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10-2010

# Demonstrating the Benefits of Green Streets for Active Aging: Initial Findings

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### Citation Details

Dill, Jennifer; Neal, Margaret B.; Shandas, Vivek; Luhr, Gretchen; Adkins, Arlie Steven; and Lund, Darin, "Demonstrating the Benefits of Green Streets for Active Aging: Initial Findings" (2010). *Urban Studies and Planning Faculty Publications and Presentations*. 110.

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# Demonstrating the Benefits of Green Streets for Active Aging: Initial Findings

October 2010

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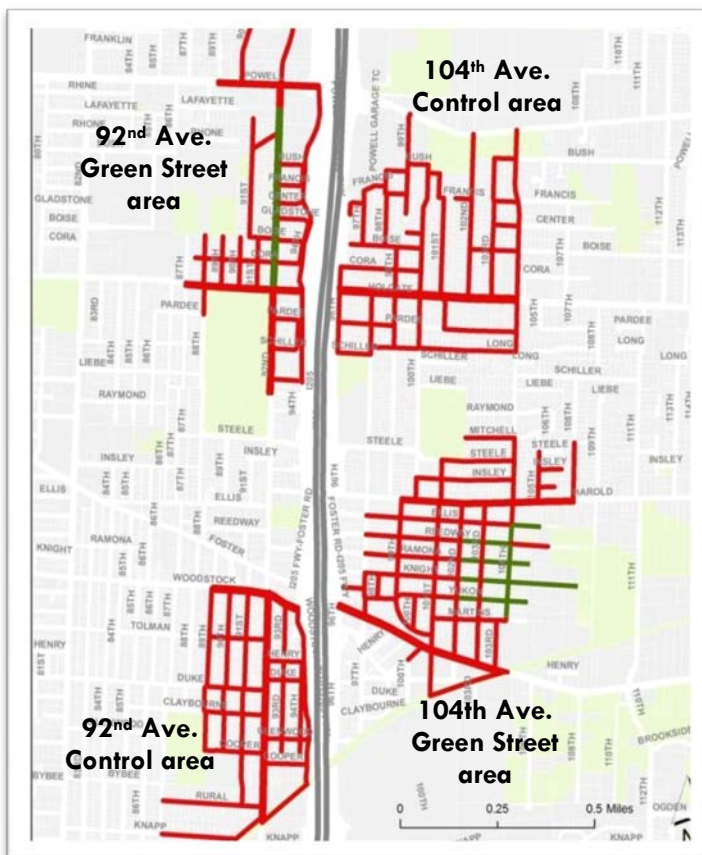
## Background of Study

The aim of this project is to help demonstrate how sustainable (“green”) streets contribute to the well-being of a community, including the physical and mental health of older and younger adults, along with the environment and economy. Green streets are streets that incorporate natural, landscape-based features that reduce stormwater runoff and accommodate multiple travel modes, particularly walking and bicycling. The study was funded by the U.S. Environmental Protection Agency (EPA).



Green Street feature along SE 92<sup>nd</sup> Ave

The study focused on four areas within the Lents Neighborhood in Portland, Oregon. Two of the areas have green streets and two do not (“controls”). The areas included are shown in the map below.



## How was the study conducted?

First, we conducted “walkability audits” of the four areas, using older adult volunteers. These audits collected detailed information about the walking and bicycling environment. We had 12 volunteers who audited nearly 400 street blocks.

Next, we invited all adult residents in the four areas to complete a survey. The first surveys were sent in early May 2010 to over 2,100 households. By the end of June we had received responses from 572 households, a response rate of 26%. Each adult in the household was invited to fill out a separate survey. From the 572 households, we received 748 individual surveys.

The survey was available in Spanish. People completing the survey could enter a random drawing for 80 \$10 gift cards from Fred Meyer. The winners were notified in July.

## Who responded?

The survey respondents were predominantly homeowners. Just over half were women and over 70% were white. A sizeable share (16% to 27%, depending upon the area) were 65 years old or over. When the 2010 U.S. Census figures are available, we will compare our results to see if they are similar.

**Table 1: Survey Respondents Characteristics**

|                            | 92 <sup>nd</sup> Green St. | 92 <sup>nd</sup> Control | 104 <sup>th</sup> Green St. | 104 <sup>th</sup> Control |
|----------------------------|----------------------------|--------------------------|-----------------------------|---------------------------|
| <b>65 or older</b>         | 21%                        | 16%                      | 17%                         | 27%                       |
| <b>Own home</b>            | 66%                        | 70%                      | 72%                         | 75%                       |
| <b>Female</b>              | 54%                        | 57%                      | 58%                         | 59%                       |
| <b>Hispanic</b>            | 9%                         | 9%                       | 8%                          | 4%                        |
| <b>White</b>               | 77%                        | 72%                      | 85%                         | 84%                       |
| <b>Income &lt;\$25,000</b> | 38%                        | 43%                      | 36%                         | 33%                       |

## What did we learn?

### *Are residents living near green streets more physically active in their neighborhoods?*

The survey asked how often people how often they walked to places in their neighborhood. Residents in the 92<sup>nd</sup> Ave. Green Street area were more likely to walk five or more times a week, and they walked an average of 27 times per month. This was significantly higher than the other areas.

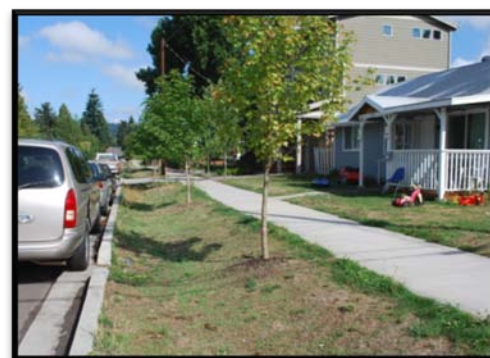
**Table 2: How often Survey Respondents Walked to Places in their Neighborhood**

|                                 | 92 <sup>nd</sup> Green Street | 92 <sup>nd</sup> Control | 104 <sup>th</sup> Green Street | 104 <sup>th</sup> Control |
|---------------------------------|-------------------------------|--------------------------|--------------------------------|---------------------------|
| <b>Less than once a week</b>    | 19%                           | 28%                      | 30%                            | 29%                       |
| <b>1 to &lt;5 times a week</b>  | 26%                           | 30%                      | 28%                            | 34%                       |
| <b>5 or more times per week</b> | 55%                           | 42%                      | 41%                            | 37%                       |
|                                 | 100%                          | 100%                     | 100%                           | 100%                      |
| <b>Avg. # times per month</b>   | 27                            | 20                       | 19                             | 18                        |
| <b>n</b>                        | 127                           | 159                      | 218                            | 239                       |

We also asked if people were walking more in their neighborhood compared to 2006 or 2007 (before the green streets were built). Over one-quarter (26%) of the residents in the 104<sup>th</sup> Green Street area said that they were. This was about twice as high as the share in the 104<sup>th</sup> Control Area. About 30% of the respondents in the 92<sup>nd</sup> Ave. Green Street area said they were walking more, compared to 22% in the 92<sup>nd</sup> Ave. Control area; this difference was not significant.

### *Do residents living near green streets interact with their neighbors more?*

We did find that residents in the two Green Streets areas waved, said hello, and stopped and talked with their neighbors more frequently than residents in the two Control areas. There were not significant differences in other types of interactions, such as going to a neighbor's house to socialize or asking a neighbor for help.



Green Street feature in SE 104<sup>th</sup> Ave. study area

**Table 3: Differences in Social Interactions**

| Average # times per month...              | Green Street Areas | Control Areas |
|---|--------------------|---------------|
| Waved to a neighbor                       | 10.1               | 8.7           |
| Said hello to a neighbor                  | 9.4                | 8.2           |
| Stopped & talked with a neighbor          | 6.6                | 5.6           |
| Gone to a neighbor's house to socialize   | 2.1                | 1.8           |
| Had a neighbor at your house to socialize | 2.3                | 1.9           |
| Gone somewhere with a neighbor            | 1.0                | 0.7           |
| Asked a neighbor to help                  | 1.4                | 1.2           |
| Sought advice from a neighbor             | 1.0                | 1.0           |
| Borrowed/exchanged things with a neighbor | 1.6                | 1.2           |
| n   | 339-344            | 392-398       |

### *What are residents' opinions of green streets?*

Residents of the Green Streets areas were more likely than those in the Control areas to say that there were more trees, bushes and other plants, along with sidewalks, street lights, and paved streets in their neighborhood compared to 2006 or 2007 (before the green streets). Moreover, 37% and 40% of the residents in the Green Streets areas said that their neighborhood was now a better place to live, which was significantly more than in the Control areas. They were also more likely to say that walking in their neighborhood was now more pleasant.

**Table 4: Residents' opinions about changes in their neighborhood since the green streets were built**

|   | 92 <sup>nd</sup><br>Green St. | 92 <sup>nd</sup><br>Control | 104 <sup>th</sup><br>Green St. | 104 <sup>th</sup><br>Control |
|---|-------------------------------|-----------------------------|--------------------------------|------------------------------|
| <b>Indicated increases in...</b>                    |                               |                             |                                |                              |
| Trees   | 42%*                          | 20%                         | 34%*                           | 21%                          |
| Bushes & other plants                               | 43%*                          | 27%                         | 32%*                           | 19%                          |
| Sidewalks   | 50%*                          | 14%                         | 52%*                           | 11%                          |
| Street lights                                       | 13%*                          | 10%                         | 16%*                           | 5%                           |
| Paved streets                                       | 20%*                          | 10%                         | 49%*                           | 9%                           |
| Pavement markings (such as crosswalks)              | 44%                           | 40%                         | 18%                            | 39%                          |
| Car or truck traffic                                | 55%                           | 55%                         | 64%                            | 70%                          |
| People walking                                      | 33%                           | 41%                         | 42%                            | 43%                          |
| People on bicycles                                  | 40%                           | 56%                         | 46%                            | 39%                          |
| Children playing outside                            | 38%*                          | 28%                         | 36%*                           | 25%                          |
| Noise level   | 49%                           | 47%                         | 52%                            | 44%                          |
| <b>Changes in opinion about neighborhood...</b>     |                               |                             |                                |                              |
| My neighborhood is now a better place to live       | 37%*                          | 22%                         | 40%*                           | 21%                          |
| Walking in the neighborhood is now more pleasant    | 44%*                          | 22%                         | 36%*                           | 20%                          |
| Walking in the neighborhood is safer now            | 24%                           | 19%                         | 22%                            | 17%                          |
| Trees & other greenery have increased               | 51%*                          | 35%                         | 44%*                           | 23%                          |
| I visit more with neighbors outdoors now            | 13%                           | 23%                         | 20%                            | 18%                          |
| Children play outside more now                      | 28%                           | 27%                         | 34%                            | 28%                          |
| Parking on the street is now more difficult         | 29%                           | 42%                         | 24%                            | 22%                          |
| Driving is now more difficult                       | 34%                           | 41%                         | 28%                            | 45%                          |
| Getting in and out of the car is now more difficult | 19%                           | 23%                         | 17%                            | 21%                          |
| There is more litter in my neighborhood now         | 55%                           | 37%                         | 42%                            | 51%                          |

\* Indicates significantly higher than the control areas.

Most (77%) of the survey respondents from the Green Street areas had noticed the green street features, and most agreed that they made their neighborhood a better place to live.

**Table 5: Survey Respondents Opinions about Green Streets**

| <b>% agreeing that<br/>These green streets...</b>  | <b>92<sup>nd</sup> Green<br/>Street</b> | <b>104<sup>th</sup> Green<br/>Street</b> | <b>Total</b> |
|--|---|--|--------------|
| Make my neighborhood a better place to live        | 65%                                     | 59%                                      | 61%          |
| Make walking in the neighborhood more pleasant     | 78%                                     | 70%                                      | 73%          |
| Make walking in the neighborhood safer             | 43%                                     | 39%                                      | 41%          |
| Improve the amount of trees & other plants         | 70%                                     | 70%                                      | 70%          |
| Result in my walking more                          | 30%                                     | 28%                                      | 28%          |
| Result in my riding a bicycle more                 | 17%                                     | 15%                                      | 16%          |
| Result in my driving less                          | 12%                                     | 11%                                      | 12%          |
| Result in my visiting more with neighbors outdoors | 10%                                     | 17%                                      | 15%          |
| Result in children playing outside more            | 19%                                     | 28%                                      | 25%          |
| Make parking on the street more difficult          | 24%                                     | 22%                                      | 23%          |
| Make driving more difficult                        | 15%                                     | 15%                                      | 15%          |
| Make getting in and out of the car more difficult  | 9%                                      | 9%                                       | 9%           |
| Result in more litter in my neighborhood           | 23%                                     | 16%                                      | 19%          |

### *Differences by Age in Perceptions of the Green Streets*

When we compared older adults (65+) to younger adults, there were some differences. Older adults were less likely to say that the green streets make walking in their neighborhood more pleasant (50% compared to 78% of adults under 65 years). Older adults were also more likely to say that the green streets make parking on the street more difficult (34% versus 21%) and driving more difficult (25% versus 13%).

**Table 6: Green Street Perceptions by Age**

| <b>% agreeing that<br/>These green streets...</b>  | <b>Under 65</b> | <b>65 or older</b> |
|--|-----------------|--------------------|
| Make my neighborhood a better place to live        | 64%             | 54%                |
| Make walking in the neighborhood more pleasant     | <b>78%</b>      | <b>50%</b>         |
| Make walking in the neighborhood safer             | 42%             | 38%                |
| Improve the amount of trees & other plants         | <b>76%</b>      | <b>46%</b>         |
| Result in my walking more                          | 28%             | 30%                |
| Result in my riding a bicycle more                 | 16%             | 15%                |
| Result in my driving less                          | 11%             | 13%                |
| Result in my visiting more with neighbors outdoors | 15%             | 11%                |
| Result in children playing outside more            | <b>28%</b>      | <b>11%</b>         |
| Make parking on the street more difficult          | <b>21%</b>      | <b>34%</b>         |
| Make driving more difficult                        | <b>13%</b>      | <b>25%</b>         |
| Make getting in and out of the car more difficult  | 8%              | 15%                |
| Result in more litter in my neighborhood           | 19%             | 22%                |

#### **Next steps...**

- Sharing results with stakeholders
- Additional analysis
- Preparing final report
- Suggestions?

#### **Contact Information**

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