Did you know your zip code determines more of your health than your genetic code? Where and how we live in and around the Jade District makes a difference in our community’s health, environmental quality, and our ability to thrive. Studies of human vulnerability suggest that communities that are consistently exposed to air pollution and extreme heat encounter more health-related challenges than all other environmental factors combined.¹ When more people have access to trees, trails, parks, and other natural areas, there are measurable improvements in mental health, physical activity, social cohesion, air quality, water quality, and other social determinants of health. This report² summarizes some of the benefits the Jade District Greening efforts are generating now, and into the future.

The Jade District is located on Portland’s east side (Census Tracts 83.01, 16.02, and 6.01) where about 14,000 people live in a 2 square mile area bordered by the 205 freeway, 82nd Avenue, and other high volume transit corridors. The Jade District is one of the most ethnically and linguistically diverse zip codes in Oregon (53% residents of color), and there are active community leaders and community-based organizations. But residents face significant health challenges. For example, asthma rates ranged from 13.8-18.4% in this area, compared to 8.9% for all of Multnomah County, and on average, one in two Jade District residents using Medicaid visit the emergency room each year.

In 2016, a coalition of community, city, nonprofit, and other organizations launched the Jade District Greening effort to help address these challenges.

²This Jade District greening benefits summary was created as part of a broader project to build a measurement framework and strategies for neighborhoods and communities to measure and articulate the health, water, and air benefits of their local greening efforts. More information on the measurement framework can be found at http://willamettepartnership.org/evaluating-greening-benefits; the data and models used to create this summary can be found in Appendices B-D of the framework.
Greening Benefits Summary

Between 2017 and 2019, Jade District greening partners planted 364 trees, created over a thousand square feet of new greenspaces, and interacted with over a thousand community members through volunteer and outreach events. The Asian Pacific American Network of Oregon (APANO) worked with Providence Center for Outcomes Research and Education, Willamette Partnership, and Portland State University to model the predicted water, air, and health benefits of those activities.

At the current pace of greening, canopy cover is likely to increase 5% above 2014 levels (from 24% to 29% cover) by 2040. In the next 20 years, we expect those trees to create a 5 degrees Fahrenheit cooling effect and a 2.9 ppb reduction (about 13% from current) in nitrogen dioxide (NO₂) exposure. Just the reduction in NO₂ exposure alone could annually reduce 22 cases of exacerbated asthma when planted trees are mature in 2040. It is estimated that a 5% increase in canopy cover would reduce water pollutant loads for sediment, nutrients, and metals by 0.6% by 2040. If the Jade District Greening effort increases its pace to meet the City’s 33.3% canopy goal, we estimate a 1% reduction in stormwater flow and pollution loading. The estimated value of each street tree based on water, air quality, and heat benefits would be about $131/tree.

The Jade District is using a community-centered approach to greening, which is engaging an array of community members and leaders. On one Saturday, Friends of Trees led a community tree-planting. The event engaged about 150 volunteers over 3-4 hours to plant 127 trees. We surveyed 82 of those volunteers about their demographics, relationship to Friends of Trees, health, and opinions regarding trees in cities. When asked “How did the tree planting event make you feel?” 100% responded positively using words like “great,” “awesome,” “productive,” and “accomplished.” Some respondents also talked about stronger social connectedness. Ninety percent of respondents agreed that trees help shade and cool surroundings, clean air, and make people feel calm. The people who showed up to plant trees came in healthy and left healthy — a result that underscores the difficulty in tracking the causal link between time in nature and health without more robust evaluation and research design.

Going Forward

APANO and the Jade District greening partners will continue efforts to increase greenspace in the District and refining the ways they monitor, measure, and model the many benefits of their work.

³In the next 20 years (2040), we expect planted trees to be at 35% of their mature height and canopy spread.

⁴Total 2017-2018 plantings are estimated to reduce pollutant loads by 0.05%.