01

One Climate Future
IN SUMMARY

PORTLAND AND SOUTH PORTLAND ARE WORKING TOGETHER TO CREATE A PROSPEROUS AND INCLUSIVE LOW-CARBON FUTURE.

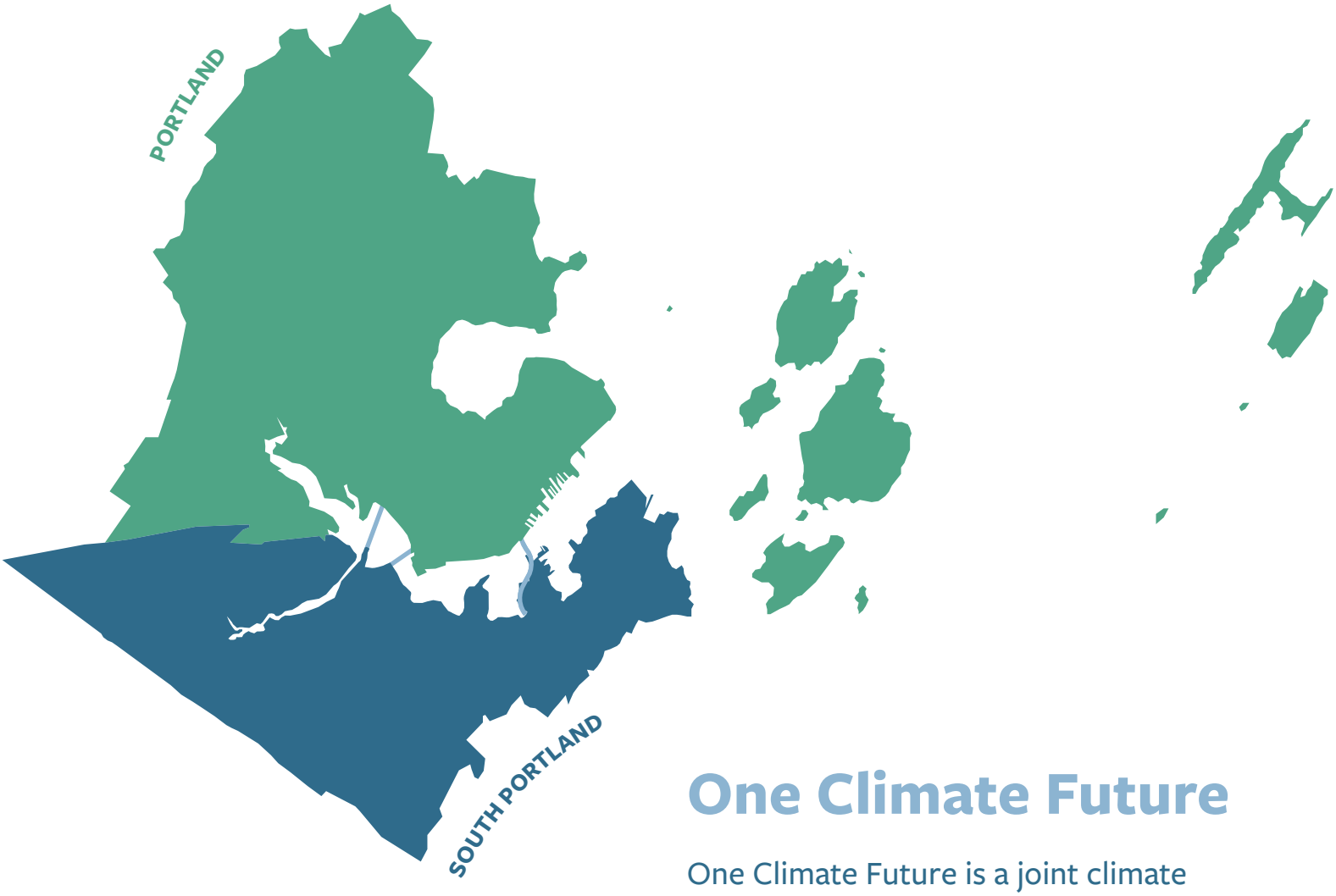
CASCO BAY BRIDGE, PORTLAND AND SOUTH PORTLAND • Photo by City of South Portland

The communities of Portland and South Portland have set our sights on a livable future. This future is powered by clean, renewable energy. It opens doors to economic opportunity. In this future we continuously innovate, working in partnership with natural systems, replenishing resources, and creating new potential from waste. Clean air, clean water, and healthy food are a given.

In this livable future, we create buildings and neighborhoods that maximize our health and happiness and minimize our carbon footprint. We create stronger connections—on the sidewalks, in the parks, on the bus, on the ferry—linking people to people, places, and opportunity.

We invest in people and communities. In this future, we equip our communities with the resources to adapt to change and to create the quality of life we each envision. We partner, seeking the insight of people with direct experience and diverse knowledges. Together, we create a prosperous future for everyone, now and for generations to come.

This is One Climate Future.



One Climate Future

One Climate Future is a joint climate action and adaptation plan for the Cities of Portland and South Portland. We are working together to be thriving, vibrant, and inclusive communities now and in the future.

SUMNER PARK OVERLOOK • Photo by Ian Johnson

A joint plan for climate action.

Portland and South Portland residents, businesses, organizations, and city leaders are seeing, feeling, and anticipating the growing effects of climate change—and calling for accelerated action. Along our coast, we are observing rising sea levels and the warming of the Gulf of Maine at increasing rates. We can also track how our current use of fossil fuels will continue to alter the climate, with further harm to ecosystems, our economy, and neighborhoods. Most importantly, we can envision a future for our cities that is both low-carbon and prosperous, and we know that we have the tools, solutions, and will within our cities to create this future.

Together, the communities of Portland and South Portland have created One Climate Future, a climate action and adaptation plan that charts a course towards a low-carbon, thriving, and inclusive future. This plan builds on the momentum of past and ongoing efforts to improve the sustainability and resilience of our cities, and lays out next steps for meeting aggressive carbon reduction goals, growing a circular economy, building community resilience, and creating more just and equitable cities.

PORTLAND AND SOUTH PORTLAND'S

CLIMATE GOALS

Leading up to the launch of One Climate Future, the Cities of Portland and South Portland committed to a set of climate goals to reduce greenhouse gas emissions and to prepare our cities for the effects of climate change. One Climate Future charts a course to meeting these goals.

80% x 2050
COMMUNITY-WIDE

Portland and South Portland will reduce community-wide greenhouse gas emissions 80% from 2017 baseline levels by 2050.

100% x 2040
MUNICIPAL

Portland and South Portland will run all municipal operations on 100% clean renewable energy by 2040.

CLIMATE RESILIENCE

Portland and South Portland will build the resilience of our neighborhoods, infrastructure, and ecosystems to the impacts of climate change.

CLIMATE EMERGENCY

Driven by youth climate leadership, Portland and South Portland declared a climate emergency in November 2019. Through this declaration, we reaffirmed our commitment to a rapid and equitable transition to clean renewable energy, and to **accelerating greenhouse gas emissions reductions between now and 2030.**

LIBERTY SHIP MEMORIAL • Photo by Paul VanDerWerf

One Climate Future is a partnership.

Portland and South Portland have committed to tackling climate change together. Our cities share invaluable resources—stretches of forests, nesting grounds along the Fore River, and the abundance of Casco Bay. We share communities, exchanging people through a daily ebb and flow as our residents commute to work in each other's cities. Likewise, climate change is not confined to jurisdictional boundaries; our cities share risks created by climate hazards and we share many of the same challenges in reducing greenhouse gas emissions. Importantly, our cities' leadership also share a commitment to addressing these challenges head-on.

It was only natural that we also share solutions. One Climate Future was crafted by the combined knowledge, ideas, and experience of city staff, organizations, businesses, and residents across our two communities. We developed joint approaches, with opportunities to take advantage of economies of scale and to use resources wisely. By continuing to work together in implementation, we can magnify our impact, creating a more regional response to climate change.

At the same time, One Climate Future is much more than a partnership between two municipalities. Nearly every action in the plan calls on partnerships—with our community organizations, development sector, property owners and renters, food growers and producers, and working waterfronts, for example—to identify the best ways to implement each action. The strategies likewise call on regional partnerships to build out a robust and integrated public transportation system, develop more efficient freight transit, and link regional bike networks. Finally, the strategies depend on statewide coordination: meeting our renewable energy targets statewide will be integral to achieving our Cities' climate goals. We will continue to advocate for and support state policy across energy, buildings, transportation, and waste sectors that will enable emissions reductions for our cities, as well as statewide.

One Climate Future is a transformation.

Portland and South Portland have committed to transitioning all municipal operations to clean energy sources by 2040, and to reducing community-wide greenhouse gas emissions 80% below 2017 levels by 2050. Driven by the leadership of the youth in our cities and globally, we have committed to accelerate this transition, aiming to achieve as much greenhouse gas emissions savings as possible within a 2030 timeframe.

These goals require bold changes: we know we must transform how we power our cities, rethink the way we design buildings, re-envision how we travel, and transition to a more circular economy. As a starting point, powering homes, offices, cars, buses, ferries (and so much more) with renewable electricity requires that we work with regional and state partners to reform how utilities currently operate, build out renewable energy sources at a much larger scale, and significantly expand the capacity of the grid—radically transforming our current energy systems and infrastructure.

One Climate Future likewise sets bold goals in other sectors—aiming for "zero waste" through smarter production, consumption, and material reuse, and committing to improving the safety of our streets and traffic patterns until we have zero pedestrian and bicyclist fatalities. With a vision for more walkable, transit-oriented neighborhoods, we aim for a seven-fold increase in the size of our bus fleets to create a more robust and integrated public transit system. By meeting our 2050 goals, 40% of all trips will be taken by walking, biking, and public transit—over three times the number of trips taken by these modes today.

But perhaps just as importantly, we will also transform many of our processes. We will use climate data to inform changes to our city zoning, and resilience metrics to monitor and adapt how we manage our stormwater, transportation, energy, and open space networks. We will focus on job training, skill building, and knowledge sharing to improve how we build buildings and expand regenerative industries. We will also continue to focus on how processes play a role in advancing equity in our cities, ensuring that decisions are informed by the people who will be most affected, and by focusing on community ownership of projects to create more just and equitable cities.

STATE-LEVEL ACTIONS

Several recent state-level actions are particularly significant to the work in our cities to address climate change.

MAINE RPS

In June 2019, Maine passed a new renewable portfolio standard (RPS). Electricity in the state will come from **80% renewable sources by 2030, and 100% by 2050**.

80% x 2050
STATE-WIDE

At the same time, the State committed to reducing greenhouse gas emissions 80% from 1990 levels by 2050.

MAINE CLIMATE COUNCIL

Maine also launched the Maine Climate Council to develop a state climate action plan. City staff from Portland and South Portland participate in the working groups.

BAYSIDE PLAYGROUND • Photo by Corey Templeton

One Climate Future is achievable.

While One Climate Future is ambitious, it is also achievable. The actions in this plan identify steps that can be implemented today, based on current technology, policy, and funding streams. They draw on successful models in other cities, while catering to our strengths, resources, and context here in Portland and South Portland, and in Maine. For actions that require new state policies, coordination with regional partnerships, or longer-term research and implementation, One Climate Future identifies the initial incremental steps that will advance those bigger efforts.

For such an ambitious shared vision to come to fruition, the approach must be practical. The transition to a cleaner, more resilient future cannot be funded entirely by local property tax payers. Such a method would be both unsustainable and inequitable. Implementing One Climate Future will require innovative financing mechanisms and strategic investments by the public and private sectors—creative approaches that the Cities of Portland and South Portland have already begun to use for sustainability investments. We have used power purchase agreements for renewable energy, lease-purchase contracts for lighting infrastructure, and a public-private partnership to access federal money for a large-scale dredging project in Portland Harbor. The State of Maine is currently considering legislation to help businesses and municipalities access private capital (C-PACE) as well as a green bank that could help finance infrastructure projects. Efficiency Maine already provides significant funding to support energy efficiency, and One Climate Future recommends new state policies that could generate additional sources of revenue to support their programs.

Furthermore, we have a head start on many of the actions in this plan. Portland and South Portland have adopted municipal climate action plans, enacted benchmarking ordinances to increase building energy efficiency, and implemented aggressive waste reduction and recycling programs. We have built large-scale solar arrays (with more solar procurement in the works!), and have deployed electric vehicles and charging infrastructure. We have run workshops and planning processes on adapting to sea level rise. These initiatives build on the significant efforts of our youth, residents, businesses, and organizations who are leading campaigns for school rooftop solar, building energy efficient buildings, and finding innovative ways to produce less waste. All of these initiatives provide the groundwork for the steps ahead.

Implications of the COVID-19 pandemic.

Thirteen months into the One Climate Future planning process, the novel coronavirus (COVID-19) pandemic hit the United States. The ramifications have been severe: businesses closed for extended periods of time to curb the spread of the virus, and workers across nearly all sectors have been furloughed or laid off. Even as Maine has progressively reopened, the dearth of tourism and the precautions around face-to-face interaction have kept a rebound in the economy at bay.

The pandemic has therefore become a potent test for our community resilience—challenging us to think on our feet and employ a lot of Maine ingenuity. Our cities' hospitals and health centers have worked overtime, ramping up protocols to serve COVID-19 patients and keep staff and other patients safe. Businesses have shifted to new online service models; restaurants that had been purely dine-in establishments have started offering takeout. Portland closed down certain streets to cars to allow for outdoor eating and social distancing, and community centers, restaurants, shelters, and schools across both cities have stepped up in new ways to offer free meals.

At the same time, COVID-19 has both highlighted and exacerbated the cracks in our systems. The number of hungry families has escalated, while we have seen an enormous amount of food loss regionally as procurement chains have been put on hold. Schools shifted quickly to online learning, a process that has amplified the sharp disparities between families who have internet access at home and those who don't. COVID-19 has thus further exposed vulnerabilities that hinder the capacity of communities to respond, adapt, and thrive—regardless of whether we are facing a pandemic or climate change.

The direct experiences of Portland and South Portland residents during the pandemic will therefore be one of the most important sources of insight as we collectively build community resilience through the implementation of One Climate Future. These insights will be core to shaping how we support business resilience (see action CR 3.3); build back the strength of our workforce (see action CR 3.2); and enhance the resilience of our food systems (see action CR 2.3). They will also be foundational in how we identify ways to support the existing solutions in our communities, and particularly those that have emerged in response to elevated need (see action CR 2.5).

There will be a continuous need to accommodate change and remain flexible with implementation. And yet, this uncertain context makes the work of One Climate Future all the more meaningful, critical, and timely.

While we first and foremost seek to restore our economic and public health, there may also be lessons drawn from the drastic shift in status quo that could carry forward. Bringing restaurant tables into the streets to limit the transference of the virus has created a pilot for activating the streetscape, an approach to encourage walking over vehicle use. Companies and organizations proved the possibility of teleworking, which if sustained, could significantly cut greenhouse gas emissions from commuting (see action TLU 1.5). Given the option to work remotely, we may see growth in our cities' populations as employees from other states move to Portland and South Portland. We want to use these changes in our favor.

Lastly, we recognize that One Climate Future will be launched into the world at a very uncertain time for our cities—for employment, for financial resources, and for the lives of our residents. There will be a continuous need to accommodate change and remain flexible as we move forward with implementation. And yet, this uncertain context makes the work of One Climate Future all the more meaningful, critical, and timely. Now more than ever we will want to use One Climate Future to build our community resilience, to bolster the solutions in our communities that are investing in our people and their health, and to be proactive about improving the ways that we deal with uncertainty to build the safe, healthy, and vibrant future we want.

One Climate Future is for everyone.

Hundreds of people provided input in the development of this plan, and that was essential: the implications of climate change are diverse and widespread, affecting our infrastructure, economies, ecosystems, and community health. We also currently use fossil fuels in nearly all areas of our daily lives. To address these integrated challenges we needed strategies that create systems-level change—and we needed insight across sectors, city departments, and communities to collectively develop those solutions.

For the same reason, implementing One Climate Future will involve everyone. The actions we will take are not housed within one city department, but rather integrate resilience and sustainability thinking across city planning and operations. The strategies for advancing building performance apply to building owners, homeowners, renters, and property managers, across all building types. Businesses across sectors play a role in new approaches to employee commuting, alternatives to single-use plastics, and improving business resilience. And even more broadly, the actions touch nearly everyone's daily lives, shaping housing and transportation affordability, influencing our access to healthy food, and improving the cleanness of the air we breathe.

The key to the success of One Climate Future will therefore come from making climate action increasingly affordable, accessible, and collaborative. The partnerships, funding mechanisms, and participatory processes for further shaping the development and implementation of strategies are some of the most important attributes of the One Climate Future plan. We will achieve the greatest collective success as we involve more people and benefit more people. It is with the combined will, experience, and vision of our communities that we can create vibrant, thriving, and inclusive low-carbon cities.

Photo credits (left to right, top to bottom): Sue Mooney; Kenneth Zirkel; John Spritz; Maggie Burns; John Phelan; Denise Michaud; Paul VanDerWerf; Corey Templeton; Denise Michaud; Denise Michaud; Bd2 Media; Denise Michaud; Formula One











WHAT IS OUR PLAN for reaching our One Climate Future goals?

IT INCLUDES SIX BIG MOVES.

Portland and South Portland's
SIX BIG MOVES

One Climate Future includes 68 strategies across four focus areas for how our two cities will address climate change. These "six big moves" encapsulate the plan, summarizing how we—the communities of Portland and South Portland—will create thriving, inclusive, low-carbon cities over the next thirty years.

1. Build better buildings.

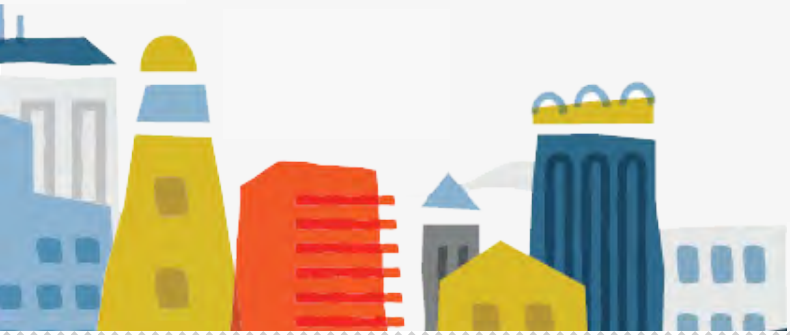
With the help of new policies, we will improve the way we design, build, and retrofit our buildings—creating spaces to live and work that are more energy efficient, comfortable, healthier, resilient to extreme weather, and powered by renewable energy. The goal is to build smarter, not more expensively, and to ensure everyone can benefit from climate-ready homes. We will work to expand financial incentives to make retrofits more affordable, encourage upgrades to rental properties to lower renters' utility bills, and continue to expand our cities' low-carbon and resilient affordable housing.

Key milestone: All new buildings to be net-zero energy starting in 2032.

Looking to read more?

Check out these strategies, in particular:

BE 2.1 Energy Stretch Code
BE 3.1 Energy Benchmarking
BE 3.2 Building Performance Standards
BE 3.3 Energy Efficiency Spending
BE 3.7 Energy Efficient Rental Housing
CR 1.1 Resilient New Development
CR 1.2 Resilient Existing Buildings
CR 2.1 Housing Affordability and Resilience



2.

Connect people to places, to opportunity.

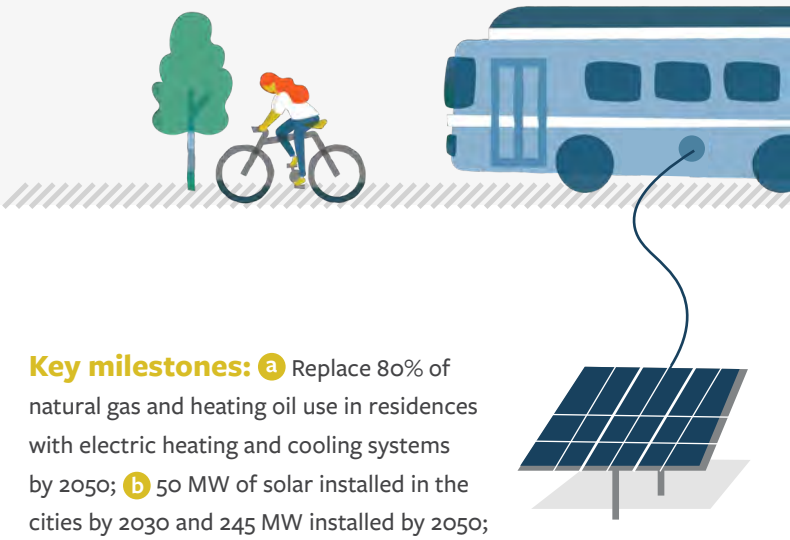
We will create connected neighborhoods—where it is easy to push a stroller to the park, roll a wheelchair to the grocery store, ride your bike to school, and take the bus to a new job opportunity. To reach this goal, we will implement safer street designs, build out our network of bikeways, and radically expand our public transit system, while making travel on transit more accessible and seamless. Supported by land use policy, we will cluster a mix of housing and businesses near transit, and increase housing in the cities to bring people closer to jobs. And we will ensure that the people who most rely on public transit systems, due to income, disability, or otherwise, are part of the decision-making teams connecting our homes, businesses, open spaces, and community resources.

Key milestones: (a) **By 2035, 26% of trips in the cities will use public transit or active transportation (up from 12% today).** (b) **Housing stock meets workforce demand within the cities by 2035.**

Looking to read more?

Check out these strategies, in particular:

TLU 1.1 Public Transit Networks
TLU 1.2 Inclusive Transit-Oriented Development
TLU 1.3 Bike Accessibility
TLU 1.4 Complete Streets
TLU 1.5 Employer Transit Partnerships
TLU 1.7 Land Use for a Smaller Carbon Footprint
CR 2.4 Transportation Access



3.

Power everything* with clean renewable electricity.

We will power everything possible with electricity—including cars, buses, ferries, as well as building heating systems. Rebates, tax incentives, and federal funding will help us reach this goal. The proportion of electricity that comes from renewable sources in Maine will ramp up to 100% by 2050, driven by the new renewable portfolio standard (RPS). The RPS is vital to transforming Maine's energy sector and to reaching our cities' carbon reduction goals. We will continue to advocate for the timely implementation of the state RPS and lead by example: we will meet all municipal electricity demand with renewable energy by 2032, and we will launch a solar proliferation strategy with a focus on community solar to expand access to the benefits of clean energy.

Key milestones: (a) Replace 80% of natural gas and heating oil use in residences with electric heating and cooling systems by 2050; (b) 50 MW of solar installed in the cities by 2030 and 245 MW installed by 2050; (c) All-electric Greater Portland METRO and South Portland Bus Service fleets by 2040.

Looking to read more?

Check out these strategies, in particular:

BE 1.1 Renewable Municipal Electricity
BE 3.4 Renewable Heating and Cooling
BE 3.6 Solar Proliferation
BE 5.1 Renewable Portfolio Standard & Community-Scale Purchasing
BE 5.3 Utility Regulatory Reform to Support Electrification
TLU 2.1 - 2.7 (full section) Vehicle Electrification
TLU 3.4 Shore Power

* Ok, almost everything. Some operations—such as certain industrial processes or heavy-duty vehicles—are currently difficult to power by electricity. Switching to biofuels is another low-carbon alternative that will have increasing viability between now and 2050.

4.

Grow a circular economy.

The old unsustainable model for economic growth was "take resources, make products, and discard waste." We will innovate: we will extend the useful lifespan of materials and products, encouraging alternatives to single-use plastics and growing the sharing economy. We will find new value in waste, using organic waste to improve soil health, expanding the reuse marketplace for building materials, and taking advantage of "by-product synergies" where one industrial waste stream serves as the source material to another. We will further invest in the people and skillsets to lead growth in clean energy and other regenerative industries. Through a circular economy, we will build and replenish not only our economic capital, but our natural and community capital, too.

Key milestones: **a** **Reduce organics in waste stream 70% by 2030.** **b** **Achieve "zero waste" (90% waste diverted from waste stream) by 2050.**

Looking to read more?

Check out these strategies, in particular:

WR 1.2 Single Stream Recycling
WR 1.3 Food Waste Reduction & Organics Recycling
WR 1.4 Single-Use Plastics
WR 1.5 Circular Sharing Economy
WR 2.1 Construction and Demolition Waste
WR 2.2 Industrial Waste
WR 2.4 Sustainable Purchasing Policy
CR 3.2 Workforce for a Resilient Economy
CR 3.3 Climate-Ready Industries and Innovation

5.

Nourish ecosystems, which nourish us.

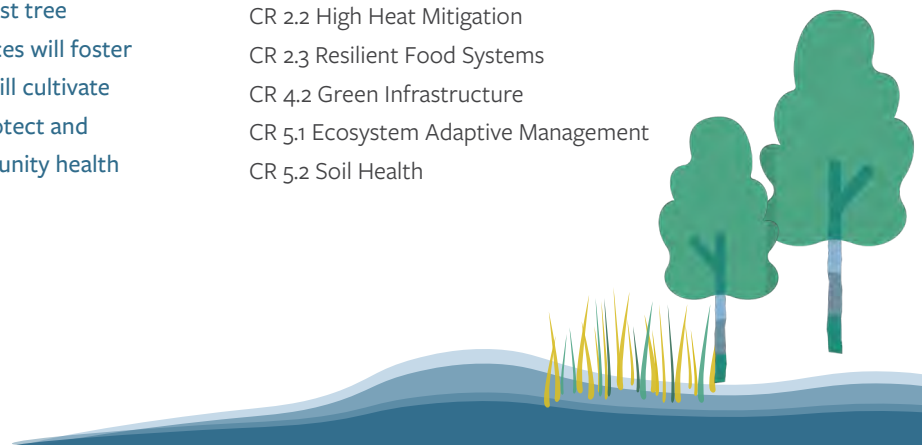
Our natural resources, on land and at sea, are our biggest assets in facing climate change. We will continue to protect open spaces and coastal waters to ensure our ecosystems can adapt and thrive despite new pests, invasive species, and climate conditions. In the process, we will increase the capacity of our soils, forests, and wetlands to sequester and store carbon, and we will expand tidal wetlands and living shorelines to buffer our neighborhoods against storm surge. We will capture and store more stormwater in green infrastructure systems, in turn reducing the effects of coastal acidification to support marine industries. A more robust tree canopy will mitigate extreme heat, protected open spaces will foster community, and healthy soils and marine ecosystems will cultivate more resilient food systems. In other words, we will protect and nourish ecosystem health, economic health, and community health in tandem.

Key milestones: **a** **Convert 15% of the cities' impervious surfaces to green infrastructure by 2050.** **b** **Ensure that all residents live within ½ mile of a park or open space by 2035.**

Looking to read more?

Check out these strategies, in particular:

CR 1.3 Resilient Open Space Planning
CR 2.2 High Heat Mitigation
CR 2.3 Resilient Food Systems
CR 4.2 Green Infrastructure
CR 5.1 Ecosystem Adaptive Management
CR 5.2 Soil Health



6.

Build collaborative capacity to create this future.

We will create new systems for working together, locally, regionally, and statewide. We will share data—improving access to data, crowdsourcing data, and generating new data—to make decisions about flood risk, track progress on energy efficiency, and improve upon our approaches to transportation demand management, for example. By sharing processes, we will create more integrated transit systems, take advantage of economies of scale in electricity procurement, and magnify the impact of our efforts. And we will share resources, equipping the people in our communities who are rich with experiential knowledge and low on resources to lead these solutions.

Key milestones: **a** **Create partnerships and design processes that cultivate collaboration and foster community ownership starting today.** **b** **Award resilience grants to expand the capacity of local organizations, neighborhood associations, and community groups by 2025.**

Looking to read more?

Check out these strategies, in particular:

BE 2.5 Leadership and Education
BE 5.2 Utility Data Access Reform
TLU 1.2 Public Transit Networks
TLU 1.4 Complete Streets
TLU 1.5 Employer Transit Partnerships
TLU 3.2 Freight Transit Partnerships
CR 2.2 High Heat Mitigation
CR 2.3 Resilient Food Systems
CR 2.4 Transportation Access
CR 2.5 Neighborhood Resources

BAYSIDE TRAIL • Photo by Corey Templeton