# Visualizing Sustainable Cities

## IMAGE RESEARCH PROJECT WITH CASCADE BICYCLE CLUB AND WASHINGTON ENVIRONMENTAL COUNCIL



## RESOURCE MEDIA

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# Introduction

Today's urban residents are continually assaulted with images—whether it's billboards and advertisements or videos in our social media feed, today's media consumption habits unquestionably rely on the visual. Corporations and media outlets have become more savvy on how to entice consumers to watch content and buy products, but what would happen if nonprofit organizations and government agencies were able to fully deploy effective imagery that engages the public on creating sustainable cities?

We know that each person brings his or her own individual perspectives, memories, priorities and interpretations to the meaning of sustainability. Those viewpoints vary depending on the race, cultures and economic mobility of our diverse urban communities, and yet it can be hard for the traditional green base to hear the voices of those who are unengaged. Instead, it's all too easy to listen to the loud and passionate voices of your base. We need this input to guide local governments, NGO's and community organizers on the best ways to **connect with all constituents** to advance **inclusive visions of sustainability in urban neighborhoods in the Pacific Northwest**.

We entered into this research with a desire to hear from under-represented voices on issues that have put up steep barriers to entry—bicycling behaviors and green stormwater infrastructure. Some of the findings surprised us. Others confirmed approaches to communicating outside the green base that we're already using. Here are a few of the key takeaways.

› **Affordability and the pace of new development continue to stir anxieties in the Puget Sound region.** For communities that have faced historic under-investment, this is an opportunity for them to weigh in on a design and input process that delivers results and meets community needs. But we need to be aware of stoking the very real fear of displacement.
› **The environmental base's concerns and priorities differ from members of the public on affordability, awareness levels of environmental issues and public infrastructure needs.** While the vast majority of survey respondents for both surveys were non-members of these organizations, when examining member group attitudes and preferences, it's very clear that the values of these member bases has departed significantly from the mainstream path.
› **Piggy backing on other issues is more important now than ever.** You might be able to recruit a few super ardent supporters of bioswales and transit-oriented development. But to widen the tent and engage more people, get them excited about street safety improvements like sidewalks, or underscore the social aspect of commuting with friends. Your issue doesn't have to be center stage.
› **When it comes to specific *behaviors*, like bicycling, there's less of a fudge factor in people's responses.** They either do or they don't bike frequently. In examining rates of behavior adoption and their cited reasons, it's very clear that barriers are deeply entrenched and systemic for specific groups, including women and people of color.

These are just some of the findings from this in-depth image research project that heard from over 1,000 Puget Sound area residents. Following are the headline results of two image-testing projects conducted with each of these community groups by Resource Media over the course of 2017.

# Research Objectives

One aspect of Resource Media's approach was to provide actionable evidence to benefit each organization's communications and organizational goals. Cascade Bicycle Club (CBC) staff were most interested in finding barriers to bicycling behaviors. Washington Environmental Council (WEC) staff wanted to know the perceived value and prioritization of green infrastructure among Puget Sound area communities.

While both groups have worked hard to become ardent and passionate forces advocating for environmental causes over the span of the past five decades, this passion isn't always reflected among people outside these organizations' membership.  Messages and images aren't always resonating with the people we need to recruit the most.

The goal of this image-testing project is to improve communications overall around bicycling and green infrastructure in the Pacific Northwest, through the development of a more diverse and inclusive visual message platform.

# Green infrastructure message findings

For Washington Environmental Council's project, Resource Media asked a series of messaging, values and awareness-gauging questions in addition to the image tests. This was done in order to get a good handle on the types of issues people were prioritizing in their communities, and which environmental problems they deemed most urgent. Below are some headline findings from these text-based questions:

> **People are most concerned with affordability.** Overall, people mostly like where they live but are worried about the financial burdens putting pressure on their ability to stay in their neighborhoods. Thirty-six percent of respondents said they were either dissatisfied or very dissatisfied with their neighborhood's affordability.

> **Environmental problems with visible human impact are seen as more urgent.** When asked to rank the biggest environmental problem for the Puget Sound region, polluted runoff ranked behind problems with a more visible human impact, such as traffic, air pollution and rampant growth.

> **Members are more likely to lend support behind projects that remove pollution, despite cost and convenience.** People who had never heard of WEC were likely to support projects that remove pollution (48 percent), but not as much as WEC members (69 percent). Thirty-six percent of non-members said that cost was an issue, while just eight percent of WEC members said that it was. Eighteen percent of non-members said that the disruption and convenience of implementing projects was a major factor, while just eight percent of members felt the same way.

> **People are more enthusiastic about public space than new development.** When asked about a number of community infrastructure improvements, people were most excited about parks, public transit and green infrastructure, whereas enthusiasm for re-development (new businesses and housing moving in) was low.

> **People don't think Puget Sound is in serious trouble.** The majority of respondents, 87 percent, reported that they thought that the Puget Sound was in fair or good condition. Again, people needed visual cues to convince them the water is not healthy such as trash and litter, and oil sheens in parking lots. Fishing and shellfish warnings were also cited as visual evidence that stuck with respondents.

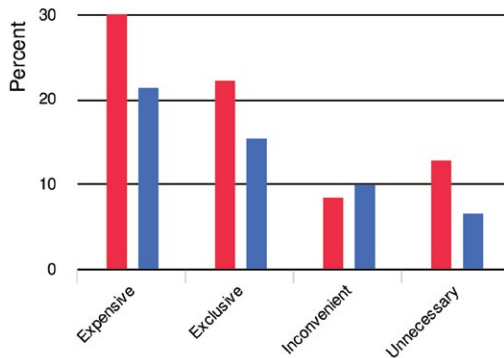## What evidence have you seen that water is unhealthy?

| Value | | Percent | Responses |
|---|---|---|---|
| Closed beaches | | 58.7% | 44 |
| Fishing and shellfish warnings | | 74.7% | 56 |
| Dead fish | | 45.3% | 34 |
| Lack of wildlife | | 56.0% | 42 |
| Oil sheens in parking lots | | 76.0% | 57 |
| Trash and litter | | 84.0% | 63 |
| Other - Write In | | 28.0% | 21 |

# Green infrastructure image findings



## People of color are more likely to see green infrastructure as "expensive, exclusive or unnecessary"

Overall, most respondents responded positively to this photo of a large, high profile bioswale project. The most common positive associations people had with this photo were healthy, welcoming and beautiful, when participants were asked, "what positive/ negative associations do you have with this photo?"
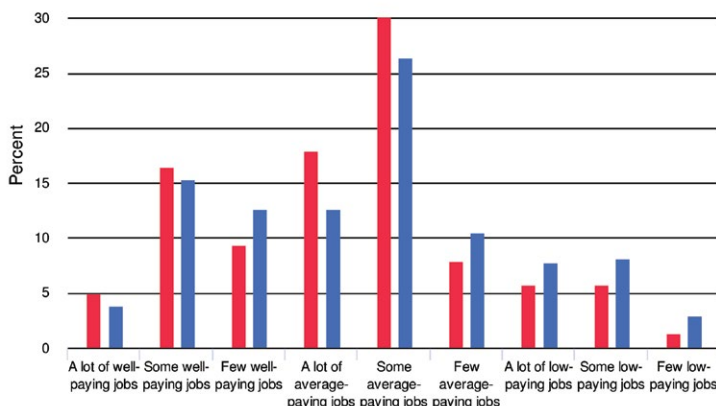
In looking at the negative associations that people had with this photo, respondents who were people of color were more likely to choose the following negative associations with this photo: expensive, exclusive and unnecessary.

When comparing residents of more rural and suburban areas (in Snohomish County) to residents of more urban and exurban areas (South King County), residents of the suburban areas were eight percent more likely to say that these types of plantings were "beautiful."



**Negative associations with this photo, Red: people of color, Blue: white only**

## People don't associate green infrastructure with high paying jobs



We also tested what economic perceptions audiences had about job creation in association with green infrastructure projects. We asked respondents whether they thought this project appeared to create a lot of jobs, some jobs, few jobs, well-paying jobs, average-paying jobs or lower-paying jobs. The most popular response was that this project appeared to create some average-paying jobs. People of color were more likely to respond that these were average-paying jobs, whites were slightly more likely to respond that these were low-paying jobs.

**Red: people of color, Blue: white only**

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# Green infrastructure image findings



## Which communities are in favor of dense housing with green infrastructure?

We tested how people perceived a new development with dense, urban housing and green infrastructure elements in a residential neighborhood and asked, "would you be happy if this development moved into your neighborhood?" People of color and those most concerned about neighborhood affordability reacted most positively to the prospect of this development coming to their community. People of color were 10 percent more likely to favor this type of development. Some of the common reasons were:

› It looks nice
› It looks environmentally friendly and green
› Need more density and family homes
› Well-built, well-planned and modern
› Better than blacktop and full cement

Both white respondents and respondents who said that they were less concerned about the affordability of their neighborhood were more likely to respond negatively to this type of development. White respondents were 10 percent more likely to disfavor it. Some of the common reasons were:

› Don't need any more houses or apartments
› Doesn't fit/clashes with my neighborhood
› More construction, more people, too crowded
› Too close together, too dense
› I live in a rural zoned area



**Red: people of color,
Blue: white only**
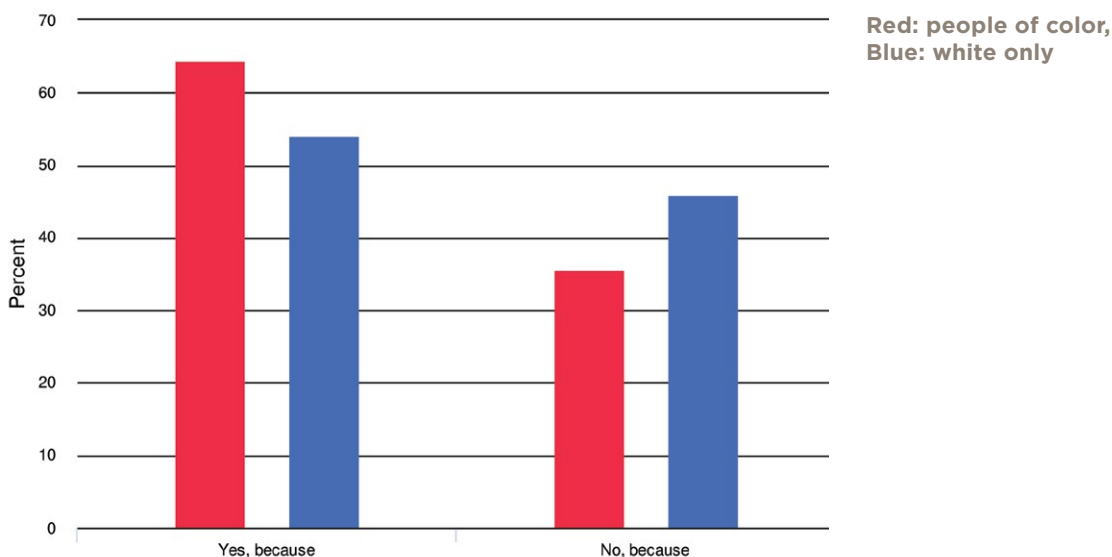
# Green infrastructure image findings



## People still don't really understand what a rain garden is

While the environmental community regularly discusses and displays rain gardens, we wanted to know whether a lay audience had a basic understanding of what a rain garden is, and what features might need to be pictured to convey this idea accurately to the public. So we asked, "which of these is a rain garden? (you may pick more than one)"

This image test shows that signage for rain gardens is working—73 percent of people could confidently choose that something is a rain garden when there is signage. However, they are also confused—60 percent of respondents also chose a photo of garden beds fed by rain barrels. Respondents could choose more than one photo option; the least selected option was the rain garden with no sign.



## Community benefits win out over beautiful flowers

One commonly held but untested theory when depicting rain gardens is that the better photos are of mature plantings and beautiful flowers. For this test we asked, "which project would you most likely support in your community and why?" Resource Media wanted to test whether this theory held up, when tested alongside another benefit of rain gardens: sidewalks, which provide the ancillary community walkability and safety. A lack of sidewalks is also more common among lower income neighborhoods with a history of under-investment. The findings showed that 72 percent of people preferred photos of rain gardens; even ones with less mature plantings, if they had a sidewalk next to it. What's more they identified the sidewalk as the feature that made the image more appealing.

This may seem like a subtle shift but the overarching strategy is to understand that not all communities care about gardening, drainage and polluted runoff and that's ok. If we depict green infrastructure in the background of and together with other community priorities, we will widen our tent of support and galvanize more people in support of these projects.

# Green infrastructure image findings





## Commercial rain gardens are seen as a greater benefit to the community than residential

Residents walking their neighborhoods will encounter rain gardens situated next to commercial areas, such as this café or next to a residential home. We tested, "which green project adds the most to the community and why?"

Seventy-two percent of respondents preferred the commercial, public rain garden for community benefits, while 27 percent preferred the private residential rain garden, visible from the street.

When explaining why, common responses were:

› Because it's helping everyone in the community and not just one
› Benefits more people
› Shared cost for larger areas
› Commercial is more likely to be maintained
› They can be installed where needed, and meet public need better.

**27% private residential rain garden**



**72% commercial public rain garden**

# Bicycle findings

One of the first lenses through which Resource Media examined differences was CBC members and non-members. These groups represent, in short, people with whom CBC is currently communicating and people with whom they are not. Looking at differences in opinion show an opportunity to engage new audiences. Some of the major findings were:

› **Convenience and safety** were the top barriers to bicycling.
› **People had a good grasp of societal expectations for safety** in dress and in riding behavior. All respondents answered that subjects wearing helmets and riding in dedicated bike paths were perceived as safer precisely because of those reasons.
› **People outside of Cascade Bicycle Club's typical member base** preferred photos of casual biking lifestyles, with bikes as part of the scenery rather than the main focus.
› **When picturing images of biking with kids**, people preferred photos of kids on their own bikes, rather than cargo bikes or trailers.
› **Images of people putting their bike on the bus** got low marks for convenience.
› **White people reported biking more often than people of color**, and men reported biking more often than women, with different barriers cited.

## Demographics make a difference in biking adoption, lifestyle and barriers



**Female: Purple,
Male: Blue**
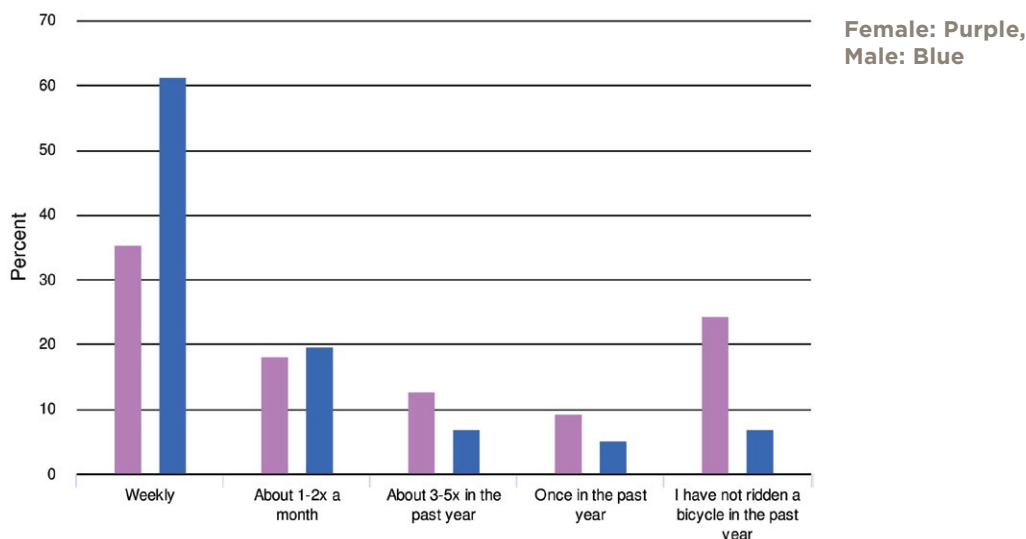
# Bicycle findings

Overall, men are riding more than women. Over 60 percent of men said that they ride weekly, while only 35 percent of women said the same. In the category of "I have not ridden a bicycle in the past year," 22 percent of women responded as such while just 8 percent of men responded the same.

Men were more likely to bike for fitness or bike commute, while women were more likely to bike for fun. This could also explain why women are not biking as often: recreation and fun time is generally seen as a more expendable activity in a busy lifestyle.

Safety and convenience were top concerns and barriers to biking more frequently. Women who cited safety concerns made up 34 percent of the total respondents; men who cited safety concerns made up just 16 percent. Women were also more likely to state their emotions and "I statements" when explaining their reasoning, for example:

> Fear
> I do not feel safe on the roads
> I do not trust the drivers around me
> I don't feel comfortable riding on the streets of Seattle
> I'm nervous around cars around here
> I'm still afraid of riding with cars in traffic, even on relatively quiet streets

Under convenience, both men and women stated that rainy weather, hills and time as barriers to biking. Women who cited convenience made up almost 40 percent of total respondents, while men who cited convenience made up 22 percent. Women were more likely to be more detailed and provide more varied reasons in explaining why biking was not convenient for them, bringing up such issues as:

> Lack of showers at workplace
> Travel between different locations throughout the day
> Needing to carry things
> Coordinating children's schedules and needs
> Planning in case of emergency
> Pet care

# Bicycle findings

Overall, white people are riding bikes more frequently than people of color; 47 percent of whites reported riding weekly, while 40 percent of people of color were riding weekly. The most noticeable disparity between reported barriers was under skill—12 percent of people of color noted that their bike riding skill was a barrier to riding, while 8 percent of white riders reported as such. When people of color noted other reasons for not biking, they included:

›  "Bike theft"
›  "Do not have a bike"
›  "Stamina"
›  "Bad history experience"
›  "Broken bicycle with minimal resources to fix it—time, money, motivation to do so"

When white survey respondents noted other reasons for not biking, they most commonly-cited reasons were:

›  "Hills and lack of strength"
›  "Injuries"
›  "Disabled or medical condition"
›  "Time and schedule"

This is not a surprise, given the systemic barriers to bike riding specifically among African American communities. For example, a 2017 intercept survey conducted by Rutgers University in New Jersey found that 21 percent of survey respondents reported being unfairly stopped by the police while bicycling (seven times the rate for females). Other key findings were that 43 percent of males were victims of bicycle theft and 56 percent of children did not feel safe from traffic in their neighborhood.[1]

People of color had a slightly lower level of awareness about Cascade Bicycle Club; they were 7 percent more likely to report that they had never heard of CBC. Overall, awareness of the organization was relatively high.

Note that due to the sample size and relatively small numbers of certain racial groups, we have combined African American, Hispanic/Latino, Asian American and multi-racial into one combined group to encompass people of color, so that numbers would be less likely to fall within margin of error in comparison to the "white only" group.

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1    http://njbikeped.org/wp-content/uploads/2016/09/Fear_A-Silent-Barrier-to-Bicycling-in-Black-and-Hispanic-Communities_Sept2016.pdf

# Bicycle findings



## People get the safety message loud and clear: dedicated bike paths and helmets are preferred

### "In which photo do the people biking look like they are most safe and why?"

It's clear that survey respondents know which images are deemed most safe, and why. The photo of the waterfront bike path was chosen by 65 percent of respondents as the most safe, even though the subject was not wearing a helmet, while the city bike lane garnered 34% of respondents. The reasons people cited for choosing the waterfront bike path included:

› Dedicated bike path
› No traffic
› No cars around
› Wide, protected bike lane dedicated to pedestrians and cyclists, away from motorized traffic.



### "Which photo most closely matches what you would like to wear while biking?"

When comparing helmeted riders vs. non-helmeted riders, the majority of respondents, 86 percent, selected the helmeted rider, stating the reason for this safety was the helmet. But when it came to thinking about what they themselves would wear while riding, members were more likely to favor the very sporty, high-tech biking gear—70 percent of members preferred this photo. Among non-members, photos of riders wearing their own clothes and a helmet were more popular—49 percent for the female photo. When shown pictures of men in high-tech biking outfits, women and people of color were less likely to pick this option, favoring instead more casual dress for men—with or without a helmet.

# Bicycle findings

## It's not all about bikes for most people





### "Which scenario looks the most fun to you?"

Interesting survey responses were uncovered when we tested more intangible notions, like sense of self, community and livability. In this photo it's clear that different communities and behaviors are associated with each photo. The first is the "weekend warrior" community; groups of men who are able to invest a lot of time and money into sports, fitness and competition. The second is more of a "casual" biker: two women chatting while walking their bikes. Fifty-six percent of people overall and 62 percent of women preferred the casual biking photo. On the flip side, almost 60 percent of men preferred the "weekend warriors" photo. This could also have to do with the subjects of the photos—people generally prefer to see themselves reflected in photos.

Not surprisingly, for people who reported that they ride weekly, they were 34 percent more likely to choose the weekend warriors photo as fun, while the opposite was true for the casual biking photo. Here it's worth noting that these photos portray two distinct bike "cultures" portrayed in these photos; the casual one is low-barrier and the sporty one rewards high-intensity competition. When setting a communications strategy, it's important to examine which groups have already been reached, and which haven't, and how to meet people where they are in terms of values and priorities.







### "Which photo most represents a livable community to you?"

These photos represent two instances in time: the photos of people riding past public transit infrastructure and on dedicated bike paths show people while biking, in well-planned bikeable communities. The photo of some kids sitting in a park, surrounded by their bikes, show people after their bike ride. The difference between these photos, besides this moment of time, is that the photo of the kids in the park portrays bikes as part of the scenery, rather than the focus of the photo. The values communicated in the park photo include friends, freedom and safety (unsupervised kids), and a beautiful green environment. Therefore, it was not a surprise to us that the park photo was most popular among non-members, with 42 percent of them selecting that photo, since these values are more mainstream than a love of bike-friendly planning.

# Bicycle findings

## Pictures of kids on their own bikes

### "Which photo best shows the way you would bike with children?"

Schedules and routines with children is one major reason that bicycling is seen as inconvenient or unsafe for those riders who are parents. So we wanted to test which bicycling setup was seen as most doable among survey respondents.

The photos compared various ways to ride with kids including a cargo bike, a pull-along trailer and kids riding their own bikes. The photo of kids riding their own bikes was the most popular among all respondents, and all genders. Men preferred this option by 15 points over women. The other bike with kid combinations—a trailer and a cargo bike reflect more modifications to the family lifestyle: buying a new piece of equipment or a new bike entirely (thus more of an investment). The photo with kids riding their own bikes also appears to be less physically challenging, for less-experienced and less-motivated riders.

## People see putting a bike on the bus as inconvenient

### "Which scenario looks most convenient for you?"

Smart integration of transportation modes just makes sense for a city like Seattle where hills and weather sometimes prevent people from riding their bikes for their full route. But it was clear that people much preferred seeing the mobility of biking vs. the nitty gritty grunt work of putting a bike on the bus. Eighty-four percent of people preferred the bike lane and bus stop photo. Getting bikes on buses is a reality that can be hard to avoid, but for audiences that you're trying to convince to bike for the first time or more often, this imagery would be a turnoff. Instead focus on the value and convenience of connection points and bike paths adjacent to transit stops.

# Communicating for diversity, equity & inclusion

› **Picture your audience: who's in your tent and who isn't?** Who needs to be and what do they care about? Diversifying your organization's members and advocates is more than just changing the color of the skin of who you count as members. It means speaking to the specific cultures, values, priorities and economic realities of the many diverse voices within in your local community.

› **One trend seen over and over again with survey respondents is that people prefer to see themselves reflected in the photos.** Representation is one major aspect of creating an inclusive imagery and communications strategy. But it's not the only one. In order to speak to, engage and motivate more than one type of person, you need to speak to their concerns, priorities, barriers and incentives.

› **People of color were more likely to assign these negative associations to bioswale imagery: expensive, exclusive and unnecessary.** If planning developments such as these in diverse neighborhoods, more care should be taken to bring in local voices to the design and planning of these efforts to ensure that these negative connotations don't take hold. In general, leaders in these communities would have a higher bar for social justice and community input than the participants in this survey.

› **Green infrastructure is viewed most favorably when positioned together with other projects that benefit communities.** Think about the types of neighborhood assets that have been out of reach for many lower income communities of color due to a history of underinvestment. Sidewalks, curbs, parks and transit are all greatly needed and will be viewed as important community benefits. And, pursuing projects like these tangibly benefit the daily lives of community members, in addition to improving water quality and bikeability.

# Image & messaging recommendations

> **Gather and utilize images of a wide representation of people and settings**—urban and suburban, casual and sporty, different races, genders and ages in order to engage and speak to those communities. Microtarget with your pictures.

> **Show the additional community values of these issues** whether that's bike riders next to transit stops, racks and bike lanes, or rain gardens next to cafes and sidewalks.

> **People are concerned about the affordability of cities in this region**. Infrastructure imagery without any clear community benefit can trigger that reaction.

> **People of color are just as likely, or more likely to have favorable opinions** about environmental messages and the green features of infrastructure. But acknowledge and work to remove the major barriers that inhibit specific behaviors, such as bicycling.

> **If you want to recruit more supporters of urban sustainability issues**, you won't meet much resistance but the key is *prioritizing* this issue when there are multiple competing priorities and a lot of anxiety about the cost of development and affordability. That's why it's important to show and emphasize the community benefits that come along for the ride, including street improvements, parks, green space, etc.

# Methodology

For this study, Resource Media deployed two online surveys, shared and promoted through Facebook to specific targeted demographics and geographic regions, in order to maximize respondents and ensure that the survey responses were not comprised solely of these organizations' members, which would skew the responses in the organizations' favor. The Cascade Bicycle Club test received 421 fully completed survey responses; the Washington Environmental Council survey received 637.

For each of the ads, Resource Media examined three audience sets to gauge which audience group would be most likely to click on the survey. Each survey also captured demographic information among those who completed the full survey. The Facebook ad offered a $100 "enter-to-win" incentive for anyone who completed the survey inputting their email at the end of the survey. These emails will not be reused by the organizations for their own communications purposes.

For Cascade Bicycle Club we targeted audiences in Tacoma, South Seattle and Tukwila. Cascade Bicycle Club also posted the survey on their own Facebook page, so that we could gather some member respondents and examine this data in comparison to non-members, as a "control" group. When examining the click-through rates of each audience group, residents of South Seattle were more likely to click on the survey. The completion rate for this survey was 86.8 percent and was deployed during June-August of 2017.

For WEC, the ads targeted Facebook users in South King County, East King County and Tacoma, with grouped target audiences into three interest groups: users Facebook had identified as interested in walking, community issues, local history, community or local news; gardening or environment in general. We wanted to recruit respondents who had some interest in this issue, but not necessarily a background in stormwater and green infrastructure. The demographic of women aged 55 and up performed at the highest rate—they were 16 percent of the audience and were responsible for 28 percent of the completed surveys. The completion rate for this survey was 68.6 percent and was deployed during August-September of 2017.

# About Resource Media

Resource Media is a non-profit communications firm that works solely in support of social change to create a more just and sustainable world. We have offices in 8 cities across the US, including Seattle and Portland. Image testing and visual storytelling strategies are among our core service offerings. Last year we captured our experience with image testing in the report "What They See Matters."

# Acknowledgements