facilities. Completed projects include:

- key roadway connections to facilitate north/south movement within the regional center
- realigning road intersections for safety and more efficient movement
- improvements to Monterey Avenue to create a Main Street standard
- Green Line light rail project with two station areas, to link the regional center and area neighborhoods to the Gateway Regional Center with high capacity transit.

Many of the significant transportation infrastructure investments that have been completed create the backbone for the transportation network. What remains to be filled in are some critical east-west connections that allow residents and visitors to more easily and efficiently travel to and through the area. In addition, key investments are needed to improve the conditions for pedestrians and bicyclists in the area.

## 2 Revitalizing area neighborhoods

The North Clackamas Revitalization Area (NCRA), formed in 2006, straddles the northern portion of the 82nd Avenue corridor. The neighborhoods just west of 82nd needed access to sewer and other important infrastructure. The goal of the NRCA is to support the existing affordable neighborhoods while also investing in the commercial areas along 82nd Avenue. Since its creation, NCRA urban renewal funds have been used to create a safe, clean and affordable mixed-use neighborhood with nearby services by:

- working with the community to create a neighborhood park
- providing low-cost loans for sanitary sewer hook ups
- partnering with Water Environment Services/CCSD#1 to extend sanitary sewers to the area
- working with affordable housing providers on the construction of new units, and loans and grants for repairs and renovations
- developing street improvements along key north-south facilities.

## 3 Supporting uses essential to a vibrant, mixed-use community

Parks, schools and other important institutions all are located within a mile of the 82nd Avenue corridor. The North Clackamas Aquatic Park, Kaiser Sunnyside Medical Center, Clackamas Community College, La Salle High School, Trader Joe's, Fred Meyer and a long list of other educational, healthcare and commercial uses call this area home. Affordable housing with a mix of housing types are located in and around the area. All the ingredients are in place, but the transition from an auto-centric area to a vibrant mixed-use community has yet to take hold.

Identifying the key investments will be critical, but it is also necessary to support the role of the private sector as a leader in creating this vibrant community. Recent planning efforts have identified the need to transition some parking lot areas into higher density housing, shift some key locations from redevelopment of low density housing to mixed-use development, and improve the bicycle and pedestrian systems. In addition, as funds become scarcer to improve the road system for more automobiles, there will be a need to see how we can work with developers to finance a variety of transportation facilities that support multiple modes of travel.

Working together with the development community, it will be important to continue to identify ways to encourage economic growth, foster a healthy community, and improve circulation and connections for all forms of travel.

## Timeline

| 1980 | 1996 | 2006 | 2009 | 2013 |
|---|---|---|---|---|
| Clackamas Town Center Urban Renewal District formed to provide transportation and community facilities to support a rapidly growing area | Clackamas Regional Center Area Design Plan adopted that implements the Metro Region 2040 regional center designation | North Clackamas Revitalization Area formed to implement the community's vision for the area as safe, clean and affordable, with mixed-use neighborhoods | Max Green Line opens, the first light rail line extended into Clackamas County | Monterey Avenue connected to Fuller Road, expanding travel choices and access to the Clackamas Town Center and Green Line station |

## Climate benefits

| | |
|---|---|
| **Mixed-use development** | ★★★★★ |
| **Active transportation** | ★★☆☆☆ |
| **Traffic management** | ★★★☆☆ |

These greenhouse gas emissions reduction strategies are an important part of what the Clackamas regional center is already doing to realize its vision for the future, and provide a strong foundation for meeting state climate goals for 2035. The climate benefits shown represent the relative effectiveness of each strategy.

For more information on greenhouse gas emissions reduction strategies, refer to the Climate Smart Communities Scenarios Project website at **www.oregonmetro.gov/climatescenarios**.

## Keys to success

**Leverage partnerships and resources to create a vibrant community** Support cooperation between public agencies, chambers of commerce, local businesses and civic organizations, and leverage local, regional, state and federal resources to build needed investments.

**Invest in sidewalks, bike lanes, multi-use trails and transit to connect people to jobs, goods, services, education and recreation** Focus on the key connections identified in the recently completed Clackamas Regional Center Pedestrian and Bikeway Connections Plan to give people who arrive by light rail or bus better access to the destinations in the 82nd Avenue corridor and jobs in the area.

**Maintain affordable housing and link these communities to commercial areas and light rail** Improve street connections, such as the realignment of Otty Road at 82nd Avenue, to enhance the safety and create a more direct route to commercial areas on 82nd Avenue and the Fuller Road Light Rail Station.

**Continue to research and develop strategies** Explore additional strategies to remove development barriers and to create a more flexible and expedited approach to approving mixed-use development in the 82nd Avenue corridor.

## Regional partner

Working together to help meet Oregon's target for reducing greenhouse gas emissions from cars and trucks

CLACKAMAS COUNTY

## About Metro

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# CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

## COMMUNITY CASE STUDY SERIES

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- Neighborhood-based travel options

## Strategies

- **Mixed-use development**
- **Active transportation**
- **Transit**

# Gateway
## Community case study

### Building community support for redevelopment

Adjacent to two regional freeways and served by three light rail lines and 13 bus lines, the Gateway area in East Portland provides one of the region's best transportation networks. It is projected to become the most accessible location in the Portland metropolitan region in 20 years, creating a new center for jobs and the residents of East Portland. With increased activity, the area will be a destination for working, shopping and recreation, and home to thousands of people, both newcomers and longtime residents.

With this focus, it is evolving into a source of community pride as an embodiment of the values and aspirations of the East Portland community. Redeveloping a low density, suburban style commercial and retail area into a more dense, pedestrian-friendly, mixed-use community will require sustained investment. The Opportunity Gateway Concept Plan and Redevelopment Strategy, the culmination of an effort by hundreds of stakeholders over a two-year period, sets the stage for a transformation that supports sustainable development and helps the region meet the state mandate to reduce greenhouse gas emissions for cars and small trucks.

## Key challenges

- Options for residents to gather and hold community events are limited due to a lack of parks and open spaces.
- There is an absence of quality affordable and market-rate housing.
- Lack of infrastructure makes it difficult to support urban development in a suburban place.
- There is a need to attract more family-wage jobs to the area, matched to the skill sets of the existing workforce.

**The Oregon Legislature has required the Portland metropolitan region to reduce per capita greenhouse gas emissions from cars and small trucks by 2035.**

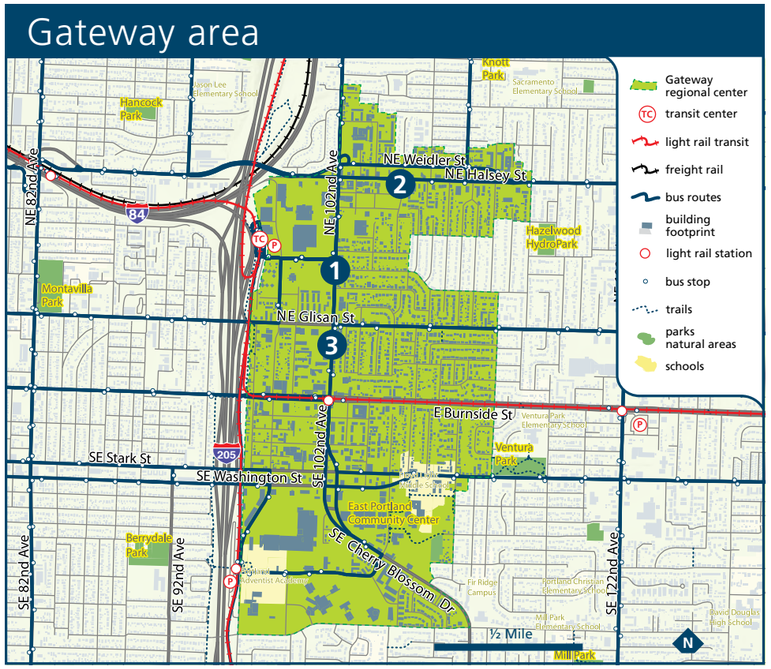
Metro

**www.oregonmetro.gov/climatescenarios**

# Planning for healthy communities and sustainable development

The Opportunity Gateway Concept Plan and Redevelopment Strategy, approved by the Portland City Council in 2000, calls for generating more activity in the Gateway area by developing retail and housing opportunities that create jobs and enhance livability. Complementing the existing transportation network with an improved local network of streets, sidewalks, and transit services will increase options for walking, biking and taking transit to meet everyday needs. The plan's proposal for a variety of amenities including grocery stores, schools, parks, and employment centers in close proximity to where people live will encourage the use of these travel options and promote a more active lifestyle.

The Gateway Transit Center will be converted from a primarily surface parking lot to a mixed-use community, complete with a public plaza, local shops, and entertainment. Proposed new street connections will reduce congestion on major streets. Nearby street improvements including wider sidewalks, street trees, and bicycle lanes will encourage more walking and biking, help reduce the heavy reliance on automobile travel, and create a livable, healthy community. To realize this vision, the city has implemented policies and programs that leverage existing amenities while promoting redevelopment tools and opportunities. Some of the activities underway or already completed are highlighted in this section.




## 1 Growing Gateway EcoDistrict

The Growing Gateway EcoDistrict was created as a pilot project by the City of Portland along with four other areas of the city in 2009. It is a community driven initiative to organize, identify and implement projects that will lead to a more sustainable neighborhood where people want to live and work. The stakeholders of the Gateway area came together and formed a committee that has been working on setting goals and identifying projects that will help create economic growth and local jobs for the community. The district includes residents, small business and property owners, and institutions that are committed to improving the environment while meeting long standing neighborhood needs for jobs, safe streets and mixed-income housing. Growing Gateway is working to help residents and businesses make energy efficiency retrofits through its program, Re-Energizing Gateway, as well as projects that improve a sense of place and connectivity in the district.

## 2 Creating a community gathering place

The Gateway community has long desired a public gathering space to enjoy in the heart of the community. The Gateway Redevelopment and Neighborhood Park Project, undertaken in 2009, seeks to promote and reinforce the identity of Gateway as a family friendly, multigenerational, and multicultural place to live and work.

In 2008, the Portland Development Commission and Portland Bureau of Parks and Recreation purchased a 4.2-acre site along Northeast Halsey Street within the Gateway Urban Renewal District. Based on previous community outreach and planning efforts, it was decided this site should be a 3-acre park and 1-acre mixed-use development. The Gateway Park property is envisioned to be an important addition to the Halsey/Weidler commercial corridor and the entire Gateway community. Gateway has long been identified as one of the city's most park-deficient districts, making the acquisition of property for a park a priority.

## 3 Realizing a vision for sustainable development

In addition to the Gateway EcoDistrict and Gateway Park undertakings, there have been other projects completed or planned that would facilitate the further re-development of the Gateway area, moving it toward the vision articulated by the community. Some of these actions include:

- roadway improvements along 102nd Avenue in 2008 including street bike lanes, planted center median strip, sidewalk widening, benches and other street furniture, and bioswales for stormwater run-off
- initiate the next phase of improvements on 102nd beginning in 2014
- construction of the LEED Platinum East Portland Aquatics Center in 2009, a neighborhood amenity financed through a parks levy and volunteer contributions from a partnership between David Douglas School District, Portland Adventist and Multnomah County for land contributions
- construction of Gateway Glisan, a catalytic mixed-use affordable housing and commercial project at the intersection of Northeast 99th Avenue and Glisan Street
- relocation of a Kaiser Permanente facility in 2013 to bring additional medical services to the Gateway area
- future plans for development of Gateway Green, a 40-acre park between I-84 and I-205 that includes a cyclo-cross track and urban park amenities, and demonstrates sustainable park features.

## Timeline

| 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|
| Community stakeholders engaged by the City of Portland to discuss concept of EcoDistrict and form work group | Work group becomes EcoDistrict Steering Committee and holds community meetings to solicit input for Ecodistrict vision and project priorities | EcoDistrict Vision developed and MOU signed documenting commitment to launch Gateway EcoDistrict and formalize partnerships between organizations | Organizational and governance structure developed; fundraising initiated for short-term staffing capacity and early projects | Fundraising and project implementation continues |

## Climate benefits

| | |
|---|---|
| **Mixed-use development** | ★ ★ ★ ★ ★ |
| **Active transportation** | ★ ★ ☆ ☆ ☆ |
| **Transit** | ★ ★ ★ ★ ★ |

These greenhouse gas emissions reduction strategies are an important part of what the Gateway area in Portland is already doing to realize its vision for the future, and provide a strong foundation for meeting state climates goals for 2035.

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## Keys to success

**Encourage grassroots community building activities** The East Portland community developed the East Portland Action Plan with the assistance of the City of Portland, and received funding to hire an advocate. The advocate has expanded the capacity and improved the advocacy of East Portland and Gateway community members. The EPAP now includes many governmental partners working with community members to improve the quality of life in East Portland.

**Support community involvement** The Growing Gateway EcoDistrict was conceived and developed by the community, including residents and businesses, in partnership with the Portland Development Commission, City of Portland, and the Portland Sustainability Institute.

**Develop and foster public-private partnerships** Many Gateway businesses support civic ventures in Gateway, including the summer Movies in the Park series and the Sunday Parkways bike ride event. The Glisan Commons mixed-use project included significant public investment to meet affordable housing and revitalization goals.

## Regional partner

Working together to help meet Oregon's target for reducing greenhouse gas emissions from cars and trucks

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# CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

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- Neighborhood-based travel options

## Strategies

- **Employer-based commuter programs**
- **Parking management**
- **Public education and marketing**

# Employer-based commuter programs

### Encouraging travel options for the daily commute

Commuters tend to have fixed routes and schedules producing a reliable trip pattern that lends itself to the use of travel options, where available. Reducing commuter drive-alone trips is the primary focus of commute options programs, leading to reduced traffic congestion, lower transportation costs, improved air and water quality, and increased levels of physical activity – all of which help lower greenhouse gas emissions and create healthy communities across the region.

Employer-based commuter programs are a strategic approach to effectively promoting travel options such as biking, walking, transit, and ridesharing to employees in the Portland metropolitan region. Parking management, end of trip facilities and commuter encouragement programs are three strategies that reduce drive-alone commute trips in the region. These programs benefit the employer and the employee through tax and other financial savings, as well as improved employee health and morale.

## Key challenges

- Gaps in walking and biking paths and facilities connecting neighborhoods to employment centers make commute options such as walking and biking impractical.
- Employers are challenged by parking constraints, ongoing costs and the need to free up parking spaces for customers and visitors.
- Factors such as families with children, non-secure bike parking, long transit times, night and weekend employment shifts not served by transit create challenges to using travel options.

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Metro

**www.oregonmetro.gov/climatescenarios**

# Creating healthy communities with commuter travel options

TriMet, Wilsonville SMART, Transportation Management Associations, and the City of Portland implement programs that encourage employees to use commute options. These organizations provide information and technical services to employers to make the business case for supporting and rewarding employees who commute using travel options.

The TriMet, Wilsonville SMART, and TMA employer outreach programs have made significant progress with reducing drive-alone trips and increasing the use of commute options in the region. Since 1996, the programs have served businesses of all sizes with transportation program assistance, transit pass programs, and surveys to comply with state air quality rules. These programs are in place for approximately one-third of the region's workforce. Program results show an increase in commute trips (from 26 to 39 percent) by transit, biking, walking, carpool, vanpool, and teleworking.

## Employer-based commuter programs

**Commuter program investments to date reach one-third of the region's workforce, increasing transit, bike, carpool and other non-drive-alone trips.**

### 1 Managing parking

Creating a parking pricing and management strategy is a highly effective method for reducing the number of automobile trips coming into downtowns and centers. The Lloyd District and downtown Portland have low drive-alone rates and high transit mode shares due largely to comprehensive policies that support the area's transportation investments. Drive-alone trips to the Lloyd District decreased from 60 percent in 1997 to 41 percent in 2011, a 32 percent decrease over 15 years, and transit trips make up nearly 45 percent of all commute trips into downtown Portland. Managing parking pricing and availability, combined with promoting commute options such as biking, walking, transit and ridesharing, have increased the use of these travel options to these areas. Districts that manage parking help businesses save money on parking costs and free up parking for customers. Encouraging employees to use commute options reduces ongoing lease or maintenance costs and addresses parking constraints.

### 2 Making commute trips easier

Another aspect of employer-based commuter programs is working with businesses to provide facilities that make employee work trips more attractive. For example, secure bicycle parking, showers, and changing facilities encourage biking and walking. Businesses invest in these facilities to reduce drive-alone commute trips, free up parking spaces for customers, improve health outcomes for their employees, and foster safe and convenient biking environments. End-of-trip facilities also offer important linkages between biking and public transportation infrastructure. The close proximity of secure bicycle parking to transit stops and stations is valued by bicycle commuters.

### 3 Encouraging commute options

Programs that provide incentives, distribute information, and promote workplace competitions are effective at reducing drive-alone trips. TriMet's Universal Annual Pass Program is one example that has helped increase transit commute trips. Employers purchase annual passes at a lower rate based on employee ridership – a proven incentive for employees to take transit. Another technique that has been implemented by the City of Portland and TMAs is employer individualized marketing. These programs provide employees with maps, trip planning services, incentives, and personalized assistance for using commute options. Several examples include the City of Portland's Downtown SmartTrips, Swan Island's Going to the Island, and the Lloyd Links program. Other encouragement programs for commuters that have yielded positive results are the Bicycle Transportation Alliance Bike Commute Challenge and the Carefree Commuter Challenge.

## By the numbers

**248,000**
One-third of the workforce, or approximately 248,000 employees, is reached by commuter programs.

**39 percent**
Employee trips using commute options rose from 26% in 1996 to 39% in 2011 among employers with commuter programs.

**11,745**
Close to 12,000 Bike Commute Challenge participants bicycled 1.3 million miles in September 2012.

**2.1 million**
Westside Transportation Alliance programs reduced the total miles driven by 2.1 million in 2011.

**418,090**
In 2012, there were 418,090 boardings on TriMet's WES Commuter Rail.

**4.5 million**
Lloyd TMA programs reduced total miles driven by 4.5 million in 2012.

**29,125**
Since 2006, the Portland SmartTrips Business program served 1,140 businesses, delivered 11,821 employee commute kits, and distributed 29,125 bike/walk maps.

## Timeline

### 1974-1979
- TriMet rideshare project begins during fuel crisis
- Carpool signs placed along regional freeways and major arterials
- Downtown Portland Carpool Parking Permit Program

### 1995–1997
- BTA Bike Commute Challenge
- Lloyd and Westside Transportation Alliance TMAs form
- ECO rules established
- TriMet Universal Pass Program piloted
- Tualatin Shuttle begins

### 2001
- Community Cycling Center Create a Commuter program initiated
- Swan Island Evening Shuttle service begins

### 2004-2009
- City of Portland Bike Parking Fund established
- Carefree Commuter Challenge
- Portland SmartTrips Downtown
- TriMet WES Commuter Rail opens

### 2011
- Drive Less Connect online
- TriMet Map Trip Planner (multimodal) launched

## Climate benefits

| | |
|---|---|
| **Employer-based commuter programs** | ★★☆☆☆ |
| **Parking management** | ★★★★☆ |
| **Public education and marketing** | ★★★☆☆ |

These greenhouse gas emissions reduction strategies are an important part of what employers throughout the region are already doing to create healthy communities and provide a strong foundation for meeting state climate goals for 2035. The climate benefits shown represent the relative effectiveness of each strategy.

For more information on greenhouse gas emissions reduction strategies, refer to the Climate Smart Communities Scenarios Project website at **www.oregonmetro.gov/climatescenarios**.

## Keys to success

**Manage parking to create a more balanced and efficient transportation system** Strategic pricing and availability of parking in business districts and downtowns lead to significant increases in use of commute options, and savings for employers and employees.

**Encourage business participation in employer outreach programs** Transportation Management Associations assist local employers in commute options programs that increase employee satisfaction, decrease absenteeism and health care costs, and comply with state air quality rules.

**Provide incentives for employees to make more of their trips by biking, walking, ridesharing and transit** Many successful commute option programs encourage employee participation through monetary incentives and reward-based challenges.

**Invest in end-of-trip facilities to encourage greater use of commute options among employees and students** Secure bike parking, showers and changing rooms for employees are a few investments that employers can provide to encourage commuting by biking or walking.

## About Metro

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SPRING 2013

# CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

## COMMUNITY CASE STUDY SERIES

This case study showcases actions that communities in the Portland metropolitan region are already taking to help reduce greenhouse gas emissions from cars and small trucks.

This is one of eight in a series developed for the Climate Smart Communities Scenarios Project.

- Beaverton
- Clackamas County
- Gateway (Portland)
- Hillsboro
- Rockwood (Gresham)
- Wilsonville
- Employer-based commuter programs
- Neighborhood-based travel options

## Strategies

- **Active transportation**
- **Public education and marketing**

# Neighborhood-based travel options

### Choosing walking, biking, and transit for local trips

Neighborhood-based travel options programs use traveler information tools, individualized marketing and educational outreach events to inform residents of the Portland metropolitan region about their travel choices. When neighborhood residents choose to walk, bike, carpool, or use transit for their trips, they help reduce traffic congestion and greenhouse gas emissions, lower transportation costs, improve air and water quality, and increase levels of physical activity – all of which help create healthy and vibrant communities across the region.

Programs offered at the neighborhood level provide the ideal scale for promoting and encouraging greater use of travel options. A majority of the trips residents make throughout the day are for shopping, leisure activities, or recreation, and begin and end at home. Programs that provide traveler information and education contribute to reducing auto trip lengths and miles traveled by informing choices, providing materials to help implement those choices, and motivating residents to try available travel options.

## Key challenges

- Geographic barriers such as freeways, arterials, hills, and rivers separate neighborhoods from access to jobs, schools, services, and amenities.
- One in six of all trips in the region are now made by active transportation, yet conditions for safe and comfortable walking and biking vary widely across the region.
- Residents have challenges to using travel options, including safety concerns, families with children, and transit services that are difficult to access.

**The Oregon Legislature has required the Portland metropolitan region to reduce per capita greenhouse gas emissions from cars and small trucks by 2035.**

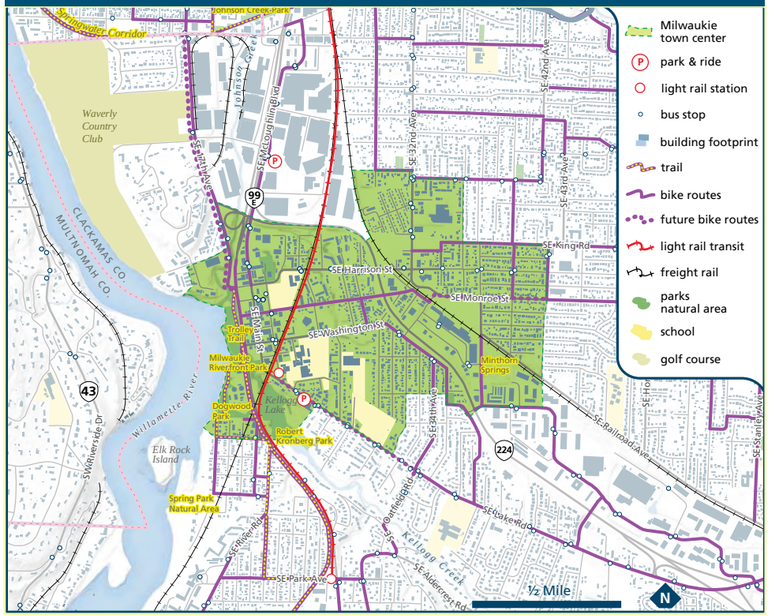
Metro

**www.oregonmetro.gov/climatescenarios**

# Tools and outreach programs encourage travel options

Traveler information tools, individualized marketing projects, and neighborhood travel options events foster more frequent use of active travel modes such as walking, biking, and transit. Tools such as bike and walking maps, transit trip planners, mobile applications for locating carsharing services, and wayfinding signage are available to help residents make safe and informed travel choices. Some of these travel resources are the foundation of individualized marketing projects, which target entire neighborhoods and encourage residents to make more of their trips using active travel modes. Individualized marketing projects are highly effective when launched in conjunction with transportation investments such as a new transit service. Travel options events such as Sunday Parkways in Portland and Sunday Streets in Wilsonville are effective strategies for promoting active transportation to residents. These events close off car traffic on designated routes, allowing residents to have positive experiences biking, walking, and trying out other fun ways to get around their neighborhoods.

## Milwaukie travel options




## 1 Providing travelers with tools

The ability to plan routes and navigate safely is a critical component to increasing the use of travel options. Both static and dynamic means of providing information can help achieve this outcome. Biking and walking maps identify safe routes to popular destinations such as parks, shopping areas, and employment centers. Wayfinding signage installed along biking and walking paths and neighborhood greenways encourage more frequent and longer biking and walking trips. Online trip planning services and real-time information displays offer a convenient and mobile way to plan and undertake a trip, using either one or multiple modes of travel. Carpooling in the region is supported by Drive Less Connect, a multi-state ridematching database that allows residents to find carpool matches for a variety of trips.

## 2 Informing travelers of options

Individualized marketing projects identify people who want to change the way they travel. Outreach staff contacts households to offer educational materials that motivate residents to drive less and use other travel options. These projects are successful by focusing only on people who are interested in receiving information. They are most effective when combined with transportation improvements, such as light rail. Individualized marketing is cost effective and and consistently reduces drive-alone trips by 9 percent.

In 2004, the City of Portland launched the Interstate TravelSmart individualized marketing project in conjunction with the opening of the MAX Yellow Line. Households that received individualized marketing made nearly twice as many transit trips compared to a similar group of households that did not participate in the marketing campaign. In addition, transit use increased nearly 15 percent during the SmartTrips project along the MAX Green Line in 2010. Follow-up surveys show that household travel behavior is sustained for at least two years after a project has been completed. A total of 12 individualized marketing projects have been conducted in the Portland metropolitan region since 2003.

## 3 Leveraging transportation investments

TriMet's MAX Orange Line will connect Southeast Portland and Milwaukie neighborhoods to downtown by a new bridge across the Willamette River dedicated to transit, biking, and walking. When service begins in 2015, there will be approximately 22,000 households and 85,000 employees within walking distance of MAX Orange Line stations. The City of Milwaukie has allocated resources to improve biking and walking facilities, develop trails and wayfinding signage, and enhance transit stops and stations by providing new bike parking. When the MAX Orange Line opens in 2015, Milwaukie will have regionally-connected travel options consisting of auto, high capacity transit, biking and walking paths, trails and facilities, and pedestrian connectivity to downtown. An individualized marketing project conducted shortly after the opening could increase ridership and promote other travel options, further leveraging this resource and capital investment.

## 4 Offering community outreach events

Community outreach programs such as Portland Sunday Parkways and Wilsonville Sunday Streets encourage residents to use travel options by exploring their neighborhoods on foot and bike without motorized traffic. These events enhance the health, transportation, air quality, recreational opportunities, and public safety interests of neighborhoods and communities. Providing recreational opportunities in a low or no-car environment is a key element for changing travel habits among residents. These events work well in suburban as well as urban areas and are an important strategy for motivating residents to try out new and active ways to travel. Sunday Parkways events have attracted 400,000 attendees since 2008 and the Wilsonville Sunday Streets event attracted more than 5,000 participants in 2012. Forty percent of residents in the region are aware of these programs. Other examples of valuable community outreach and educational programs include the Community Cycling Center's program to reduce barriers to biking and Metro's Vámonos program, both of which provide communities across the region with the skills and resources to become more active by walking, biking, and using transit for their transportation needs.

## Timeline

### 1983-1996

- Bike There! Map
- Federal policy resulting in funds for non-auto transportation (ISTEA)
- Bridge Pedal event

### 2002-2006

- TravelSmart individualized marketing pilot and large-scale projects
- City of Portland SmartTrips individualized marketing projects
- Drive Less Save More campaign

### 2008-2010

- City of Portland Sunday Parkways
- Metro Walk There! Guidebook
- Gresham wayfinding signage and individualized marketing projects

### 2011

- Discover Wilsonville individualized marketing project
- Drive Less Connect online tool

### 2012-2013

- Wilsonville Sunday Streets event
- Metro's Vámanos project
- Tigard and Tualatin Hills Parks and Recreation wayfinding signage projects

## Climate benefits

| | |
|---|---|
| **Active transportation** | ★ ★ ☆ ☆ ☆ |
| **Public education and marketing** | ★ ★ ★ ☆ ☆ |

These greenhouse gas emissions reduction strategies are an important part of what neighborhoods throughout the region are already doing to create healthy communities and provide a strong foundation for meeting state climate goals for 2035. The climate benefits shown represent the relative effectiveness of each strategy.

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## Keys to success

- **Invest in transportation systems that give residents options** Provide residents with safe and reliable travel options with good connectivity to employment centers and neighborhood amenities and services.
- **Ensure residents are informed of, and confident using, their travel options** Remove barriers by identifying and addressing concerns through direct outreach.
- **Complement walking, biking and transit investments with direct outreach to nearby residents** Leverage large transportation investments by funding strategically-located individualized marketing projects.

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