

IV. APPENDIX

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A1: NEIGHBORHOOD “HOW TO” GUIDES

1. How Do I Talk to My Neighbors about Climate Change?

Talking about climate change and sustainability can sometimes be a conversation stopper, rather than a conversation starter. Below are some tips on how to start the conversation and keep it going.

It is helpful to feel comfortable talking about climate change because it is likely that once your group meets a few times and begins brainstorming neighborhood goals and projects, there will be more than enough for each group member to do. Additionally, if your group is hoping to share your events with others, people may begin to ask, “Why are you hosting these events?” or “What is your group all about?” Learning to talk about climate change can help you and your neighbors recruit volunteers, promote your events and share your group’s mission with others.

STARTING THE CONVERSATION:

- 1) Starting the conversation can be the most difficult part, but focusing on who you are talking to and how you begin the conversation can make it much easier.
- 2) Start with people you know.
 - a) Whether you are trying to broaden your group or simply refine your climate change conversation skills, starting with people you know is a great way to begin.
 - b) This approach has multiple benefits:
 - i) It allows you to explore new interests and potential conversation topics with friends and neighbors
 - ii) It provides you with a more comfortable atmosphere, because your friends and neighbors can connect what you are saying with everything else they know about you.
- 3) You don’t need to start talking about climate change right away, give it some time.
 - a) Let your conversation naturally lead to climate change by first talking about another topic you have in common with the person.
 - i) For example, if you both commute by bicycle, start there and then refer to an interesting article you recently read about the average carbon footprint of an automobile commute.
 - b) If this is the first time you are talking to a neighbor, it may be more important to focus on getting to know that person, than to focus on getting them on board with your cause. This may be a good opportunity to invite them to a sustainable potluck or block party, providing you with a future venue to further the conversation about climate change.

CONTINUING THE CONVERSATION:

Once you're engaged in the conversation, make the most of the opportunity. Below are 3 tips to keep the conversation interesting and relevant to the person your talking with:

1) Frame the conversation:

a) Connect it to something that is of interest to the person. For example, many people we spoke with indicated climate action planning was a great opportunity to build community in their neighborhoods and save money each month.

2) Make climate change manageable:

a) Climate change is a huge topic and is often talked about through policy or governmental goals (i.e. reduction of vehicle miles travelled), which is often difficult to connection to oneself, let alone one's neighborhood.

b) Provide an example of how the neighborhood would like to address climate change (i.e. by starting a bike buddy program).

3) Try to focus on the solutions:

a) By giving solutions a higher priority, you're showing the person you're speaking with that you're interested in moving forward, not dwelling on what could happen.

b) This also reassures the person that if they come to a meeting, it won't be focusing on the problem, as much as it will be focusing on solution.

RESOURCES FOR NEIGHBORHOODS:

- How to communicate about climate change: Oregon Climate Masters: www.uoregon.edu/~climlead/publicationspress/CPW_Climate_Change_Communications_Final_Report_6_3_2005.pdf
- ICLEI Guide to Community Engagement: www.icleiusa.org/action-center/engaging-your-community/
- Climate Crossroads: A Research-Based Framing Guide For and From Global Warming Advocates. This guide provides talking points and a framework for thinking and talking about climate change. The guide and toolkit are available through the website. www.iccr.org/news/press_releases/pdf%20files/ClimateCrossroads.pdf

2. How Do I Start a Sustainability Committee or Green Team in My Neighborhood?

With a little bit of organization, starting a sustainability committee can be easy. Below are a few steps to get you started.

WHY CREATE A SUSTAINABILITY COMMITTEE?

Neighborhood Sustainability Committees are a great way to organize the community for action. Aside from the environmental benefits of this type of committee it also provides a great community building opportunity. A sustainability committee offers an opportunity to get new volunteers involved in the neighborhood.

WHAT DOES A SUSTAINABILITY COMMITTEE OR GREEN TEAM DO?

The committee could be a small discussion group that meets to discuss important topics, or a neighborhood-wide group that takes action to address specific issues as an advocacy group or a project-oriented group. The important thing is to take advantage of the existing resources and values of your neighborhood.

There are examples of sustainability committees right here in Southeast Portland that could be used as models or your group could be unique and do something completely different. Check out the Southeast Uplift website for descriptions of the groups in Southeast Portland.

SETTING UP YOUR COMMITTEE OR TEAM:

- 1) Basic Outreach to Form the Group: Find a core group to get the committee started. Don't limit yourself to people already involved with the neighborhood association. Remember, this is about engaging new participants.
 - a) Put up posters and brochures at neighborhood businesses, events and on-line networking sites;
 - b) Write an article for the newsletter;
 - c) Talk about the idea at monthly meetings; and
 - d) Think of friends and neighbors who might be interested and invite them personally.
- 2) Call a Meeting: When you have a group of committed team members, call your first meeting. Make this an event people will be excited about, and prepare an agenda prior to the meeting. The main goal of the meeting will be to:
 - a) Define goals and objectives for your group; and
 - b) Brainstorm opportunities in your neighborhood.
 - c) Here is a sample meeting agenda to work from:
 - 1) Greeting – 5 minutes
 - 2) Introduction of members – 10 minutes
 - 3) Why are we here? (Needs and benefits) – 10 minutes
 - 4) Create mission statement (Goals and objectives) – 25 minutes
 - 5) Future meetings and communication methods – 10 minutes

- 3) Create a Timeline for Next Steps: Once you have a vision for what you want your committee to accomplish, find small steps that your group can take to move toward your goal. It should be something large enough to make a difference, but small enough to be managed by the members of your committee.
 - a) List resources in your neighborhood that could be useful
 - b) Contact organizations that might be able to help
 - c) Assign some small tasks to committee members
 - d) Begin looking at the projects and approaches discussed in this handbook
- 4) Evaluate Progress and Seek New Opportunities:
 - a) As you move ahead, you can do broader outreach to recruit more participants, and research funding resources for neighborhood projects if necessary.

RESOURCES FOR NEIGHBORHOODS:

- Southeast Uplift Sustainability Program: seuplift.longsight.com/our_programs/sustainability
- Center for Earth Leadership: www.earthleaders.org/

3. How Do I Work With the City to Address Issues in My Neighborhood?

Neighborhood Associations in Portland have the ability to provide input into what their community looks like, providing residents with an inside track to elected officials and decision-makers. However, it can still require some work and be a bit difficult to navigate the system in order to get neighbors voices heard. Southeast Uplift can help to connect you to the City and advocate on your behalf.

WHY WORK WITH THE CITY?

The City can help you accomplish some projects that are bigger than the neighborhood level, or that require changes in infrastructure, policy or regulations.

HOW CAN SOUTHEAST UPLIFT HELP?

Southeast Uplift can put you in touch with the right program or person at the City, help advocate on policy issues, garner support from other neighborhoods and take an official position on an issue or action item. Some committees also have a representative from the City at their meetings, so it provides a direct connection to the City.

SETTING YOUR NEIGHBORHOOD UP TO WORK WITH THE CITY:

- 1) Contact Southeast Uplift at 503-232-0010. They can help by:
 - a) Directing you to the correct department and staff person at the City,
 - b) Connecting you with other neighborhoods interested in the same topic, or
 - c) Potentially, by suggesting a SE Uplift committee that may be of help.
- 2) Build broader support by:
 - a) Sharing information with neighborhood residents and leaders. This can be done through meetings or indirect communication (newsletter, e-mail, posters).
 - b) Updating the neighborhood through known communication methods (meetings, newsletter, website, e-mail, phone, etc.).
 - c) Developing and nurturing coalitions and partnerships with other neighborhoods, community groups and organizations.
- 3) Demonstrate community support for your project or issue by:
 - a) Gathering neighborhood opinions (signatures or written support may help),
 - b) Requesting neighbors to draft letters and e-mails of support, and
 - c) Inviting City staff or elected officials to neighborhood meetings when talking about the topic of interest.
- 4) Offer to help the City in moving your project forward, some examples may include:
 - a) Volunteering time to help conduct research,
 - b) Gathering written support from neighbors,
 - c) Raising money to fund the project, and
 - d) Looking for grants and/or partners to make the project more feasible or a stronger proposal.

RESOURCES FOR NEIGHBORHOODS:

- Southeast Uplift Advocacy Toolbox: seuplift.longsight.com/toolbox/toolkits/advocacy
- City of Portland website: www.portlandonline.com/
- Portland Office of Neighborhood Involvement: www.portlandonline.com/oni/

A2: Neighborhood Tools

1. GAUGING NEIGHBORHOOD INTERESTS, PRIORITIES AND CAPACITY QUESTIONNAIRE

PURPOSE:

- To gather baseline data about your neighborhood's interest, perceived level of capacity and priorities.
- To better understand the types of climate actions that may be complementary to the current goals of your neighborhood.

SAMPLE QUESTIONNAIRE:

Introduction:

- 1) What makes our neighborhood really great?
- 2) What are your priorities for our neighborhood?

Neighborhood Engagement:

- 1) Would you consider our neighborhood a community? What makes it feel that way?
- 2) How would you describe the level of community engagement in our neighborhood?
- 3) What have you noticed or found to work well to get people in our neighborhood involved in neighborhood activities?

Climate Change:

- 1) What actions/activities have you already been doing to address sustainability and/or climate change?
- 2) In general, how much would you say you know about climate change?
Select one: 1) expert 2) a lot 3) a little 4) what's climate change?
- 3) In general, how much do you think our neighborhood knows about climate change?
Select one: 1) expert 2) a lot 3) a little 4) what's climate change?
- 4) Do you currently take steps to reduce your carbon footprint?
(Select one) Yes No
If so, what are they? _____

If not, are you willing to take steps to reduce your carbon footprint?
(Select one) Yes No
- 5) What could our neighborhood do to help you take initial steps, or additional steps, towards reducing your carbon footprint?
- 6) What do you think Southeast Uplift could do to help our neighborhood address climate change?

2. NEIGHBORHOOD CLIMATE ACTION PLAN TEMPLATE

The following provides information to help create a neighborhood climate action plan. It could serve as a starting point for neighborhood groups or associations to build their own plan.

INTRODUCTION AND PURPOSE OF THE PLAN

The purpose of a climate action plan is to document a neighborhood's goals for taking action on climate change. This section should:

- 1) Inform the reader of the process for forming the plan; and
- 2) Describe the theme of the plan:
 - Will it focus on reducing emissions by a certain percentage focusing on different sectors?
 - Does it serve as an outline for education and outreach?
 - Or, does your group have another planning process in mind? (See the Neighborhood Climate Action Planning Process section in the handbook for more information.)
- 3) Share the group's vision statement: Vision statements typically include physical and community goals for a timeline of 10, 15, or 20 years.
 - This should describe the neighborhood's ideal scenario for the future.
 - The goals and objectives of the plan will help meet this vision.

DESCRIPTION OF THE NEIGHBORHOOD

This section provides a snapshot of neighborhood information. The following is a list of potential information to include. Writing this section will help the group understand their neighborhood as a whole better and will also provide information to refer to later when assessing the success of climate change mitigation projects.

- Percentage of renters;
- Percentage of homeowners;
- Age demographics;
- Physical characteristics;
- History of the neighborhood;
- Description of past and current climate actions, projects, and programs;
- Baseline of energy use; and
- Greenhouse gas emissions estimates.

GOALS AND ACTIONS

Depending on how your neighborhood chooses to focus the theme of the plan these chapters may differ. If you choose to focus the plan around different sectors that contribute to greenhouse gas emissions, then the following outline of chapters makes sense, as it aligns with other climate action planning documents, such as the 2009 Portland Climate Action Plan:

- Buildings and Energy;
- Land Use and Mobility;
- Consumption and Waste;
- Urban Forestry; and
- Food & Agriculture.

Each chapter should contain:

- Objective/Goal: Specific information about what you hope to achieve
- Actions: Specific steps a neighborhood can take to achieve the goal

Sample chapter outline:

Chapter 1: Energy Use

Objective: Reduce energy use from both residential homes and commercial buildings in the neighborhood.

Actions:

- Promote and provide energy audits to neighborhood residents and businesses.
- Hold a green power challenge; promote the use of renewable energy throughout the neighborhood.
- Start a neighborhood weatherization team to help increase energy efficiency within homes.
- Study the feasibility of partnering with PGE to provide energy use data on neighborhood residents and businesses energy bills.

IMPLEMENTATION PLAN

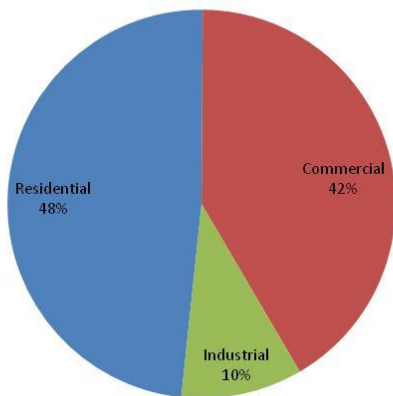
The implementation section is where objectives and action items are organized into a timeline. You should identify which actions will happen in the short term and which should happen in the long term. This section should also detail potential partners for implementing the actions, such as the City of Portland, Southeast Uplift or other organizations.

A3: SOUTHEAST PORTLAND DATA

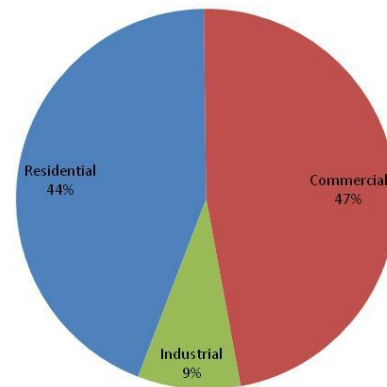
SOUTHEAST PORTLAND BASELINE CARBON FOOTPRINT INDICATORS

To begin to get an idea of recent carbon emission trends within Southeast Uplift neighborhoods, the project team collected data from several local agencies. Data sets were collected on electricity and green power consumption, participation in home weatherization workshops, and the number of pledge cards signed by residents to drive less. Data sets were available by zip code, and were collected from Portland General Electric, the Community Energy Project, and Metro’s Regional Travel Options Department. Zip codes represented in the analysis include: 97202, 97206, 97213, 97214, 97215, 97216, and 97232. The results of the data collection effort reveal a decrease of 12 percent in carbon emissions from electricity consumption between 2000 and 2008, as shown in the graphs below (Source of graphs in this section: PGE kwh data).

SE Uplift eCO2 Emissions from Electricity, 2000
(Total = 503,216 Tons)

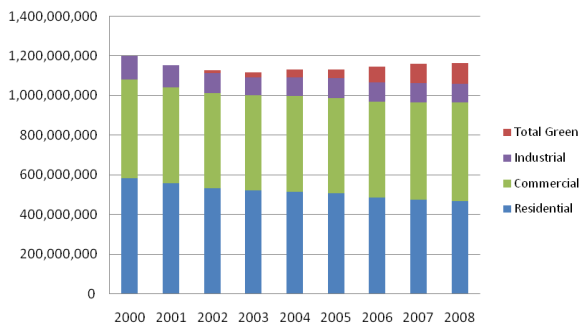


SE Uplift eCO2 Emissions from Electricity, 2008
(Total = 443,777 Tons)

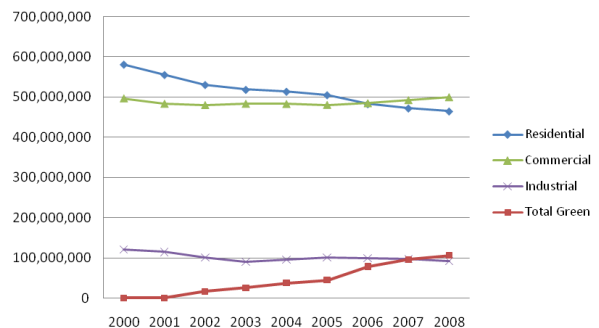


The decline appears to be primarily attributable to increases in energy efficiency and green power consumption, since both the population and number of PGE accounts increased within the same time period. This finding was verified with PGE as a likely explanation for the observed trends. The following charts show trends in electricity consumption by sector between 2000 and 2008:

Electricity usage in SE Uplift Zipcodes (kwhs)



Electricity usage in SE Uplift Zipcodes (kwhs)



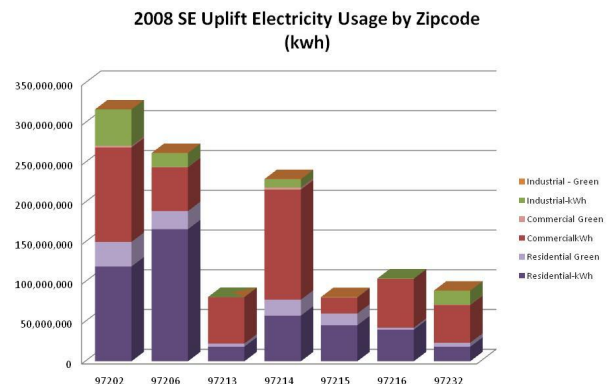
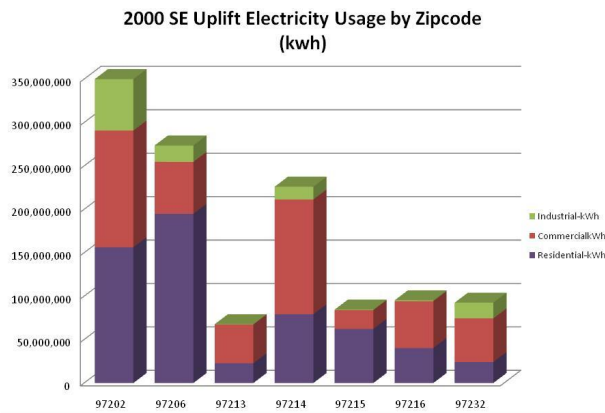


Table 2: PGE accounts by zipcode

Note that the difference in total electricity consumption by zipcode is due to differences in the total number of accounts per zip code

Total Number of PGE Accounts by Zip code							
Zip code	97202	97206	97213	97214	97215	97216	97232
PGE Accounts	20,366	21,820	3,247	14,982	7,571	4,734	4,235

ELECTRICITY CONSUMPTION AND GREEN POWER TRENDS, 2000 – 2008:

Electricity – 3 percent decrease

Green Power – 9 percent increase

Carbon Emissions – 12 percent decrease

Residential – Electricity consumption declined by 3 percent and carbon emissions declined by 20 percent. The decline in electricity consumption & carbon emissions can be primarily attributed to energy efficiency efforts and the 20 percent increase in green power consumption.

Commercial – Electricity consumption increased by 2 percent and carbon emissions increased by 1 percent. Since the number of commercial accounts increased by 7 percent, it is likely the increase in carbon emissions would have been higher, if not for energy efficiency efforts and a 3 percent increase in green power consumption.

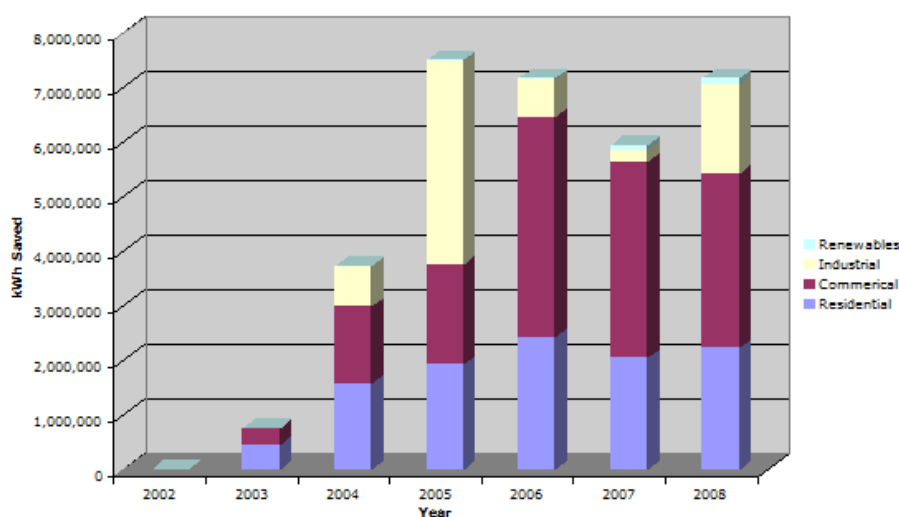
Industrial – Electricity consumption and carbon emissions declined by 24 percent. The decline is likely due to a combination of the 9 percent decline in industrial accounts and the 3 percent increase in green power consumption.

While a complete carbon footprint would include additional data, such as natural gas and gasoline consumption, these data sets are not always available at the neighborhood level. Even so, identifying a few carbon emission indicators, such as the ones in this report, can help to illustrate behavioral trends and prioritize a course of action. For example, the trends in electricity consumption reveal that the Southeast Uplift residential sector is making the majority of green power purchases. This means that there may be an opportunity to further decrease emissions in the commercial sector by encouraging local businesses to purchase green power as well. The use of Green Neighborh Agreement, described on page 39, may serve as a useful tool for neighbors that wish to encourage additional businesses within their community to adopt this climate-friendly behavior.

ENERGY TRUST OF OREGON, ELECTRICITY REDUCTIONS TRENDS, 2000 – 2008:

Some of the reductions in energy consumption, as discussed above, may be a result of energy efficiency measures and on-site generation. The Energy Trust of Oregon has provided significant opportunities for residential, commercial and industrial sites to become more energy efficient, reduce energy demand and generate energy on-site. The Energy Trust supplied data for its programs between 2002 and 2008 for the following zip codes 97214, 97215, 97213, 97206, 97202, and 97222. The cumulative impact of the various programs have resulted in over 28,000 participating sites receiving over \$24 million of direct incentives and reducing electricity usage by over 57 million kilowatt-hours (see graph and table below).

Electricity Reduction by Sector as a Result of Oregon Energy Trust Program



Source: Energy Trust of Oregon

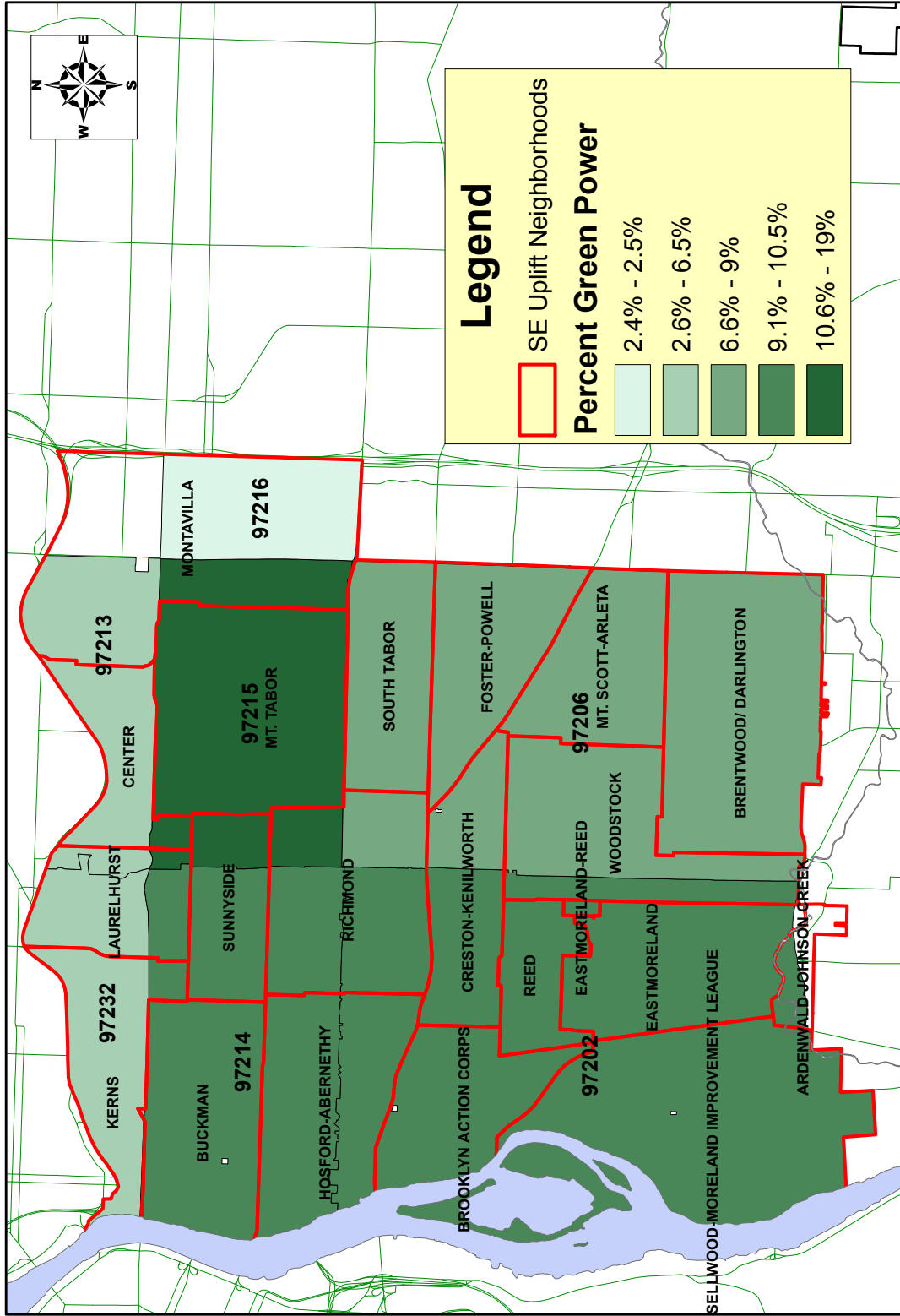
Table 3 shows the aggregated data from zip codes 97214, 97215, 97213, 97206, 97202, and 97222, demonstrating cumulative program results from 2002 through 2008.

Table 3: Energy Trust program savings in southeast Portland

Source: Energy Trust of Oregon

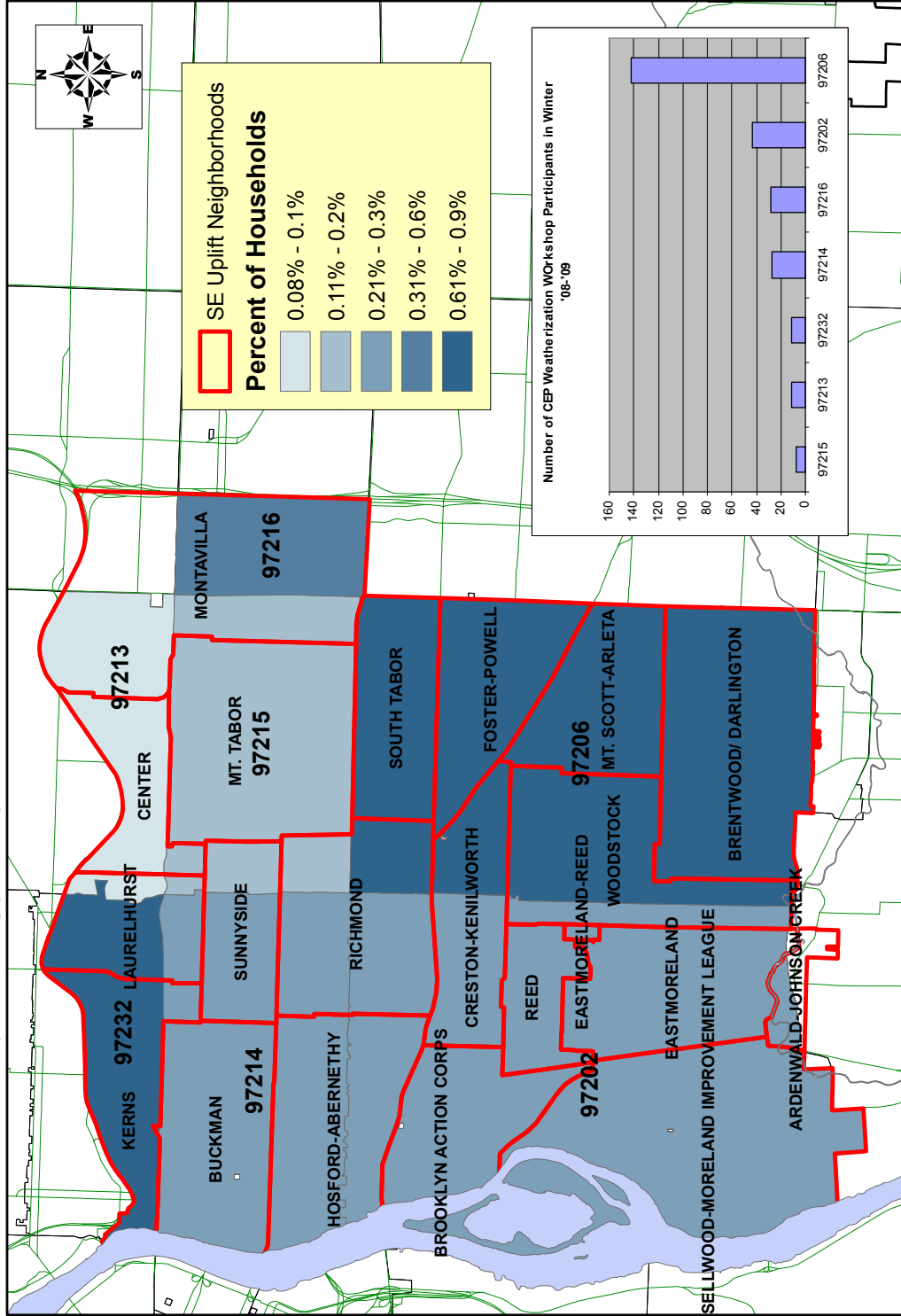
Reportable kwh Reduced	Reportable Therms Reduced	Total Incentive (\$)	Total Number of Sites
57,467,274	1,534,672	\$24,156,955	28,881

Percent Green Power PGE Electricity Consumption, 2008



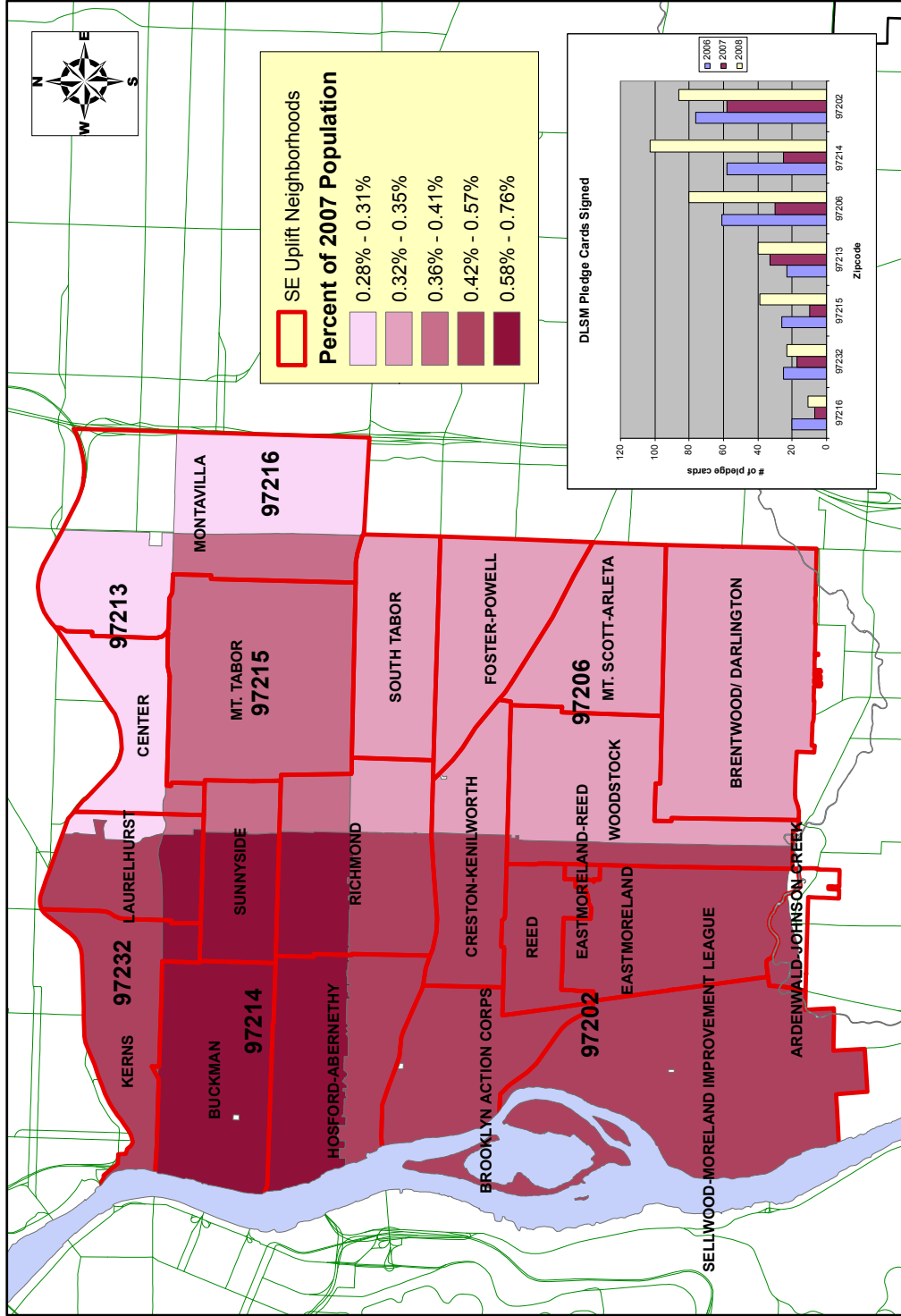
Source: Portland General Electric

Percent of Households that Participated in a Community Energy Project Weatherization Workshop in '08-'09



Source: Community Energy Project

Percent of Population that has Signed a Drive Less Save More Pledge Card



Source: Metro; Regional Travel Options

A4: EXTENDED LIST OF NEIGHBORHOOD ACTION PROJECTS

	ACTION	Description	Example
Energy Conservation	Give out Tip Sheets	Distribute carbon reduction tip sheets to neighbors.	
	Light Bulb Exchange	Organize a light bulb exchange in your neighborhood to encourage residents to switch out their old incandescent bulbs for CFLs.	Columbia Law School Light Bulb Exchange
	Weatherization Teams	Start a Neighborhood "Weatherization Eco-Team" to help weatherize homes.	The Low Carbon Diet Book
	Energy Audits	Neighborhood "Kill-A-Watt" Teams help neighbors reduce their energy use from appliances.	Sunnyside NA
	Revolving Fund for weatherization	Start a local weatherization revolving fund program. The fund fronts the costs of energy upgrades and is paid back over time.	Energy Service Contracting Organizations (ESCOs)
Renewable Energy	Green power challenge	Organize a neighborhood green power challenge to increase green power customers.	Bellingham Green Power Challenge
	Bulk Energy Purchasing	Organize neighbors get discounted rates on bulk green power purchases or renewable energy installations.	SE Uplift Neighborhoods
	Bio-Diesel Co-op	Begin a neighborhood bio-diesel cooperative.	The Seattle Climate Action Plan
	District Energy	Begin a neighborhood district energy project.	SunNE
Urban Forestry	Tree-Planting Event	Organize a tree-planting event.	Friends of Trees
	Restoration Event	Organize a neighborhood natural area restoration event.	Friends of Trees
	Sustainable Lawn Care Teams	Organize xeriscaping, permaculture and natural lawn care neighborhood teams.	
Food and Agriculture	Sustainable Potlucks	Organize Sustainable Community Meals to increase awareness of the impacts of food choice on climate change.	Woodstock Neighborhood Green Team
	Shared Garden Space	Organize shared garden space between neighbors.	
	Community Composting Site	Start a Neighborhood Composting Site where neighbors can leave their food scraps and receive finished compost.	Buckman Neighborhood
	Community Gardens	Find community space for growing food.	
Waste and Consumption Reduction	Resource Website	Participate in a resource sharing/ exchange website.	Bright Neighbor
	Resource Exchange	Organize regular neighborhood exchange events, free boxes, or a permanent exchange location.	Share-It-Square, City Repair
	Recycling Collection Center	Organize a hard-to-recycle item collection center (i.e. household batteries, cell phones, etc) for residents.	Woodstock battery collection at community center
	Food Preservation Teams	Organize fruit picking, preserving and canning teams.	Portland Preserve
	Resource Library	Start a resource lending library.	North Portland Tool Library
	Green Neighbor Agreement	Form a "Green Neighbor Agreement" to encourage local businesses to adopt sustainable practices.	Carrot Mob
	Local Currency/ Bartering	Start a neighborhood "local currency" program to encourage residents to buy local products and services.	Transition Towns

	ACTION	Description	Example
Transportation	Bike Buddy/ Transit Buddy Program	Start a "Bike Buddy" or "Transit Buddy" Program.	Bicycle Transportation Alliance
	"Safe-Routes to School"	Organize "Bike Train" or "Walking School Bus Programs" with the parents of other school-aged children in your neighborhood.	Safe Routes to School Program
	Alternative Transportation Challenge	Organize an alternative transportation (bike, pedestrian, transit) challenge with residents of your neighborhood or block.	Bicycle Transportation Alliance
	Ride-Sharing	Start a neighborhood ride-share program.	Portland Climate Action Plan
	Car-Sharing	Organize a car-sharing program, or encourage an existing one to bring more cars to your neighborhood.	Flexcar
	"Pedi-Cabs"	Organize a community "pedi-cab" service for your neighborhood, or encourage an existing one to come to your area.	Portland Rose Pedals
	Local Improvement Districts	Start a Local Improvement District (LID) in your neighborhood to help improve the sidewalk condition and walkability of your neighborhood.	
	Bike Sharing	Start a bike sharing or lending program.	Arcata, CA Bike lending library
	City Advocacy for Mixed Growth and Transit Access	Work with the city to remove impediments to mixed-use development and/or increased transit access in your neighborhood.	
Community Engagements	Start a Green Team	Form a Green Team or Sustainability Committee for interested residents to meet and organize.	South Tabor Neighborhood Association
	Community Events	Hold neighborhood events & post announcements in places where people gather.	Neighborhood clean-ups, etc
	Climate Speaker Series	Start a Climate Dialogue series and host fun and informative events to get neighbors involved.	Sunnyside Neighborhood Association
	Climate Action Trainings	Bring a Climate Action Training Program to your neighborhood.	The University of Oregon's "Climate Masters"
	Block-Level Community Building	Go door-to-door on your block and get to know people, and see if they have resources or needs they are willing to share.	Block Parties

A5: TRACKING AND MONITORING RESOURCES

1. How to Set-Up a Neighborhood Survey

Setting up a survey or questionnaire for your neighborhood can be fairly easy with the help of free on-line survey tools. We've listed a few recommended steps and provided you with website links to a few survey tools below.

WHY SURVEY?

Surveys and questionnaires can help you gather data from a broader group of people in a shorter amount of time than some other methods, such as interviews. People may also feel more comfortable responding to some questions if they can remain anonymous, or have more time to think through a response.

SETTING UP THE SURVEY:

- 1) Set goals
 - a) Begin by asking yourself what information you hope to gather through a survey. If you are looking for basic information from a lot of people, a survey with multiple choice, or close-ended questions would probably be the best tool. If you would like to learn more about how people feel about a topic(s), an open-ended questionnaire or interview may be better option. See an example of a survey in the next appendix item and a questionnaire in Appendix A2.
- 2) Develop your questions
 - a) Do some preliminary research into survey and question design. Questions should:
 - Be specific, but not so specific that the respondent can't provide a meaningful response
 - Use simple words
 - Be clear, not vague
 - Be short
 - Avoid bias (i.e. was this event better than the last one?)
- 3) Test your survey on friends, family or neighbors before distributing. This will help you work out wording problems or understand places that people may be confused or misreading a question.
- 4) Revise your survey based on the feedback you receive from the test survey.
- 5) Select your method of survey:
 - a) Printed surveys
 - i) Pros: Allow you to hand out at meetings, provide you with a hard copy of the results
 - ii) Cons: You must manually analyze the results, printing costs, may not be able to distribute to people you do not come into contact with.
 - b) Web-based surveys
 - i) Pros: They allow you to distribute the survey to many people via e-mail and list-serves, some analyze the results for you (saving time), no printing costs
 - ii) Cons: Some people may not want to receive e-mail, you may not reach some people if they don't have e-mail/Internet access (you can supplement with some paper copies), some free survey tools have limited capabilities (i.e. limit the number of people that can take the survey, will not analyze your results).

- 6) Either input your survey into an on-line survey tool or print your surveys. Even if you do develop an on-line survey, it may be good to print a few to give to people that do not have Internet access.

RESOURCES FOR NEIGHBORHOODS

- Survey Gizmo Web Tool: www.surveygizmo.com/
- Survey Monkey Web Tool: www.surveymonkey.com/
- Tips for developing survey questions:
www.sciencebuddies.org/science-fair-projects/project_ideas/Soc_survey.shtml

2. Measuring Our Carbon Footprint: A Sample Neighborhood Survey

Conducting a regular survey of neighborhood residents has the benefit of tracking changes in sustainable behaviors, community involvement, and carbon footprint indicators. In addition, collecting information on household energy and fuel usage can enable a neighborhood to develop neighborhood carbon footprint estimates. Tracking progress has the benefit of aligning neighborhoods with city and regional goals, which can increase neighborhood visibility and the potential for government funding. Regularly surveying neighbors and widely distributing the results may help to sustain community involvement by increasing neighborhood pride and empowerment.

The survey is divided into the following climate action categories found in the City of Portland and Multnomah County Draft Climate Action Plan:

- Buildings and Energy Use
- Land Use and Mobility
- Consumption and Waste
- Urban Forestry and Stormwater
- Food and Agriculture
- Community Engagement

The questions are designed to help residents connect behaviors with their climate impact, connect carbon reduction efforts to increases in community involvement, and allow neighborhoods to track their carbon footprint and community involvement levels over time. Neighborhoods are encouraged to use all or some of these questions, or to create questions of their own based off the indicators they have selected for themselves (see *How to Measure your Progress*, page 13). Questions in the quiz were informed by the research that contributed to this handbook and the Ecological Footprint Quiz developed by Redefining Progress and the Center for Sustainable Economy¹.

¹ Redefining Progress, Center for Sustainable Economy: The Ecological Footprint Quiz.

Building & Energy Use

1. How many people live in your household? _____ people

2. What is the size of your home?
 - 500 - 999 square feet or less (apartment, studio, or small home)
 - 1000 - 1499 square feet (small home, approximately 2-3 bedrooms)
 - 1500 - 1999 square feet (average home, approximately 3 bedrooms)
 - 2000 - 2499 square feet (large home, approximately 4 bedrooms)
 - 2500 square feet or larger (very large home)

3. What energy sources do you use in your home? Please check all that apply.
 - Electricity
 - Natural gas, propane, or liquefied petroleum gas
 - Heating oil
 - Wood or biomass
 - Other: _____

4. At what temperature do you keep your thermostat set in winter? _____ degrees Fahrenheit

5. Approximately how many months do you have your heat turned on? _____ months

6. If applicable, how many months do you keep your air conditioner turned on? _____ months

7. Do you choose the renewable energy option (ie. Green Power) through your electric company?
 - Yes
 - No
 - Unable to
 - Don't know

- 7a. If yes, what percent of your electricity comes from renewable sources? _____ percent

8. If applicable, do you choose the renewable energy option through your gas company?
 - Yes
 - No
 - Unable to
 - Don't know

9. Do you use another form of renewable energy?

- Yes
- No

If yes, what is it? _____

10. Which energy saving features and habits do you have or practice in your home? Please check all that apply.

Energy saving features

- Compact fluorescent bulbs
- Energy efficient appliances (Energy Star, etc)
- Extra insulation (walls, attic, hot water heater, etc)
- Insulating blinds
- Storm doors and windows
- Sealed drafts from leaky doors, windows, fireplace, and ductwork
- Instant hot water heater
- Solar panels or solar hot water

Energy saving habits

- Turn off lights when leaving rooms
- Use power strips to turn off stand-by lights
- Turn off computers and monitors when not in use
- Dry clothes outside whenever possible
- Keep thermostat at 68°F or below in winter
- Unplug small appliances when not in use
- Minimal use of power equipment when landscaping

11. Have you ever had a home energy audit?

- Yes
- No
- Don't know

12. If yes, did you implement the suggested actions?

- Yes
- No

If yes, which ones? _____

13. Have you purchased offsets for carbon emissions associated with your energy use?

- Yes
- No

Land Use & Mobility

1. Do you drive:

- A hybrid
- An electric car
- A gasoline powered automobile
- A biodiesel powered automobile
- I don't drive (skip to Question 4)

2. How many gallons of gasoline does your car's gasoline tank hold? _____ gallons

3. Approximately how many times a month on average do you fill up your tank? _____ times per month

4. How often do you...

	Never	Rarely	Sometimes	Frequently	Always
Commute to work by walking					
Commute to work by bike					
Commute to work by public transit					
Walk, bike, or bus for non-work related trips?					

5. Please enter the estimated number of miles you travel per year by airplane: _____ miles

Consumption & Waste

1. How many standard size garbage bins does your household fill each week?

- Less than one
- One or two
- More than two

2. What proportion of the following wastes do you recycle?

	None	A Fair Amount	Almost All
Paper			
Aluminum			
Glass			
Plastic			
Electronic wastes			

3. How often do you...

	Never	Rarely	Sometimes	Frequently	Always
Compost food scraps					
Compost yard and lawn clippings					
Select products with less packaging					
Share resources with your neighbors (tools, free boxes, etc)					

4. How often do you buy new things to replace old ones?

- I generally use things until I genuinely need to replace them.
- Some items I use for years, others I replace before I need to.
- I frequently replace belongings even if they are in good condition.

5. Approximately what share of your home furnishings are second hand or made of either recycled or sustainably produced materials?

- Almost none
- A few
- A fair amount
- Almost all

6. When you buy clothing or paper products, how often do you select items labeled as recycled, natural, organic, or made of sustainable fibers?

- Almost never
- Sometimes
- Almost always

Urban Forestry & Stormwater Management

1. Do you have trees on your property?

- Yes
- No
- Unable to
- Don't know

2. Have you ever participated in a community tree planting event?

- Yes
- No
- Unable to
- Don't know

3. Which water saving features and habits do you have and practice in your home? Please check all that apply.

Water saving features

- Low flow toilets
- Low flow shower heads and faucets
- Rainwater catchment system
- Grey water recycling system
- Drought tolerant landscaping

Water saving habits

- Minimize shower time and toilet flushing
- Run clothes and dish washers only when full
- Wash cars rarely
- Look for and fix leaks regularly
- Avoid hosing down decks, walkways, driveways

2. Does your home have disconnected downspouts?

- Yes
- No
- Unable to
- Don't know

Food & Agriculture

1. What best describes your diet?

- Vegan – Plant based foods only
- Vegetarian – Primarily plant based foods, but some dairy
- Omnivore – An assortment of meat, seafood, vegetables, dairy, and grains
- Carnivore – Meat, seafood, and dairy several times a week
- Top of the food chain – Meat, seafood, or dairy at almost every meal

2. How often do you . . .

	Never	Rarely	Sometimes	Frequently	Always
Grow your own food					
Purchase organic food					
Purchase locally produced food					

3. Do you have a garden, or share a space, to grow your own vegetables and herbs?

- Yes
- No

Community Engagement

1. Have you ever attended a neighborhood meeting (such as a neighborhood association or committee meeting)?

- Yes
- No
- Not sure

1a. If yes, do you generally attend neighborhood meetings on a regular basis?

- Yes
- No

2. Have you ever attended a neighborhood or community event (such as a community clean-up, block party, or tree planting)?

- Yes
- No
- Not sure

2a. If yes, would you say you generally participate in neighborhood or community events on a regular basis?

- Yes
- No

3. Have you ever started or been involved with organizing a community-based activity?

- Yes
- No

4. Do you know the names of most of the neighbors on your block?

- Yes
- No

5. How many people in your neighborhood would you estimate that you know by name? _____ people

6. If you have never attended a neighborhood event or meeting, what would help you become more involved?

- Hold meetings/events at different times
- Hold meetings/events at different places
- Make meetings/events more family-friendly
- Make meetings/events more fun

Other: _____

7. Is there anything else you would like to tell us?

A6: METHODOLOGY

1. Creating the Neighborhood Climate Action Planning Handbook

Creating the Neighborhood Climate Action Planning Handbook involved extensive research, public involvement, and consultation with technical advisors. Figure 4 provides an overview of the handbook creation methodology.

RESEARCH

C-Change Consultants conducted in-depth research at the start of this project. The research was focused primarily in three areas:

- *Climate action content*: Research on climate action plans from various cities to understand what actions can be applied to the neighborhood level and what types of actions impact carbon reduction the most.
- *Neighborhood organizing strategies*: Research on what elements are important to the success of neighborhood level actions and efforts.
- *Communicating about climate change*: Research on the best ways to communicate with diverse audiences about climate change and climate action.

Information from the research was used to develop the initial list of climate actions presented in the focus groups and to develop a framework for the entire project.

PILOT NEIGHBORHOODS

C-Change Consultants worked with three pilot Southeast Portland neighborhoods South Tabor, Woodstock, and the Sustainability Committee of Sunnyside neighborhood as a sample of different neighborhoods in Southeast Uplift territory. Selection of the pilot neighborhoods was not a scientific attempt to get exact representation of all neighborhoods in Southeast Portland. Rather, the three pilot neighborhoods were selected because they are located in different sections of Southeast, have different characteristics, and all wanted to be involved in the process. In addition, C-Change Consultants worked with the newly forming Southeast Sustainability Network to understand what sustainability actions and programs are occurring and ongoing. It is important to note that the individuals and associations involved in this project self-selected to participate due to an existing interest in addressing climate change. Members of the pilot neighborhoods and the Southeast sustainability network participated in focus groups and were invited to the open house event.

INTERVIEWS/CASE STUDIES

C-Change Consultants conducted interviews with a variety of individual neighborhood activists as well as representatives of local organizations throughout the course of this process. The purpose of the interviews with local and neighborhood organizations was:

- To better understand what makes certain local and community initiatives successful; and
- What are some common barriers and opportunities with organizing at the neighborhood level?

C-Change Consultants also interviewed city-wide organizations to better understand where a neighborhood climate action planning initiative could fit in with already existing efforts. The list of organizations interviewed by C-Change Consultants includes:

- City Repair
- Community Energy Project
- Southeast Portland Community Policing
- Friends of Trees
- Mark Lakeman, Communitecture
- Northwest Neighborhood Energy
- Energy Trust of Oregon
- Mayor's Office, Department of Planning and Sustainability

C-Change Consultants also interviewed volunteers in neighborhood projects especially around issues of sustainability and climate change. The purpose of these interviews were to:

- Understand how neighborhood activism is and can be successful; and
- To use these interviews as the basis for a series of case studies of successful neighborhood sustainability projects and programs to be featured in the guide.

The list of neighborhood volunteers interviewed by C-Change includes:

- Rueben Deumling, Sunnyside Sustainability Committee
- Todd Sargent, Woodstock Neighborhood
- Catherine Failing, Woodstock Neighborhood
- Tom Thompson, NE Portland Tool Library
- Mike Thayer, South Tabor Sustainability Committee
- Nancy Oberschmidt, Buckman Neighborhood and Southeast Sustainability Network
- Peter Nierengarten, Sunnyside Sustainability Committee
- Jeanne Longley, Transition Sunnyside

The findings from these interviews are incorporated into the handbook and also featured as case studies for each category of climate action (buildings and energy use, land use and mobility, consumption and waste, urban forestry and stormwater management, and urban agriculture).

FOCUS GROUPS

C-Change Consultants held four focus groups, one for each pilot neighborhood, Sunnyside, South Tabor, Woodstock, and the Southeast Sustainability Network. The following were the goals of the focus groups:

- Convene a group of neighborhood residents who are interested in taking action towards reducing the neighborhood carbon footprint;
- Identify actions, strategies, or events that currently work or do not work for their neighborhood; and
- Identify climate change specific actions that their neighborhood can plan to do in the future.

C-Change Consultants used a variety of methods to get the word out to the neighborhoods about each of the focus groups including posting fliers in the neighborhoods, sending out announcements on the neighborhood list-serves, and posting the announcements on websites like BrightNeighbor.

Each focus group met for approximately one hour. Focus group members participated in a guided discussion on neighborhood priorities, current sustainability actions, and goals for future sustainability and climate action efforts. The number of participants at each of the four focus groups was:

- Southeast Sustainability Network: 15
- Sunnyside Sustainability Committee: 10
- South Tabor: 7
- Woodstock: 3

The findings from these focus groups were synthesized and incorporated into the recommended actions and strategies presented at the open house event for feedback.

QUESTIONNAIRE

C-Change Consultants created a short online questionnaire with ten questions designed for distribution among the three pilot neighborhoods and the Southeast Sustainability Network members. The purpose of the questionnaire was to get feedback from residents on neighborhood priorities, current neighborhood sustainability activities, and goals for future sustainability and climate action efforts.

The numbers of respondents from each focus group was:

- Southeast Sustainability Network: 11
- Sunnyside Sustainability Committee: 5
- South Tabor: 6
- Woodstock: 6

The findings from the surveys were discussed at each of the four focus groups and incorporated into recommendations for climate actions and strategies presented in the open house.

OPEN HOUSE EVENT

C-Change Consultants hosted an open house event for the entire Southeast Portland Community at Southeast Uplift on April 23rd from 6-9pm. The purpose of the event was to get feedback from the Southeast Portland community on the actions and strategies developed through the research, focus groups, and questionnaire.

C-Change Consultants used a variety of methods to get the word out to all of Southeast Portland and the entire city about the open house event including posting fliers in commercial areas in Southeast Portland, sending out announcements on the neighborhood list-serves, posting the announcements on websites like BrightNeighbor and other neighborhood blogs and websites, and contacting media like the Oregonian and the Southeast Examiner.

At the event, C-Change Consultants used a variety of activities to elicit feedback from participants. About 50-60 individuals attended the event. The findings from the open house were incorporated as recommended actions and strategies into the handbook.

TECHNICAL ADVISORY COMMITTEE

C-Change Consultants enlisted the help of a technical advisory committee, made up of professional planners to provide feedback on the process and products developed by C-Change Consultants. The planners involved in the advisory committee included:

- Tom Armstrong, Southeast District Planner, Bureau of Planning and Sustainability
- Michelle Crim, Sustainable Government Coordinator, Bureau of Planning and Sustainability
- Heidi Rahn, Solid Waste Planner, Metro

The experts included on this committee were selected to reflect concurrent regional and citywide climate action planning efforts as well as on-going planning efforts at the neighborhood and district level.

2. Estimating the Climate Impact of Neighborhood Actions

INTRODUCTION

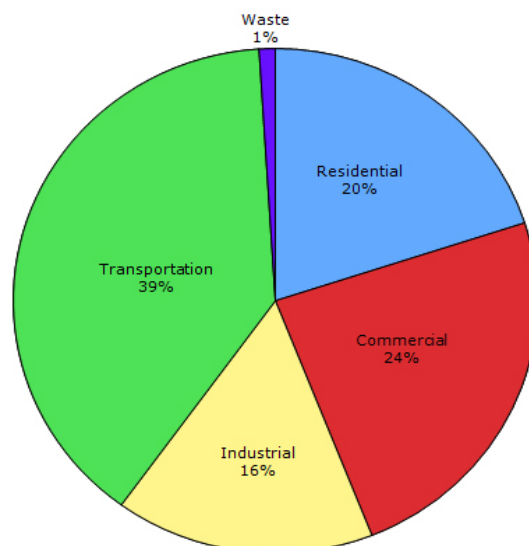
To better understand the impact of neighborhood actions, local plans and academic articles were reviewed to develop a rough estimation on carbon usage. Many neighborhood climate actions depend on the collective effort and collaboration of multiple residents. Therefore, it is difficult to provide actual carbon reduction figures for any neighborhood climate action, since the amount of carbon reduced will depend on the scale of the activity, the extent of involvement, and the specific circumstances of each neighborhood. Nevertheless, actions can be compared relative to each other based on their carbon reduction potential and the known sources of Multnomah County's greenhouse gas emissions. The following sections include a discussion of the sources of Multnomah County's greenhouse gas emissions, and a brief discussion of the carbon reduction potential for neighborhood level actions.

MULTNOMAH COUNTY GREENHOUSE GAS EMISSIONS

Multnomah County and the City of Portland identified three main sources of greenhouse gas emissions; those include energy use in residential, commercial, and industrial buildings (60 percent), transportation (39 percent) and solid waste (1 percent). The chart to the right provides a visual representation of Portland and Multnomah County's greenhouse gas emissions by source.

These sources serve as three of the four categories that the carbon reduction potential of neighborhood actions was considered; the fourth category was food systems. Each carbon reduction potential estimate began by acknowledging the level of impact that can be achieved in Multnomah County by taking action within that category. For example, there is more opportunity to reduce carbon within the building energy use and transportation categories than there is in solid waste. Thus, actions within those categories are considered to have a greater carbon reduction potential for the Portland and Multnomah County area.

Multnomah County Carbon Emissions by Source; 2007



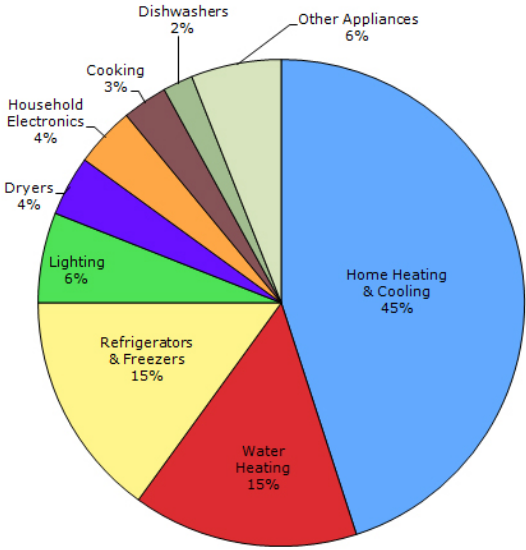
Source: 2009 Portland Multnomah Draft Climate Action Plan

ENERGY USE IN BUILDINGS

Energy usage within residential, commercial, and industrial buildings is a major source of greenhouse gas emissions within Multnomah County, making up 60 percent of the total emissions. Therefore, there is a great opportunity to reduce carbon emissions and conserve energy from this category.

According to the Energy Trust of Oregon, major sources of residential energy use comes from home heating and cooling (45 percent), water heating (15 percent) and refrigerator and freezer usage (15 percent). Therefore, neighborhood actions that focus on reducing residential energy use from these particular areas, such as neighborhood weatherization teams, or home energy audit teams, may have high carbon reduction potentials. Additionally, commercial and industrial building energy usage makes up a high percentage of this category. Neighborhood actions that entail working with local businesses to encourage them to conserve energy or buy green power, such as Green Neighbor Agreements, may also have a high carbon reduction potential.

Average U.S. Household Energy Usage

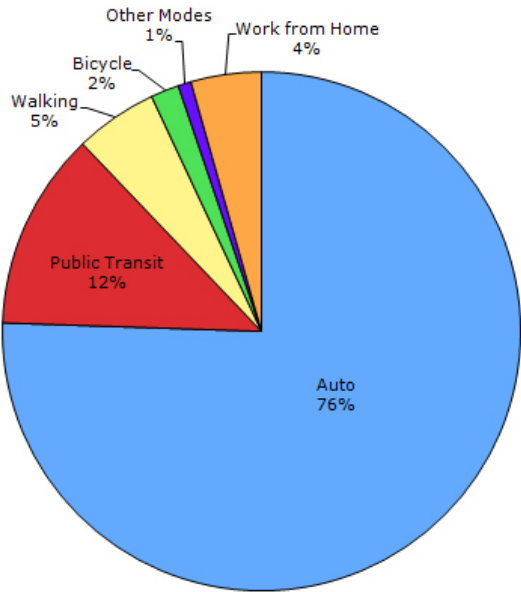


Source: Energy Trust of Oregon

TRANSPORTATION

Transportation is the second largest source of greenhouse gas emissions, making up 39 percent of Multnomah County’s total emissions. According to the 2000 census, the primary commute mode of Southeast Uplift area residents was the automobile (75.5 percent), followed by public transit (12.3 percent), walking (5.2 percent) and working at home (4.4 percent). This means that the carbon reduction potential of neighborhood actions that focus on reducing automobile usage is high. Actions such as bike and transit buddies, or alternative transportation challenges, have high carbon reduction potentials, to the extent that they successfully encourage people to take fewer trips by car.

Commute Mode of Southeast Uplift Residents



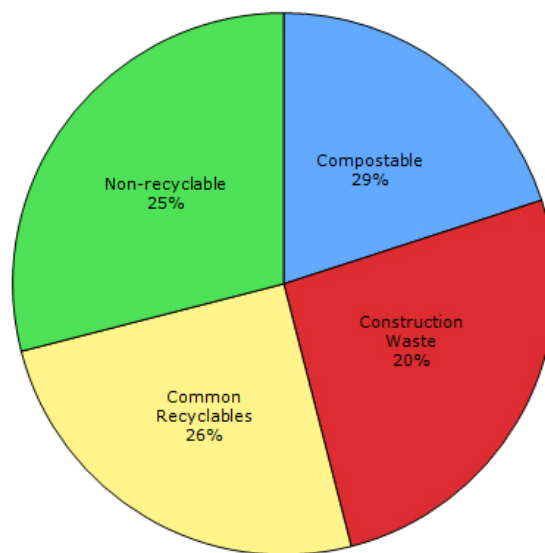
Source: 2000 Census

SOLID WASTE

Waste disposal makes up 1 percent of all Multnomah County’s greenhouse gas emissions. However, this is due primarily to improved methane capture at local landfills and does not include the energy saved from recycling and consuming less.

The chart on this page shows the Portland Waste Stream. According to the Portland Recycles! Plan, there is the opportunity to recycle 75 percent of the waste currently making its way to the landfill. These opportunities are important, as recycling significantly reduces energy usage when producing many products. In 2005 the Portland Metropolitan area recycled approximately 1.1 million tons of materials, which reduced greenhouse gas emissions the equivalent of taking 438,021 cars off the road or powering 162,255 houses for one year. This means that neighborhood actions that focus on recycling, such as a neighborhood clean up event, will likely have a medium carbon reduction potential. Neighborhood actions that focus on resource sharing, such as starting a Tool Library, will reduce carbon to the extent that the consumption of new goods is reduced and materials are prevented from prematurely going to the landfill.

Portland Waste Stream Analysis



Source: 2008 Portland Recycles! Plan

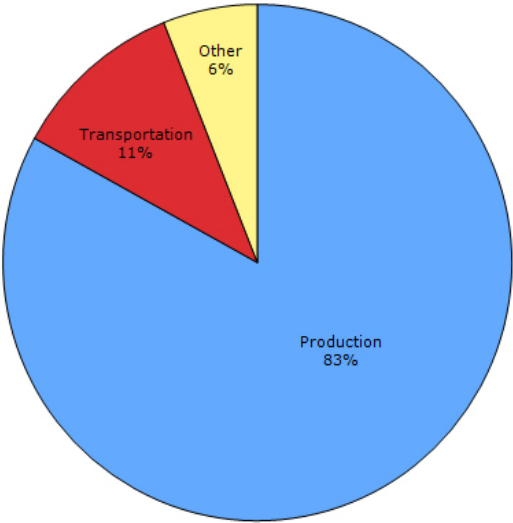
FOOD SYSTEMS

According to the 2009 Draft Portland Climate Action Plan, over 10 percent of US carbon emissions come from food consumption. The plan reports that the figure may approach up to 30 percent if food importation and agriculture-related deforestation and soil degradation are included in the total. For neighborhood climate actions, the primary opportunity areas for reducing carbon from food systems include meat consumption, food miles, and purchasing organics.

Red meat is the most carbon intensive food group (30 percent of emissions), followed by dairy (18 percent), carbohydrates (11 percent) and fruits and vegetables (11 percent). Additionally, while food miles have been the focus of discussions on food’s impact on climate change, a recent study has found that production is actually the largest emitter of greenhouse gases (83 percent) and transportation is only 11 percent in comparison, with the final phase of transportation and delivery to the retailer making up only 4 percent of food’s greenhouse gas emissions (Weber and Matthews, 2008).

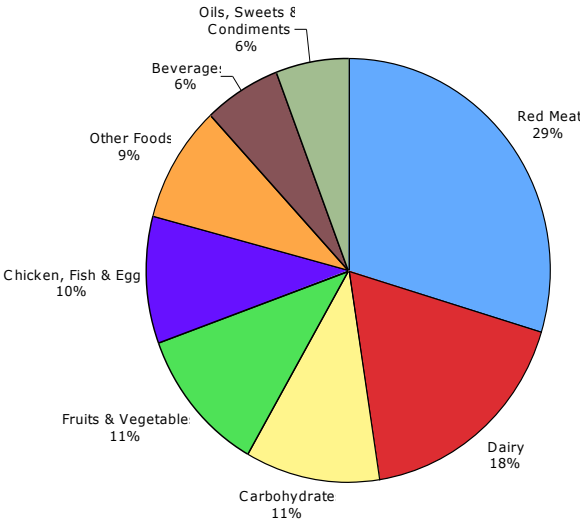
If focusing only on carbon reduction, more impact can be made by changing food habits than by reducing food miles. For example shifting less than one day per week’s worth of calories from red meat and dairy products to chicken, fish, eggs, or a vegetable-based diet achieves more carbon reduction than buying all locally sourced food (Weber and Matthews, 2008). This means that neighborhood actions focused on increasing the consumption of low carbon foods, such as community gardens and sustainable potlucks, will have a medium carbon reduction potential. Neighborhood actions such as bulk food buying can help reduce food miles, and will likely have a smaller carbon reduction potential.

Greenhouse Gas Emissions of Food Systems by Phase



Source: Weber and Matthews, 2008

Estimated Greenhouse Gas Emissions by Food Group



Source: Weber and Matthews, 2008

V. REFERENCES

- City of Berkeley (2007) *Climate Action Plan*. Retrieved June 1, 2009, from http://www.berkeleyclimateaction.org/Content/10054/Climate_Action_Plan.html
- City of Boulder (2009) *Community Guide to Climate Action Plan*. Retrieved June 1, 2009, from <http://www.beclimatesmart.com/content/documents/CAP-Draft-3-31-09.pdf>
- City of Madison, Wisconsin (2002) *Sustainable Lifestyle Campaign*. Retrieved June 1, 2009, from http://www.cityofmadison.com/sustainability/City/documents/ccp_2002.pdf
- City of Portland and Multnomah County (2009) *Draft Climate Action Plan*. Retrieved June 1, 2009, from <http://www.portlandonline.com/osd/index.cfm?c=49989&a=240683>
- City of Portland and Multnomah County (2001) *Local Action Plan on Global Warming*. Retrieved June 1, 2008, from <http://www.portlandonline.com/shared/cfm/image.cfm?id=25050>
- City of Portland (2008) *Portland Recycles! Plan*. Retrieved June 1, 2009, from <http://www.portlandonline.com/shared/cfm/image.cfm?id=194082>
- Descending the Oil Peak: Navigating the transition from oil and natural gas. Report of the City of Portland Peak Oil Task Force. March 2007. Retrieved June 1, 2009, from www.portlandonline.com/osd/index.cfm?c=42894
- EcoTrust (2009) Retrieved June 1, 2009, from <http://www.energytrust.org/residential/existinghomes/her.html>
- Energy Trust of Oregon (2009) Retrieved June 1, 2009, from <http://www.energytrust.org/>
- European Commission (2006) *Environmental Impact of Products: Analysis of the Life Cycle Environmental Impacts Related to the Final Consumption of the EU-25*. Technical Report EUR 22284 EN. Spain: European Commission, Joint Research Centre, Institute of Prospective Technological Studies.
- Friends of Trees (2009) Retrieved June 1, 2009, from <http://www.friendsoftrees.org/>
- Hopkins, Rob (2008) *The Transition Handbook*. Green Books: Totnes, UK.
- Hosford Abernethy Neighborhood Development (2009) *Sustainability*. Retrieved June 1, 2009, from <http://handpdx.org/blog/sustainability/>
- ICLEI (2009) *Community Engagement*. Retrieved June 1, 2009, from <http://www.iclei.org/index.php?id=2316>
- Longley, Jeanne, Carolyn Buhl, and Jane Pullman. *Transition Sunnyside 2030: Reminiscences of a Great Adventure* (work in progress – version 3 March 17, 2009). (2009) Transition Sunnyside Core Members.

Markowitz, Ezra M. and Bob Doppelt (2009) *Reducing Greenhouse Gas Emissions Through Behavioral Change; An Assessment of Past Research On Energy Use, Transportation and Water Consumption*. Climate Leadership Initiative, Institute for a Sustainable Environment, University of Oregon.

Morton Meadows Neighborhood Association (2008) *Neighborhood Energy Action Plan*. Retrieved June 1, 2009, from http://www.unomaha.edu/energysavers/pdf_attachments/MM_NEAP_Plan_2008-0724.pdf

Pike, Cara, and Meredith Herr (2008) *Climate Crossroads, A Research-Based Framing Guide For and From Global Warming Advocates*, The Topos Partnership.

Poracsky, Joseph and Lackner, Michael. (2005) *Urban Forestry Canopy Cover: Portland, Oregon, 1972-2002: Final Report*. Retrieved June 1, 2009, from http://web.pdx.edu/~poracskj/Cart%20Center/Street_Trees-27.pdf

Redefining Progress, Center for Sustainable Economy (2008) *The Ecological Footprint Quiz*. Retrieved May, 2009 from: http://www.myfootprint.org/en/visitor_information/

University of Oregon Climate Masters, (2008) *Climate Change Communications*. Retrieved June 1, 2009, from http://www.uoregon.edu/~climlead/publicationspress/CPW_Climate_Change_Communications_Final_Report_6_3_2005.pdf

US Census Bureau (2000) *Census 2000*, Retrieved June 1, 2009, from <http://www.census.gov>

Ward, Bud (2008) *Communicating on Climate Change: An Essential Resource for Journalists, Scientists, and Educators*. Metcalf Institute for Marine & Environmental Reporting, University of Rhode Island Graduate School of Oceanography.

Weber, C.L. and Matthews, H.S. (2008) *Food-Miles and the Climate Impacts of Freight Transportation in American Food Consumption* Environmental Science & Technology, Vol. 42, pp. 3508–3513, 2008.