Climate Smart Communities Scenarios Health Impact Assessment Summary

Oregon Health Authority **April 2013**

Health impacts of a changing climate

Changes to our climate have the potential to impact health in many ways. For example, more summer heat waves with higher temperatures or longer durations would increase heat-related illness and death. Increased frequency and severity of winter storms could lead to increased respiratory illness from mold exposure and increased drownings.

Communities in Oregon are especially concerned about **water quality and quantity**; the impact of **severe weather** events like flash floods and **drought** on health, including **mental health**; and the possible increase of **communicable and vector borne diseases**.

Health Impact Assessment

Health impact assessment (HIA) provides decision-makers with information about how a proposed policy, program or project may affect the health of people. HIA provides evidence-based information and recommendations to be used within an existing decision-making process to increase the positive health impacts of a proposed project or policy and mitigate negative impacts, all with a specific focus on equity.

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

Climate Smart Communities Scenarios HIA

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

This HIA is intended to support Metro as they consider public health and health equity in the selection and implementation of final transportation and land use policies and investments aimed at achieving GHG reductions in the region. OHA's recommendations apply to the development and assessment of three specific GHG-reduction scenarios, or combinations of policies and investments, that will be further tested in 2013 and the development, and adoption of a single, preferred scenario that will be decided upon in 2014.

For more information about the Climate Smart Communities Scenarios HIA, go to www.healthoregon.org and www.oregonmetro.gov.

Funding provided by the CDC's Healthy Community Design Initiative

Oregon Health Authority

Summary of findings

Reducing greenhouse gas emissions will have health benefits for Oregonians by slowing down climate change and improving air quality, and OHA found that almost all of the policies under consideration could improve health. Advancements in fuel technology and policies related to fleet mix and turnover can help to reduce GHG emissions in the region, and increasing the costs of driving and creating walkable and bikeable communities can reduce carbon emissions while increasing the number of active community members.

OHA found that certain policy combinations had more health benefits than others. Strategies that meet GHG reduction goals by decreasing vehicle miles traveled (VMT) will have the most positive impact on human health by increasing physical activity through active transportation and reducing injuries and fatalities from collisions.

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

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

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

CSCS HIA Key Recommendations

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

Funding provided by the CDC's Healthy Community Design Initiative

Oregon Health Authority