LIVABLE CITY YEAR

CITY OF TACOMA

EQUITY IN THE URBAN FOREST: A
SUSTAINABLE MODEL FOR GREEN
REGIONAL GROWTH

UNIVERSITY OF WASHINGTON
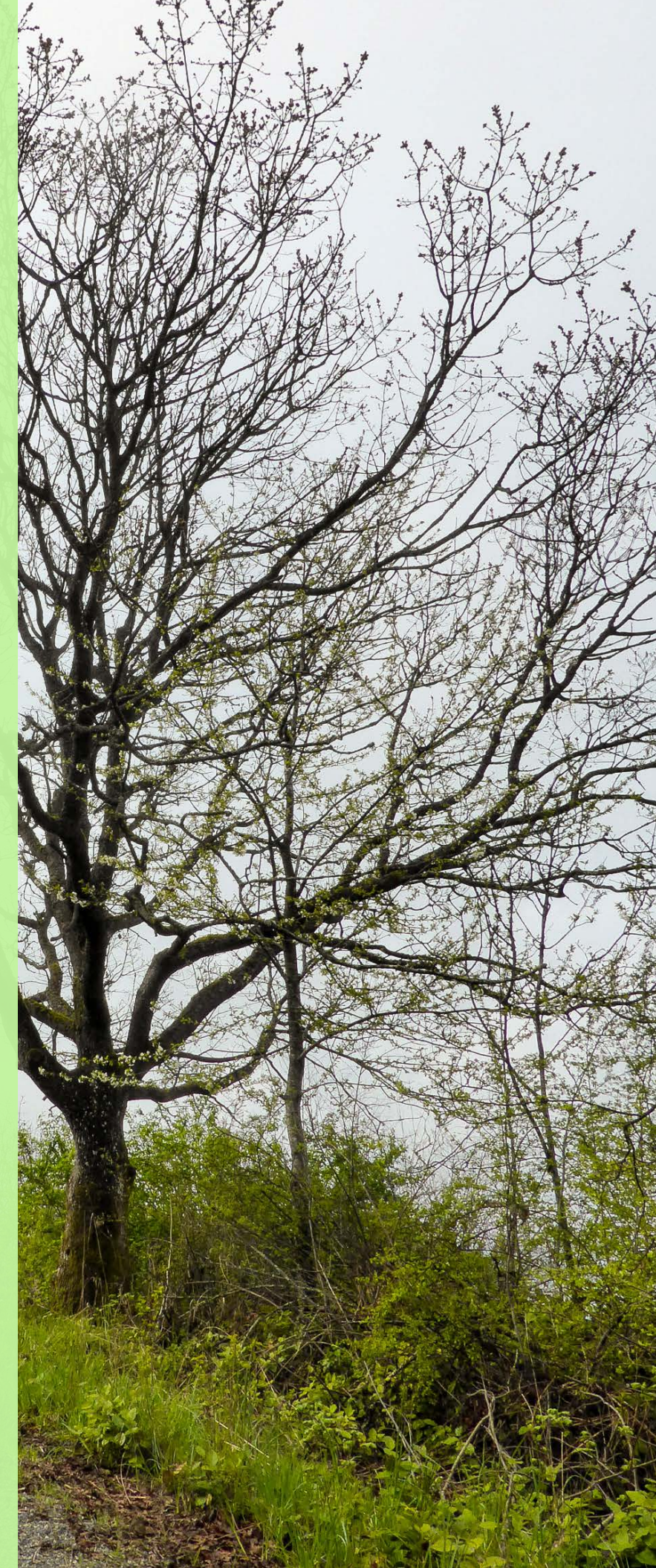   SCHOOL OF ENVIRONMENTAL AND
    FOREST SCIENCES

SEFS 571/PUBPOL 592
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UNIVERSITY of
WASHINGTON

LIVABLE CITY YEAR

Tacoma

LIVABLE CITY YEAR 2017–2018
IN PARTNERSHIP WITH
CITY OF TACOMA

WINTER 2018

LIVABLE
CITY YEAR

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ACKNOWLEDGMENTS

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ABOUT LIVABLE CITY YEAR

The University of Washington's Livable City Year (LCY) initiative enables local governments to engage UW faculty and students for one academic year to work on city-defined projects that promote local sustainability and livability goals. The program engages hundreds of students each year in high-priority projects, creating momentum on real-world challenges while enabling the students to serve and learn from communities. Partner cities benefit directly from bold and applied ideas that propel fresh thinking, improve livability for residents and invigorate city staff. Focus areas include environmental sustainability; economic viability; population health; and social equity, inclusion, and access. The program's 2017–2018 partner is the City of Tacoma; this follows a partnership with the City of Auburn in 2016–2017.

The LCY program is led by faculty directors Branden Born (Department of Urban Design and Planning), Jennifer Otten (School of Public Health) and Anne Taufen (Urban Studies Program, UW Tacoma), with support from Program Manager Teri Thomson Randall. The program was launched in 2016 in collaboration with UW Sustainability and Urban@UW, with foundational support from the Association of Washington Cities, the College of Built Environments, the Department of Urban Design and Planning, and Undergraduate Academic Affairs.

LCY is modeled after the University of Oregon's Sustainable City Year Program, and is a member of the Educational Partnerships for Innovation in Communities Network (EPIC-N), the collection of institutions that have successfully adopted this new model for community innovation and change.

For more information, contact the program at uwlcy@uw.edu.

ABOUT TACOMA

The third largest city in the state of Washington, Tacoma is a diverse, progressive, international gateway to the Pacific Rim. The port city of nearly 210,000 people has evolved considerably over the last two decades, propelled by significant development including the University of Washington Tacoma, the Tacoma Link light rail system, the restored urban waterfront of the Thea Foss Waterway, the expansions of both the MultiCare and CHI Franciscan health systems, and a significant influx of foreign direct investment in its downtown core.

Washington State's highest density of art and history museums are found in Tacoma, which is home to a flourishing creative community of writers, artists, musicians, photographers, filmmakers, chefs, entrepreneurs, and business owners who each add their unique flair to the city's vibrant commercial landscape. The iconic Tacoma Dome has endured as a high-demand venue for some of the largest names in the entertainment industry.

A magnet for families looking for affordable single-family homes in the Puget Sound area, Tacoma also draws those seeking a more urban downtown setting with competitively priced condos and apartments that feature panoramic mountain and water views. The city's natural beauty and proximity to the Puget Sound and Mount Rainier draws hikers, runners, bicyclists, and maritime enthusiasts to the area, while its lively social scene is infused with energy by thousands of students attending the University of Washington Tacoma and other academic institutions.

The City of Tacoma's strategic plan, Tacoma 2025, was adopted in January 2015 following unprecedented public participation and contribution. The plan articulates the City's core values of opportunity, equity, partnerships, and accountability, and expresses the City's deep commitment to apply these values in all of its decisions and programming. Each Livable City Year project ties into the principles and focus areas of this strategic plan. The City of Tacoma is proud of its 2017–2018 Livable City Year partnership with the University of Washington and of the opportunity this brings to its residents.

TACOMA 2025 STRATEGIC PLAN

The *Equity in the Urban Forest: A Sustainable Model for Green Regional Growth* project supports the Livability and Equity and Accessibility goals of the Tacoma 2025 Strategic Plan and was sponsored by the City's Office of Environmental Policy and Sustainability.

Goal #1 Livability
The City of Tacoma will be a city of choice in the region known for connected neighborhoods, accessible and efficient transportation transit options, and vibrant arts and culture. Residents will be healthy and have access to services and community amenities while maintaining affordability.

Goal #2 Economy and Workforce
By 2025, Tacoma will be a growing economy where Tacoma residents can find livable wage jobs in key industry areas. Tacoma will be a place of choice for employers, professionals, and new graduates.

Goal #3 Education
Tacoma will lead the region in educational attainment amongst youth and adults. In addition to producing more graduates from high school and college, more college graduates will find employment in the region. Lifelong learning and access to education will be prioritized and valued.

Goal #4 Civic Engagement
Tacoma residents will be engaged participants in making Tacoma a well-run city. The leadership of the city, both elected and volunteer, will reflect the diversity of the city and residents and will fully participate in community decision-making.

Goal #5 Equity and Accessibility
Tacoma will ensure that all residents are treated equitably and have access to services, facilities, and financial stability. Disaggregated data will be used to make decisions, direct funding, and develop strategies to address disparate outcomes.
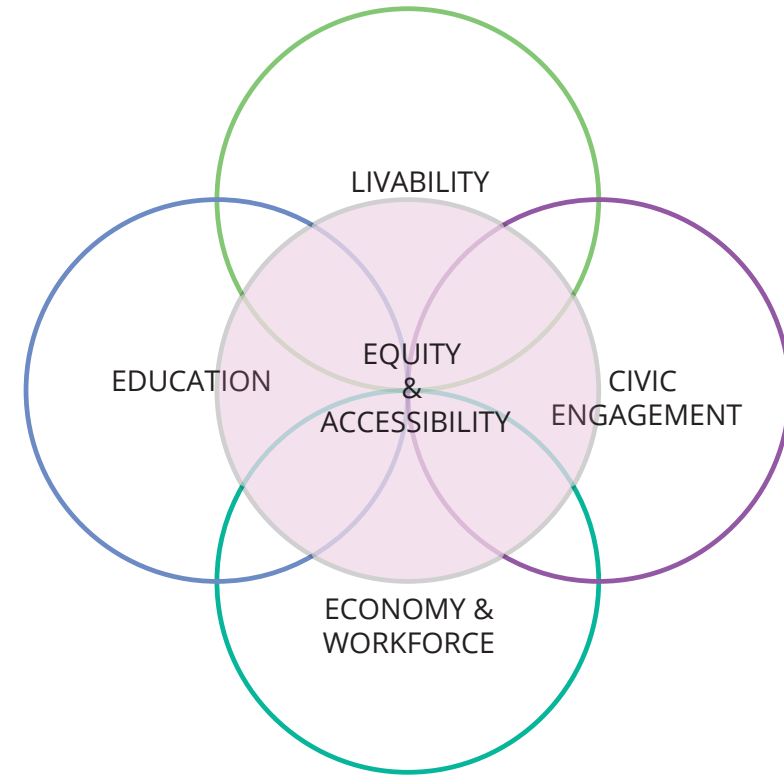
RESOURCES

Tacoma 2025 Strategic Plan: https://www.cityoftacoma.org/tacoma_2025

Office of Environmental Policy and Sustainability:
http://www.cityoftacoma.org/government/city_departments/environmentalservices/office_of_environmental_policy_and_sustainability

Livable City Year: https://www.washington.edu/livable-city-year/

University of Washington School of Environmental and Forest Sciences:
http://www.sefs.washington.edu/

University of Washington Evans School of Public Policy and Governance:
https://evans.uw.edu/

During the winter quarter of the 2018 academic year, the City of Tacoma Urban Forestry department partnered with University of Washington Livable City Year (UW LCY) on a project centered around green development and community engagement goals for the Tacoma Mall Neighborhood Subarea. This Subarea encompasses some of Tacoma's most disadvantaged neighborhoods, with high rates of poverty, below-average health outcomes, and few community resources like schools, parks, and community centers.

The Tacoma Mall Neighborhood Subarea is designated as a Regional Growth Center. The neighborhood currently lacks open space, parks, community centers, and schools. CITY OF TACOMA

After downtown, this Subarea represents the second highest concentration of urban development in the City of Tacoma; it has been identified by the Puget Sound Regional Council as a Regional Growth Center (RGC), projected to experience rapid growth over the next several decades and to play host to high concentrations of new housing and jobs. The City of Tacoma states within the vision statement of the Tacoma Mall Neighborhood Subarea Plan that it intends to transform this area into, "a compact, pedestrian-friendly, urban mixed-use neighborhood with a high quality of life, which includes access to healthy lifestyle choices, services, and multi-modal transportation options" (City of Tacoma 2018). The City introduces early on in the Subarea Plan its motivation not only to accommodate growth but also to address long-time neighborhood tensions and environmental issues. The Subarea's status as an RGC makes the neighborhood rank high among the City's top investment priorities.

The purpose of this project, titled: Equity and Urban Forest: A Sustainable Model for Green Regional Growth, is to provide recommendations for the City of Tacoma's approach to community outreach and green infrastructure development for the Tacoma Mall Neighborhood Subarea. The UW LCY formed, in cooperation with City of Tacoma staff, to develop a communications strategy, a set of outreach tools, and an implementation plan for demonstration projects. The team's objective is to assist the City of Tacoma in gaining broad support from its constituents, including residents and business owners, for meeting the green development goals outlined for the Tacoma Mall Neighborhood Subarea within the City of Tacoma's Vision 2040 Plan. The team has included, within its recommendations, strategies to create effective partnerships with diverse stakeholders.

In creating a communications strategy, the UW LCY team grounded their methodology in understanding the needs and concerns of community members. Rather than approaching the neighborhood purely from the outside, with predetermined notions, goals, and solutions, the students started their work by developing understandings of the neighborhood's history, character, and composition, as well as the pressing issues community members identify. The team encourages the City to continue to place community input and involvement at the center of its work planning and implementing for changes coming to the Subarea. They recommend that the City of Tacoma pay attention to the ways that community members react to efforts to alter, replace, or enhance parts of the neighborhood; and they encourage the City to engage in positive,

community-oriented actions, rather than to rely entirely on facts and figures as guides. In their strategies related to "social-marketing" and "demonstration projects," students recommend that the City especially focus on partnering with community members and leaders.

Within this report, the UW LCY team provides communication tools and an implementation plan for potential demonstration projects for the City of Tacoma to consider. The communications tools consist of a pamphlet and flyer that describe the benefits of urban trees and green infrastructure, and a contact list for neighborhood organizations and businesses. Students based their implementation plan upon this communications strategy, a site visit, and a review of public comments. Suggested green infrastructure design elements include sidewalk and street tree plantings, swales, restoration of native Gary Oak groves, and greening the Madison School property.

The students hope that the materials presented within this report assist the City of Tacoma in achieving the quality of life and environmental goals already established for the Tacoma Mall Neighborhood Subarea. They believe that by paying attention to community needs and by focusing on proactive outreach and direct calls to action, the City of Tacoma's development strategies will lead to the formation of strong partnerships with community stakeholders and to positive outcomes for the people of the Tacoma Mall neighborhood.

Rather than approaching the neighborhood from the outside, with predetermined notions and goals, the students began by developing understanding's of the neighborhood's history and character.

LCY team members explored undeveloped lands that could potentially become green spaces within the Tacoma Mall Neighborhood Subarea.
SCOTT DAVIS

Relative to the greater Tacoma metropolitan area, the high-density, low-income Tacoma Mall neighborhood (Tacoma Mall Regional Growth Center; TMRGC) contends with a lower than average life expectancy and limited oppurtunities, in the form of parks, school yards, open space, and community centers, for recreation and play. In recent years, the Puget Sound Regional Council (PSRC) designated this section of the City as a primary center for future job and housing growth. By 2040, PSRC predicts the area's total number of residents to triple and its number of jobs to double. The City of Tacoma expresses concern for how the neighborhood's projected growth occurs, especially regarding the impacts of that growth on public health and on the environment. Thus, in the interest of social equity and ecological resilience, the City stands by sustainable development practices as the way forward for the TMRGC.

The City of Tacoma identified urban forests and urban green infrastructure as the focus for this LCY project. In the City's 2010 Urban Forestry Policy Element Comprehensive Plan, the City stated its goal to increase its total canopy coverage to 30% by 2030 (City of Tacoma 2017). The Tacoma Mall Neighborhood Subarea Regional Development Plan's Environmental Goal supports the city's broad objective to increase canopy cover; it aims to maximize the health and functionality of the Subarea's natural environment to provide public benefits, like improved water and air quality. The Subarea Plan sets a 25% canopy coverage target for the

Tacoma Mall neighborhood's Madison District and 20% targets for the other three districts, by 2030 (City of Tacoma 2017).

In 2018, the City of Tacoma received a Washington Department of Natural Resources (WA DNR) grant to accomplish the aforementioned urban forestry goals for the TMRGC. The specific green infrastructure goals identified within the grant proposal seek to improve community health and environmental outcomes by expanding urban tree canopy coverage, reducing storm-water pollution, increasing water infiltration to the South Tacoma Aquifer, improving air quality, reducing the rate of urban heat island effects, and creating more attractive and walkable streetscapes. Diverse strategies have already been proposed and applied toward accomplishing the City's canopy cover and green infrastructure goals. The City of Tacoma, along with neighborhood stakeholders, intends to execute various approaches to increase total tree canopy coverage and green infrastructure throughout the Tacoma Mall Neighborhood Subarea.

With these goals in mind, the City partnered with the SEFS 571 Resource Policy and Administration class and requested that the students develop an outline of practical recommendations for implementation of green infrastructure projects for the Tacoma Mall Neighborhood Subarea. The City also asked students to create communications and outreach programs to engage local people. Students began by developing broad

For the City of Tacoma, creating an urban forest is a social justice issue, not just an environmental one. Residents of the city's wealthier neighborhoods, especially in north Tacoma, benefit from a greater number of street trees planted around their homes and from better access to green space. CITY OF TACOMA

conceptions of what educational and outreach-focused resources might resemble. Their initial ideas included developing educational materials on the benefits of green infrastructure, supporting community engagement, and providing resources on environmental justice strategies for urban greening initiatives.

However, prior to delving into any of these topics, students educated themselves about the development and intent of the City's Tacoma Mall Neighborhood Subarea Plan (TMNSP). In particular, the students focused on understanding the potential impacts of the City's plan on community members. Newly acquired knowledge and insights enabled the students to take the existing plan for the neighborhood and add to it a set of environmental targets. Then, students developed an implementation plan to outline first steps for the City to follow to invest in green infrastructure (GI) — trees, soils, vegetation, and natural processes to manage storm water — to support the underserved communities of the Tacoma Mall Neighborhood Subarea.

Ultimately, the LCY student team and the City of Tacoma agreed on three primary deliverables: a report on neighborhood context and best practices, a package of communications tools, and an implementation plan. This report offers an overview of ten weeks of the students' research and analysis. Their efforts culminated in a presentation of key findings, which they prepared for the City of Tacoma.

Metro Parks Tacoma currently works to help the City of Tacoma improve environmental and health outcomes in the Tacoma Mall neighborhood. SCOTT DAVIS

The student team worked with City of Tacoma staff to identify materials that would enhance the City's attempts to build equity through urban forestry programs. SCOTT DAVIS

In their approach to this project, members of the student team agreed on the importance of identifying actionable goals for their ten-week period of time. After reviewing the scope of work for the project, the LCY team traveled to Tacoma to discuss its details with their partners at the City of Tacoma. City of Tacoma urban forester, Michael Carey, and city planner, Elliot Barnett, presented students with information on: urban forestry best practices, goals of the Tacoma Mall Neighborhood Subarea and Vision 2040 Plans, and history and demographics of the Tacoma Mall Neighborhood. Students and City staff then discussed the project's full scope and potential deliverables.

Based on this meeting, the LCY team proposed the following steps:
1. Review the Tacoma Mall Neighborhood Subarea Plan.
2. Study the composition and character of the Subarea.
3. Recommend best practices for environmentally and socially just outcomes.
4. Conduct a literature review on topics of urban forestry and green infrastructure.
5. Develop an implementation plan, including recommendations for priority sites.
6. Produce communications media about tree canopy and urban green infrastructure benefits.
7. Identify existing community groups, important businesses, and other stakeholders, and create a community engagement plan.

SITE VISIT
To begin to understand the physical layout and character of the Tacoma Mall Neighborhood, as well as opportunities to develop green infrastructure, the LCY team conducted a site visit. They visited land parcels that the City of Tacoma identified as potentially significant green spaces, and others, which they identified themselves as possible to include. Based on the lack of green space presentin the neighborhood at large, the student team decided that demonstration projects would be useful for generating interest and buy-in from residents, business owners, and other stakeholders. Students conducted their site visit together; this enabled them to develop as a team and to share and build off each other's ideas and inspiration.

Top: The LCY team gathers to synthesize research and advance their project work.
Bottom: LCY team members explore a potential green space. SCOTT DAVIS

RESEARCH AND ANALYSIS

Following the site visit, students divided their project into four task-oriented sections. One group conducted **a literature review**. They gleaned background information to support the team's recommendations, which tie together topics of public health, tree canopy benefits, and green infrastructure. The literature review focused on academic writing, including case studies, within the fields of urban forestry, built environments, public health, sociology, and geography.

Another group of students conducted **a GIS-based analysis** to systematically document neighborhood businesses, community organizations, and other stakeholders. This work informed the various outreach and communications recommendations included in this report.

A third group carried out **a review of news articles and public comments** associated with the Tacoma Mall Neighborhood Subarea Plan. Public comments provided key insights into community members' major concerns and interests. Students used their review of public comments to identify actions that would be particularly unwelcome within the neighborhood.

Lastly, a group of students reviewed **existing urban forestry resources and communication tools**. This ensured that the team did not waste time and energy recreating tools already in use by, or available to, City staff. The team's preliminary background research and analysis helped them to determine how to focus their efforts for the duration of the quarter.

Upon completion of this sequence of research and analysis, the LCY team synthesized their findings and decided on three primary deliverables to develop for the City of Tacoma:

1. **A report on the Tacoma Mall Neighborhood Subarea context and best practices for communicating green infrastructure goals and initiatives:** This includes a community health profile which outlines the demographic and health statistics of the neighborhood, and a set of recommendations for using this information to implement strategies. The report also provides a guide for effectively communicating the goals of green-infrastructure projects to community members through a social marketing process.
2. **A package of communications tools**: This includes a pamphlet and flyer for communicating the benefits of green infrastructure to key target audiences, as well as a contact list for the City to use to form partnerships within the neighborhood.
3. **An implementation plan**: This highlights the types of green infrastructure that would be most beneficial to the neighborhood. It also proposes specific sites for implementation within the Tacoma Mall Neighborhood Subarea, and corresponding outreach applications.

At the end of the academic quarter, the LCY team delivered these documents and presented their findings to City of Tacoma staff. This meeting and presentation provided a valuable opportunity for dialogue between the two parties. City staff helped the LCY team clarify key points and made final requests for students to include additional content. This exchange helped students refine and strengthen their final report and recommendations.

Desire to improve community health metrics in the Tacoma Mall Neighborhood Subarea motivated the City to apply for the WA DNR grant in 2010. The LCY student team hoped to orient this UW LCY project around a similar objective. Thus, the students began by trying to understand the neighborhood's demographics and public health context. The table presented below compares health outcomes of the Tacoma Mall neighborhood compared to that of the City as a whole and demonstrates increased likelihood of asthma and diabetes, in addition to a lower average life expectancy.

An important resource for the students was the Tacoma Mall Neighborhood Subarea Plan's "Healthy Communities and Community Health Needs" appendix, prepared by the Tacoma-Pierce County Health Department. This document calls upon community planners to promote programs and strategies that address the social, psychological, economic, and environmental factors that influence community health outcomes (NW Sound Consulting 2015).

This appendix identifies the Tacoma Mall Neighborhood Subarea as an area exposed to higher health risks than Tacoma, Pierce County, and Washington State averages. Additional demographic data shows that the neighborhood experiences a higher rate of poverty and a greater number of children aged 5 years and older. The neighborhood's chronic disease rates for asthma and diabetes are higher than rates for city as a whole. There is also an eight-year gap in life expectancy between the Tacoma Mall neighborhood and the City of Tacoma. Furthermore, the report identifies poor air quality and high lead exposure as priority environmental health concerns. Fortunately, obesity and poor mental health rates are lower than City averages (NW Sound Consulting 2015).

Comparison of Health Outcomes

Outcomes	Tacoma Mall	Tacoma
Obesity (adults)	33%	49.5%
Asthma (adults)	25%	21.9%
Diabetes (adults)	23%	14.9%
Poor mental health days (adults)	19%	23.3%
Life expectancy at birth	71.2	79.0

Tacoma Mall Community Livability Themes

The following represent neighborhood priorities that emerged from public comment records.
- Neighborhood safety
- Parking, speeding, and traffic
- Walkability and alternative transportation modes
- Parks and public amenities for youth recreation

The Major Taylor Project operates out of Seattle and serves three high schools and three middle schools in Tacoma. It intentionally establishes itself in neighborhoods, like South Tacoma, with many low-income families. The project provides opportunities for students to ride bicycles; to learn about bike safety, maintenance, and how to build bikes; and to act as advocates for change in their neighborhoods.

Providing urban green space may play an important role in improving neighborhood health outcomes, but it is crucial that community planners weigh that against the urgency of other issues, like limited access to healthy food and the need to improve sidewalk conditions.

Environmental Concerns

The Tacoma Mall Neighborhood Subarea Plan refers to a number of environmental issues relevant to the neighborhood. However, some concerns of area residents are not mentioned or addressed.

Mentioned within plan
- Air quality
- Lead exposure
- Sidewalk and road conditions
- Leaf litter maintenance
- Recycling
- Water management

Not mentioned
- Extreme heat
- Carbon emissions

Providing urban green space may play an important role in improving neighborhood health outcomes, but it is crucial that community planners weigh that against the urgency of other issues, like limited access to healthy food and need to improve sidewalk conditions. This is important to evaluate within the context of the Tacoma Mall neighborhood. Improving the neighborhood's health outcomes requires a multi-pronged approach and recognition of the various political, social, and economic barriers that make it difficult to create new green spaces. It is important to acknowledge that the creation of parks and green spaces evokes concern for many residents who fear neighborhood improvements will lead to increased property values and to subsequent instability of rental markets (Towey 2017).

The Tacoma-Pierce County Health Department provides suggestions for, "Health-In-All-Policies," within the aforementioned, "Healthy Communities and Community Health Needs," appendix of the Tacoma Mall Subarea Plan. Many of these appear relevant and useful to the topic of greening the Tacoma Mall Neighborhood Subarea and helped guide the LCY students in their formation of a communications guide and recommendations for a green infrastructure plan.

Based on their examination of the, "Health-in-All-Policies," the students recommend the City creates active places for youth and young adults by working with Metro Parks Tacoma, the Boys and Girls Club, local churches, and private sector entities to create new recreation facilities, such as a swimming pool, basketball courts, and skate parks. Second, the LCY team recommends that the City of Tacoma involve community members in creating vibrant public spaces, with pieces of public art showcased, to foster and celebrate the neighborhood's identity. The City can also work with community members to incorporate place-making design features to preserve historic and cultural assets that connect people to place. Finally, the students recommend adding essential community-oriented facilities and services within reasonable walking distances of residential areas; this recommendation targets equitable access to resources like parks, medical clinics, community services, salons, coffee shops, playgrounds, trails, dog parks, and street trees. Students recognize that while the improvements and green infrastructure projects they propose can be pursued as part of a single plan, the City may need to gauge trade-offs between investments in different types of community projects and use this assessment to determine where to begin its work.

In addition to their urban forest recommendations, students encourage the City to work with partners, like Metro Parks and the Boys and Girls Club, to create more active places for youth and young adults who live in the Tacoma Mall neighborhood. The neighborhood currently lacks these sorts of facilities.
CREATIVE COMMONS CC0

CONSCIENTIOUS RESHAPING OF NEIGHBORHOOD IMAGE AND BRANDING

The Tacoma Mall neighborhood lacks a singular, cohesive community name and identity. The City hopes to foster a stronger sense of neighborhood identity through its subarea planning and development process. One component of that identity formation might be continued development of urban green spaces and planting of street trees within the neighborhood. However, in cities across the country, low-income communities like the Tacoma Mall neighborhood express their concern that gentrification accompanies such greening projects and threatens to displace them from their homes. The Tacoma-Pierce County Health Department's record of public comments for a draft of the Tacoma Mall Subarea Plan echoed this concern. While residents conveyed their support for designs to increase walkability and expand green space, they emphasized the importance of simultaneously addressing affordable housing. The LCY team recommends that the City of Tacoma make affordability and diversity central components of its neighborhood branding strategy for the Tacoma Mall Neighborhood Subarea.

PRIORITIZE COMMUNITY GAINS OVER LONG-TERM PLANS AND THEORETICAL FRAMEWORKS

The City of Tacoma's strategy for increasing urban green space is informed by critical theoretical frameworks such as the Triple Bottom Line, peer-reviewed literature, and long-term projections of environmental impacts. While this provides the City with a strong foundation for understanding the potential benefits of urban forestry and various community outreach approaches, it should not replace direct engagement with community members to determine their specific and nuanced needs and priorities. Public-facing communications are necessary for the City to understand the community's immediate needs and opportunities. For example,

> Residents expressed support for designs to increase walkability and expand green space, but emphasized the importance of simultaneously addressing affordable housing.

> Public-facing communications are necessary for the City to understand the community's immediate needs and opportunities.

tree planting at The Holy Rosary School generated positive attention from media outlets like Tacoma Weekly News, which highlighted the community's involvement and the near-term benefits of the project for the school and its students (Dunkelberger 2018). The students recommend that the City of Tacoma work with existing community groups whenever possible in both planning and implementation of such projects. The City might partner with the non-profit organization Tacoma Needs Trees, which generates and leverages support among residents for expanding Tacoma's urban forest to improve public health and to protect the Puget Sound.

HIGHLIGHT ACTIONS AND OPPORTUNITIES FOR COMMUNITY ENGAGEMENT

While it is desirable to increase awareness and appreciation of the potential benefits of expanding the urban forest in the Tacoma Mall neighborhood through the creation of information-focused materials, it is also important to focus on direct actions and opportunities for hands-on, community engagement. This provides meaningful, experiential learning and empowers community members to take part in the positive changes occurring in their neighborhood. Both the Tacoma Needs Trees Facebook page and the Trees Baltimore website offer models for placing call-outs to community members to take action more prominently than informational content. (https://www.facebook.com/TacomaNeedsTrees/) and the Trees Baltimore website (http://treebaltimore.org/)

As part of tailoring a communications strategy to the needs of community members, the City can make use of existing relationships and data. Social marketing is a strategy that applies marketing principles to social issues. It has been applied effectively within many fields, including education, workplace safety, and public health. The University of Kansas Community Toolbox offers valuable online resources to support social media: (https://ctb.ku.edu/en/sustain/social-marketing/overview/main). The LCY team's Communication Guide draws upon these resources and adapts them to

Neighborhood Quarters

Proposed neighborhood names for the Tacoma Mall Neighborhood Subarea. CITY OF TACOMA
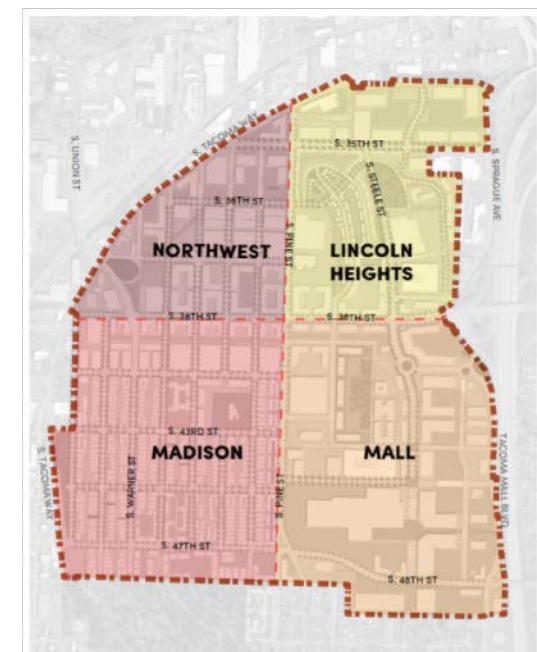
the Tacoma Mall Neighborhood Subarea and to the City's canopy cover goals. The students recommend the following approach to outreach and information sharing, which targets including various community stakeholders.

- **Step 1: Define the problem**
  Draw from City of Tacoma and Pierce County documents and community priorities for guidance. Try to understand the problem at its root, including legal, political, economic, and social barriers to achieving solutions.
- **Step 2: Set goals**
  Provide specific and feasible actions to address priority problems. Goals should be incremental and related to community needs, desires, and priorities.
- **Step 3: Establish audience**
  Hone in on specific subgroups (e.g., young parents, youth, landlords, apartment-dwellers), rather than targeting the "general public."
- **Step 4: Develop understandings of audience**
  Review public comments and gather additional community input on a routine basis. Seek to understand the desires and concerns of specific audiences.
- **Step 5: Brainstorm strategies for change**
  Discuss multiple options and levels of intervention, and evaluate the feasibility and potential benefits of each approach.
- **Step 6: Take action**
  Implement a visible, community-oriented green infrastructure project early on. It is crucial that early projects garner excitement and elicit a positive first impression from community members. Early failures damage trust between community members and local government agencies and can impair long-term success.
- **Step 7: Solicit and incorporate feedback**
  Learn from mistakes and make changes to ensure that community needs are met as project implementation continues. In the case of the Tacoma Mall Neighborhood Subarea Vision Plan, public comment, community meetings, and surveys issued through local periodicals generated significant interest and feedback. These processes could be employed for future projects.

The health benefits of urban green spaces

Springbrook Park

Holy Rosary School

The health benefits of urban green spaces

Media that emphasizes community involvement in neighborhood tree planting is more inspiring and momentum-building than media that places statistics and information-dense figures at the fore. Data and figures may be more useful for internal communications, grant applications, and academic discourse. CLAIRE PENDERGRAST

Building upon the social marketing strategy to garner community support, the LCY team created a Neighborhood Outreach Master Contact list and maps that correspond to it. The Tacoma Mall neighborhood lacks community centers and public schools and few of its residents own homes; these characteristics influenced students' approach to identifying potential community partners and to devising methods for involving them in planning and organizing.

The Neighborhood Outreach Master Contact list includes all businesses, residents, service agencies, and organizations present within the Tacoma Mall Neighborhood Subarea boundaries. The list is organized as an excel file, with a distinct sheet for each of the Subarea's proposed districts. Students gleaned contact information for a list from publicly accessible, GIS, parcel layers, downloaded from Washington State GeoServices website. Information categories displayed in the excel file include land use, type, site address, tax payer name, addresses, and GIS-generated acreage for all parcels within the Tacoma Mall Neighborhood Subarea.

There are many potential community and business partnerships within and just beyond the Tacoma Mall Neighborhood Subarea. Within the Subarea boundaries, potential partners include: Titus-Will Auto Group, Costco Wholesale, REI, Head Start/Madison School, Trinity Church, and the Tacoma Mall. It is highly probable that residents of the area interact on a daily basis with services and community centers just beyond the Subarea's bounds. Bearing this in mind, students produced another map and contact list to account for a one-mile radius of the Subarea's borders. In the Master Contact list, all of the parcel information for this additional zone (except for residential) is included in Sheet 5, with the following types of land uses categorized: cultural, entertainment/recreational, manufacturing, services, trade, transportation, communication/utilities, and undeveloped. The LCY team recommends that the City consider the zone that surrounds the Tacoma Mall Neighborhood Subarea, and include its schools, churches, community centers, after-school programs, restaurants, and businesses, in efforts to reach and engage community members.

Through its partnerships with these stakeholders, the City would enhance its visibility and increase its chances of reaching residents of the Tacoma Mall neighborhood. Outreach methods might involve setting up informational booths, posting flyers, and tabling at local grocery stores, schools, and community centers. In addition, the City can supplement these efforts to inform community members with events focused on engaging stakeholders, such as a tree planting competition that challenges local auto companies or other neighborhood businesses. To strengthen these types of outreach efforts, the student team produced attractive media that can be used to appeal to targeted audiences.

One Mile Radius of Tacoma Mall Neighborhood Subarea Boundaries

To support the City of Tacoma in its efforts to inspire strong community buy-in for urban trees and other green infrastructure projects, the LCY team created a pamphlet that highlights the benefits of increased urban tree canopy (Appendix A1). They created this resource drawing information from the Nature Conservancy's, "Outside Our Doors," report, which summarizes the growing body of evidence that urban trees promote human well-being, both physiologically and psychologically (House et al. 2016).

Increased urban tree canopy correlates with the following benefits to city dwellers:
- Increased opportunities to exercise
- Decreased stress levels
- Improved mental focus
- Enhanced neighborhood and community involvement
- Increased perception of safety
- Decreased "urban heat island" effect
- Improved air quality

The LCY team recognized the importance of contextualizing these benefits in terms that capture their relevance to the community at large, as well as to key stakeholders. Different benefits may be more relevant and compelling to some constituencies than others, just as different concerns tend to arise among different stakeholders. Thus, students attempted to create a well-rounded communications strategy to appeal to the range of constituencies that comprise the Tacoma Mall neighborhood. This range includes: residential and commercial property owners, business owners, community organizations, workers, and renters. The following sections reflect an approach to communicating the benefits of urban tree canopy and other green infrastructure to each of the Tacoma Mall Neighborhood Subarea's key constituencies.

BENEFITS TO LOCAL BUSINESSES AND PROPERTY OWNERS

Business and property owners represent significant stakeholder groups of the Tacoma Mall Neighborhood Subarea. To reach these groups, the students produced an easy-to-distribute flyer that communicates five reasons urban trees and green spaces are good for business (listed below). Students sourced all facts from, "Outside Our Doors," by the Nature Conservancy (House et al. 2016). The flyer is included as an appendix to this report (Appendix A1).

1. Trees increase the value of homes and commercial property.
2. Pedestrian friendly retail centers with trees experience 20-40% increased foot traffic. Shoppers spend 9-12% more at such centers.
3. On average, owners of green malls increase their earnings from collecting rent payments by 22%.
4. Shoppers demonstrate willingness to travel further to access green shopping environments and desire to spend more time there.
5. Workers experience increased productivity and job satisfaction.

LESSONS FROM PUBLIC COMMENTS

Students reviewed available public comments to the Tacoma Mall Neighborhood Subarea 2040 Vision Plan; this informed their understandings of community concerns and their design of a targeted social marketing approach. It also informed their recommendations to the City around implementation and prioritization of green infrastructure projects. Students looked out for comments related specifically to green infrastructure and to tree canopy cover goals, and recorded these as either, "Supports," or, "Concerns." The table below summarizes the LCY team's findings. Their analysis of public comments enabled them to identify opportunities and barriers to implementation of green infrastructure initiatives, and allowed them to devise a set of actions with the greatest potential to positively impact the community. These lessons aided students in their development of the implementation plan, described in the following section.

Cover to the student-generated pamphlet on the benefits of urban trees. MARCIA ROSENQUIST

Supports vs Concerns

Supports	Concerns
• Evergreen trees	• Entrances on alleyways
• Tree canopy	• Winter air quality
• Impervious pavement	• Leaf litter
• Water quality: South Tacoma aquifer	• Reductions in driving/turning lanes for street trees
• Green building standards	• Parks and open space may attract crime and vagrancy
• Street trees	• Connectivity breaks up property
• Greening Madison School	• Elimination of large parcels for development
• Loop road	• Lack of schools and community spaces
• Increased transit Infrastructure	• Impact of maintenance/cost of trees and infrastructure on business owners
• Improved stormwater systems	• Green building standards increase costs to new businesses
• Bicycle and pedestrian paths	• General lack of street maintenance, safety, and cleanliness
• Neighborhood street improvement	

The LCY team's site visit to the Tacoma Mall Neighborhood Subarea provided the original inspiration for their implementation plan, which proposes specific sites and pilot projects. Students identified sites within all quadrants of the Subarea and combined their knowledge of the physical geography with lessons learned about community priorities to form a set of recommendations for the City, described below: street and sidewalk improvements, phytoremediation swales, native Garry Oak groves, and greening of the Madison School property.

STREET AND SIDEWALK IMPROVEMENTS: EVERGREEN STREET TREES

Public comments on the Tacoma Mall Neighborhood Subarea Plan revealed strong support for planting street trees, especially evergreen trees. Community members based their preference for evergreen trees on the facts that they improve winter air quality more than deciduous trees (because they keep their foliage over winter) and that they require less maintenance. The City might meet or acknowledge this interest wherever possible.

Furthermore, community members expressed their broad support for planting street trees to improve the aesthetic of neighborhoods throughout the Subarea. It is important to note that residents and business owners expressed a strong preference for street trees despite their concerns about parks and larger green spaces.

This discrepancy likely emerges from the perception that open spaces become hotspots for crime and vagrancy. Regardless, the City of Tacoma has an opportunity to acknowledge broad public support for street trees and to take the lead on greening the Tacoma Mall Neighborhood Subarea.

Residents and business owners expressed a strong preference for street trees despite their concerns about parks and larger green spaces.
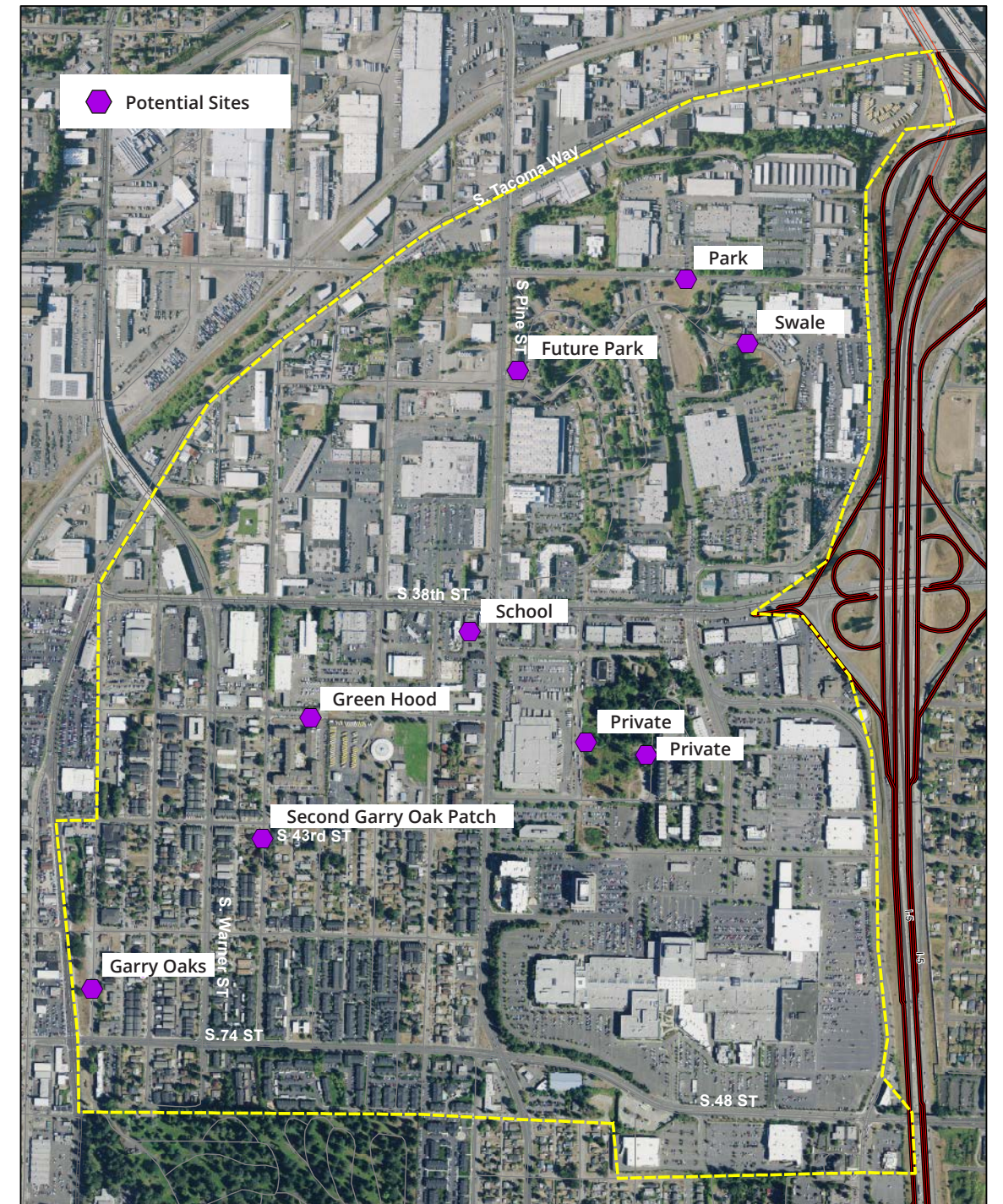
Students identified potential sites for City of Tacoma-sponsored, green infrastructure projects, which are spread throughout this map of the Tacoma Mall neighborhood. KATIE WOOLSEY

In addition to their status as regional icons, evergreen street trees provide unique benefits compared to deciduous trees. NW TREE FARM

STREETSIDE SWALES

Water quality, stormwater infrastructure, and improved neighborhood streets surfaced as additional priorities to community members. Given these findings, and the aforementioned concerns about developing larger green spaces, the student team identified vegetated streetside swales as an excellent short-to-medium term project that targets increasing green space and that also acknowledges community concerns. One good example of developing such swales in the context of a low-income neighborhood, is High Point neighborhood, in Seattle. Its swales were planned and administered by the Seattle Housing Authority. The students recommend that the City of Tacoma consider swales in their immediate plans for the Tacoma Mall neighborhood (Tackett 2009).

PHYTOREMEDIATION SWALES

Beyond streetside swales, larger unused properties, natural drainage systems, and city-owned rights-of-way can be converted to phytoremediation swales. These projects consist of greater engineering complexity than streetside swales and vegetated strips; they offer a more effective means to filter pollutants from the environment; and, they accommodate trees and larger plants. One of the best examples of a phytoremediation is the "Swale on Yale" in Seattle. This project has dramatically reduced pollutant runoff into Seattle's Lake Union, and, because the swale is aesthetically appealing and located in a heavily trafficked neighborhood, it also provides improved opportunities for public interaction and education.

One potential site for such a phytoremediation swale is at the intersection of South Idaho Street and South Oregon Avenue. The site is well suited for such a feature because it already contains a large depression, with a number of native trees. The site could be planted out with trees in the Salicaceae family, which includes native willows and black cottonwood, as well as a diverse array of native grasses. The depression will naturally collect rainwater runoff, cleaning it and helping to recharge groundwater. The site could include interpretive signs focused on the water quality improvements and stormwater retention function. The LCY students suggest that City include fencing for a site like this one, to address community concerns about vagrancy and crime in large, unmonitored open spaces.
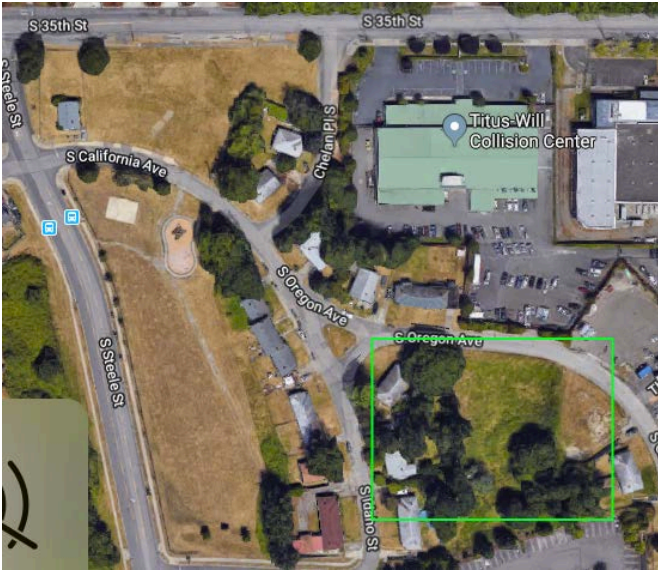
Top Left: The area outlined by green indicates where students recommend incorporating a phytoremediation site in the northeastern quadrant of the subarea. (Map data: Copyright 2018 Google)
Top Right: Students identified this site as a potential location for a phytoremediation swale, which would help clean and filter stormwater before it reaches streams and underground aquifers. SCOTT DAVIS
Bottom: Streetside swales and larger right-of-way swales like this "Swale on Yale" in Seattle provide significant ecological benefits within urban areas. VULCAN REAL ESTATE

NATIVE GARRY OAK GROVES

Garry Oak (Quercus garryana) is a protected species within the limits of the City of Tacoma, and throughout much of the Puget Sound region. Despite historic abundance in the area, the species has experienced significant population decline in recent decades. A few Garry Oak stands persist in the Tacoma Mall Neighborhood Subarea: one, along the border of the Subarea and another, on private property in a different part of the neighborhood. Restoring remnant oak stands by introducing sapling Garry Oaks, and by planting a diverse community of native prairie grasses, sedges, and forbs, could add to the neighborhood's unique sense of place. The plant community selection might include other charismatic native plants, such as Camas (Camassia quasmash), Oregon Grape (Berberis spp.), Roemer's Fescue (Festuca diaphoresis var Roemers), or the Columbia Lily (Lilium Columbiana). While students do not expect these sites to be restored to the fully functioning oak savannah ecosystems of the past, re-introduction of companion plants would help Garry Oaks thrive. Where trees stand on private property, the City might pursue partnerships with landowners to maintain the grass around the oak trees. One survey by the Tacoma News Tribune asked residents of the Tacoma Mall Neighborhood Subarea to identify potential names for the Subarea, and several names were inspired by the Garry Oaks (Driscoll 2016). It would be especially relevant to restore touchstone Garry Oak groves if "Oaks" becomes part of the new name for the Tacoma Mall neighborhood.

> Restoring remnant Garry Oak stands could add to the sense of place within the Tacoma Mall neighborhood.

Left: This small grove of native Garry Oaks (Quercus garryana) *is located on private property.*
Right: This stand of Garry Oaks along South Tacoma Way, along the western border of the subarea, is the largest oak stand in suburban Tacoma. The site's ecological value and overall aesthetic could be significantly enhanced through restoration efforts. SCOTT DAVIS

MADISON SCHOOL AND 40TH STREET COMMUNITY GARDEN

Various community members identified the Madison School property, largely cleared and devoid of vegetation, as a site of interest to them for increased canopy cover and green infrastructure design. Adjacent to the Madison School is a promising asset, a community garden. Subsequently, the students view this location as an ideal site for a greening project. Transformation of the Madison School property could turn a relatively uninviting space into a focal point for the community.

> Transformation of the Madison School property could turn a relatively uninviting space into a focal point for the community.

Left: The community garden adjacent to the Madison School property provides the opportunity to connect and improve two neighboring public spaces. MARCIA ROSENQUIST
Right: The Madison School is no longer an operating public school and is a large open space lacking in vegetation. The property has been identified by many community members as a priority site for improvement and greening. SCOTT DAVIS

The students involved in this project recognize that many residents of the Tacoma Mall Neighborhood Subarea seek, above all else, access to the basic amenities that would improve their quality of life. Many residents voiced their desire for nearby youth and young adult activities. The LCY student team recommends that the City acknowledge the community's priorities and focus green infrastructure outreach efforts on principles of community engagement and social equity. Students hope that the City finds the Social Marketing Process to be an effective tool to focus actions, guide communications, and plan effective marketing and outreach efforts.

To assist the City in those outreach efforts, the student team created resources tailored to the apparent interests and concerns of community members. This includes pamphlets related to planting trees. To help guide the use of these resources and to foster stronger ties between the City and neighborhood stakeholders, the students also created a Neighborhood Outreach Master Contact list. This tool is meant to aid the City in a targeted marketing and outreach strategy. The list includes data specific to the Subarea, as well as a 1-mile radius that surrounds the Subarea; and highlights potential partnerships between the City and local businesses and other stakeholders. Ideally, these communication tools will help the City of Tacoma to generate neighborhood support around green infrastructure projects.

Moving from communications and information to planning and implementation, the students proposed key sites for the City of Tacoma to implement a number of small projects. Most of these projects entail ecological infrastructure plans other than tree planting; all lend to the development of the neighborhood's urban forest. Students recommend that the City view planting street trees, installing phytoremediation systems, greening the Madison School site, and restoring Garry Oak groves as immediate targets. Such projects hold the potential to build confidence, excitement, and momentum among community members around green infrastructure design.

Moving forward, the students intend for this report, and for all their associated work as the LCY team, to serve as a useful guide for community-responsive communications and for implementation of green infrastructure projects in the Tacoma Mall Neighborhood Subarea. They

hope the resources they have provided equip the City of Tacoma staff to create an urban forest, with awareness of the pressing issues experienced by community members. The City can carry out a plan to increase canopy cover and add green infrastructure throughout the Tacoma Mall Neighborhood Subarea to improve public health and environmental outcomes. It can do so while attending to community members' needs and priorities and while standing for social equity.

The LCY team presented their work to City staff at the end of the winter quarter, concluding a fruitful university-city collaboration. CLARE RYAN

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Additional Resources:

Public Comments on the City of Tacoma's Tacoma Mall Subarea Plan can be found at:

http://cms.cityoftacoma.org/Planning/Tacoma%20Mall%20Subarea/TMall%20Comments%2 0Batch%201.pdf

http://cms.cityoftacoma.org/Planning/Tacoma%20Mall%20Subarea/TMall%20Comments%2 0Batch%202.pdf

Appendix A: Pamphlet

Appendix B: 5 Reasons Why