



TRANSPORTATION WORKING GROUP
BEND COMMUNITY CLIMATE ACTION PLAN
OCTOBER 10, 2018



**Community Climate
Action Plan**



1. Introductions
2. Background of C-CAP
3. Background Information
4. Exercise: Feedback from Group on Draft Objectives, Input on Barriers and Equity Considerations



City Council Resolution No. 3044

CITY OPERATIONS

Strategic Energy Management Plan to:

- Become carbon neutral by 2030
- Reduce fossil fuel use for City facilities and operations by
 - 40% by 2030
 - 70% by 2050

COMMUNITY WIDE

Community Climate Action Plan to:

- Reduce fossil fuel use community wide by
 - 40% by 2030
 - 70% by 2050

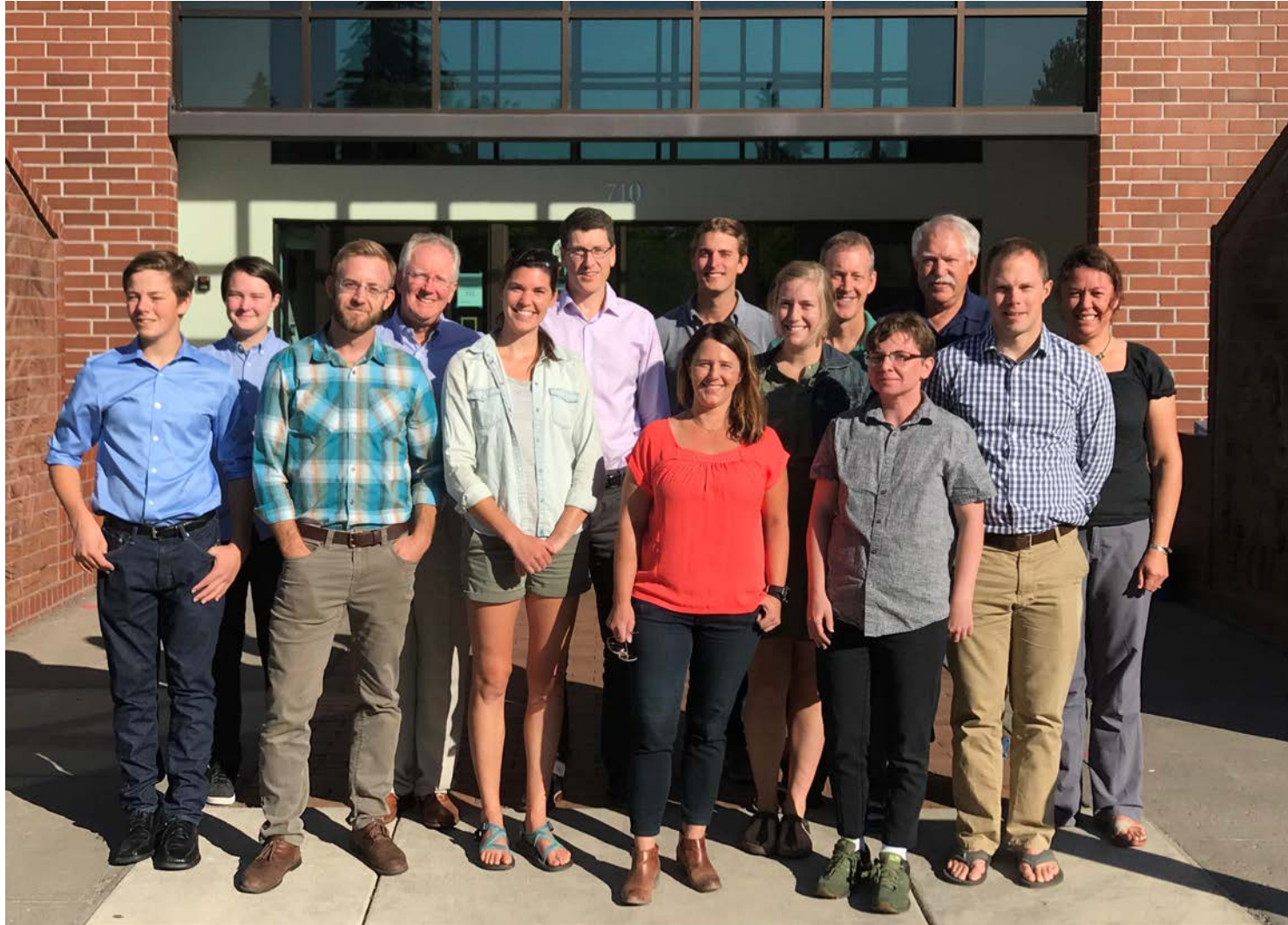
City Council Resolution No. 3099

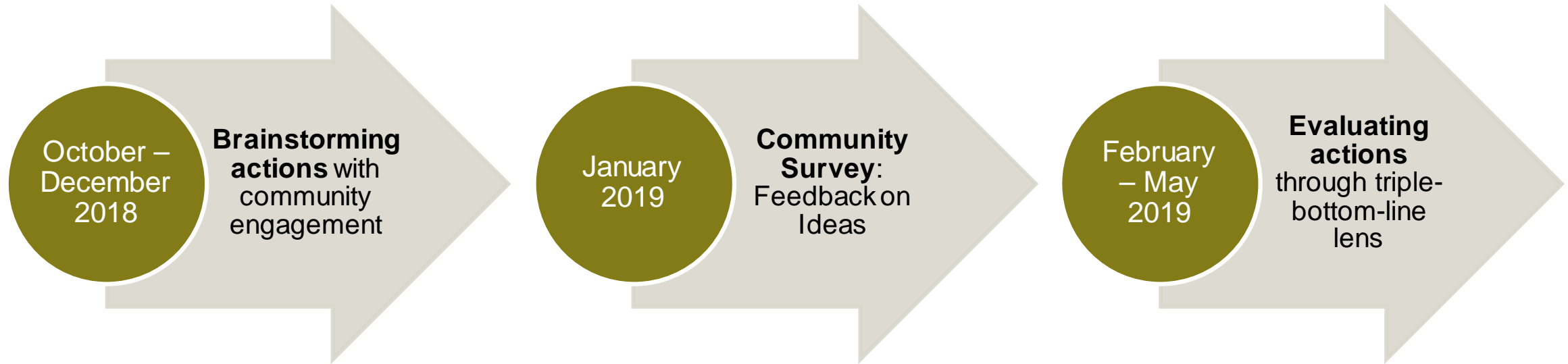
- Established Climate Action Steering Committee (CASC) to create Community Climate Action Plan (C-CAP)



Community Climate
Action Plan

CLIMATE ACTION STEERING COMMITTEE





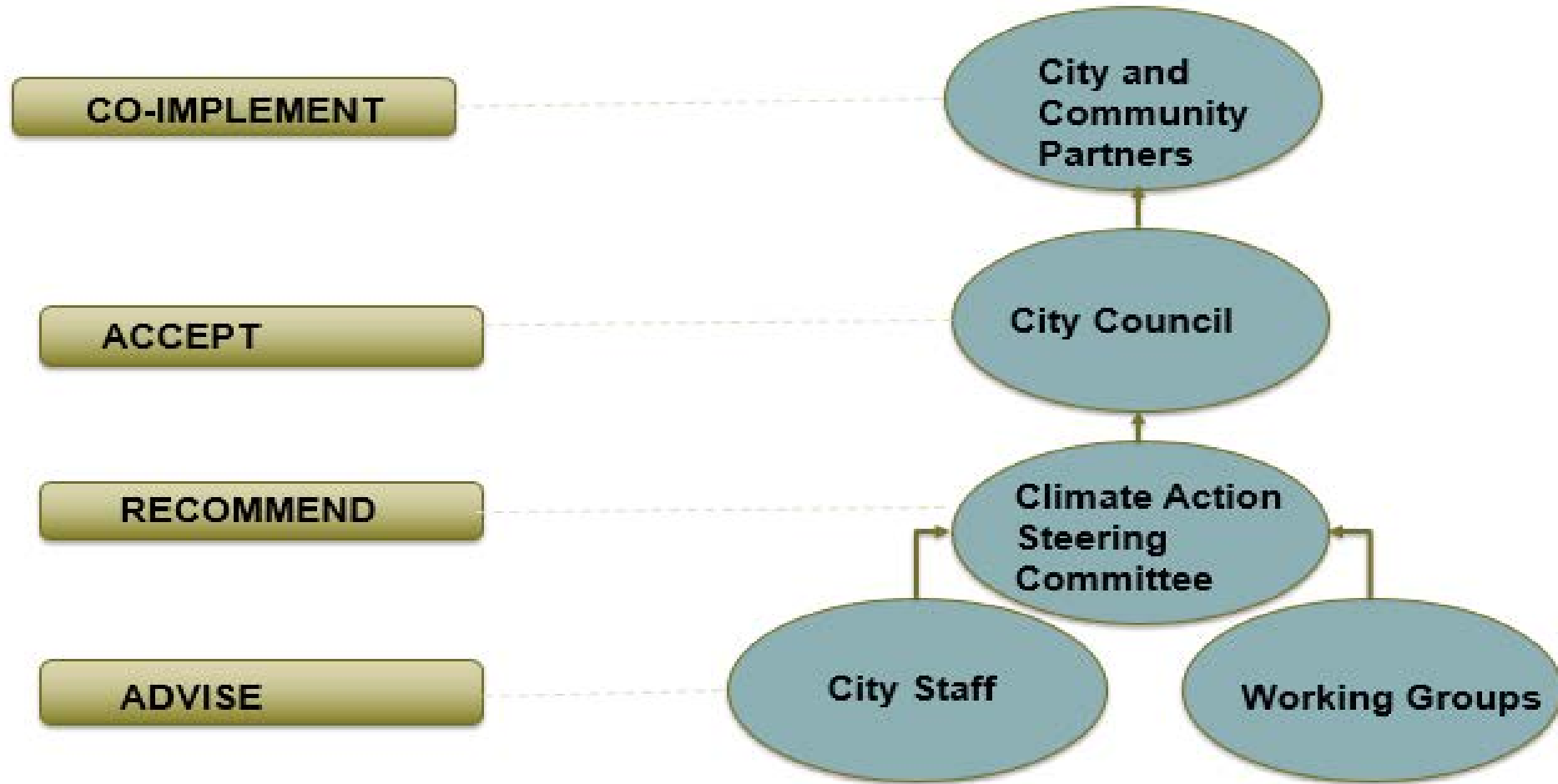




Sector Working Groups

- Led by Climate Action Steering Committee members
- Direct input on barriers, objectives, and equity considerations
- *Brainstorm and create* list of potential climate actions

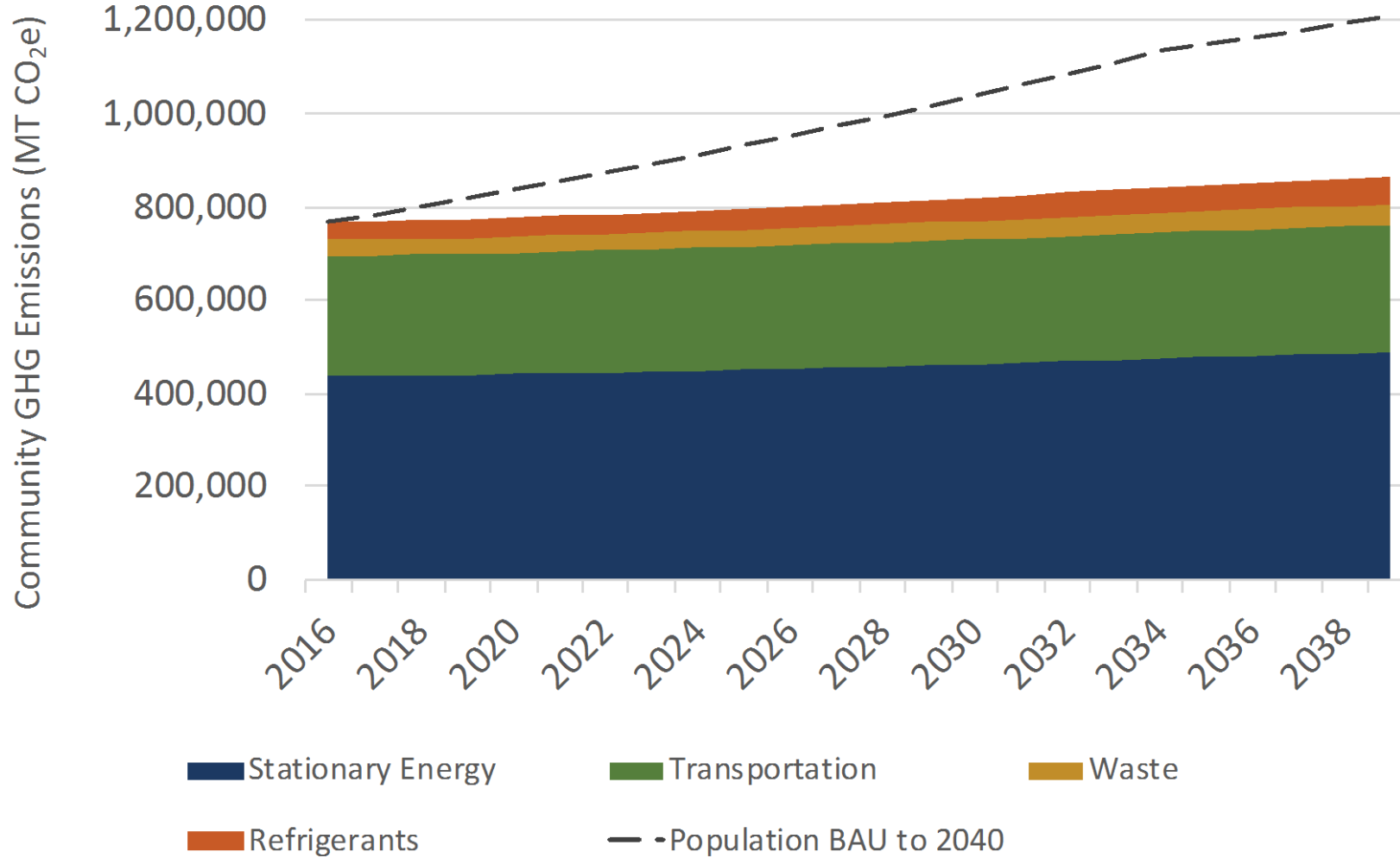
Working Groups advise the Climate Action Steering Committee



BEND COMMUNITY GHG INVENTORY & TRANSPORTATION

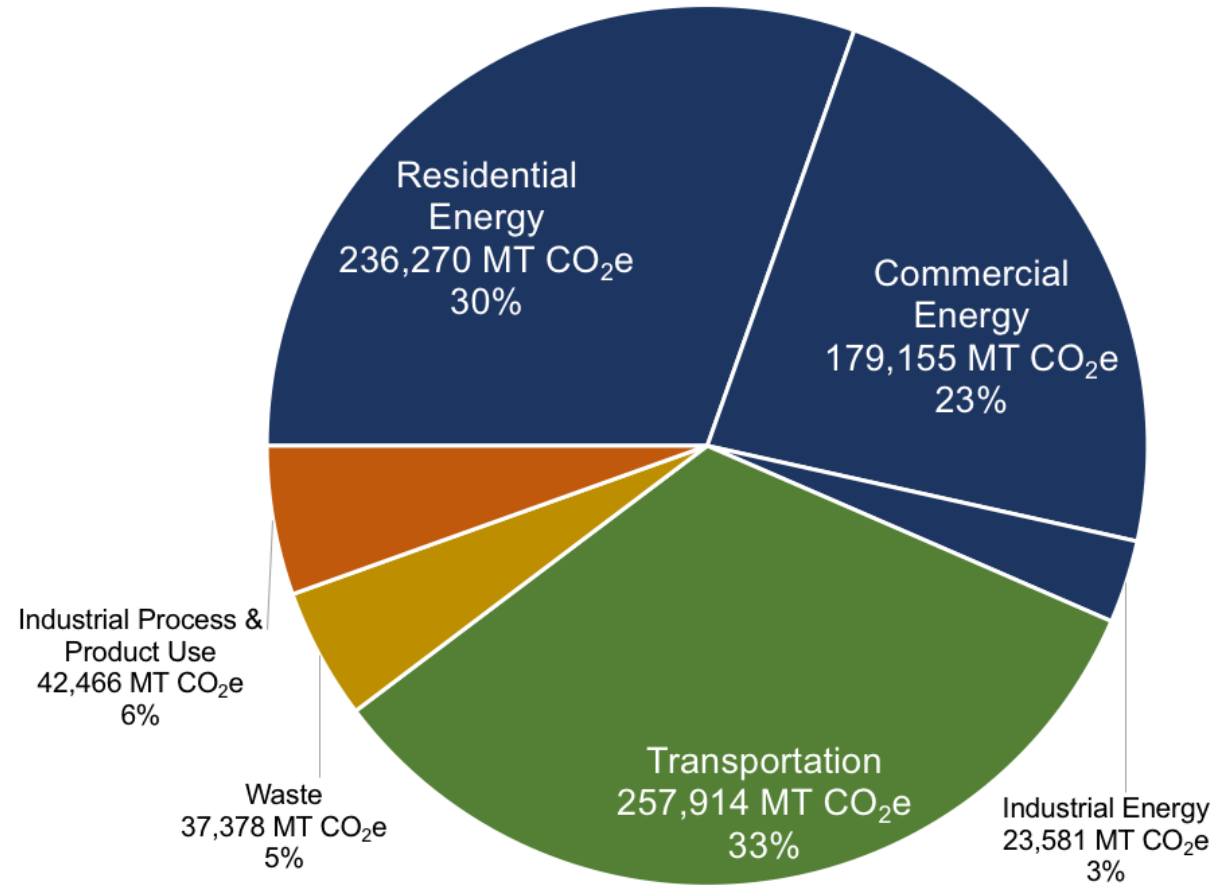


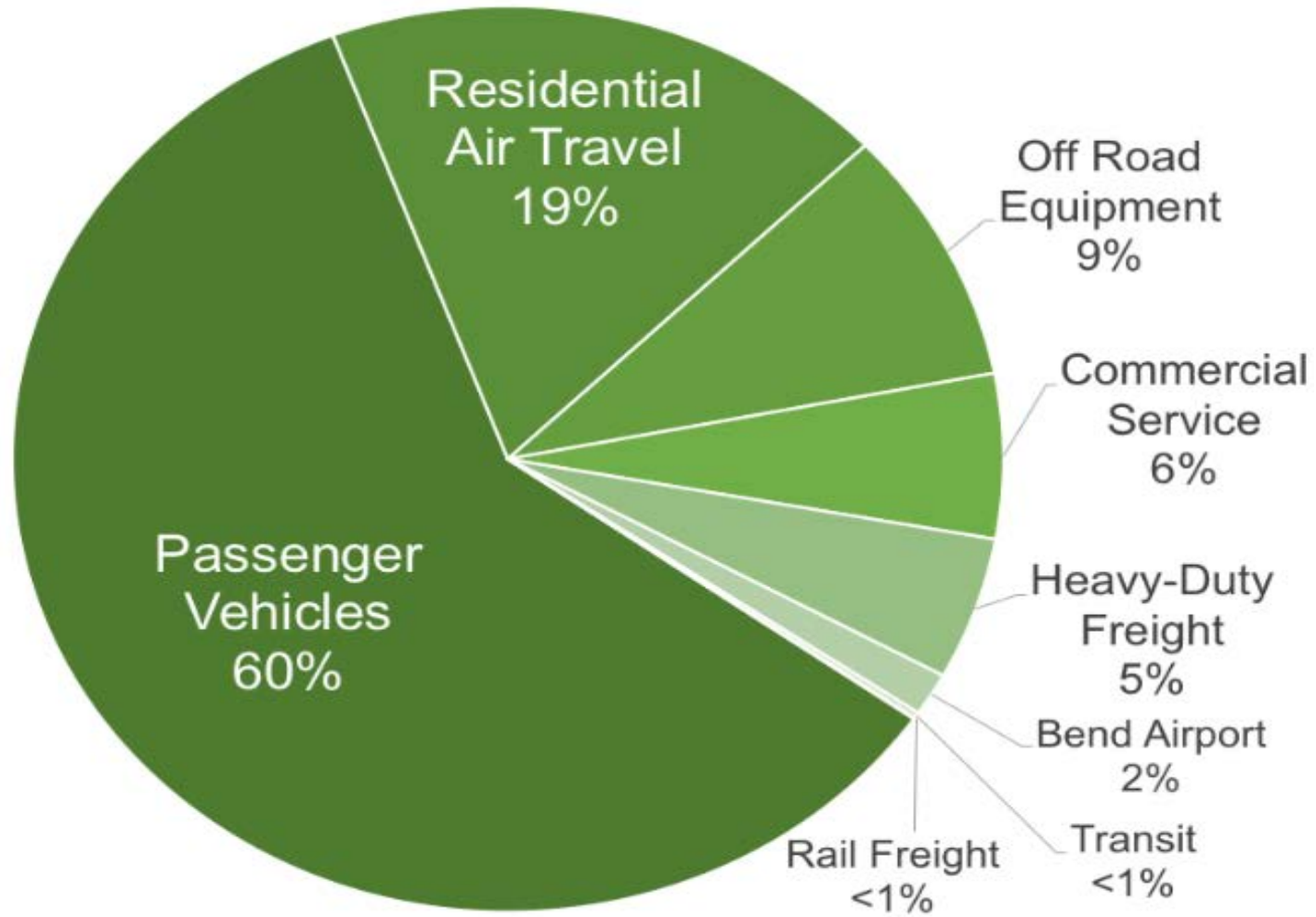
Business As Usual Emissions Forecast





Bend Sector-Based Greenhouse Gas Emissions
776,765 MT CO₂e
9.3 MT CO₂e per capita







Transportation Emissions: tailpipe emissions from on-road and off-road vehicle transportation of passengers and freight

Energy (fuel production): Process and energy emissions from the extraction and production into usable fuel products (e.g. electricity from household outlets, gasoline pumped into cars, natural gas combusted by furnaces, etc). These upstream emissions are considered at the community scale for electricity, natural gas, gasoline, diesel, propane, and fuel oil.



Bend Sector-Based Greenhouse Gas Emissions
with *Household Consumption and Community Fuel Production*

809,352 MT CO₂e Sector-Based*

871,543 MT CO₂e Household Consumption and Community Fuel Production (magenta)

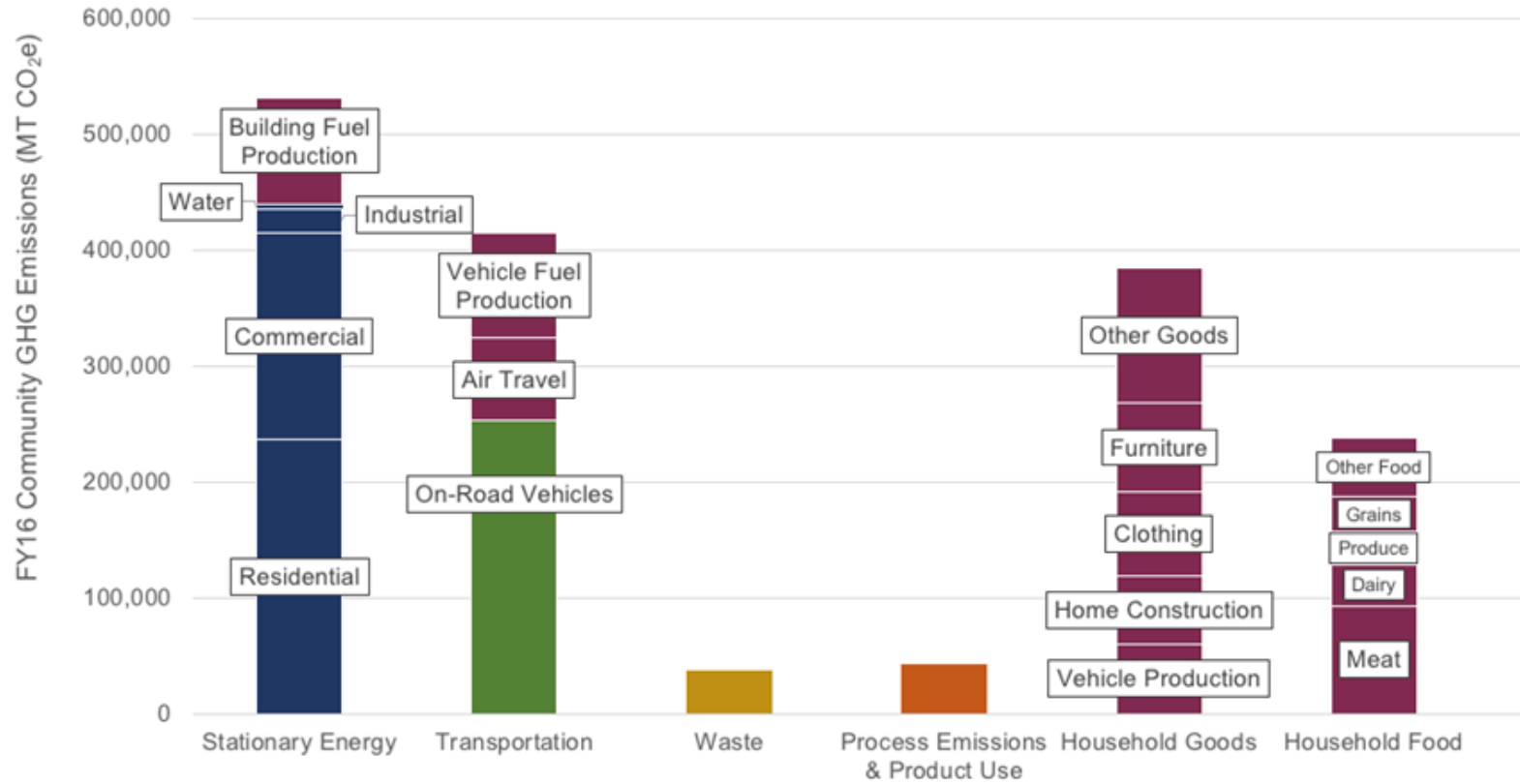


Figure 4: Detailed summary of sector-based emissions and comparison to emissions from household consumption and fuel production.

Note Figure 3 presents location-based emissions for electricity. Market-based emissions details are included in Figure 5 and Figure 7*

Note2: Other Goods include electronics, toys, personal care products, cleaning products, printed reading materials, paper, office supplies, and medical supplies.



Community Climate
Action Plan



Bend's Transportation System

**Climate Action Steering Committee – Transportation
Work Group Meeting**
October 10, 2018



1. Infrastructure and Policy Framework

Tyler Deke, MPO Manager

2. Citywide Transportation Advisory Committee and Transportation Plan Update

Mike Riley, Co-Chair, CTAC



Bend's Transportation System

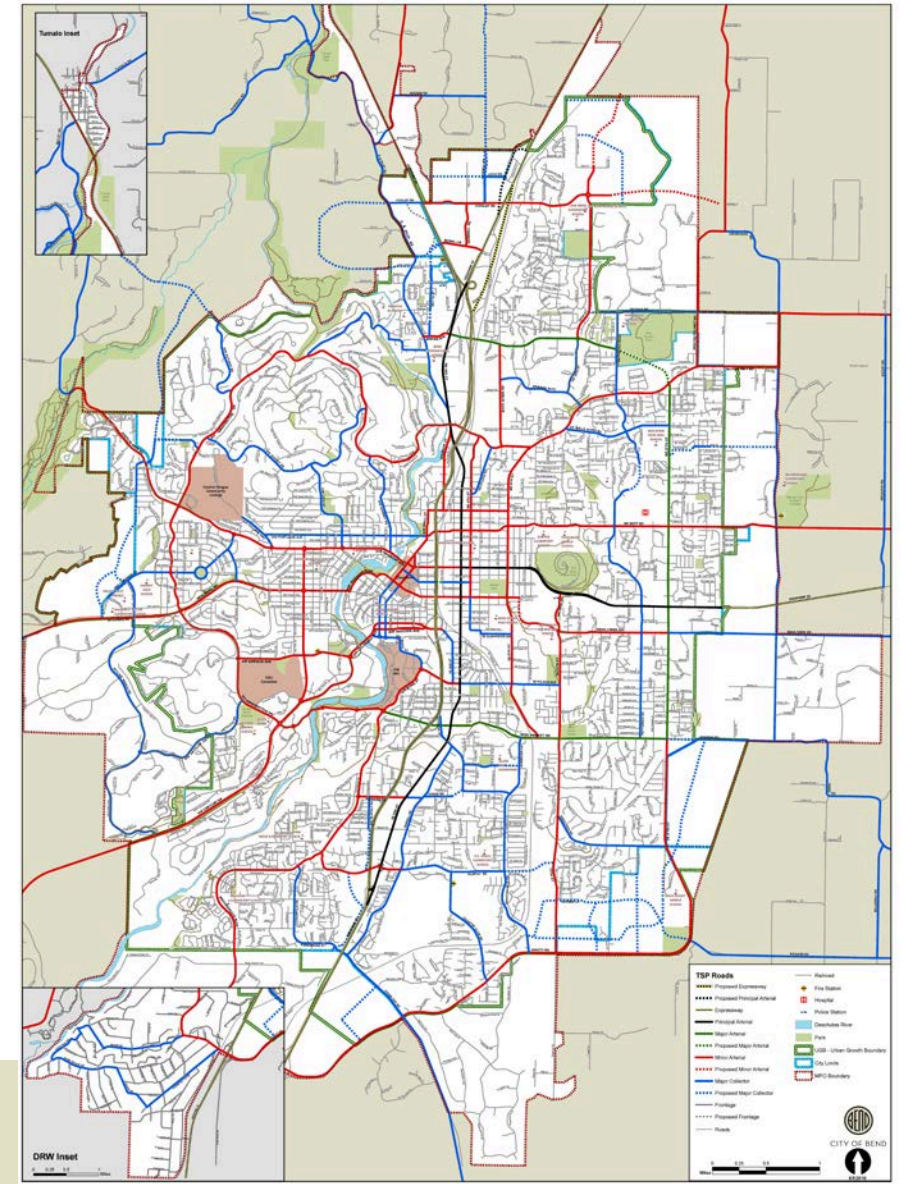
**Climate Action Steering Committee – Transportation
Work Group Meeting**
October 10, 2018



- Transportation system – existing data and policy framework
- Transportation System Plan update



- Our transportation system includes:
 - Roads and bridges (ODOT, city, county and private)
 - Bike lanes (standard, buffered, protected)
 - Sidewalks, crosswalks and median islands
 - Trails (City and BPRD) and bridges
 - Public transportation (Cascades East Transit and others)
 - Bike share system (scooters coming?)
 - Private providers (taxis, Uber, Lyft, shuttles)
 - School buses
 - Intercity buses services (Breeze, The Point)
 - Overhead lights
 - Traffic signals





Owners & operators of the transportation system:

- Public
 - *City of Bend*
 - *Oregon Department of Transportation*
 - *Bend Park and Recreation District*
 - *Deschutes County*
 - *Cascades East Transit*
- Private
 - *Homeowners associations*
 - *For profit providers (taxis, Breeze, Lyft, Uber)*

STATE REGULATORY REQUIREMENTS



- **Statewide Planning Goal 12:** *To provide and encourage a safe, convenient and economic transportation system.*
- The **Transportation Planning Rule** (OAR 660-12) implements Goal 12 by requiring cities to have a 20-year plan that:
 - Supports the statewide, regional and local system
 - Promotes choices
 - Provides safe and convenient access and circulation
 - Facilitates the flow of goods and services
 - Provides adequate funding for needed projects
 - Coordinates with the Metropolitan Planning Organization

FEDERAL REGULATORY REQUIREMENTS



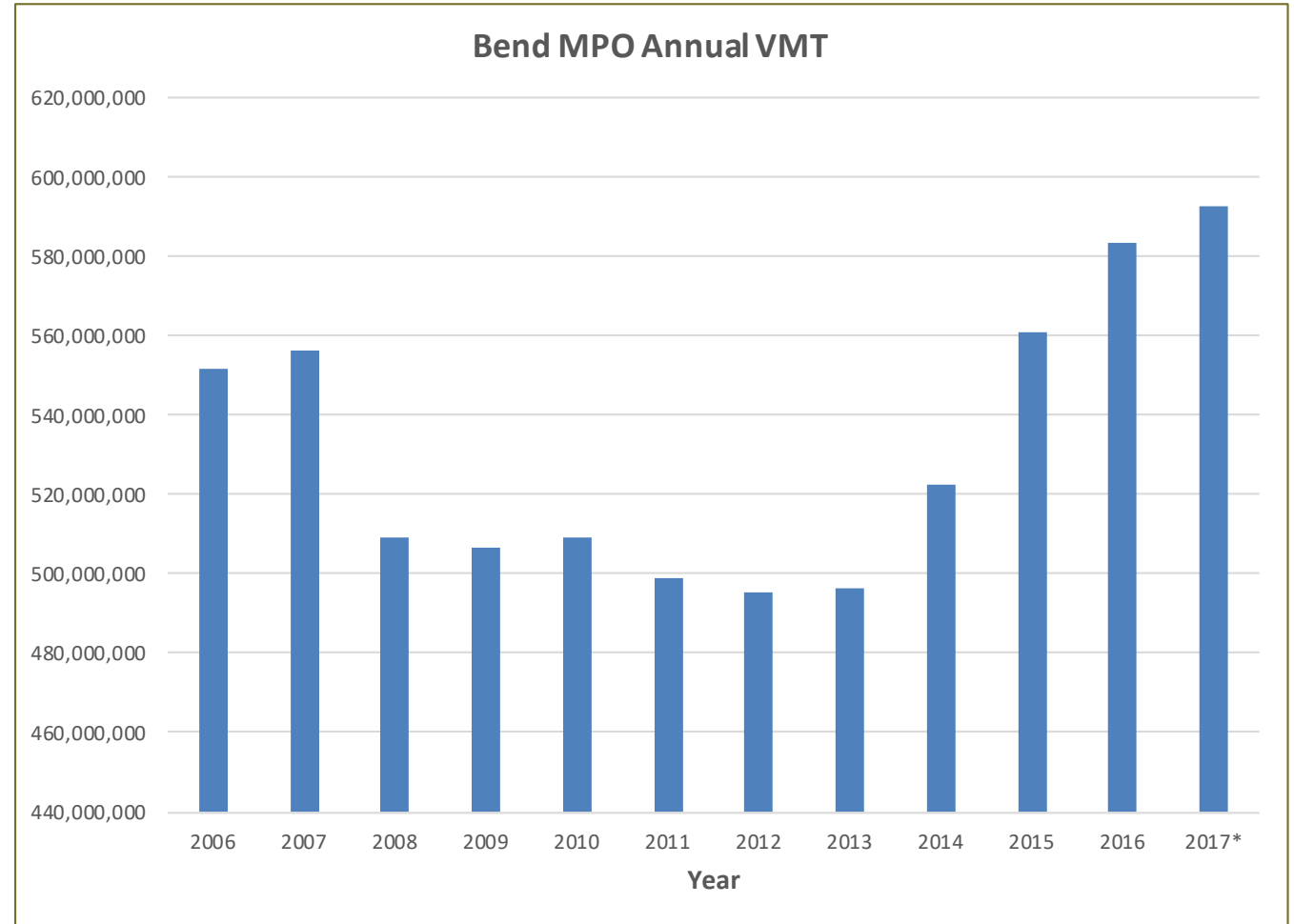
- MPO planning and policy is regulated by federal laws and regulations (US Code Titles 23 & 49, 23 CFR Section 450 & 49 CFR)
- Support a comprehensive, continuing and cooperative planning process
- Develop 20-year plan that considers a number of factors including safety, economic vitality, and system efficiency
 - Plan must be financially constrained
 - Must be updated every 5 years
- Maintain a short-range list of state and federally funded projects (the “TIP”)
- Develop and maintain plans
 - Technology plan (the “ITS Plan”)
 - Environmental Justice plan
- Coordinate other regional planning efforts (e.g. US97/Bend Parkway Study)

TOTAL DRIVING



- We are driving more – a lot more
- Total annual vehicle miles traveled (VMT) is up significantly

Source: ODOT



HOW WE GET TO WORK



- Driving alone has decreased
- Working at home has increased
- Bicycling has increased (a bit)

	2006-10*	2009-13*	2012-16*
Drove Alone	78.6%	75.7%	75.1%
Carpooled	7.5%	7.7%	7.5%
Public Transportation	0.6%	0.7%	0.6%
Walked	2.9%	3.5%	3.3%
Bicycle	2.2%	2.2%	3.1%
Taxi, motorcycle, other	0.7%	0.8%	1.0%
Worked at home	7.5%	9.4%	9.4%

*Average across 5 years
Source: American Community Survey





How Bend compares to other Oregon cities

	Bend	Medford	Corvallis	Albany	Salem	Gresham
Drove Alone	75.1%	79.0%	58.7%	79.3%	73.2%	70.8%
Carpooled	7.5%	9.2%	7.4%	10.3%	13.2%	12.9%
Public Transportation	0.6%	1.0%	2.9%	0.4%	2.5%	7.9%
Walked	3.3%	3.0%	9.8%	3.2%	4.0%	2.6%
Bicycle	3.1%	2.2%	12.8%	0.9%	1.4%	0.7%
Taxi, motorcycle, other	1.0%	1.2%	1.0%	1.6%	1.1%	0.8%
Worked at home	9.4%	4.6%	7.5%	4.2%	4.6%	4.4%

Source: American Community Survey, 2012-2016





Home Locations of People Working in Bend

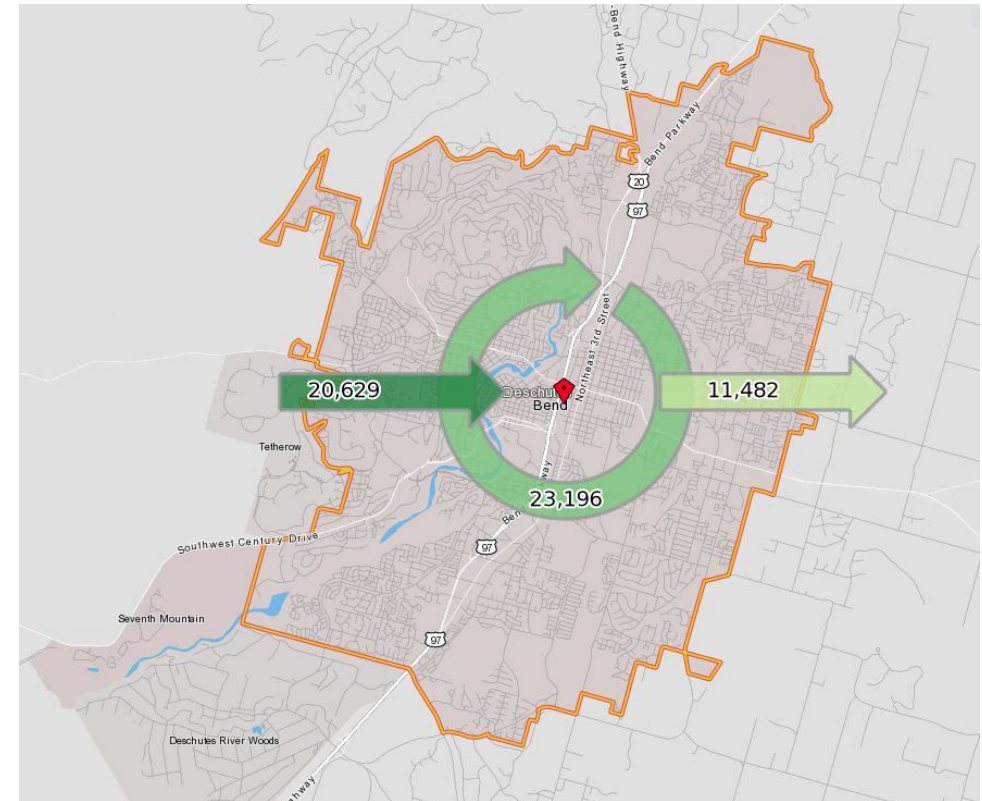
2005		2010		2015	
	Share		Share		Share
Bend	49.9%	Bend	46.7%	Bend	52.9%
Redmond	6.0%	Redmond	6.1%	Redmond	7.3%
DRW	3.3%	DRW	2.4%	DRW	3.3%
All Other Locations	40.8%	All Other Locations	44.8%	All Other Locations	36.5%

Source: <https://onthemap.ces.census.gov/>

Mean Travel Time to Work

- Has increased only slightly over the past 10 years (from 15.3 minutes to 15.7 minutes)

Source: American Community Survey





How Bend Compares to Other Oregon Cities

2015 Data - Home Locations of Primary Workers

	Work Inside City	Work Outside City
Beaverton	13%	87%
Gresham	21%	79%
Hillsboro	22%	78%
Salem	37%	64%
Albany	37%	63%
Corvallis	37%	63%
Medford	38%	62%
Portland	43%	57%
Eugene	44%	56%
Bend	53%	47%

Source: <https://onthemap.ces.census.gov/>



VEHICLE FLEET CHARACTERISTICS



How our fleet has changed over time

Input	1990	2005	2010	2015
Household vehicles - percent light trucks (e.g. SUV, pickup truck, van) (Deschutes Co)	42%	60%	61%	63%
Average Vehicle Age (Deschutes Co)	10.5	10.5	10.5	12
Average Light Duty Vehicle MPG (statewide)	18	21	22	26

Source: Oregon Statewide Transportation Strategy – 2018 Monitoring Report

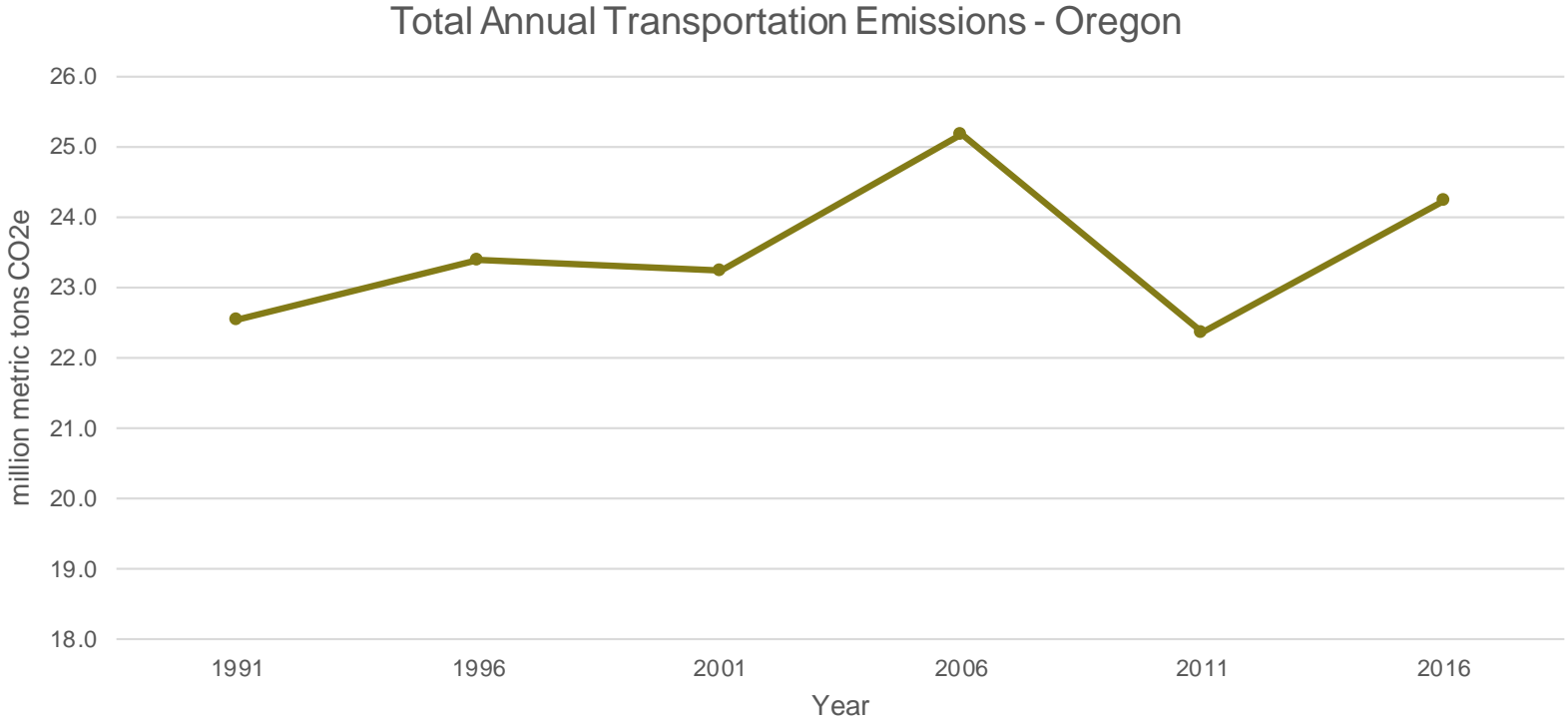


From this

To this

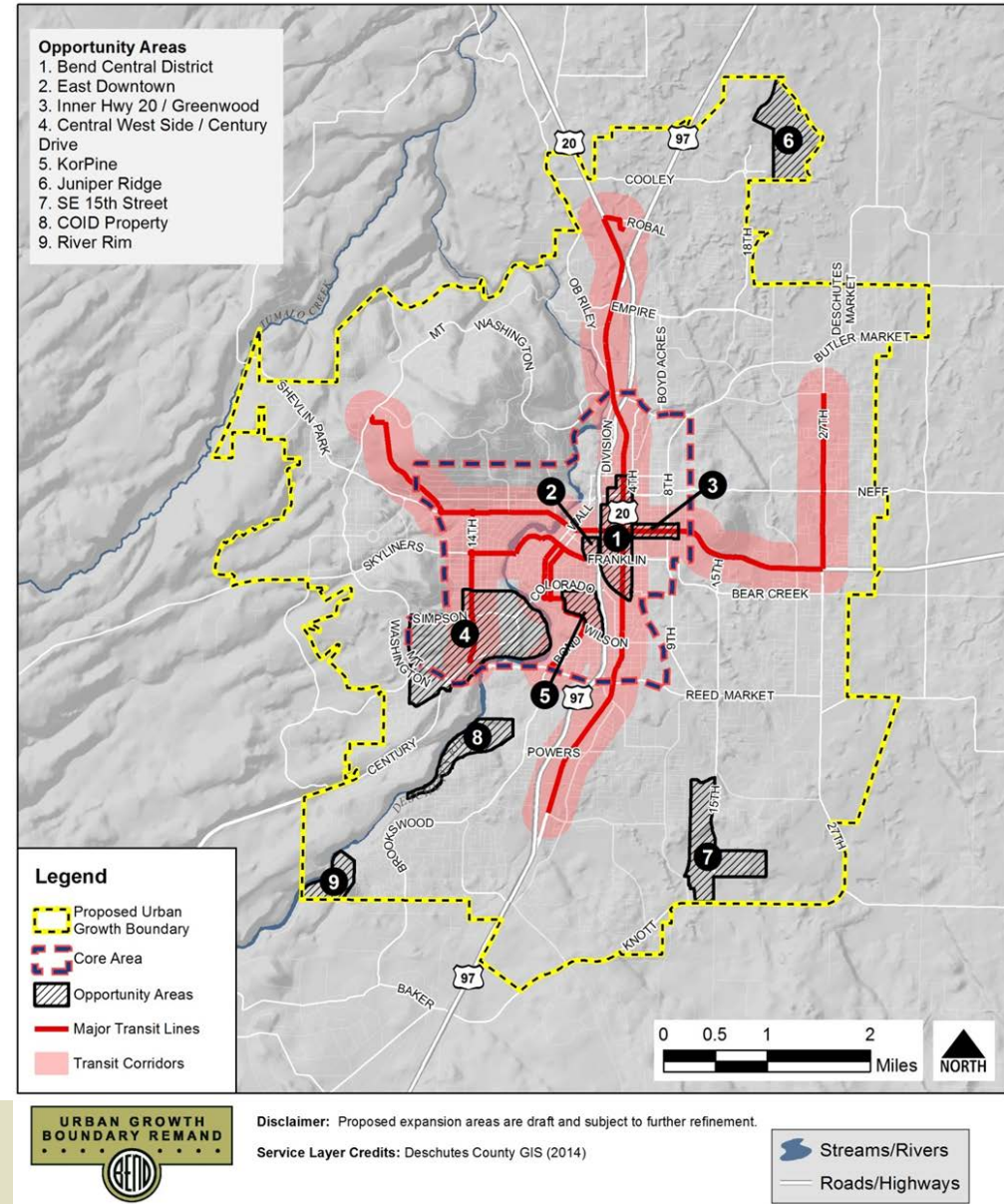
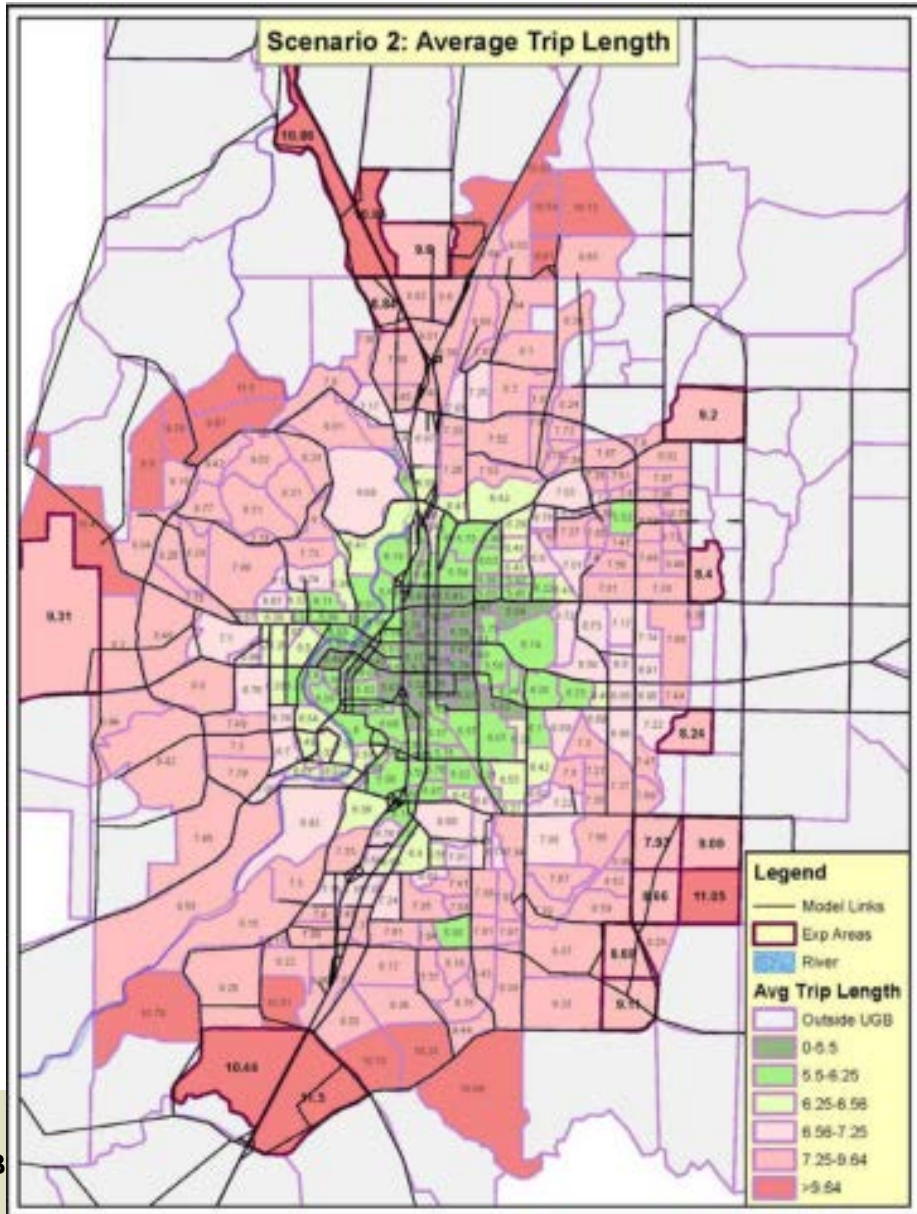


TRANSPORTATION EMISSIONS - OREGON



Source: DEQ Oregon Greenhouse Gas Sector-Based Inventory Data
<https://www.oregon.gov/deq/aq/programs/Pages/GHG-Inventory.aspx>

FOCUS ON REDEVELOPMENT IN AREAS WITH LOWEST VMT



OREGON CLIMATE LEGISLATION – TRANSPORTATION

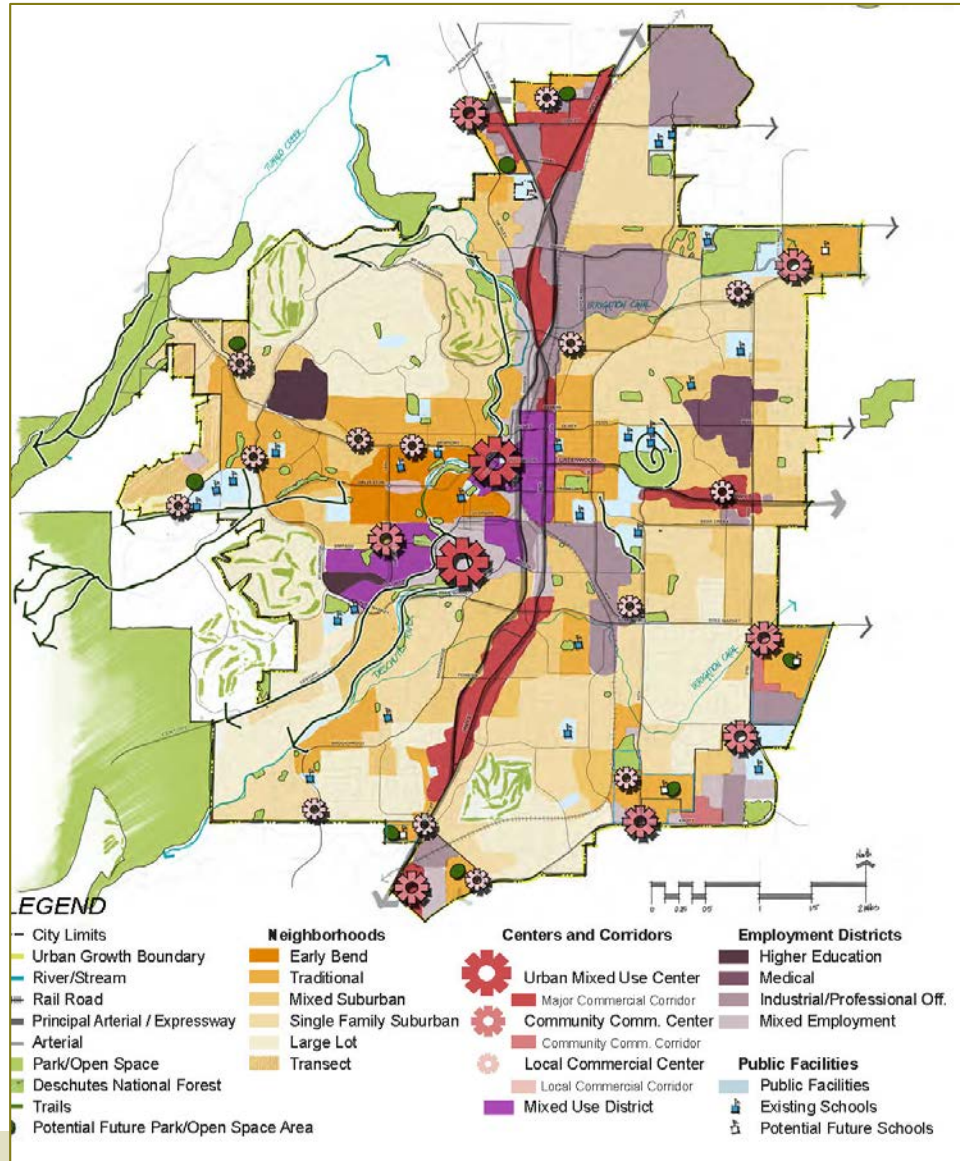


- SB 1059
 - Statewide, comprehensive bill aimed at reducing greenhouse gas from transportation
 - Directs Oregon Department of Transportation (ODOT) and Department of Land Conservation and Development (DLCD) to do the following:
 - Coordinate and consult other state agencies, stakeholders and local governments to develop a state-level strategy to reduce transportation greenhouse gases
 - Develop a toolkit to assist local governments and MPOs in reducing transportation greenhouse gases
 - Develop guidelines for scenario planning, and provide information to Land Conservation and Development Commission to set transportation-related greenhouse gas reduction targets for MPO areas
 - Work with local governments within MPO areas to consider transportation actions to reduce greenhouse gases in the short-term



- **Metropolitan GHG Reduction Targets**
 - LCDC adopted targets for emissions reductions from light vehicles to help guide metropolitan areas as they conduct scenario planning
 - Targets based on an assessment of what could be accomplished at the metropolitan level
 - The targets call for a 17-20% reduction statewide by 2035 for the state to be on track to meet its 2050 GHG reduction goals
 - Goals established for each metropolitan area, with Bend's reduction target set at 18% by 2035
- **HB 2001**
 - Requires Metro to develop and select a preferred land use and transportation scenario that achieves the GHG emissions reduction targets
 - Eugene-Springfield metropolitan area directed to conduct scenario planning and develop two or more alternative land use and transportation scenarios that achieve their targets
 - Scenario planning not required for other metropolitan areas, but is encouraged

URBAN FORM TO REDUCE VMT



Encourage greater land use diversity in areas that are missing “complete neighborhood” components

INTEGRATED LAND USE & TRANSPORTATION STRATEGIES (1)



ILUTP Element	Proposed Strategies	Additional Strategies for Further Consideration	
		Medium-Term	Long-Term
Land Use Strategies	<p>Designate and ultimately rezone mixed use opportunity areas identified in UGB project.</p> <p>Adopt efficiency measures identified in UGB project.</p>	<p>Designate additional mixed use areas along transit corridors</p> <p>Adopt design standards for key pedestrian areas and transit corridors.</p> <p>Strengthen connectivity standards for new master-planned neighborhoods.</p>	<p>Consider up-zoning selected neighborhoods where there is potential and community support for infill development.</p>
Transportation Demand Management (TDM) and Parking Management	<p>Set policy supporting incentives approach to TDM and increasing applicability of TDM programs</p> <p>Conduct analysis and feasibility for parking management and pricing</p> <p>Establish TDM requirements for institutional and employment master plans</p>	<p>Consider transportation SDC reductions for TDM measures</p> <p>Require TDM programs for additional large businesses / institutions</p> <p>Partner to establish TMAs for certain areas</p> <p>Implement parking management programs in key areas based on outcomes of parking study</p>	<p>Implement parking pricing in key areas (e.g. downtown and 3rd Street / Central Area), based on the results of the parking study.</p>

INTEGRATED LAND USE & TRANSPORTATION STRATEGIES (2)



ILUTP Element	Proposed Strategies	Additional Strategies for Further Consideration	
		Medium-Term	Long-Term
Transit	<p>Support and maintain 2016 service improvements</p> <p>Define and enhance transit centers and corridors in opportunity and core areas.</p> <p>Propose new and enhanced transit funding</p>	<p>Implement most components of Bend Transit Plan, including additional hours of service, more frequent peak headways, and two new routes.</p>	<p>Implement further hours of service, improved service and headways on specific routes primarily in opportunity and Core areas, and conversion of 3 routes from bus service to pre-BRT types of service</p>
Roadway Improvement Management and Policies	<p>Implement selective "road diets" where safety issues have been identified</p>	<p>Develop pedestrian and biking safety projects for the opportunity areas that enhance walking, biking, and transit modal splits.</p>	<p>Continue to develop and implement policies that increase walking and biking safety by modifying street standards</p>
Complete Streets and Connectivity Investment	<p>Implement programmed projects</p> <p>Prioritize streetscapes in opportunity and core areas and transit corridors.</p>	<p>Evaluate funding mechanisms for complete street improvements</p> <p>Implement planned but not-yet-funded projects, focusing improvements in opportunity areas and adjoining corridors.</p>	<p>Refinement and potential implementation of aspirational projects</p>

QUESTIONS?



- Tyler Deke, Manager, Bend Metropolitan Planning Organization
- www.bendmpo.org
- tdeke@bendoregon.gov
- 541-693-2113

WHAT IS A TRANSPORTATION SYSTEM PLAN?



An investment and management plan for Bend that will:

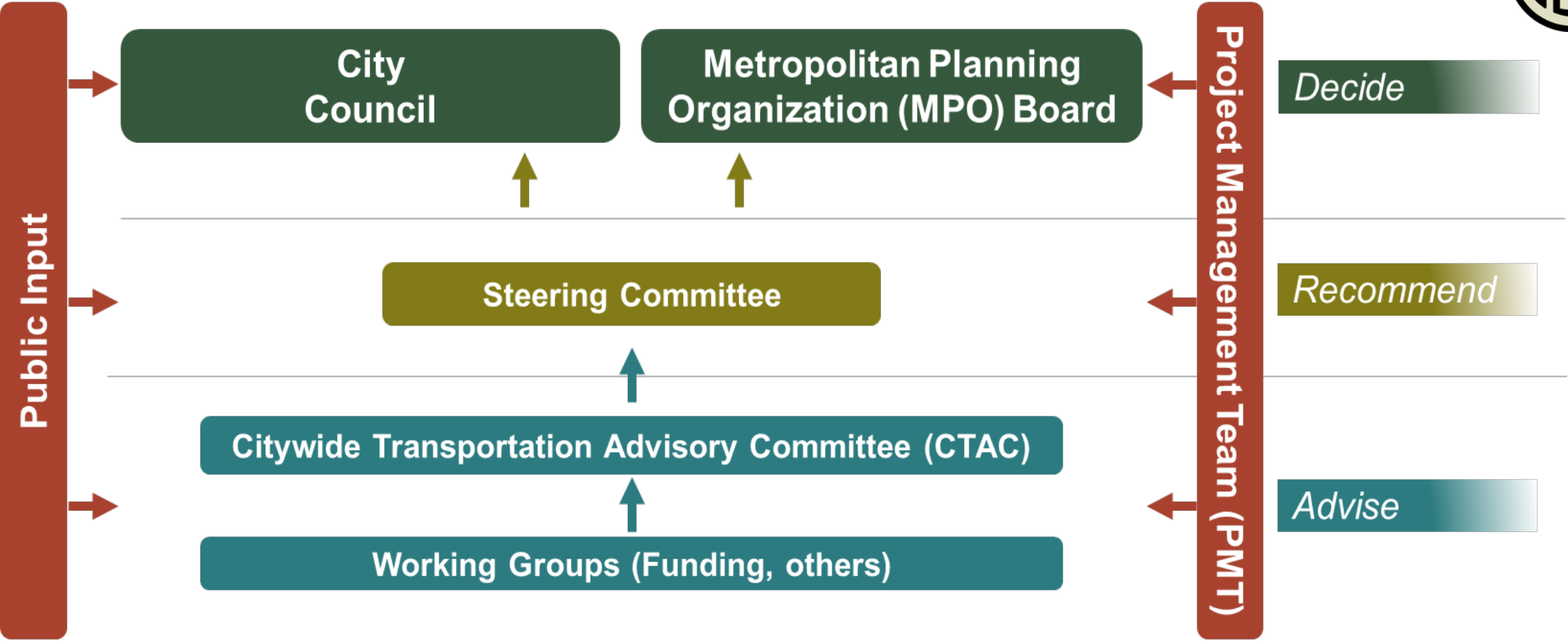
- Make improvements needed to manage growth to 2040
- Implement projects/programs/policies that reflect City Goals
- Balance the needs of all travel modes
- Reduce VMT





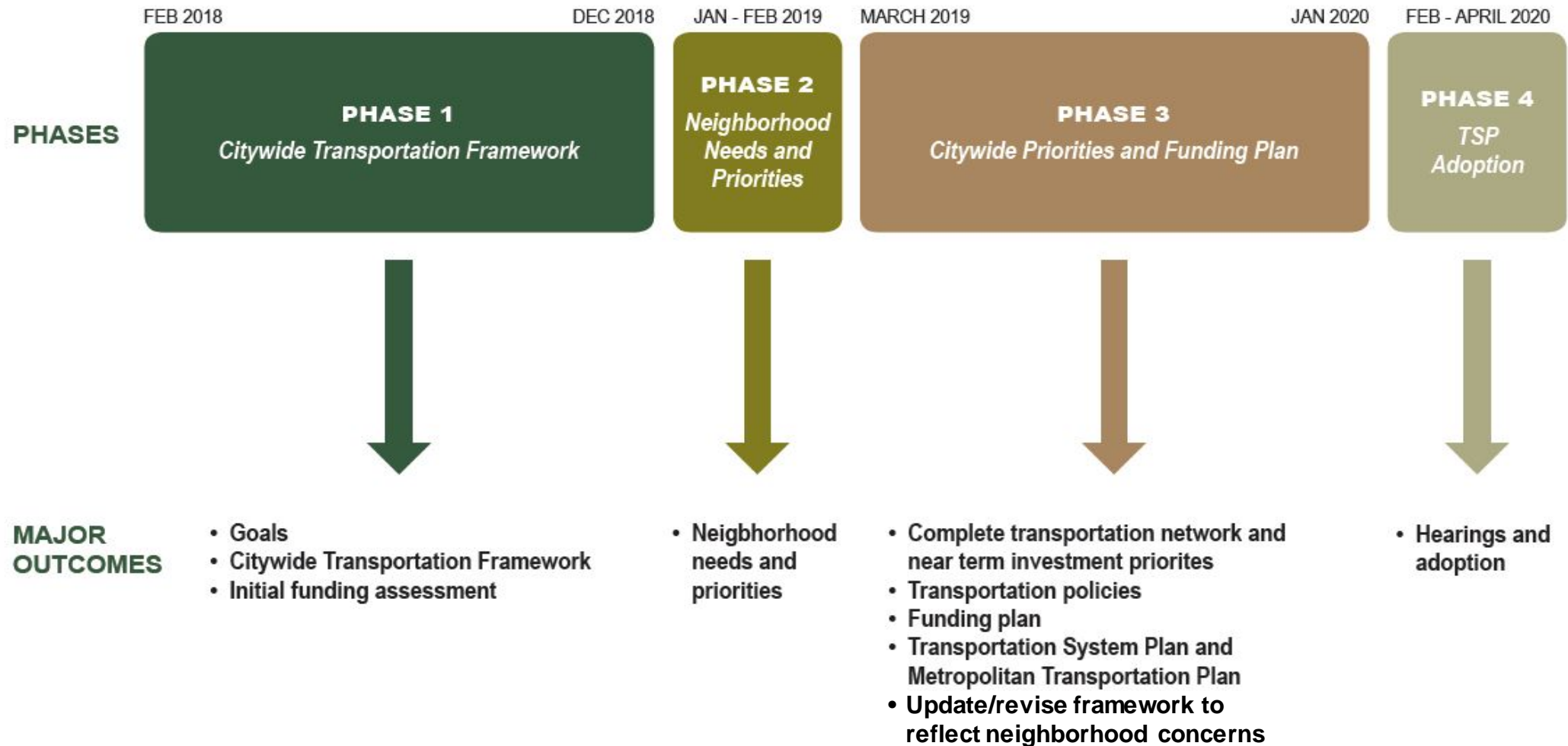
- City of Bend, Transportation Plan update
- Metropolitan Planning Organization (MPO), Transportation Plan update
- Oregon Department of Transportation, Parkway Plan
- Cascades East Transit, Regional Transit Plan update
- Commute Options, Transportation Demand Management

DECISION-MAKING





WORK PLAN PHASES (2018-2020)



PHASE 1: CITYWIDE SYSTEM



- Focus on collectors & arterials to meet MPO timeline
- Assume a baseline of projects (Bend CIP, MPO list)
- Identify three 'scenarios' or bookends of project/program types to model:
 1. *Build new facilities (i.e., new roads, bridges, paths)*
 2. *Widen or enhance existing facilities (i.e., add motor vehicle lanes, bike and pedestrian facilities)*
 3. *Use what we have more efficiently (i.e. increase transit, synchronize signals demand management)*
- Choose the best-performing projects/programs from each scenario as a basis for the Citywide system
- Identify the Initial Funding Assessment (strategy)
- Begin work on the local network in January (Neighborhood Outreach)

EXISTING CONDITIONS HIGHLIGHTS BY TRAVEL MODE



Motor Vehicles:

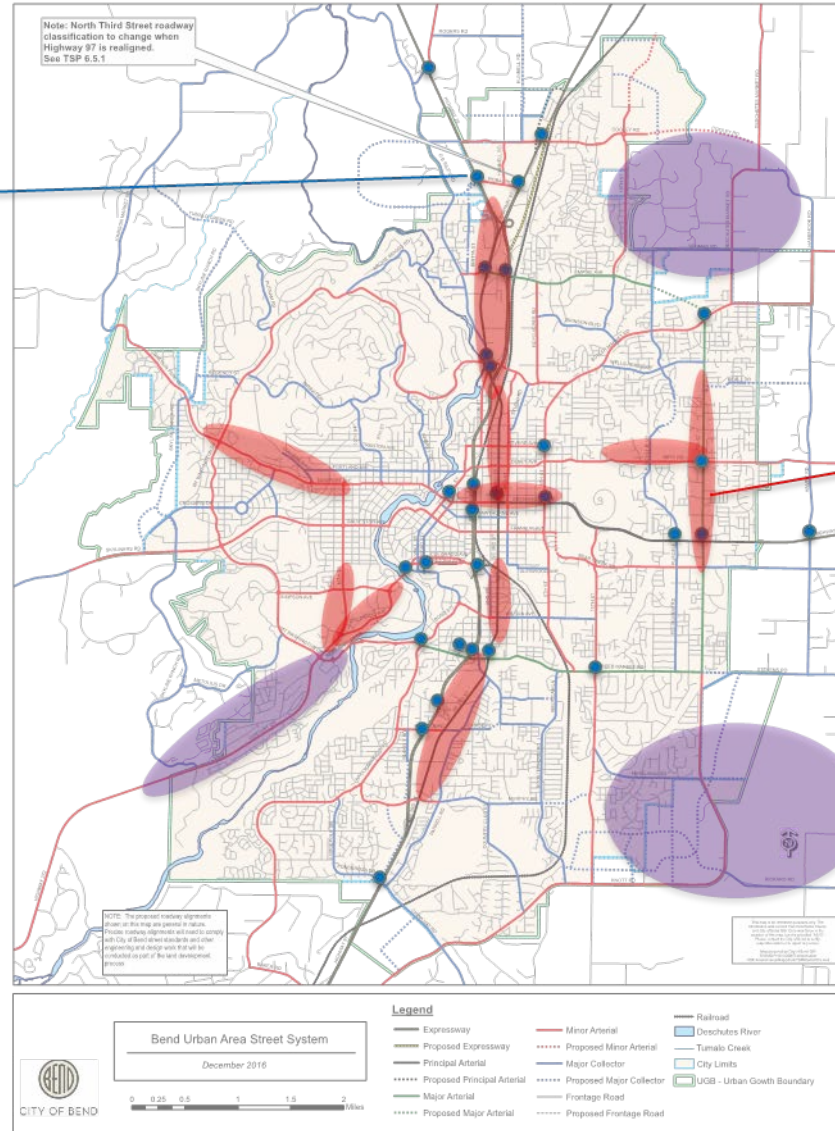
- Congestion hotspots
- Limited east-west connections
- Maintenance challenges

Transit:

- Limited frequency
- Requires transfers

Safety:

- High crash areas
- Pedestrian & bicyclist crashes are 2x statewide average



Pedestrians:

- Gaps/substandard facilities on major routes
- Need for neighborhood infill/repair

Bicycling:

- Gaps, substandard facilities on major routes
- Need for low stress facilities

PARTICIPATION SUMMARY

OPEN HOUSE #1 (JUNE 2018)



Total Participation



1,000+
Participants | **2,446**
Comments

Includes all online/in-person comments.

June 11th Open House



65
Visitors

Includes all comment forms and map comments.



244
Responses

Online Participation



638
Online Responses



1,143
Online Map Comments



421
Mobile Responses

OPEN HOUSE #1 GOAL RANKING



FEEDBACK ON DRAFT GOALS



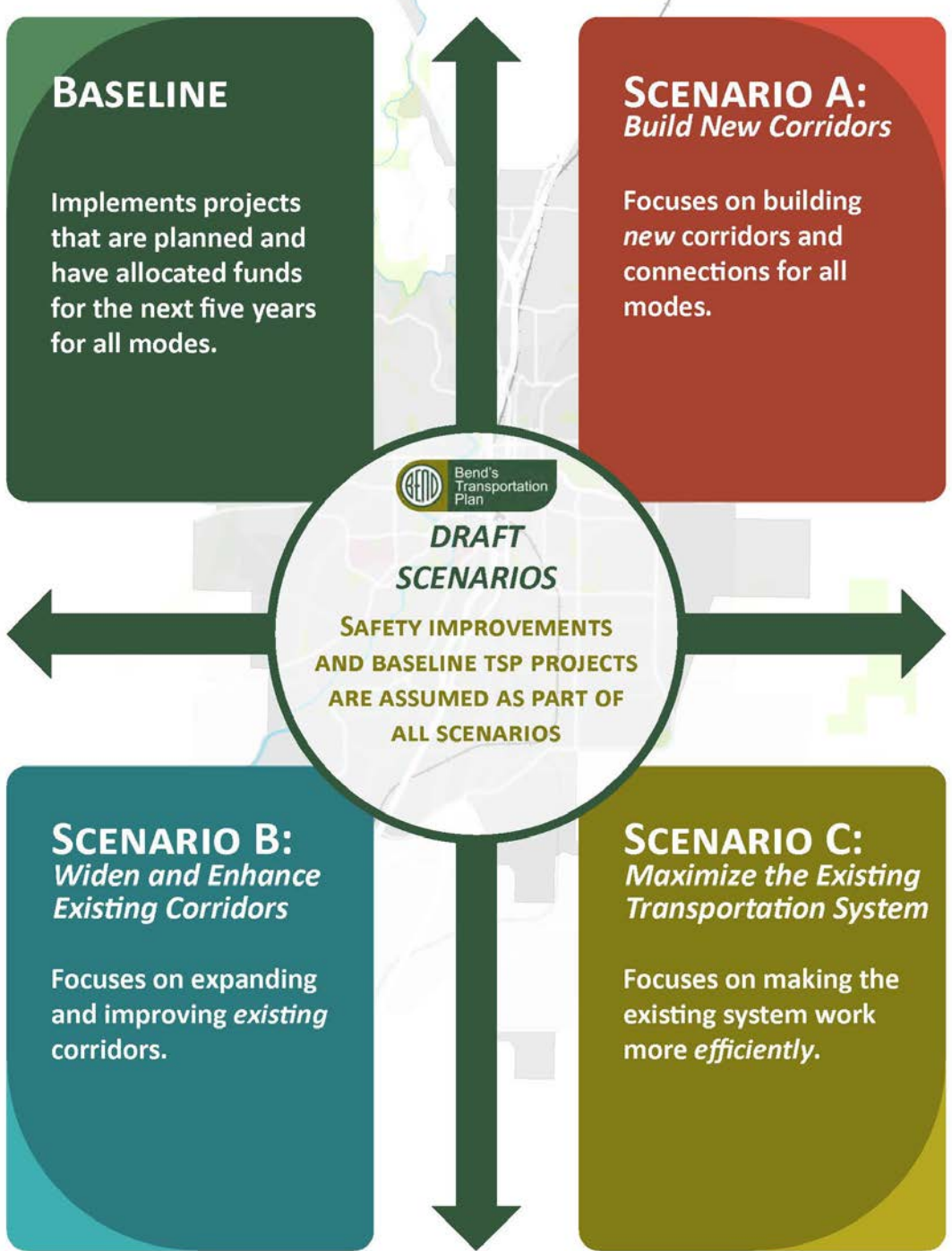
TRANSPORTATION GOALS



- Increase System Capacity, Quality, and Connectivity for All Users (e.g. drivers, walkers, bicyclists, transit riders, mobility device users, commercial vehicles, and other forms of transportation)
- Ensure Safety for All Users
- Facilitate Housing Supply, Job Creation, and Economic Development to Meet Demand/Growth
- Protect Livability and Ensure Equity and Access
- Steward the Environment
- Have a Regional Outlook and Future Focus
- Implement a Comprehensive Funding and Implementation Plan



THREE CITYWIDE SCENARIOS



CTAC adopted a set of “*performance measures*” to evaluate each scenario’s performance against the goals

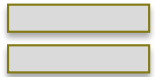
FUNDING CHALLENGES



- Transportation projects & programs are only partially funded with limited local, state and federal resources
- Rising costs of construction
- Deferred street maintenance
- Rapid growth
- Expansion areas



FUNDING WORK GROUP PROCESS



Preferred transportation investment package for Bend

PUTTING IT ALL TOGETHER



What we want



How we pay for it



Summer/Fall 2018

Winter/Spring 2019

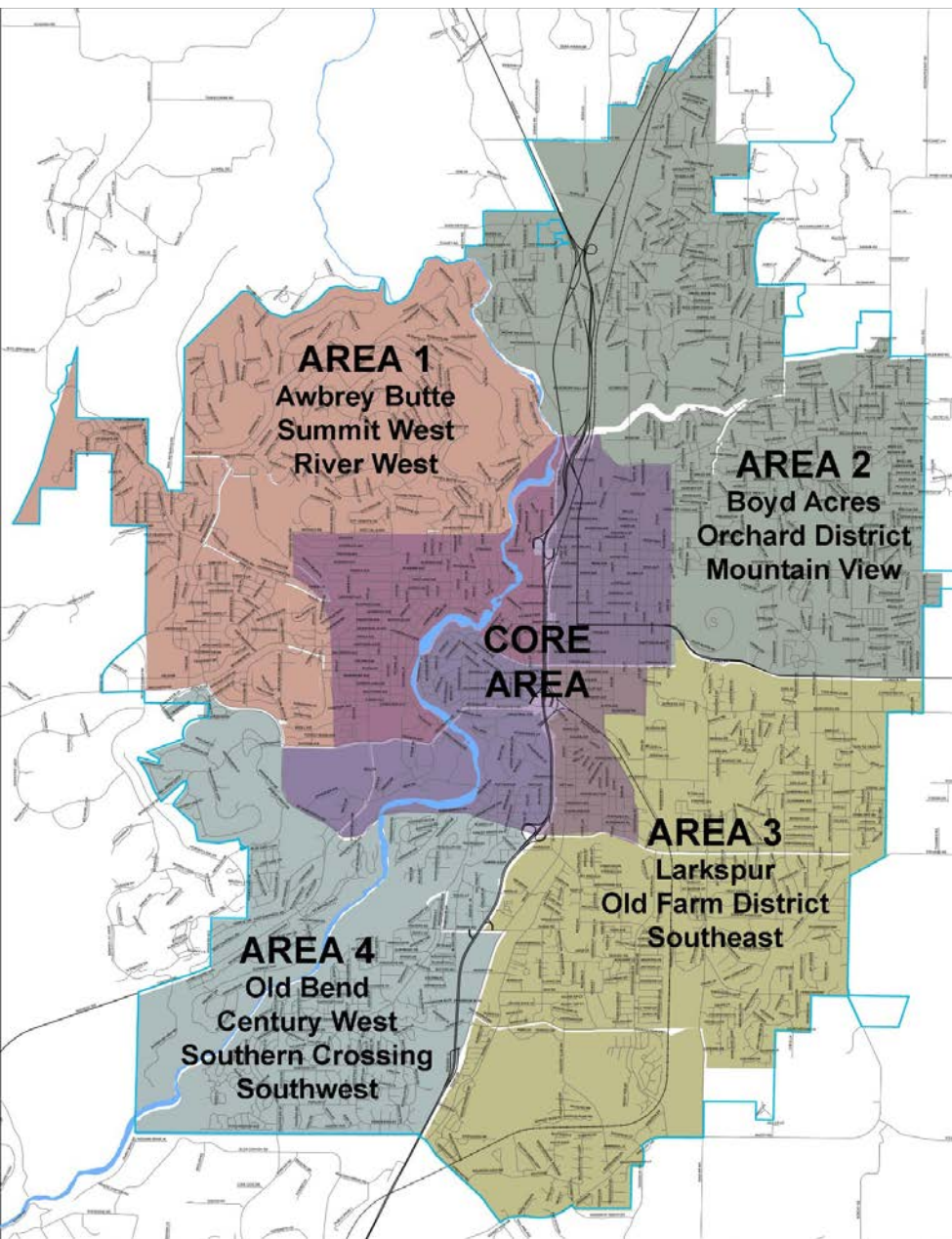
Pull it together





PHASE 2 NEIGHBORHOOD OUTREACH

- Combined Neighborhood Association Workshops
- Late January 2019
- Workshops to identify
 - ✓ Vision
 - ✓ Projects & Programs
 - ✓ Local Priorities
- Results will be combined with Phase 1 (Regional System) to form the complete Transportation Plan



QUESTIONS?



- Mike Riley, Co-Chair, Citywide Transportation Advisory Committee
mike@envirocenter.org
541-385-6908
- Karen Swirsky, Senior Planner, City of Bend Growth Management Dept.
kswirsky@bendoregon.gov
541-323-8513
- <https://www.bendoregon.gov/city-projects/transportation-system-plan>



Policy, infrastructure and incentives to support objectives such as:

- Dramatically changing the community mode share in favor of low carbon options
- Expanding and improving the accessibility of affordable, low carbon mobility choices.
- Facilitating market dominance of clean technologies and clean fuels
- Ensuring complete, connected, and regionalized mobility systems
- Promoting an urban form that increases walkability and transit connectivity and affordable neighborhoods



Source: peopleforbikes.org

TRANSPORTATION DRAFT OBJECTIVES, BARRIERS, AND EQUITY CONSIDERATIONS



1. Encourage behavior change toward lower carbon transportation choices
2. Increase education and awareness of lower carbon transportation options
3. Decrease total per capita vehicle miles traveled (VMT)
4. Improve urban infrastructure to enable more active transportation options.
5. Support innovative forms of low carbon transportation
6. Pursue opportunities to make Bend's existing transportation system more efficient.



BARRIERS

- Culture
- Habits
- Convenience/Time
- Urban infrastructure
- Perception
- Radius to city center
- Population growth
- Urban boundaries
- Cost of living index
- Location of affordable housing
- Cost of more efficient vehicles
- Cost to retrofit
- City funding priorities
- Culture of change
- We don't know what future technologies are going to be yet

EQUITY CONSIDERATIONS

- Unfair lack of the resources required to change behavior
- Access to technology
- Lack of affordable housing inventory increases VMT because people need to live farther and commute into town
- Must be aware of regressive taxes
- Must remain cost accessible for lower income individuals

EXERCISE



- Split into small groups around tables – up to 6 tables total
- Each table should have a facilitator from the CASC or City Staff
- Fill out worksheet with your own ideas on sticky notes
- Provide feedback on:
 - Draft Objectives
 - Barriers
 - Equity Considerations
- Let us know if we missed any objectives
- TIME: 30-45 minutes total



- Brainstorm, ask your friends and networks – what actions should we take?
- Review Pre-Meeting Reading Materials to be Posted on CASC website
 - Transportation White Paper
 - CNCA Framework for Long Term Deep Carbon Reduction Planning Waste Systems Chapter
 - City of Aspen Greenhouse Gas Reduction Toolkit Waste and Landfill Chapter



**Community Climate
Action Plan**



