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Metro | *Agenda*

Meeting: Metro Technical Advisory Committee

Date: Wednesday, December 4, 2013

Time: 10 a.m. – noon

Place: **Room 370A&B (Room Change)**

Time	Agenda Item	Action Requested	Presenter(s)	Materials
10:00 am	**CALL TO ORDER**	Information	John Williams, Chair	
	Citizen Comment to MTAC Agenda Items	Information	All	
10:10	**Climate Smart Communities Scenarios Project – Report on scenarios' cost analysis and project next steps** *Objective: MTAC provides input on additional results related to the scenarios' cost analysis, and suggests policy areas to be the focus of discussion and input to shape the draft preferred approach in 2014*	Information	Kim Ellis, Metro	At the meeting
11:10	**GroveLink Transit Update** *Objective: To inform MTAC about Forest Grove's experience with a new local transit system intended to augment existing TriMet service in Forest Grove*	Information	Jon Holan, Planning Director, City of Forest Grove & Julie Wilckey, Chief Operating Officer, Ride Connection	At the meeting
Noon	**ADJOURN**			

MTAC meets the 1st & 3rd Wednesday of the month. The next meeting will be held December 18, 2013.
For agenda and schedule information, contact Paulette Copperstone: 503-797-1562, Paulette.Copperstone@oregonmetro.gov.

To check on closure or cancellations during inclement weather, please call 503-797-1700.

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Metro | *Memo*

DATE: December 3, 2013

TO: MTAC and Interested Parties

FROM: Kim Ellis, Principal Transportation Planner

SUBJECT: Climate Smart Communities Scenarios Project – First Look At Results and Next Steps

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PURPOSE

On November 6, members discussed early results related to greenhouse gas emissions, housing, jobs, travel and air quality. On December 4, staff will present early results from the scenarios' cost analysis focusing on economic and social equity outcomes. Public health and additional cost-related results will be reported in January.

ACTION REQUESTED

MTAC provides suggestions for presenting the cost-related analysis to policymakers and suggests key policy areas to be the focus of further discussion and input in 2014 to shape the draft preferred approach.

QUESTIONS FOR CONSIDERATION

- What suggestions do you have for presenting this information to the Metro Policy Advisory Committee (MPAC) and the Joint Policy Advisory Committee on Transportation (JPACT)?
- Given the early results and the relative climate benefits of policies tested in Phase 1 (see Table 1), what policy areas should be the focus of discussion and input in 2014 to shape the draft preferred scenario?

BACKGROUND

The 2009 Oregon Legislature required the Portland metropolitan region to develop an approach to reduce per capita greenhouse gas emissions from cars and small trucks by 20 percent below 2005 levels by 2035. The Metro Council has adopted policies to make decisions that advance the six desired outcomes found in the Regional Framework Plan. One of those desired outcomes pertains to leadership on climate change.

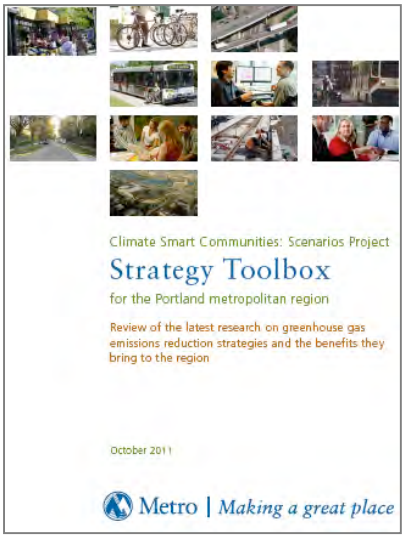
Figure 1. Metro's scenario evaluation criteria are based on the six desired regional outcomes adopted by the Metro Council in 2010.

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 reduce greenhouse gas emissions as required by the state. All six desired outcomes are being used to guide the evaluation of scenarios and development of a preferred approach. The land use visions of cities and counties across the region are the foundation for this work.

Figure 2 illustrates an overview of the project timeline.

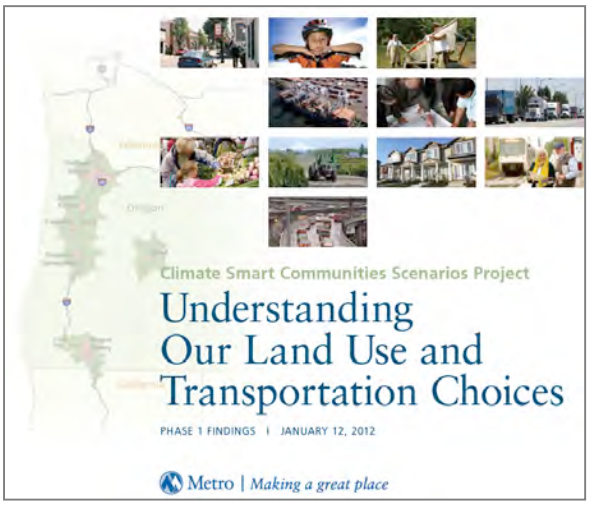
FIGURE 2. CLIMATE SMART COMMUNITIES SCENARIOS PROJECT TIMELINE

Phase 1 began in 2011 and concluded in early 2012. This phase focused on understanding the region's choices and started with producing the *Strategy Toolbox*, which reviewed the latest research on greenhouse gas (GHG) reduction strategies and their potential effectiveness and benefits. Staff also strategically engaged public officials, community and business leaders, community groups and government staff through two regional summits, 31 stakeholder interviews, and public opinion research.



Metro then evaluated a wide range of options for reducing GHG emissions by testing 144 different combinations of land use and transportation strategies (called "scenarios") to learn what it would take to meet the region's reduction target.

Phase 1 found that current plans and policies – if realized – along with advancements in fleet and technology provide a strong foundation for meeting the state target. Although current plans move the region in the right direction, current funding is not sufficient to implement adopted local and regional plans. Metro concluded that a key to meeting the target would be the various governmental agencies working together to develop partnerships and make community investments needed to encourage development that both supports adopted local and regional plans and reduces greenhouse gas emissions.



Phase 2 began in January 2012 and concluded in October 2013. This phase focused on shaping and evaluating future choices for supporting community visions and meeting the state emissions reduction target. Staff conducted sensitivity analysis of the Phase 1 scenarios to better understand the GHG emissions reduction potential of individual policies. [1] The policies tested included pay-as-you-drive insurance, traffic operations, expanded transit service, user-based pricing of transportation, transportation demand management programs, increased bicycle travel and advancements in clean fuels and vehicle technologies.

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

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

The information derived from the sensitivity analysis was used to develop a five-star rating system for communicating the relative climate benefits of different policies in the region. Adopted local land use plans and zoning were unchanged in the Phase 1 analysis and, therefore, no climate benefit is able to be reported for this policy.

The climate benefits are shown in **Table 1** using a scale of 1 to 5 stars, with 5 stars representing the most effective greenhouse gas emissions reduction policies.

[1] Memo to TPAC and interested parties on Climate Smart Communities: Phase 1 Metropolitan GreenSTEP scenarios sensitivity analysis (June 21, 2012).

TABLE 1. RELATIVE CLIMATE BENEFITS FOR THE PORTLAND METROPOLITAN REGION *

Investments and actions that reduce greenhouse gas emissions	Estimated climate benefit
Shift to low emissions vehicles and low carbon fuels	✻ ✻ ✻ ✻ ✻
Maintain and make transit more convenient, frequent, accessible and affordable	✻ ✻ ✻ ✻ ✻
Increase the cost of fuel (e.g., gas tax or other fees)	✻ ✻ ✻ ✻ ✻
Increase participation in private pay-as-you-drive insurance programs	✻ ✻ ✻ ✻ ✻
Implement a mileage-based road user fee	✻ ✻ ✻ ✻ ✻
Use a market-based approach to manage parking	✻ ✻ ✻ ✻ ✻
Implement a carbon fee	✻ ✻ ✻ ✻ ✻
Adopt Federal fuel economy standards	✻ ✻ ✻ ✻ ✻
Use technology and "smarter roads to manage traffic flow and boost efficiency	✻ ✻ ✻ ✻ ✻
Provide information to expand use of low carbon travel options and fuel-efficient driving techniques[2] through public education and marketing	✻ ✻ ✻ ✻ ✻
Make walking and biking more safe and convenient with complete streets	✻ ✻ ✻ ✻ ✻
Provide information and incentives to expand use of low carbon travel options through employer-based commuter programs	✻ ✻ ✻ ✻ ✻
Limit urban growth boundary expansion	✻ ✻ ✻ ✻ ✻
Expand access to car-sharing	✻ ✻ ✻ ✻ ✻
Expand access to and market share of electric vehicle/plug-in electric vehicles	✻ ✻ ✻ ✻ ✻
Maintain and make streets and highways more safe, reliable and connected	✻ ✻ ✻ ✻ ✻

* Note: The estimated climate benefit reflects the relative climate benefit of individual policies as they were tested in Phase 1. The climate benefit shown represents the relative effectiveness of each policy in isolation and does not capture any reductions that may occur from synergies between multiple policies.

Metro also undertook an extensive consultation process by sharing the Phase 1 findings with the cities, counties, county-level coordinating committees, regional advisory committees and state commissions. In addition, Metro convened workshops with community leaders working to advance public health, social equity, environmental justice and environmental protection in the region. A series of discussion groups were held in partnership with developers and business associations across the region.

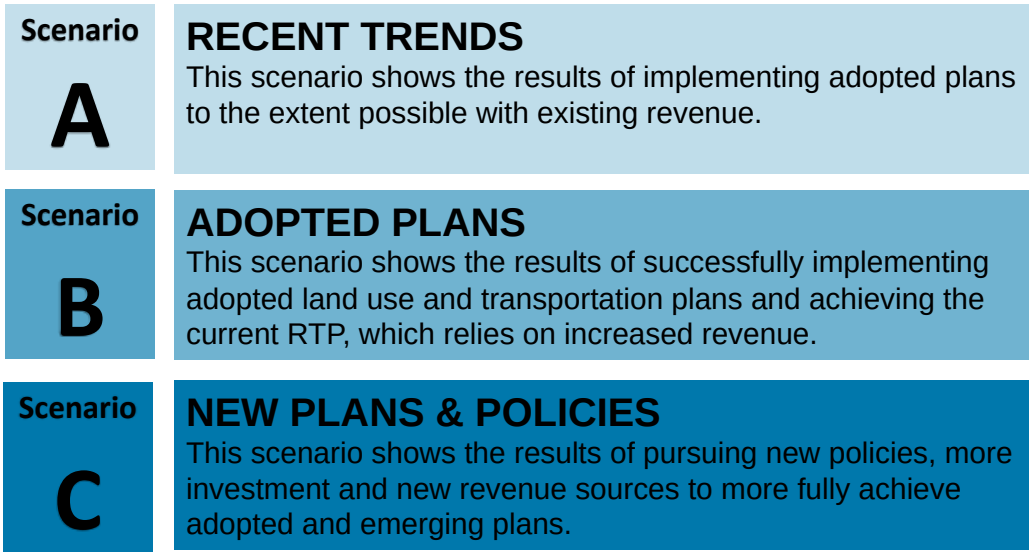
[2] ODOT initiated a statewide EcoDrive campaign in 2013. More information can be found at http://www.oregon.gov/ODOT/TD/TP/pages/ecodrive.aspx

More than 100 community and business leaders participated in the workshops and discussion groups.

Eight case studies were produced to spotlight local government success stories related to strategies implemented to achieve their local visions that also help to reduce GHG emissions. A video of local elected officials and other community and business leaders was also produced as another tool for sharing information about the project and the range of strategies being considered.

Through these efforts, Metro concluded that the region's 2040 Growth Concept and the locally adopted land use and transportation plans that implement it provide the foundation for further scenario development and analysis. **Figure 3** summarizes the three approaches evaluated.

FIGURE 3. THREE APPROACHES THAT WERE EVALUATED IN 2013



A set of criteria also were developed through the Phase 2 consultation process that would be used to evaluate and compare the scenarios considering costs and benefits across public health, environmental, economic and social equity outcomes. As unanimously recommended by the Metro Policy Advisory Committee (MPAC) and the Joint Policy Advisory Committee on Transportation (JPACT), Council approved a resolution on June 6 directing staff to move forward into the analysis and report back with the results in Fall 2013. The Phase 2 evaluation was conducted during the summer and fall of 2013.

In addition to conducting the analysis, staff prepared a communication and engagement strategy to guide the project to successful completion by the end of 2014. The strategy is summarized in Table 2.

Table 2. Phase 3 Engagement Strategy As Supported by Council on July 30, 2013

Stage	First Look at Scenario Results	Community Choices Discussion	Building Understanding of Preferred Scenario	Final Adoption and Building Momentum for the Future
Time frame	Oct. – Dec. 2013	Jan. – May 2014	June – Aug. 2014	Sept. – Dec. 2014
Milestone	Release results (Oct.)	Council/JPACT/MPAC direction on preferred scenario (April-May)	Public review draft scenario summarized (June)	Public comment period begins (Sept.) Council/JPACT/MPAC Adoption (Dec.)
Goal	Decision-makers review results and begin to identify/ discuss tradeoffs and policy issues through process of shared discovery	Decision-makers, public officials, business and community leaders, community groups and engaged public shape public review draft preferred scenario	Decision-makers, public officials, and business and community leaders understand basic elements of draft preferred scenario and importance of participating in final adoption process	Decision-makers, public officials, and business and community leaders embrace and take ownership of preferred scenario, commit to implement next steps/action plan

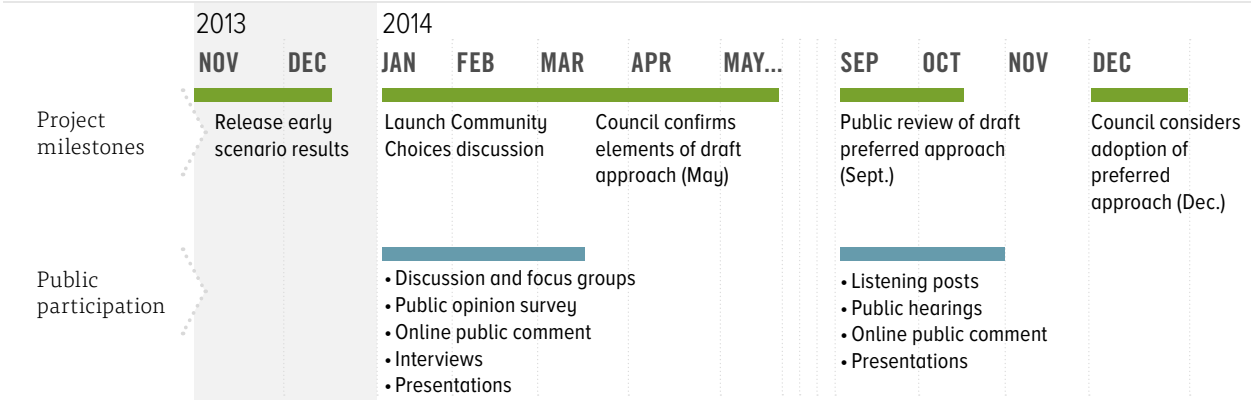
PHASE 3 - WHERE WE ARE NOW AND WHERE WE ARE HEADED

As directed by the Metro Council in June and July, staff began reporting back to Council and regional advisory committees in November 2013, launching the third, and final, phase of the project. More information is provided below.

Phase 3 from November 2013 to December 2014 will focus on reporting back the results of the evaluation and seeking input from community and business leaders, local governments, state agencies and the public about which investments and actions should be included in a preferred approach for the Metro Council to consider for adoption in December 2014.

Figure 3 provides a summary of Phase 3 activities and milestones is provided for reference.

FIGURE 3. PHASE 3 PROJECT MILESTONES AND PUBLIC PARTICIPATION OPPORTUNITIES



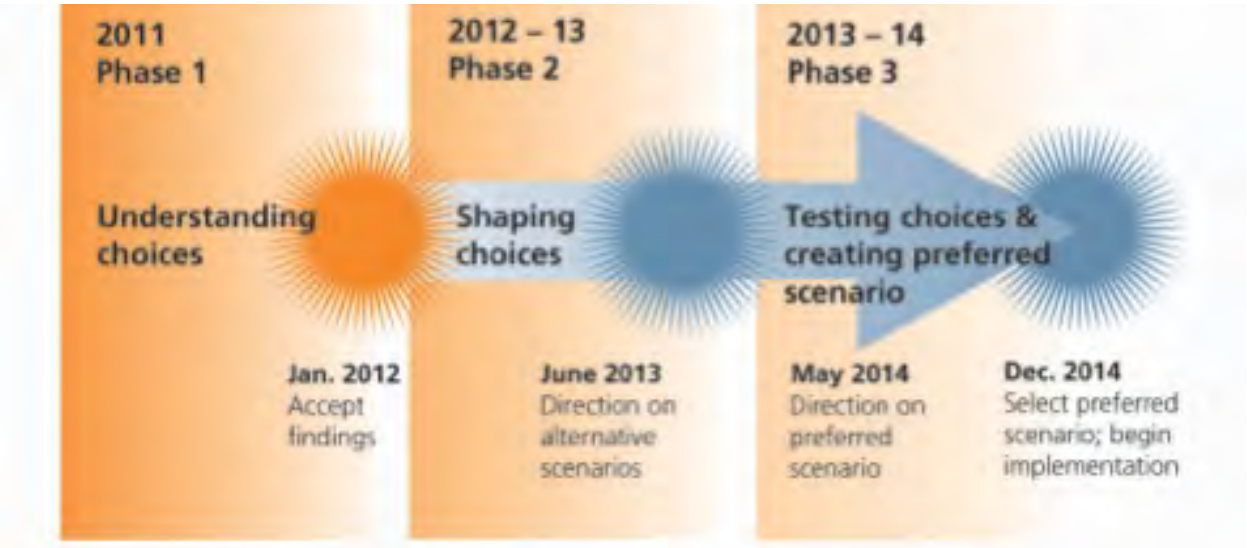
- **FIRST LOOK AT RESULTS: In November and December 2013**, the analysis results are being reported back to the Metro Council, regional advisory committees and local government county-level coordinating committees, prior to engaging other community and business leaders and the public. The November briefings focused on review of what was tested and reporting the estimated greenhouse gas emissions reductions and land use, employment, transportation and environmental outcomes. The December briefings will focus on reporting the scenarios' cost analysis relative to economic and social equity outcomes. Additional cost-related analysis and the public health impact assessment being conducted by the Oregon Health Authority will be reported in January 2014. **A goal of the "First Look at Results" is to begin to identify potential policy areas on which to seek input through "Community Choices" discussions in 2014.**

- **COMMUNITY CHOICES DISCUSSION: From January to April 2014**, Metro will facilitate a Community Choices discussion to explore policy choices and trade-offs. Community and business leaders, local governments and the public will be asked to weigh in on which investments and actions should be included in the region's preferred approach. On-line comment opportunities, stakeholder interviews, discussion groups, public opinion research and focus groups will be used to gather input. A Community Choices discussion guide, Data Book of results, presentation tool kit and other communication materials will also be available to support Council and partner outreach throughout this period. **A public engagement summary report and recommendations for the draft preferred scenario will be provided to Metro's technical and policy advisory committees in April.**

- **DIRECTION TO STAFF: In May 2014**, the Metro Council will be asked to provide direction to staff on the draft preferred approach. Outreach to local government officials will occur in the summer in advance of the final adoption process to be held in the fall. **The draft approach will be evaluated in Summer 2014 and then released for final public review in September 2014.**

- **ADOPTION PROCESS: From September to December 2014**, the project will move into the final adoption stage. OAR 660-044 directs the Metro Council to select a preferred approach by the end of 2014 after public review and consultation with local governments and state and regional partners. On-line comment opportunities and public hearings are planned during this period. Refinements may be identified through the adoption process. The final action to select a preferred scenario is required to be in the form of an amendment to the Regional Framework Plan. The action is also anticipated to make recommendations to state agencies and commissions, the 2015 Legislature, and the 2018 Regional Transportation Plan (RTP) update. **The Metro Council will consider adoption of a preferred approach on December 18, 2014.**

Figure 5 shows the project timeline and decision milestones.



In early 2015, Metro will submit the preferred approach to the Land Conservation and Development Commission in the manner of periodic review. According to OAR 660-044, following Metro's plan amendment and LCDC review and order, Metro is required to adopt functional plan amendments, if needed, to require cities and counties to update local plans as necessary to implement the preferred scenario.

CHANGES SINCE MTAC LAST CONSIDERED THIS ITEM

- Council and staff **briefed MPAC, JPACT, county-level policy and technical coordinating committees, City of Portland staff and the Local Officials Advisory Committee (LOAC) to LCDC** on the early results.
- **Staff continued preparing additional analysis of the three alternatives related to costs and fiscal, public health and social equity outcomes, and reviewed initial results with the Transportation Policy Alternatives Committee (TPAC)**.
- The **Oregon Health Authority continued preparing a health impact assessment** of the three alternatives. This work is now expected to be completed in December and will be shared with policymakers in January.
- Staff **selected a contractor to support the project's communications and engagement plan**. Jeanne Lawson and Associates has been selected to assist Metro staff with gathering input from identified audiences through interviews, facilitated topic-specific discussion groups, and an online comment tool that effectively engages interested members of the public. The input will be summarized and then provided to Council, MPAC and JPACT to inform development of a draft preferred scenario by May 2014. The Contractor will also help develop a mix of presentation tools and materials to support Councilor and partner presentations and outreach in 2014.

- Staff continued **coordination with Oregon Department of Transportation (ODOT), the Department of Land Conservation and Development (DLCD) and the Oregon Metropolitan Planning Organizations Consortium (OMPOC)** on CSC-related work**.** Staff provided information to be included in a progress report from LCDC and ODOT to the 2014 House and Senate Transportation Subcommittees by February 1, 2014. Staff provided information to ODOT to inform development of a draft implementation work plan for the Oregon Statewide Transportation Strategy (STS). The STS was accepted in March by the Oregon Transportation Commission and will consider a draft work plan in 2014.

  In addition, staff continued to provide technical and communication materials to the Central Lane metropolitan planning organization (MPO) to support the scenario planning effort under way in the Eugene-Springfield area. They anticipate completing an initial assessment of the greenhouse gas emissions reductions that could be achieved through their adopted plans by the end of the year. The Bend, Rogue Valley and Corvallis area MPOs are exploring how they might move forward to conduct a similar assessment of their adopted plans, and have reviewed the STS and CSC work completed to date to inform their approach.

  As noted at the November meeting, the LCDC designated Commissioner Lidz to be the CSC project liaison to the Commission in May. Commissioner Lidz plans to attend future Council work sessions, Council liaison meetings and MPAC and JPACT discussions as his schedule permits. At this time, Commission Lidz anticipates attending the December MPAC and JPACT discussions. This represents an important opportunity for the region to build understanding of and support for the region's preferred approach with a member of the Commission. The Commission will review the region's adopted approach in the manner of periodic review in 2015.

  Metro staff requested DLCD staff to respond to the Metro Council's November 5 work session request for LCDC review of the region's preferred approach prior to final Council action in December 2014. Similar to past land use actions taken by the Metro Council, DLCD staff have indicated that the Commission cannot formally review the region's preferred approach until after it is adopted by the Metro Council and submitted to LCDC in the manner of periodic review. DCLD staff have suggested that on-going staff coordination, Commissioner Lidz's role as a CSC liaison to the Commission and planned briefings to the full Commission will provide opportunities for the Commission to raise concerns and provide suggestions to the CSC process prior to final Council action in December 2014.

- Staff continued **coordination** with the Urban Growth Report, Regional Transportation Plan (RTP), Metropolitan Transportation Improvement Program and Equity Strategy Program staff to identify potential opportunities for collaboration around engagement, evaluation methods and data. The Oregon Department of Transportation, TriMet, SMART district, and cities and counties in the region are currently developing lists of investment priorities as part of the 2014 RTP update. The project lists are due on December 6, 2013, and are anticipated to include updated investment priorities from the Southwest Corridor Plan and East Metro Connection Plan in addition to other locally identified priorities from more recent updates to local visions and transportation system plans (TSPs). This presents an early opportunity for public agencies

to identify investment priorities to be included in the preferred approach that is developed in 2014.

PROPOSED NEXT STEPS

Nov. – Dec. 2013	"First Look at Results" **-** Report back to regional advisory committees, and County Coordinating Committees, and identify key policy areas for further discussion and input in 2014. *November will focus on review of what was tested and reporting the estimated greenhouse gas emissions reductions and land use, employment, transportation and environmental outcomes.* *December will focus on reporting the scenarios' cost analysis relative to economic and social equity outcomes. Additional cost-related results will also be reported in January.* The Oregon Health Authority is anticipated to complete health impact assessment of the three scenarios and make recommendations in January. Prepare a presentation toolkit, a Data Book summarizing the results, and a discussion guide and other communication materials to seek input on which strategies should be included in the region's preferred approach from Jan. to April 2014.
Dec. 10, 2013	Council work session to discuss the scenarios' cost analysis relative to economic and social equity outcomes and share key themes and concerns raised during local government briefings.
Dec. 11 and 12	MPAC and JPACT will receive an informational presentation on additional results related to economic and social equity outcomes, and have an opportunity to engage with Commissioner Lidz, LCDC's liaison to the CSC project.
January 3	TPAC will receive an informational presentation on the remaining early results. The committee will also be requested to make a recommendation to JPACT on key policy areas to be the focus of further discussion and input in 2014.
January 8 and 9	MPAC and JPACT will receive an informational presentation on the remaining early results and recently completed opinion research compiled by Adam Davis. The committees will also be requested to make a recommendation to the Metro Council on key policy areas to be the focus of further discussion and input in 2014.
Jan. – March 2014	Engage local and state officials, community and business leaders and groups, and the public to share the results and seek input on the investments and actions to include in a draft preferred approach. Project status update provided to the Land Conservation and Development Commission (LCDC) and the Oregon Transportation Commission; an opportunity for the commissions to provide

	comments and suggestions for Metro to consider as it moves forward.
April-May 2014	MPAC, JPACT and Metro Council provide direction on draft preferred approach - directing staff to analyze the draft preferred approach and prepare adoption package and public review materials.
Summer 2014	Analyze draft preferred scenario using the regional travel demand model and Metropolitan GreenSTEP.
	Project staff prepare adoption package for public comment period and provide updates to local governments.
September 2014	45-day public comment period on adoption package.
	Consult with local governments, state and regional partners and the public on the "public review draft" preferred approach and implementation recommendations.
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 approach.
January 2015	Preferred approach submitted to DLCD and LCDC for consideration in the manner of periodic review.

ATTACHMENT 1.

DECEMBER 3, 2013

FIRST LOOK AT RESULTS

Project Briefings and Engagement

November 2013 | Launch Phase 3 and First Look at Results

- Nov. 1 – TPAC (share early results; prep for JPACT)
- Nov. 5 – Council work session (share early results)
- Nov. 6 – MTAC (discuss early results; prep for MPAC)
- Nov. 13 – MPAC (share early results; identify key policy areas for further discussion)
- Nov. 14 – JPACT (share early results; identify key policy areas for further discussion)
- Nov. 18 - Local Officials Advisory Committee to LCDC (share early results)
- Nov. 20 - EMCTC TAC (share early results)
- Nov. 21 - WCCC TAC (share early results)
- Nov. 22 - TPAC (share early results)
- Nov. 27 - CTAC (share early results)

December 2013 | First Look at Results continues

- Dec. 2 - WCCC Policy (share early results; identify key policy areas)
- Dec. 4 - MTAC (share additional results; identify key policy areas)
- Dec. 5 - Wash. Co. Planning Directors (share early results; identify key policy areas)
- Dec. 5 - C-4 Metro Subcommittee (share early results; identify key policy areas)
- Dec. 9 - EMCTC Policy (share early results; identify key policy areas)
- Dec. 10 – Council work session (review additional results and share key themes)
- Dec. 11 - MPAC (review additional results)
- Dec. 12 – JPACT (review additional results)

January 2014 | Complete First Look at Results

- Jan. 3 – TPAC (review additional results; recommend policy areas to be focus of 2014 engagement)
- Jan. 8 – MPAC (review additional results; recommend policy areas to be focus of 2014 engagement)
- Jan. 9 – JPACT (review additional results; recommend policy areas to be focus of 2014 engagement)

January – May 2014 Community Choices Discussion schedule under development

OVERVIEW OF SCENARIO ASSUMPTIONS

November 25, 2013

INTRODUCTION

The Portland metropolitan region is an extraordinary place to live. Our region has vibrant communities with inviting neighborhoods. We have a diverse economy and a world-class transit system. The region features beautiful scenery, parks, trails and wild places close to home.

Over the years, the communities of the Portland metropolitan area have taken a collaborative approach to planning that has helped make our region one of the most livable in the country. Because of our dedication to planning and working together to make those plans a reality, we have set our region on a wise course for managing growth – but times are changing. An increasingly diverse and growing population, a changing climate, rising energy costs, aging infrastructure, and other social and economic challenges demand new kinds of leadership and thoughtful deliberation and action.

PROJECT BACKGROUND

The 2009 Oregon Legislature required the Portland metropolitan region to develop an approach to reduce per capita greenhouse gas emissions from cars and small trucks by 20 percent by 2035 while at the same time the region expects to welcome nearly 490,000 new residents and more than 365,000 new jobs within the region's urban growth boundary.

The Climate Smart Communities Scenarios Project will illustrate how different investments and policies can protect farms, forestland and natural areas, create healthy, livable neighborhoods, and grow the regional economy while reducing greenhouse gas emissions from cars and small trucks. Building toward a future that reflects what is important to us means making priority investments that drive a strong economy, support the unique character of our communities and ensure everyone has access to the opportunities that create the quality of life for which our region is known.

We know that investing in quality infrastructure is essential to a functioning, vibrant economy and healthy, livable communities. Past experience and analysis indicate that investments in centers, corridors and employment areas are an effective means of attracting growth to these areas in support of community visions and values. Investments can take the form of urban renewal, expanding transit service, building new sidewalks, bikeways or street connections, managing parking, travel option programs, and other tools. Removing barriers to more efficient use of land and existing infrastructure can also help local governments achieve their desired community visions.

Yet the Portland metropolitan region is not making the investments necessary to support our growing population or achieve community visions. The cost of building the needed public and private facilities is estimated to be $27 to $41 billion. Traditional funding sources are expected to cover only half that amount. The existing transportation system is overburdened and underfunded, and cannot not meet current or future needs of the region.

As the region's economy, labor and housing markets begin to recover in the aftermath of the Great Recession, lack of investment over the last 20 years in the systems that support our communities is undermining our region's ability to take advantage of opportunity. We're investing less in infrastructure today than at any time in our history. Infrastructure, such as roads, highways, sewer and stormwater networks, and school facilities, is not being maintained or replaced as it ages. We also need to complete gaps in our region's transit, walking and biking networks. At a time when state and federal resources needed to address our aging infrastructure are scarce, we have a unique opportunity to find a better way to support our communities, attract new business, and grow the economy. The same kinds of investments that can help address these needs

can also help achieve our greenhouse gas emissions reduction goals.

To better understand the possibilities and challenges facing the region, the Climate Smart Communities Scenarios Project evaluated three scenarios in Summer, 2013. Each scenario reflects choices about how and where the region invests to implement locally adopted plans and visions. They illustrate how different levels of leadership and investment could impact how the region grows over the next 25 years and how those investments might affect different aspects of livability for the region – creation of living-wage jobs, access to transit and jobs, housing, air quality, public health and greenhouse gas emissions.

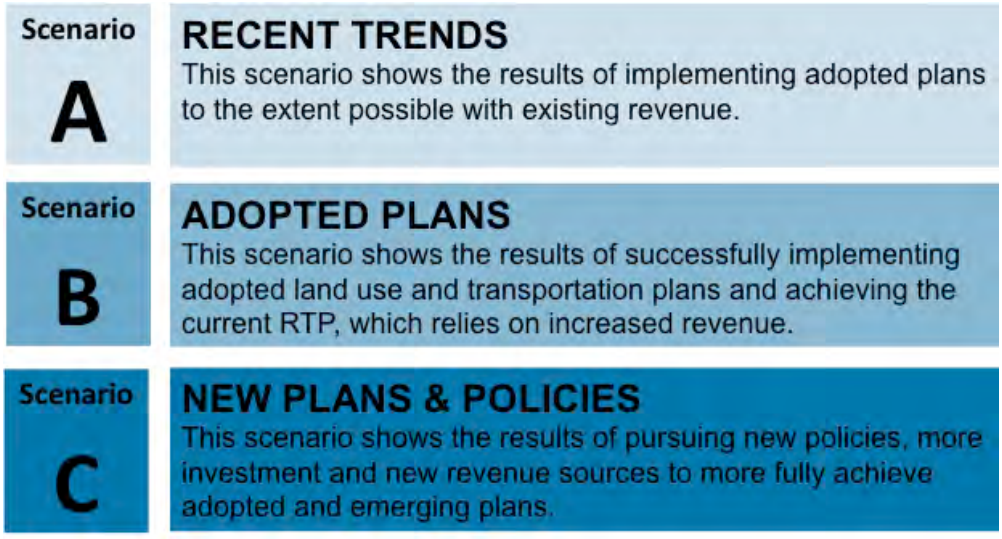
The results of the analysis will be used to frame a regional discussion about which investments and actions should be included in a preferred approach. Working together, cities, counties and regional partners will decide which elements from each of the three scenarios evaluated should go forward into a preferred approach for the region to adopt in December 2014. Through this collaborative effort, we can identify how the region should work together to implement the approach that is adopted and develop new kinds of leadership and the local, regional, state and federal partnerships needed to invest in communities to make local and regional plans a reality.

WHAT WE TESTED

While most assumptions are tailored to each scenario, several assumptions were the same for all three scenarios:

- Comprehensive plans and zoning as adopted by cities and counties across the region.
- Vehicle and fuel assumptions that 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.
- Federal gas tax at 18 cents per gallon (2012 level).

THREE APPROACHES THAT WE EVALUATED IN 2013



Scenario A RECENT TRENDS

Reference case

Given the uncertainties facing our region today, it is difficult to predict future trends and conditions. With that limitation in mind, the starting point for the scenarios analysis is the reference scenario. This scenario is a projection of how the region would grow if current local government transportation and land-use plans are followed through to 2035 with existing revenues and policies.

Land use and urban form

- Current zoning is maintained.
- Future Metro urban growth boundary expansions through the year 2035 add about 28,000 acres, in keeping with falling behind on the investments needed to attract growth in the region's centers, corridors and employment areas. This represents an accelerated schedule for making the region's adopted 50-year land supply available for development.
- Neighboring cities grow at rates that are similar to historic rates.

Public and private development incentives and fees

- Public incentives for housing decline from today limiting the ability of public agencies to partner with the private sector to build investments.
- Significant urban growth boundary expansion is coupled with higher developers fees in these areas to help urban reserves to be ready for development, recognizing limited public funding is available to fund needed infrastructure in these areas.
- Areas with paid parking in place today remain the same. This includes portions of the Portland Central City – Downtown Central Business District, Lloyd District, and the River District/Northwest. No other parking strategies are implemented throughout the region.

Transportation revenues

Limited investment is made in the region's transportation system as funding levels stay the same as they are today for the period 2010 to 2035. Only projects with committed funding were included in the analysis.

Key road and highway investments

- The Sellwood Bridge replacement is completed.
- Interchanges in the I-84, OR 217 and US 26 corridors and at the junction of I-205/I-84 are improved.
- Auxiliary lanes are added on I-5 and I-205 at the junctions of I-5/I-205 and I-205/Powell/Washington and I-205/I-84, respectively.
- US 26 West is widened to six through lanes.
- Shute Road and 185th Avenue are widened to seven lanes to improve access from the Intel campus to US 26.
- The Sunrise project connection from I-205 to Southeast 122nd Avenue is built.
- Existing programs aimed at improving traffic operations and reducing delay continue at existing programmatic levels. Investments include timing traffic signals to be coordinated and implementing programs to clear breakdowns and accidents quickly on the region's highways.

Regional transit investments

- Portland-to-Milwaukie light-rail transit is constructed and Milwaukie light rail feeder bus service is provided.
- The Portland streetcar CL line loop is completed.
- 2010 levels of TriMet and South Metro Area Rapid Transit (SMART) service is maintained with small increases in TriMet service targeted to address overcrowding and delays due to congestion.

Complete streets and active transportation investments

- New street connections and widening of existing major streets are limited to projects with committed funding.
- Limited bicycle and pedestrian investments reflecting that existing revenues are largely dedicated to transit, road and highway investments.

Education and incentive programs

- Employer Outreach programs are funded at existing levels and focused on encouraging large employers (100 or more employees) to promote transit use, flexible work hours, carpooling, walking and bicycling in their workforce.
- Metro's Regional Travel Options (RTO) program continues to support operation of the Drive Less Connect program and provides technical assistance to Transportation Management Associations (TMAs) in the region, including the Lloyd District TMA, Westside Transportation Alliance and Swan Island TMA at existing program levels.
- Participation in carsharing programs grows.

Scenario B ADOPTED PLANS

This scenario is a projection of how the region would grow if current local transportation and land-use plans are followed through to 2035 with the revenues anticipated in the 2035 Regional Transportation Plan.

Land use and urban form

- Current local zoning is maintained.
- Future Metro UGB expansions through the year 2035 add nearly 12,000 acres, in keeping with the regional growth distribution adopted by the Metro Council in November 2012.
- Assumptions for neighboring cities are the same as Scenario A.

Public and private development incentives and fees

- Public incentives for housing grow and are available in more areas than today.
- Developers pay similar fees as exist today, but less than Scenario A.
- Funding for public infrastructure (capital costs as well as costs of maintenance and upgrade) is available in all urban reserve areas added to the urban growth boundary to accommodate new jobs and housing.
- A market-based approach to parking management is implemented in all regional centers, station communities and town centers served by high capacity transit.

Transportation revenues

Significant investments are made to the transportation system reflecting the $14 billion (2014$) in funding assumed in the 2035 RTP financially constrained system for the period 2010 to 2035. Funding sources include:

- an increase of one cent per gallon per year in the statewide gas tax for system operations and maintenance.
- a $15 increase of the state vehicle registration fee every eight years to pay for system expansion.
- continuation of past local and federal funding levels to pay for system expansion
- tolling on the I-5/Columbia River Bridge crossing to help pay for the I-5 Bridge Replacement project.
- An increase in the payroll tax to pay for reinvestment and expansion of transit service.

Key road and highway investments

- The I-5/Columbia River Bridge Replacement is constructed, and I-5 North is widened to six through lanes.
- Additional interchange investments are made in the I-5, I-205, I-84, OR 217 and US 26 corridors.
- Programs and investments aimed at improving traffic operations and reducing delay are also expanded, including the expansion of real-time traveler information on-line and through the growing Smartphone app industry.

Regional transit investments

- Columbia River Crossing light rail from Milwaukie to Clark College via downtown Vancouver is constructed.
- Portland to Lake Oswego streetcar, Burnside/Couch streetcar to Hollywood Transit Center and the Eastside streetcar loop (using the Milwaukie LRT bridge) are completed.
- Bus service routes and operations are adjusted to serve all new capital projects.

Complete streets and active transportation investments

- New street connections that further build out the regional street grid and arterial street expansion are constructed throughout system.
- Freight rail and street extensions and expansions focused on serving industrial areas are constructed.
- Major streets are widened or retrofitted with wider sidewalks, safer street crossings, improved bus stops, bikeways, transit signal priority at intersections and other multi-modal designs.
- On-street bicycle and pedestrian projects, such as bicycle lanes, cycle tracks, bicycle boulevards, sidewalks and crossing improvements are constructed.
- Off-street regional trail projects are constructed, such as the Lake Oswego to Portland trail, South waterfront Willamette Greenway trail, Fanno Creek (Red Electric) trail, Beaverton Creek Trail, Westside trail, Bronson Creek trail, Council Creek trail, Tonquin trail, Columbia Slough trail, Scouter's Mountain trail, the Sunrise Project trail and Springwater trail, Oregon City Loop trail, a segment of the E. Buttes Loop trail, and the Gresham-Fairview trail.

Education and incentive programs

- Car-sharing and Metro's Regional Travel Options (RTO) program is expanded throughout the region, particularly in areas served by high capacity transit.
- ODOT successfully launches a statewide EcoDrive Campaign, focusing on giving commercial drivers training in fuel-efficient driving practices. The campaign targets public agencies and private, commercial companies who maintain a fleet of cars and/or trucks, providing them with materials to teach their employees on ways to improve fuel efficiency through vehicle maintenance and driving techniques.

Scenario C NEW PLANS & POLICIES

Land use and urban form

- Current local zoning is maintained, but additional zoned capacity is assumed in keeping with the Southwest Corridor land use vision adopted by the Southwest Corridor Steering Committee in 2013. The vision identified additional residential and employment capacity to be added to areas of southwest Portland, Tigard, Tualatin and Sherwood.
- Future Metro UGB expansions through the year 2035 add nearly 12,000 acres, in keeping with the regional growth distribution adopted by the Metro Council in November 2012.
- Assumptions for neighboring cities are the same as Scenario A.

Public and private development incentives and fees

- Public incentives for housing grow and are available in more areas than Scenario B. New locations served by high capacity transit are assumed to provide incentives to attract more housing and jobs in these areas.
- Developers pay similar fees as exist today, the same as Scenario B.
- Funding for public infrastructure (capital costs as well as costs of maintenance and upgrade) is available in all urban reserve areas added to the urban growth boundary to accommodate new jobs and housing.
- In addition to the parking assumptions in Scenario B, a market-based approach to parking is also implemented in locations within .25-mile of where one or more frequent bus service routes intersect. Frequent bus lines have 15-minute or better service all day everyday.

Transportation revenues

Significant investments are made to the transportation system reflecting the $20.8 billion (2014$) in funding assumed in the 2035 RTP State System for the period 2010 to 2035. In addition to the financially constrained system funding sources, this includes:

- The equivalent of a $2 per year increase in the state vehicle registration fee through 2035 to pay for system expansion.
- Creation of a local/regional vehicle registration fee equivalent to $1 per year to pay for system expansion.
- Creation of local street utility fees where they do not currently exist to pay for system maintenance and operations.
- a $.03 per mile road use fee in lieu of at statewide gas tax beginning in 2015 to pay for system maintenance and expansion.
- a $50 per ton carbon fee beginning in 2015 to pay for system expansion.
- the equivalent of a .02 increase in the TriMet payroll tax to pay for additional expansion of transit service.

Key road and highway investments

- Investments assumed in Scenario B.
- The Sunrise project extension from Southeast 122nd to Southeast 172nd Avenue is built.
- Operational improvements are made in the I-5 South and I-205 corridors.
- Programs and investments aimed at improving traffic operations and reducing delay are also expanded to clear breakdowns and accidents quickly on the region's arterials.
- Additional interchange investments are made at the junctions of I-5/OR 217, I-5/72nd and US 26/185th Avenue.

Regional transit investments

- Investments assumed in Scenario B.
- An extension of light rail transit from Portland to Tigard via Barbur Boulevard is constructed.
- High capacity transit serving AmberGlen in Hillsboro and the Powell/Division, I-205,

McLoughlin Boulevard and Tualatin-Valley Highway corridors is provided.
- Other Portland Streetcar extensions are completed, including: Broadway/Weidler Streetcar, Northeast MLK Streetcar, linking Portland State University to the Oregon Museum of Science and Industry (OMSI) to Northeast Killingsworth, and Northwest 19th/20th Streetcar.
- Bus service routes and operations are adjusted to serve all new capital projects. In addition, all headways are 30-minute or better, either through overlapping service or straight frequency on a single line. Frequent service lines have a minimum of 10-minute headway or better.
- A locally-developed transit Service Enhancement Plan (SEP) for each part of the region is fully implemented building on the plan developed for the westside in 2012.
- Westside commuter rail operations are expanded to all-day service with 15-minute peak and 15 off-peak headways.

Complete streets and active transportation investments

- Additional new street connections that build out the regional street grid and arterial street expansion are constructed throughout system.
- Freight rail and street extensions and expansions focused on serving industrial areas are constructed.
- Major streets are widened or retrofitted with wider sidewalks, safer street crossings, improved bus stops, bikeways, transit signal priority at intersections and other multi-modal designs.
- On-street bicycle and pedestrian projects, such as bicycle lanes, cycle tracks, bicycle boulevards, sidewalks and crossing improvements are constructed.
- The draft regional Active Transportation Plan (August 2013) recommended pedestrian and bicycle networks are completed, including the spiderweb bicycle network. The spiderweb network encompasses diagonal bicycle parkways radiating from the Portland central city that are connected by circular bicycle parkways that connect nearly all town centers.
- Off-street regional trails in Scenario B are constructed in addition to other trails, such as the Turf to Surf Rail with Trail, the Willamette River shared-use path in Oregon City, the Trolley Trail Bridge, completion of the St. John's segment of the Willamette Greenway, the northern railroad crossing segment of the Gresham-Fairview trail, and the East Buttes Loop Trail.

Education and incentive programs

- Car-sharing, employer outreach programs and Metro's Regional Travel Options (RTO) program are expanded throughout the region, particularly in new areas served by high capacity transit and frequent bus service.
- Real-time traveler information is provided on-line and through the growing Smartphone app industry.
- ODOT successfully expands its statewide EcoDrive Campaign to individual drivers, as evidenced by growth in participation in the region.

Phase 2: 2010 base year and alternative scenario inputs

The inputs are for research purposes only and do not represent current or future policy decisions of the Metro Council.

Strategy		2010	2035		
		Base Year Reflects existing conditions	Scenario A Recent trends	Scenario B Adopted plans	Scenario C New plans and policies
Community design	Households in mixed use areas (percent)	26%	36%	37%	37%
	Urban growth boundary expansion (acres)	2010 UGB	28,000 acres	12,000 acres	12,000 acres
	SOV trips under 10 miles that shift to bike (percent)	9%	10%	15%	20%
	Transit service (daily revenue miles)	73,000 miles	80,000 miles	91,000 miles (RTP Financially Constrained)	159,000 miles (RTP State + more transit)
	Work/non-work trips in areas with parking management (percent)	13% / 8%	13% / 8%	30% / 30%	50% / 50%
Pricing	Pay-as-you-drive insurance (percent of households participating)	0%	20%	40%	100%
	Gas tax (cost per gallon 2005$)	$0.42	$0.48	$0.73	$0.18
	Road user fee (cost per mile 2005$)	$0	$0	$0	$0.03
	Carbon emissions fee (cost per ton)	$0	$0	$0	$50.00

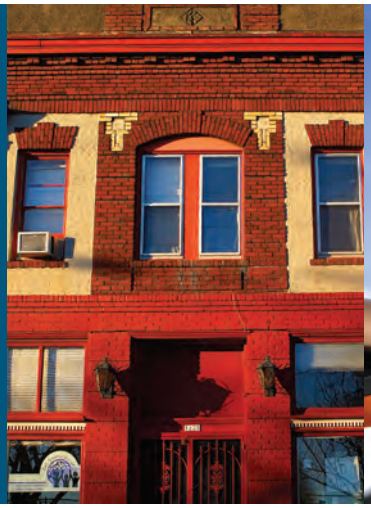
November 18, 2013

The inputs are for research purposes only and do not represent current or future policy decisions of the Metro Council.

	Strategy	2010	2035		
		Base Year Reflects existing conditions	Scenario A Recent trends	Scenario B Adopted plans	Scenario C New plans and policies
Marketing and incentives	Households participating in eco-driving (percent)	0%	0%	30%	60%
	Households participating in individualized marketing programs (percent)	9%	30%	30%	60%
	Workers participating in employer-based commuter programs (percent)	20%	20%	20%	40%
	Car-sharing in high density areas (target participation rate)	One car share per 5000 vehicles	Twice the number of car share vehicles available	Same as Scenario A	Four times the number of car share vehicles available
	Car-sharing in medium density areas (target participation rate)	One car share per 5000 vehicles	Same as today	Twice the number of car share vehicles available	Same as Scenario B
Roads	Freeway and arterial expansion (lane miles added from 2010)	N/A	9 miles	81 miles (RTP Financially Constrained)	105 miles (RTP State)
	Delay reduced by traffic management strategies (percent)	10%	10%	20%	35%
Fleet	Fleet mix (percent)	auto: 57% light truck: 43%	auto: 71% light truck: 29%		
	Fleet turnover rate (age)	10 years	8 years		
Technology	Fuel economy (miles per gallon)	auto: 29.2 mpg light truck: 20.9 mpg	auto: 68.5 mpg light truck: 47.7 mpg		
	Carbon intensity of fuels	90 g CO_2e/megajoule	72 g CO_2e/megajoule		
	Plug-in hybrid electric/all electric vehicles (percent)	auto: 0%/1% light truck: 0%/1%	auto: 8%/26% light truck: 2%/26%		

CLIMATE SMART COMMUNITIES SCENARIOS PROJECT

Metro



What the future might look like in 2035

Scenario
A

Recent Trends

This scenario shows the results of implementing adopted plans to the extent possible with existing revenue.

Scenario
B

Adopted Plans

This scenario shows the results of successfully implementing adopted land use and transportation plans and achieving the current RTP, which relies on increased revenue.

Scenario
C

New Plans and Policies

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

INVESTING IN GREAT COMMUNITIES

The Climate Smart Communities Scenarios Project was initiated in response to a mandate from the 2009 Oregon Legislature to reduce greenhouse gas emissions by 20 percent from cars and small trucks by 2035.

There are many ways to reduce emissions while creating healthy, more equitable communities and a vibrant regional economy. Providing services and shopping near where people live, expanding transit service, encouraging electric cars and providing safer routes for walking and biking all can help.

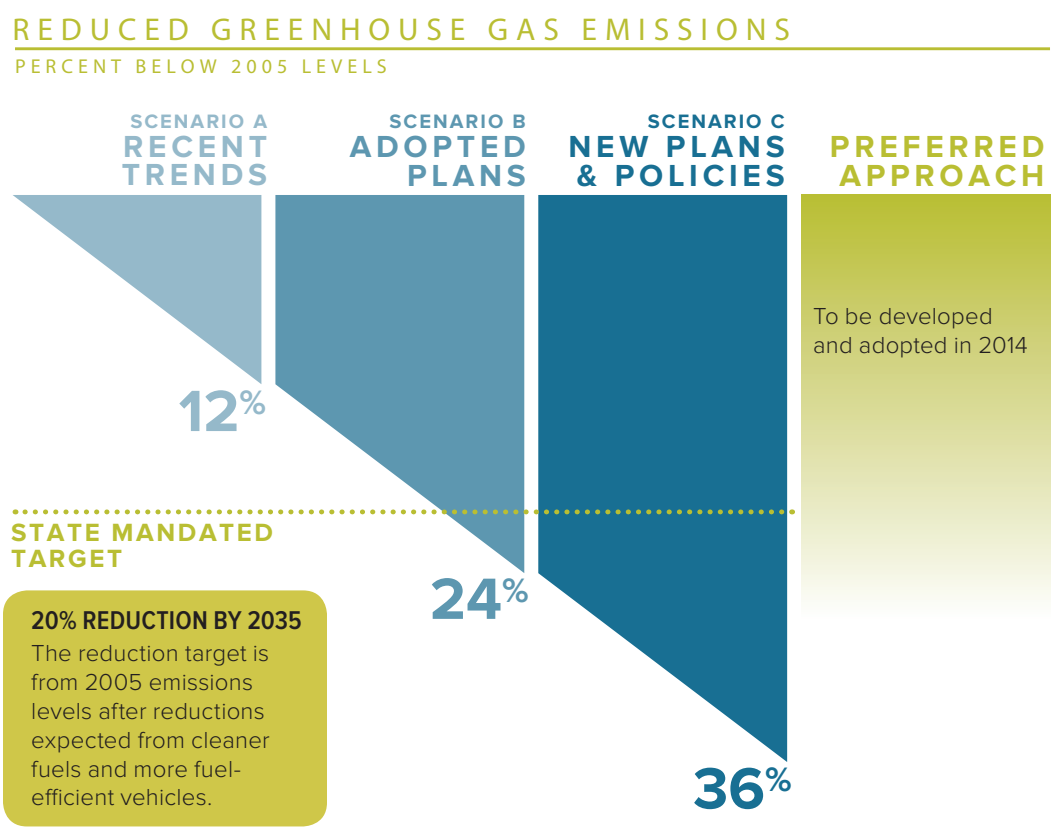
The goal of the Climate Smart Communities Scenarios Project is to engage community, business, public health and elected leaders in a discussion with their communities to shape a preferred approach that meets the state mandate and supports local and regional plans for downtowns, main streets and employment areas.

To realize that goal, Metro evaluated three approaches – or scenarios – over the summer of 2013 to better understand how best to support community visions and reduce greenhouse gas emissions. The results will be used to frame the regional discussion about which investments and actions should be included in a preferred approach for the Metro Council to consider for adoption in December 2014.

WHAT HAVE WE LEARNED SO FAR?
Adopted plans can meet the target

Our early analysis indicates that adopted local and regional plans can meet our target for reducing greenhouse gas emissions – if we make the investments and take the actions needed to implement those plans.

This is good news, but there is more work to be done.



WHAT DOES THIS MEAN FOR YOUR COMMUNITY?
We're in this together

Local, regional state and federal partnerships are needed to make the investments and take the actions necessary to create great communities while reducing greenhouse gas emissions.

What are the challenges to realizing your community visions?

At both the local and regional levels, we face many challenges in carrying out our adopted plans. The Climate Smart Scenarios Project provides an opportunity to work together to build on existing efforts and address these challenges.

Financial
- Funding
- Market demand and lending practices
- Costs and affordability

Civic
- Public acceptance
- Political will
- Governance structures

Regulatory
- Existing codes and regulations
- Alignment of federal, state and local policies

Sources: Regional policy and technical advisory committees, community and business leaders. Scenarios Project Strategy Toolbox (October 2011). Phase 1 Findings (January 2012) and Community Case Studies (Spring 2013)

WHAT INVESTMENTS AND ACTIONS BEST SUPPORT YOUR COMMUNITY VISION?

Each community is unique

Most of the investments and actions under consideration are already being implemented to varying degrees across the region to realize community visions and other important economic, social and environmental goals.

A one-size-fits-all preferred approach won't meet the needs of our diverse communities. A combination of investments and other actions will help us realize our shared vision for making this region a great place for generations to come.

INVESTMENTS AND ACTIONS THAT REDUCE EMISSIONS ✓ completed ● in progress		WHO HAS A ROLE?			
SUPPORTING LAND USE VISIONS		**FEDERAL**	**STATE**	**REGIONAL**	**LOCAL**
✓	Adopt 2040 Growth Concept			○	
✓	Adopt local zoning and comp plans				○
✓	Manage urban growth boundary			○	
●	Update community visions if desired				○
MAXIMIZING ENERGY EFFICIENCY					
✓	Adopt Federal fuel economy standards	○	○		
●	Shift to lower carbon fuels	○	○		
●	Shift to low emissions vehicles	○	○	○	○
●	Expand access to electric vehicle technology	○	○	○	○
●	Expand access to car-sharing				○
●	Use a market-based approach to manage parking				○
●	Use technology and "smarter" roads to manage traffic flow and boost efficiency		○	○	○
●	Provide information and incentives to expand use of low carbon travel options		○	○	○
INVESTING IN COMMUNITIES					
●	Maintain streets, highways, bridges and transit		○	○	○
●	Make streets and highways more safe, reliable and connected		○	○	○
●	Make transit more convenient, frequent, accessible and affordable		○	○	○
●	Make walking and biking more safe and convenient		○	○	○
●	Provide schools, services and shopping close to neighborhoods				○

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

MAKING A GREAT PLACE

Metro

NOV. 12, 2013

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WHAT'S NEXT?

November and December 2013 The analysis results are reported back to the Metro Council, regional advisory committees and county-level coordinating committees

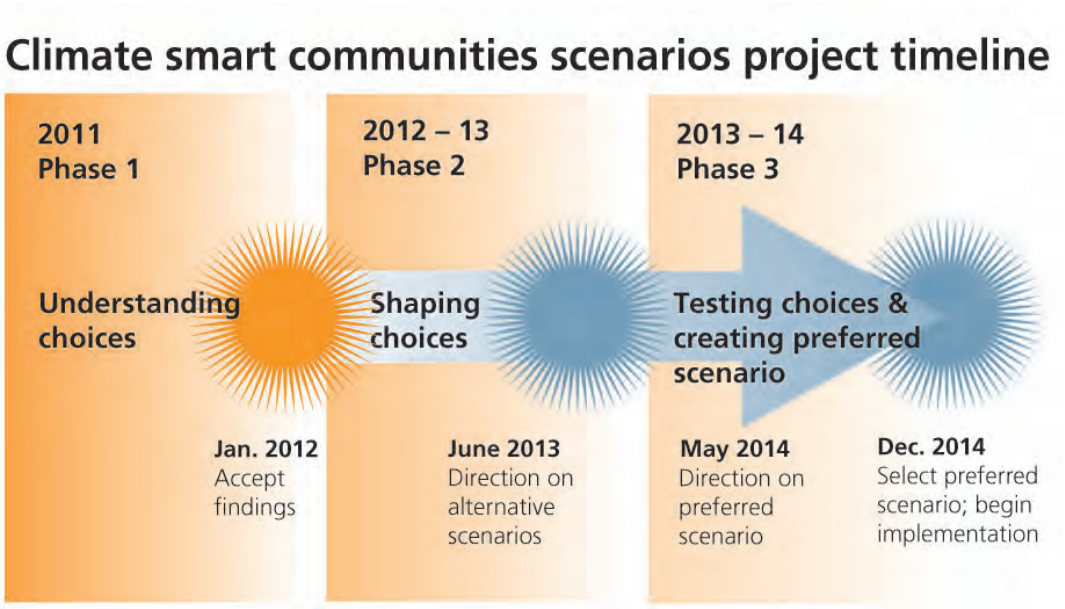
January to April 2014 Community and business leaders, local governments and the public are asked to weigh in on which investments and actions should be included in the region's preferred approach

May 2014 The Metro Council is asked to provide direction to staff on the draft preferred approach

Summer 2014 Evaluation period for preferred approach

September 2014 Final public review of preferred approach

December 2014 Metro Council considers adoption of preferred approach



WHERE CAN I FIND MORE INFORMATION?

www.oregonmetro.gov/climatescenarios

Visit the project website to learn more about existing community efforts and their challenges, and to download other publications and reports.

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

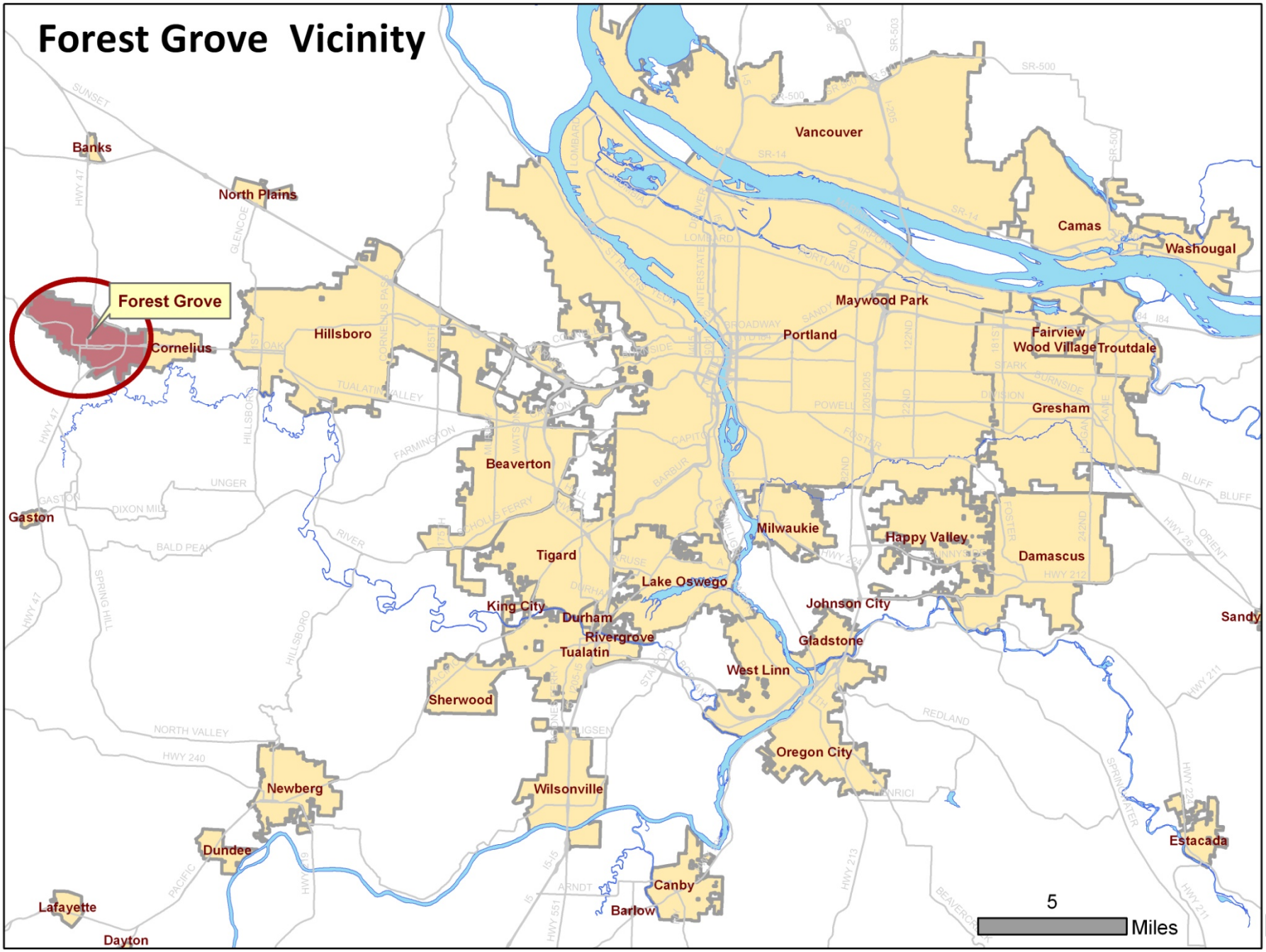
Materials following this page were distributed at the meeting.

GroveLink

Transit in Forest Grove

MTAC

December 4, 2013


Forest Grove Vicinity
Forest Grove
Cornelius
Hillsboro
Banks
North Plains
Gaston
Beaverton
Tigard
Tualatin
Sherwood
King City
Durham
Rivergrove
Lake Oswego
Newberg
Dundee
Lafayette
Dayton
Wilsonville
Canby
Barlow
Oregon City
West Linn
Gladstone
Johnson City
Milwaukie
Portland
Vancouver
Camas
Washougal
Maywood Park
Fairview
Wood Village
Troutdale
Gresham
Happy Valley
Damascus
Sandy
Estacada
5
Miles
N

Forest Grove Community

- 22,340 (as of July, 2013 – PSU)
- 12.3% - 65 or older
- 23.9% - School age children
- 23.1% - Hispanic or Latino
- Home to Pacific University
  - 2370 students at Forest Grove campus (65% of total enrollment)
- 57% owner occupied/43% renter

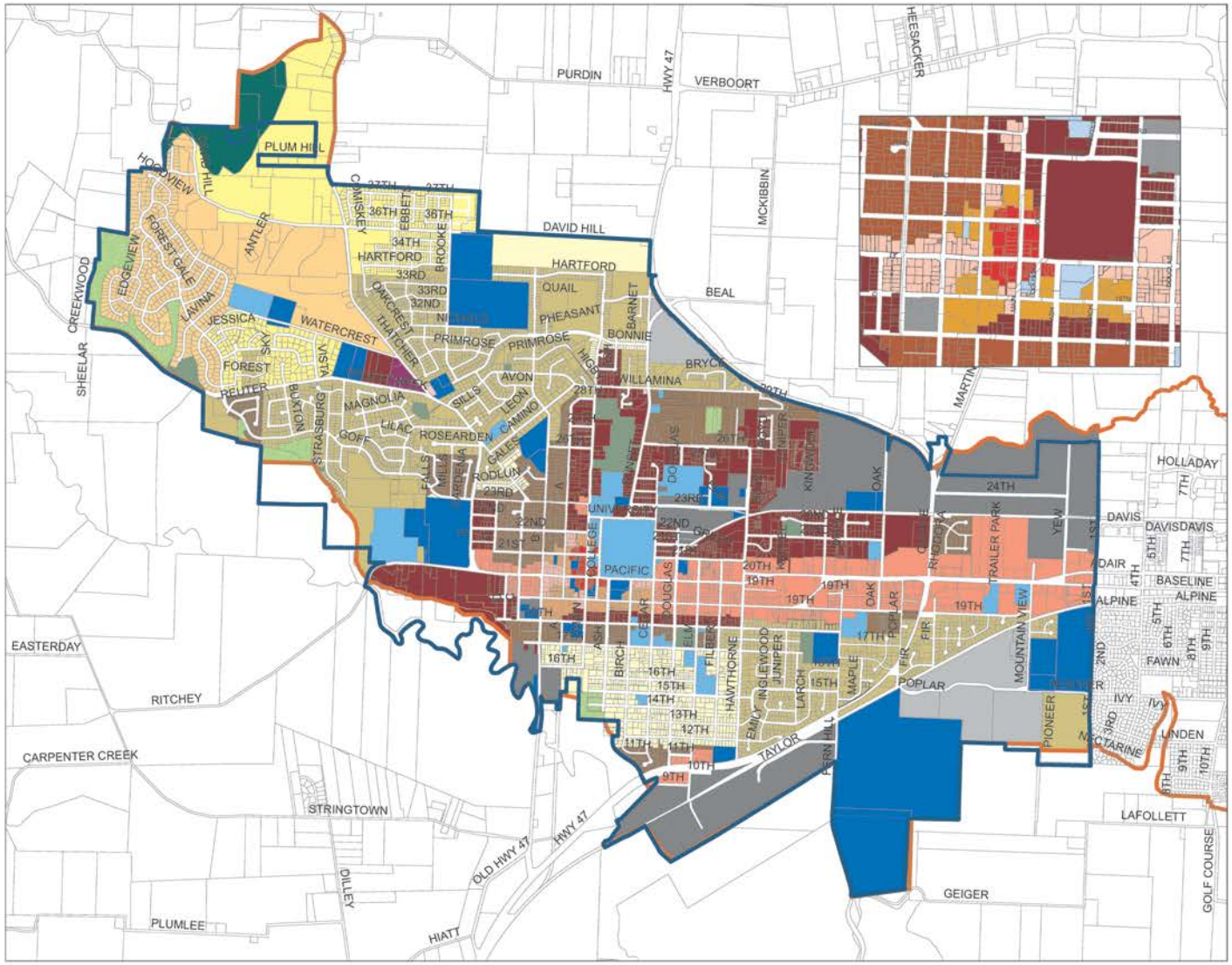
city of forest grove

City of Forest Grove Comprehensive Plan Designations

Comprehensive Plan Designations

COMP_PLAN

- A-Medium
- B-C
- B-Standard
- C-Low
- Commercial Auto
- Commercial Neighborhood
- Commercial Planned Development
- D-Suburban
- Existing Park
- General Industrial
- High Density Residential
- Light Industrial
- Medium Density Residential
- Open Space
- Public
- Semi-Public
- TCC
- TCS
- TCT
- Urban Growth Boundary
- City Limits

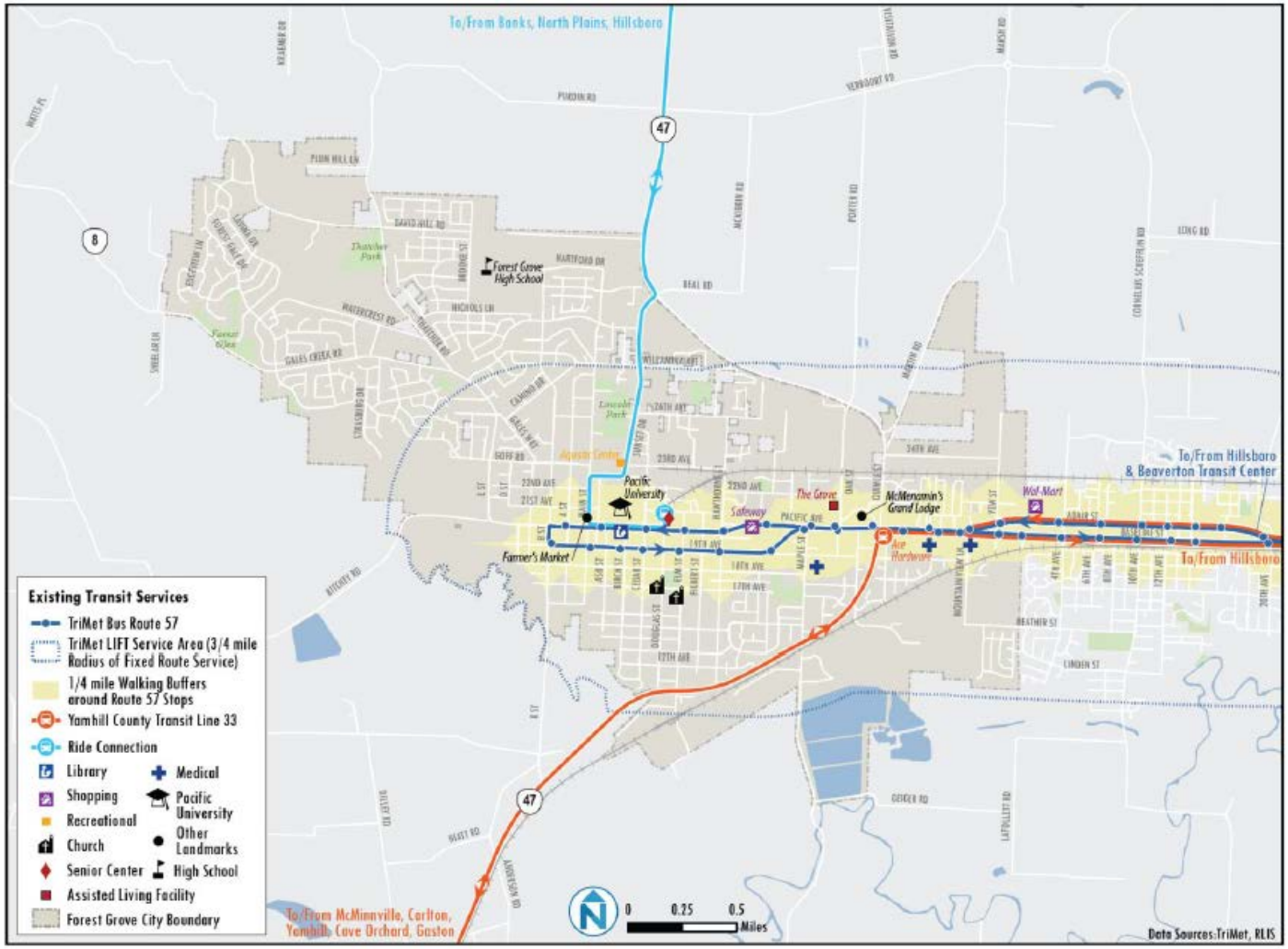


0 650 1,300 2,600 3,900 5,200 Feet

Two Transit Studies

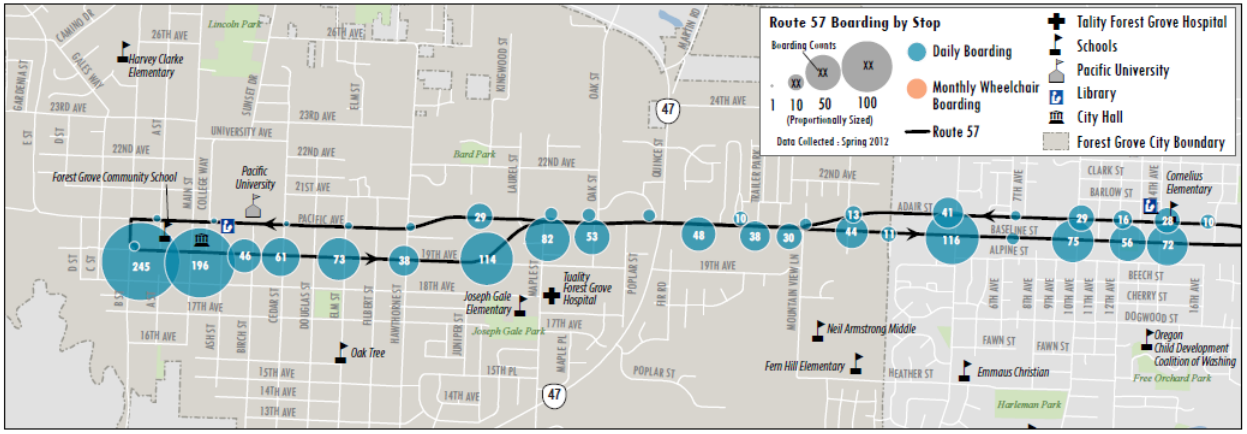
- 2009 – In-house effort with citizen committee
- 2011 – Nelson – Nygaard with citizen committee
- TriMet developed Westside Transit Service Study- recommended additional transit service for Forest Grove-Cornelius area

Existing Transit Service



Existing Line 57 Ridership

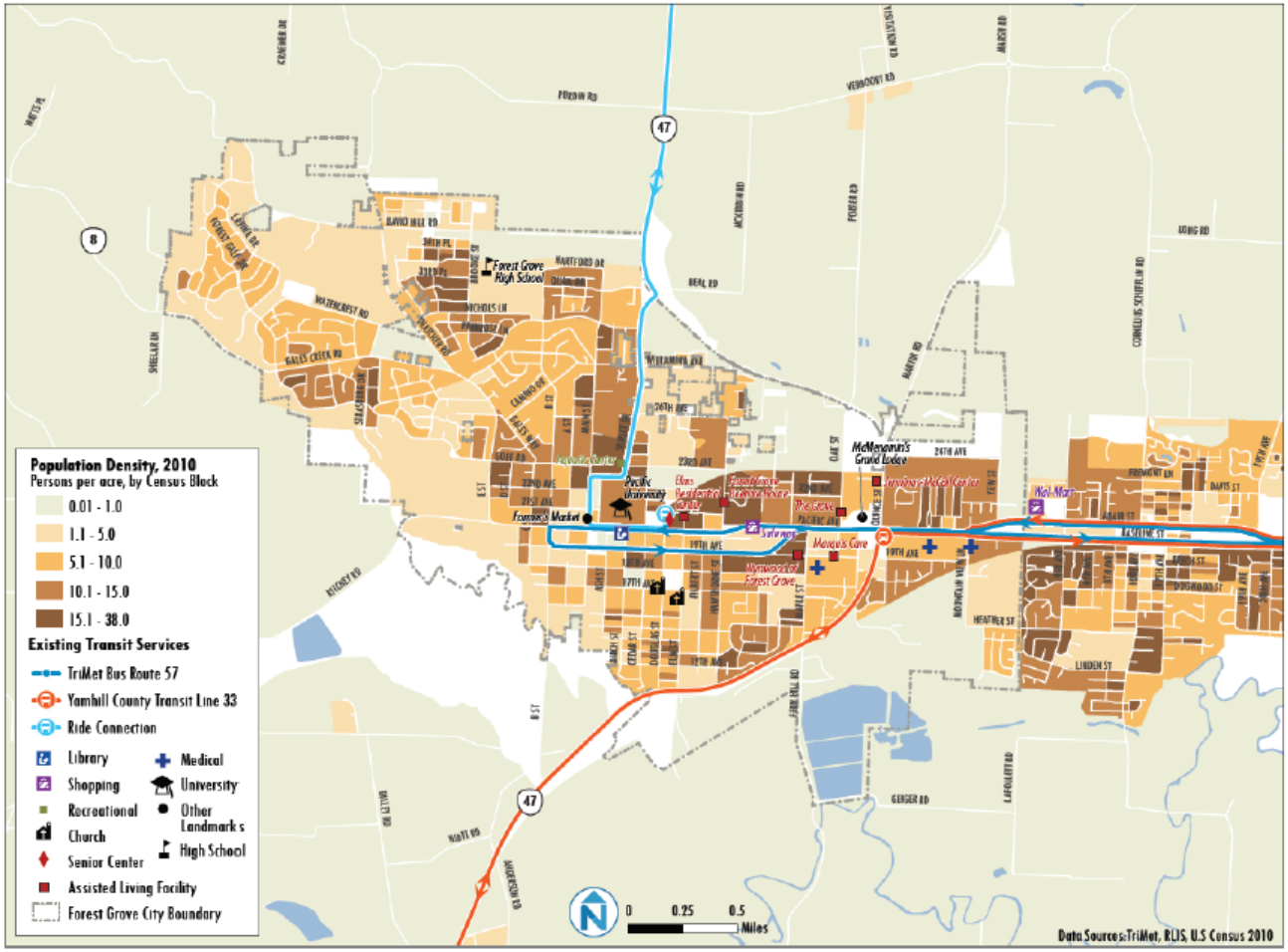
- Line 57 is highly productive in Forest Grove and overall (among TriMet Frequent Service routes)
- Most Line 57 boarding activity in Forest Grove is in eastbound direction (out of Forest Grove)
- About **16%** of Line 57 boardings occur within Forest Grove
- About **14%** of Line 57 weekday service hours are within Forest Grove



Weekday Line 57 Boardings, Spring 2012

Transit Market Analysis: Population Density

Population density (2010) in relation to existing fixed-route transit service in Forest Grove



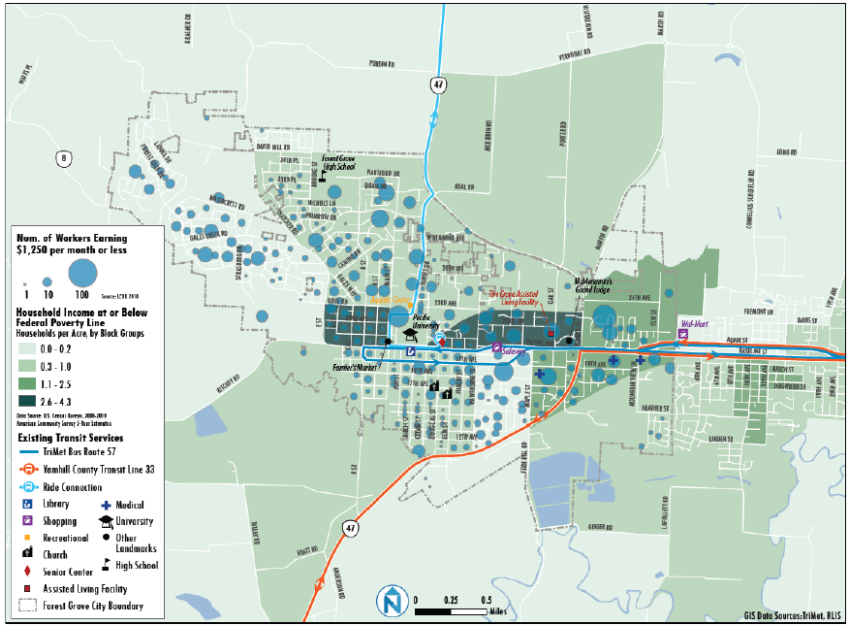
Transit Market Analysis: Demographics

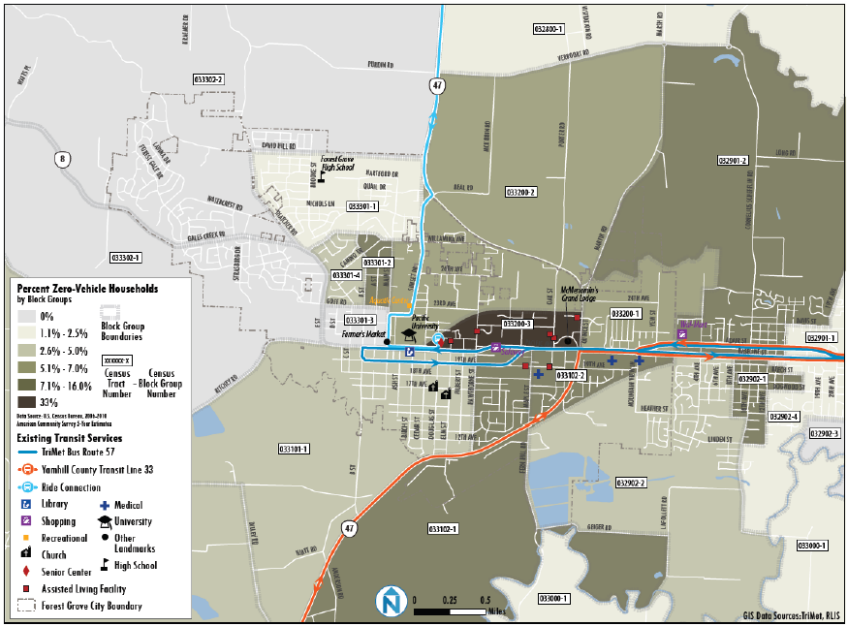
Forest Grove has a larger share of demographic groups that typically have the greatest need for transit services, compared to the county and region.

Geography	Total Population [a]	% Youth (persons aged 10-17) [a]	% Seniors: (persons aged 65+) [a]	% Persons with a Disability [b]	Total Households	% Low-Income Households [c]	% Households without a Vehicle [c]
City of Forest Grove	21,083	12.0%	12.3%	14.7%	7,289	20.0%	10.6%
Washington County	529,710	11.2%	10.0%	9.3%	197,797	9.9%	5.9%
Portland Metro Area	2,226,009	10.6%	11.3%	11.2%	856,582	12.4%	8.3%

Transit Market Analysis: Low-Income or Zero Vehicle HH

- Home locations of workers earning < $1,250/month
- Density of poverty households
- Share of households without a vehicle available





Transit Market Analysis: 2010 Commute Patterns

- Live and work in Forest Grove: 1,467
- In/out-flows of workers:
  - Work in Forest Grove, live outside: 4,669
  - Live in Forest Grove, work outside: 6,266

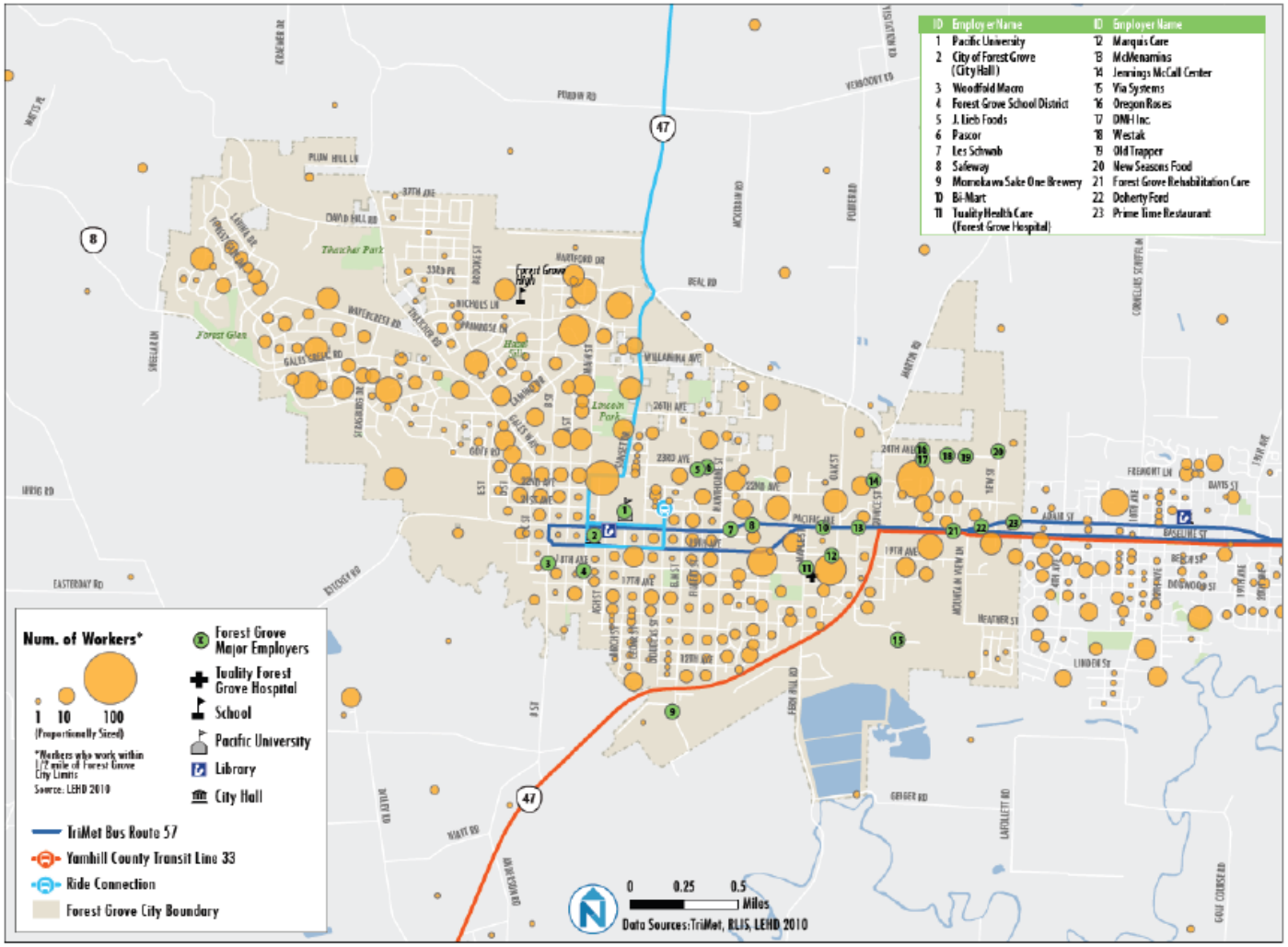
Where Forest Grove Workers Live

Rank	Home City	# of Workers	% of Workers	Approximate Distances from Forest Grove (Miles)
1	Forest Grove	1,467	23.9%	-
2	Hillsboro	760	12.4%	6
3	Portland	416	6.8%	21
4	Cornelius	388	6.3%	2
5	Aloha	253	4.1%	12
6	Beaverton	200	3.3%	15

Where Forest Grove Residents Work

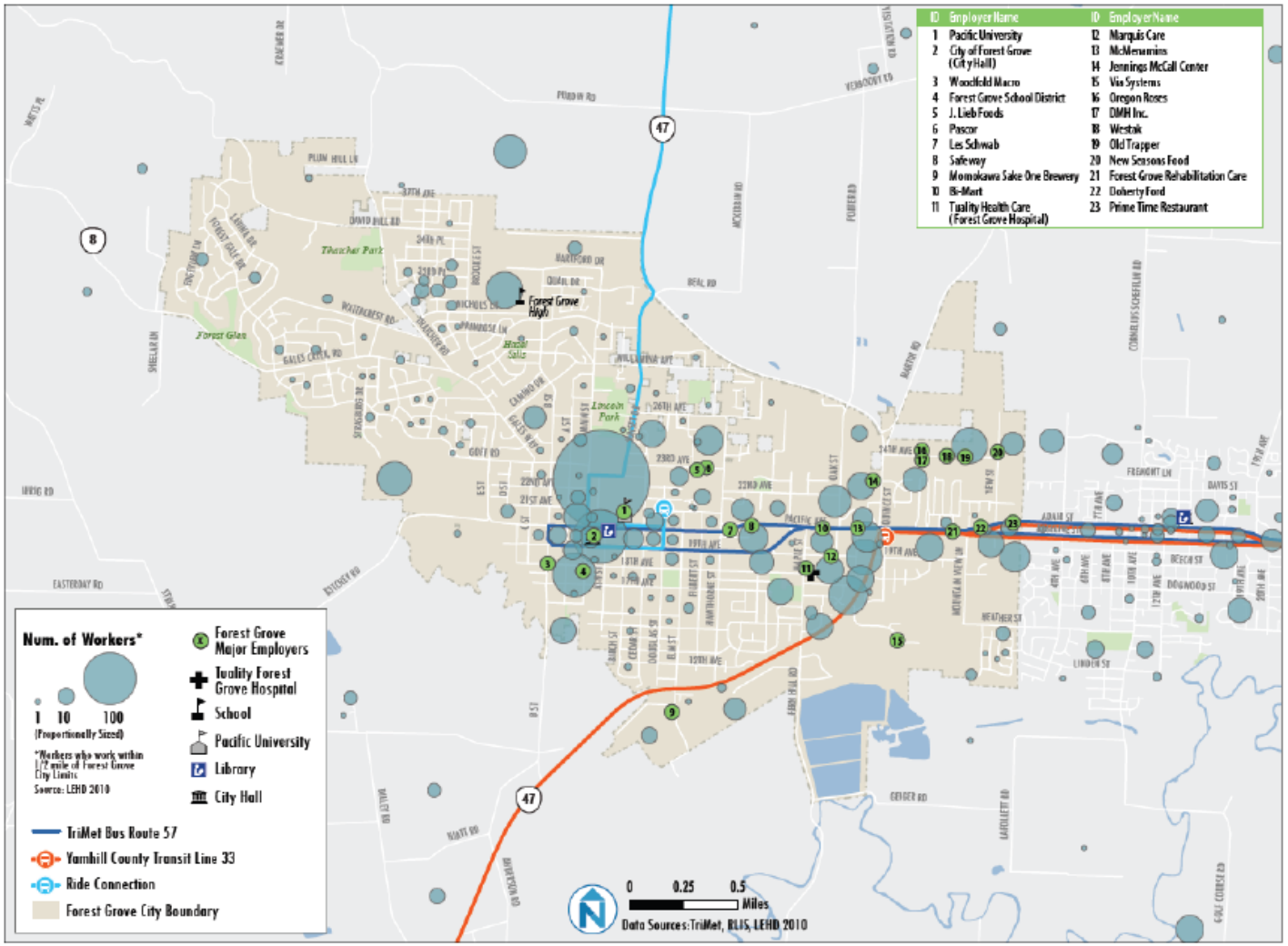
Rank	Work City	# of Workers	% of Workers	Approximate Distances from Forest Grove (Miles)
1	Hillsboro	1,651	21.4%	6
2	Forest Grove	1,467	19.0%	-
3	Portland	1,079	14.0%	21
4	Beaverton	511	6.6%	15
5	Cornelius	258	3.3%	2
6	Tigard	202	2.6%	18

Transit Market Analysis: Home Locations of Forest Grove Workers*



* Workers who live or work within a half-mile of Forest Grove city limits

Transit Market Analysis: Work Locations of Forest Grove Residents*



* Workers who live or work within a half-mile of Forest Grove city limits

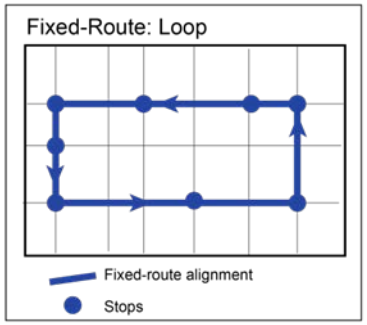
Nelson – Nygaard Study

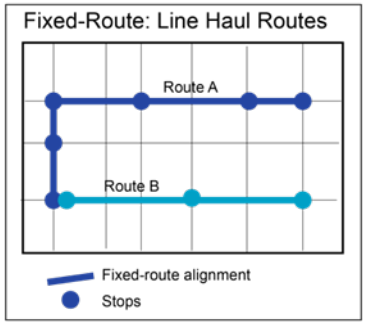
- Conducted Peer Review
  - Golden – Denver (CO)
    - Service model: RTD is regional/local provider (similar to Forest Grove)
  - Burlington – Boston (MA)
    - Service model: MBTA is regional provider, but City of Burlington operates "local overlay" service
  - Savage – Minneapolis (MN)
    - Service model: MVTA is a sub-regional provider responsible for local service in Savage
  - Canby – Portland
    - Service model: Canby Area Transit (CAT) operates both local and regional service

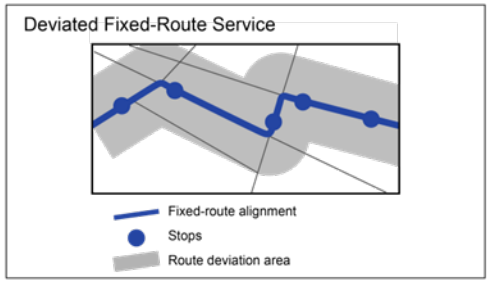
Nelson – Nygaard Study

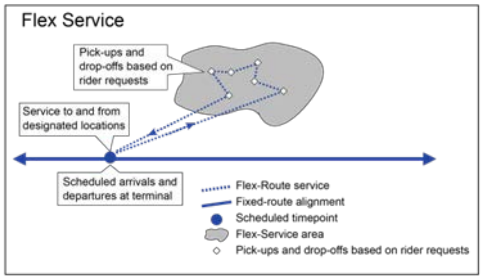
Local Service Types

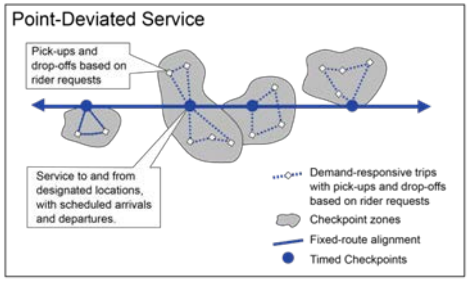
Service Type	Description
Fixed Route	Local service with fixed route and schedules (e.g., 30-60 minutes). Requires complementary ADA Paratransit (curbside pickups/dropoffs).
Deviated Fixed Route	Local service with optional deviations (e.g., ¾ mile area) along the length of a route to make curbside pickups/dropoffs on demand. No ADA requirement.
Flex Route	Local service with curbside pickups/dropoffs on demand in a defined zone. May have some fixed stops or timepoints (point deviation). No ADA requirement.











During Nelson – Nygaard Study

- TriMet approached Ride Connection to apply for funds to provide service in Forest Grove

Grant Funding

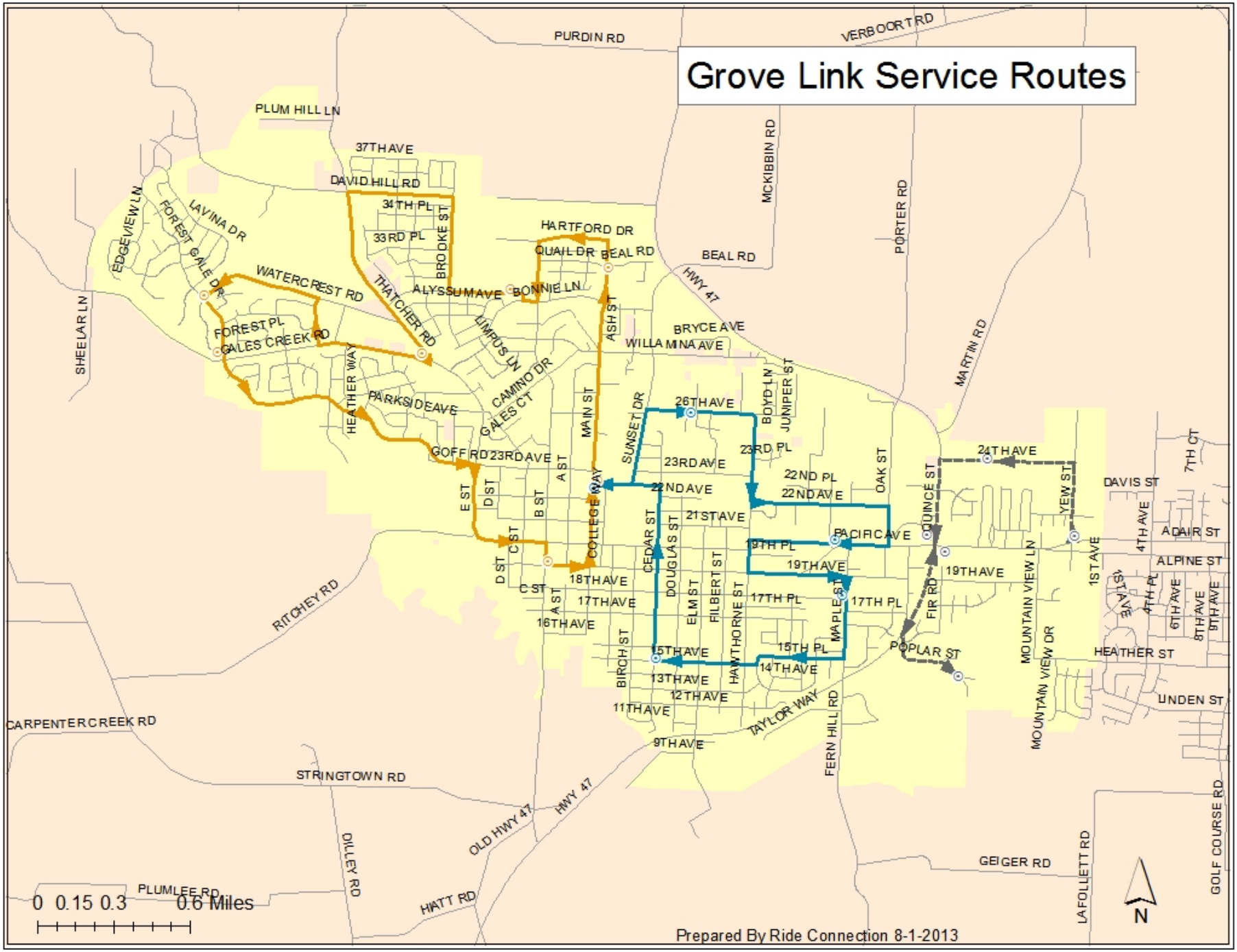
- JARC - Operation costs for one year - $121,000 for Forest Grove
- 5310 Funds - Operation costs for two years $121,000 per year
- 5310 Funds - Bus Equipment (two 14 passenger buses) - $134,450
- TriMet funded the local match for operations; City funded the bus equipment match ($13,808) through TIF funds

Before Operations Began

- Ride Connection wanted community input to develop the service
  - Publicity Campaign
  - Survey – about 300 responses
  - Developed routes
  - Solicited comments about the routes
  - Solicited proposed name for the service
- The service was developed based on these inputs
- Service – Deviated Fixed Route
  - Deviation changed in response to users' needs

Service Operation

- Two Routes
  - West and East side of community
  - Cover Industrial Areas during peak times
  - Service to most of the community
  - High School
- Two Schedules
  - Midday
  - Peak hours (Commuter times)
  - 6 am to 7 pm weekdays
- Started service August 19th


Grove Link Service Routes
PURDIN RD
VERBOORT RD
PLUM HILL LN
37TH AVE
DAVID HILL RD
34TH PL
33RD PL
BROOKE ST
HARTFORD DR
QUAIL DR
BEAL RD
MCKIBBIN RD
PORTER RD
HWY 47
EDGEVIEW LN
FOREST GALE DR
LAVINA DR
WATERCREST RD
THATCHER RD
ALYSSUM AVE
BONNIE LN
LIMPUS LN
ASH ST
BRYCE AVE
WILLAMINA AVE
SHEELAR LN
FOREST PL
GALES CREEK RD
HEATHER WAY
PARKSIDE AVE
CAMINO DR
GALES CT
MAIN ST
SUNSET DR
26TH AVE
BOYD LN
JUNIPER ST
MARTIN RD
GOFF RD
23RD AVE
23RD PL
22ND PL
22ND AVE
OAK ST
24TH AVE
QUINCE ST
YEW ST
DAVIS ST
7TH CT
E ST
D ST
C ST
B ST
A ST
COLLEGE WAY
21ST AVE
PACIFIC AVE
19TH PL
19TH AVE
ADAIR ST
4TH AVE
ALPINE ST
CEDAR ST
DOUGLAS ST
ELM ST
FILBERT ST
HAWTHORNE ST
MAPLE ST
FIR RD
1ST AVE
4TH PL
6TH AVE
8TH AVE
9TH AVE
18TH AVE
17TH AVE
17TH PL
16TH AVE
15TH AVE
15TH PL
14TH AVE
13TH AVE
12TH AVE
11TH AVE
9TH AVE
BIRCH ST
POPLAR ST
MOUNTAIN VIEW LN
MOUNTAIN VIEW DR
HEATHER ST
LINDEN ST
RITCHEY RD
CARPENTER CREEK RD
STRINGTOWN RD
TAYLOR WAY
FERN HILL RD
OLD HWY 47
HWY 47
OLNEY RD
PLUMLEE RD
HATT RD
GEIGER RD
LAFOLLETT RD
GOLF COURSE RD
0 0.15 0.3 0.6 Miles
N
Prepared By Ride Connection 8-1-2013

Results Thus Far

Ridership has increased each month

- August – averaged 40 passengers per day
- September – averaged 70 passengers per day
- October – averaged 84 passengers per day
- November (as of November 22nd) – averaged 88 passengers per day
- Buses at certain times are at capacity

AM and PM differences are significant

- AM – 32%
- PM – 68%

Popular stops

- Safeway store
- High School
- Watercress and Forest Gale Drive

Low ridership

- Industrial areas

Next Steps

- Develop Long-Term funding source
- Work on improving ridership in Industrial Areas
- Install infrastructure
  - Permanent bus stops
  - Shelters
  - Bus zones