Making the Case for Green Infrastructure

4th Annual Puget Sound Green Infrastructure Summit
March 22nd, 2019 | Cascadia College/U.W. Bothell
Making the Case for Green Infrastructure

Presentation at 4th Annual Puget Sound Green Infrastructure Summit

MAR 22, 2019
Seattle-based Vulcan Real Estate directs all real estate investment activities for Vulcan Inc.

We develop high-performing quality assets including office, biotech, residential, and mixed-use projects throughout the Pacific Northwest.

Our real estate model is based on creating lasting value for all by developing inspiring places that are socially, economically and environmentally progressive.
Green Infrastructure

What is it (according to the Environmental Protection Agency)?

“Cost-effective, resilient approach to managing wet weather impacts that provides many community benefits.”

Why do it?

- Stormwater = major cause of water pollution in urban areas
- Green infrastructure uses vegetation to restore some of natural processes required to manage water and create healthier environments

What is the result?

- Reduces and treats stormwater at its source
- Delivers environmental, social, and economic benefits
South Lake Union

Proximity to lake

Former industrial area = soil contamination – Vulcan has invested $30M to date for soils remediation

20M SF of development since 2004 (8M by Vulcan alone)

Increased development = opportunity to make positive impact through environmental remediation, green building practices and green infrastructure
Our Salmon-Safe Commitment

Announced commitment to piloting Salmon-Safe’s developer accreditation initiative in 2015

Became world’s first accredited Salmon-Safe developer in 2017

Hero of Salmon Award in 2019

Commitments include:

• Getting site certification on new development sites

• Requiring general contractor partners to be accredited by Salmon-Safe for zero sediment runoff during construction

• Sharing key learnings both internally and with other developers

• Educating public on our work
Our Salmon Safe Strategies

To qualify for Salmon-Safe certification, each project is required to meet the Salmon-Safe development principles of protecting habitat and water quality during construction.

Post-construction requirements include:
- Incorporating strategies that treat stormwater
- Providing ecologically functioning habitat
- Commitment to water conservation methods

Interdisciplinary team, including scientists from local universities and private-sector partners, are called on to conduct each assessment on behalf of Salmon-Safe.

At completion, you can see elements that are beautiful and also play a role in stormwater management and water conservation:
- Vegetated roofs and green walls
- Cisterns that capture rainwater for onsite irrigation
- Bioretention planters with plants that naturally filter out contaminants
Swale on Yale

Joint-venture project with Seattle Public Utilities

First half of Swale on Yale completed in 2013

System is designed to treat about 190M gallons of stormwater annually

Swales filter out more than 90% of contaminants before they are sent to Lake Union
Sitka Apartments

Full-block residential development with 384 units

- Includes installation of second half of Swale on Yale project to treat stormwater before it reaches Lake Union—part of the region’s new salmon migration corridor
- Removal of ~15,000 tons of contaminated soil during construction results in improved soil and groundwater quality
- Cistern collects rainwater for on-site irrigation
- Green roofs are installed atop Sitka and its ground-floor awnings; all other roof drainage is directed to one of five bioretention planters
Arbor Blocks, soon to be home to two new office buildings for Facebook, features a pedestrian-friendly woonerf between two office buildings along 8th Avenue:

- Design of meandering pathway, absence of curbs, specialty paving pattern, and incorporation of numerous vegetated, seating, and walking surfaces will discourage its use as a through street while simultaneously providing areas for urban habitat.
- Includes approximately 12 planting areas ranging in size from 100 SF to 2,000 SF which, together with the green roofs, represent a sizeable increase in urban habitat compared to existing conditions.
- Plants and trees will be primarily native and drought-tolerant species, thereby minimizing the need for extensive irrigation.
- Use of Salmon-Safe accredited contractor—applying best construction site management practices to achieve zero sediment runoff.
Lakefront Blocks

Two block development under construction with four office buildings for Google plus two residential towers across from Lake Union

- Employs Salmon-Safe accredited contractor, green roofs, and rainwater cistern for onsite irrigation
- In addition, amended soils will be added to street-side planting strips to provide treatment of stormwater from adjacent sidewalks
- High visibility location for construction signage along Mercer that illustrates benefits of Salmon-Safe development practices
Batik Apartments

Residential development in Yesler with 195 units

- Located in Yesler where runoff goes into Elliott Bay watershed (Elliott Bay is a migratory route in Puget Sound therefore all 7 Pacific salmon species are evident at some point in the year)
- Bioretention planters, vegetated roofs, and water-efficient irrigation
- Stormwater management features include street-side planters for rain collection
- Stormwater from approximately 80% of project’s surface area are treated on-site through use of vegetated bioretention structures
Jackson Apartments

Residential development on 23rd & Jackson in Central Area with 532 units

- Large site—previously an asphalt paved parking lot—totaling almost 4 acres - stormwater runoff was all untreated

- New development—36% of site area is open space, including a 60' wide pollinator habitat which will attract butterflies, bees, and other pollinators and provides a great opportunity for bioretention swales for treating runoff

- Project will be able to treat 90% of stormwater generated onsite
Green Infrastructure Incentives

Locally, incentives for using green infrastructure are largely absent... hence, there are not a lot of developers doing it voluntarily.

Jurisdictions have a great opportunity before them to take a leadership position on green infrastructure improvements.

Incentives can take many forms:

- Additional development capacity (FAR) or structure height
- Expedited permitting time
- Reduced utility hook-up fees
- Other ideas?
Thank You

Learn more at vulcan.com/salmonsafe
2019 Green Infrastructure Summit!

Presentation
by Sameer Ranade, Senior Organizer
Who We Are - Driven by the vision of an inclusive and fair society

• A statewide coalition of 63 organizations and groups rooted in communities of color and people with lower incomes

• As thought leaders and organizers we build our agenda and strength with our grassroots community.

• Together we are focused on building power and capacity for a Just Transition to a clean energy economy that centers equity and is led by people of color.
Principles for Climate Justice

• Acknowledge that past policies and decisions maintain a system of injustice
• Follow the leadership, knowledge and expertise of communities disproportionately impacted
• Use racial and economic analysis to drive decisions
• Use targeted strategies that create benefits for all
• Create net environmental and economic benefits for communities of color and people with lower incomes
Principles in Practice: 2017 Listening Sessions

Purpose of this project

- Listen to concerns of communities of color across Washington.
- To help prioritize concerns and identify community driven solutions.
- Develop and advocate for equitable strategies.
Farm Workers
Indigenous Peoples
African Immigrants
Asian Pacific Islanders
<table>
<thead>
<tr>
<th>Organizing</th>
<th>Listening Sessions</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front and Centered developed a request for proposals to host listening sessions. Front and Centered also developed facilitator’s guide and materials on specific topics.</td>
<td>Two-hour listening sessions were hosted in 9 different communities. Each listening session provided notes and summaries from the meeting.</td>
<td>The meeting notes and summaries written by the host organizations were analyzed for this report.</td>
</tr>
</tbody>
</table>
Main Questions & Findings

Pollution
What kinds of pollution, if any, are impacting your life or work and that of your family and community?

Pollution outcome and sensitivity
What factors best show if your community is healthy or doing well compared to other communities?

Figure 3. Wordcloud based on responses to question regarding pollutions in the community.

Figure 4. Wordcloud based on responses to question regarding pollution outcomes and sensitivities.
Developed in collaboration with the UW Environmental & Occupational Health Washington State Departments of Health & Ecology and the Puget Sound Clean Air Agency.

Map estimates a cumulative environmental health impact ranking for each census tract that reflects pollutant exposures and factors that affect people’s vulnerability to environmental hazards.
Pollution Burden x Pop. Characteristics = EJ Rank

**Pollution Burden**

- Exposures
  - Air pollutants
  - Water contaminants
  - Pesticide exposure
  - Toxic releases from facilities

- Environmental effects
  - Clean up sites
  - Hazardous Waste

**Population Characteristics**

- Sensitive population
  - Asthma
  - Cardiovascular disease
  - Low birth weight

- Socioeconomic factors
  - Educational attainment
  - Housing & transportation burden
  - Linguistic isolation
  - Poverty
  - Unemployment
Healthy Environment for All (HEAL) Act
SB 5489

• Define and commit state agencies to a mission of environmental justice.

• Requires agencies to use environmental health disparity mapping to inform decisions about enforcement, investments and policy.

• The Act forms a task force to direct equitable action, including requiring agencies to measure their work against a baseline of environmental health and develop targets for decreasing disparity.

• The task force also recommends agency tools for properly informing and engaging community members in environmental health solutions, including translated services and materials.
Thank you for your service to our communities and earth

To engage on the HEAL Act, contact Sameer at Sameer@frontandcentered.org
Making the Case
to communities, governments, and businesses

JESSIE MARTIN  |  Executive Director, Earth Economics
Earth Economics is a leader in ecological economics.
Earth Economics is a leader in ecological economics. We quantify and value the benefits nature provides.
QUANTIFY ≠ MONETIZE ≠ CAPITALIZE
Our Approach

Community Engagement

Place-Based Analysis

Policy + Finance
Making the case is never just about making the business case.
COMMUNITIES

Why does this matter to me?
COMMUNITIES

Why does this matter to me?

Why it’s important vs. what it is
“Stop planning for people, and start planning with them.”
DATE 2/1/2019
TIME 15:07
LOCATION Laing at Morang
DETAILS Significant rain event, streets and driveways blocked for 3 days
Where are we going to get the money?
VALUATION TOOL

• Enables rapid, screening-level analysis

• 5 benefits across 5 asset types

• Can be tailored to local factors
THE BLUEPRINT

• Funding Guide
• Financing Guide
• Green Bond Decision Flow
• Hands-on support
GASB 62

- Official rule clarification on Regulatory Assets
- Step-by-step guidance for auditors, bond counsel, and finance staff
- Hands-on support
How does this help the bottom line?
THE BLUEPRINT

“As an investor, we’re looking for projects. For some reason, the projects are not getting to the folks ready to fund them.”
eartheconomics.org/blueprint

jmartin@eartheconomics.org