



Subject South Park Sea Level Rise Adaptation Vision Summary

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1. Purpose and Introduction

Significant portions of the South Park neighborhood in Seattle are highly at risk of increased flooding due to sea level rise (SLR). This memorandum summarizes how the City of Seattle's (City's) policies and understanding of community interests will shape a vision for adapting to SLR in South Park, and discusses the following:

- Context for why SLR-related flood risk management is needed in South Park (Section 2)
- Current SLR projections and the community resilience risks specific to South Park (Section 3)
- Prior work completed related to SLR flood risk mitigation in Seattle and South Park (Section 4)
- Elements of the City's vision for addressing SLR in South Park (Section 5)
- Next steps to continue advancing SLR flood protection (Section 6)

The information and vision presented in this memorandum represents the starting point for the City's vision in addressing SLR. Next steps will involve considerable outreach and engagement with stakeholders and the community, which will refine this vision. The vision presented herein represents the starting point for those engagement discussions.

2. Context and the South Park Neighborhood

The South Park neighborhood in Seattle is both a vibrant and vulnerable community that serves as a major economic engine in the city—vibrant for its rich and proud culture and heritage, industrial economy, and vulnerable in terms of its decades of exposure to pollution and future risk from climate change impacts, particularly SLR. A plan view of the South Park neighborhood can be found [here](#) – the prior page at the hyperlink shows a vicinity map (City of Seattle, 2018).

The Lower Duwamish Valley, where the South Park neighborhood is located, holds the ancestral lands of the Duwamish Tribe, whose people have lived along the riverbanks since time immemorial. When European Americans first arrived in 1851, 90 longhouses were in the valley, spread among 17 villages (City of Seattle, 2020).

In the early 1900s, the meandering Duwamish River was dredged and straightened to become a navigable waterway, shortening the river's path from 15 to 5.5 miles. This transformed mudflats and floodplains into agricultural land and, later, into industrial lands for maritime and manufacturing businesses.

As a result of 20th-century industrialization, the lower 5 miles of the Duwamish River have been heavily contaminated and were declared a Superfund site by the United States Environmental Protection Agency. Nevertheless, the river remains critical habitat for thousands of spawning salmon and trout each year.

Today, the working waterfront along the Lower Duwamish River supports the Port of Seattle and the Duwamish Manufacturing and Industrial Center (MIC), Seattle's largest manufacturing and industrial area. The Duwamish MIC, spanning from Elliott Bay to the southern city limits including Harbor Island and the

neighborhoods of SoDo, Georgetown, and South Park, supports more than 42,000 industrial jobs, representing 40 percent of citywide industrial employment (PSRC 2014).

In 2016, the City of Seattle launched the Duwamish Valley Program, which advances environmental justice and equitable development by coordinating and aligning investments in projects and programs to meet the needs and aspirations of those most affected by racial inequities and health disparities. A key milestone of this program was the publication of the *Duwamish Valley Action Plan* (Action Plan; City of Seattle 2018). The Action Plan identified climate change impacts and SLR as some of the most substantial long-term challenges facing South Park.

Projections for SLR indicate that the northern industrial area of the South Park neighborhood is highly at risk for increased flooding (Section 3 discusses these projections and their potential impacts). Given that the South Park neighborhood contains some of Seattle’s lowest-lying land, and the neighborhood already experiences episodic flooding due to extreme high tides (USACE 2017) as illustrated in Figure 1, the SLR projections pose a major threat to the health, safety, and well-being of South Park residents and businesses.

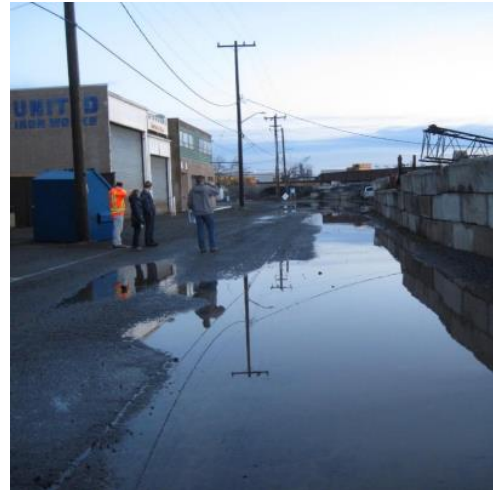


Figure 3. Dry-weather king tide flooding in South park

3. Current Conditions and Future Risks

Sea level along Seattle's Puget Sound shoreline has risen 8 inches since 1900, and current data projects accelerating SLR during this century (Mauger et al. 2015). Table 1 and Figure 2 summarize the SLR projections that the City is planning for in South Park.

In addition to SLR, climate change will bring more frequent and more intense storm events. The resulting storm surge associated with these events, plus rising sea levels, increases the risk for severe episodic flooding. In South Park these higher sea levels and storm surge will threaten about 210 private properties with flooding during the 100-year storm by 2070 (USACE, 2017).

Table 1. Sea Level Rise Projections for the City of Seattle

Condition	2020	2050		2100	
	Water Level (ft) ¹	Projected SLR (ft) ²	Water Level (ft) ^{1,3}	Projected SLR (ft) ²	Water Level (ft) ^{1,3}
Daily high tide	0	1	1	3	3
Monthly high tide	1	1	2	3	4
Annual high tide	2	1	3	3	5
100-year storm surge ⁴	3	1	4	3	6

¹ Water level above the average daily high tide (MHHW) in 2020.

² SLR is relative to a 1991 through 2009 average, based on 50-percent probability SLR values for 2050 and 17-percent probability for 2100, using regional climate model 8.5 greenhouse gas model. (Miller et al. 2018).

³ Calculated as 2020 water level plus projected SLR for the given future year.

⁴ Current projections do not include a change in storm surge as a result of SLR.

ft = feet

MHHW = mean higher high water

SLR = sea level rise

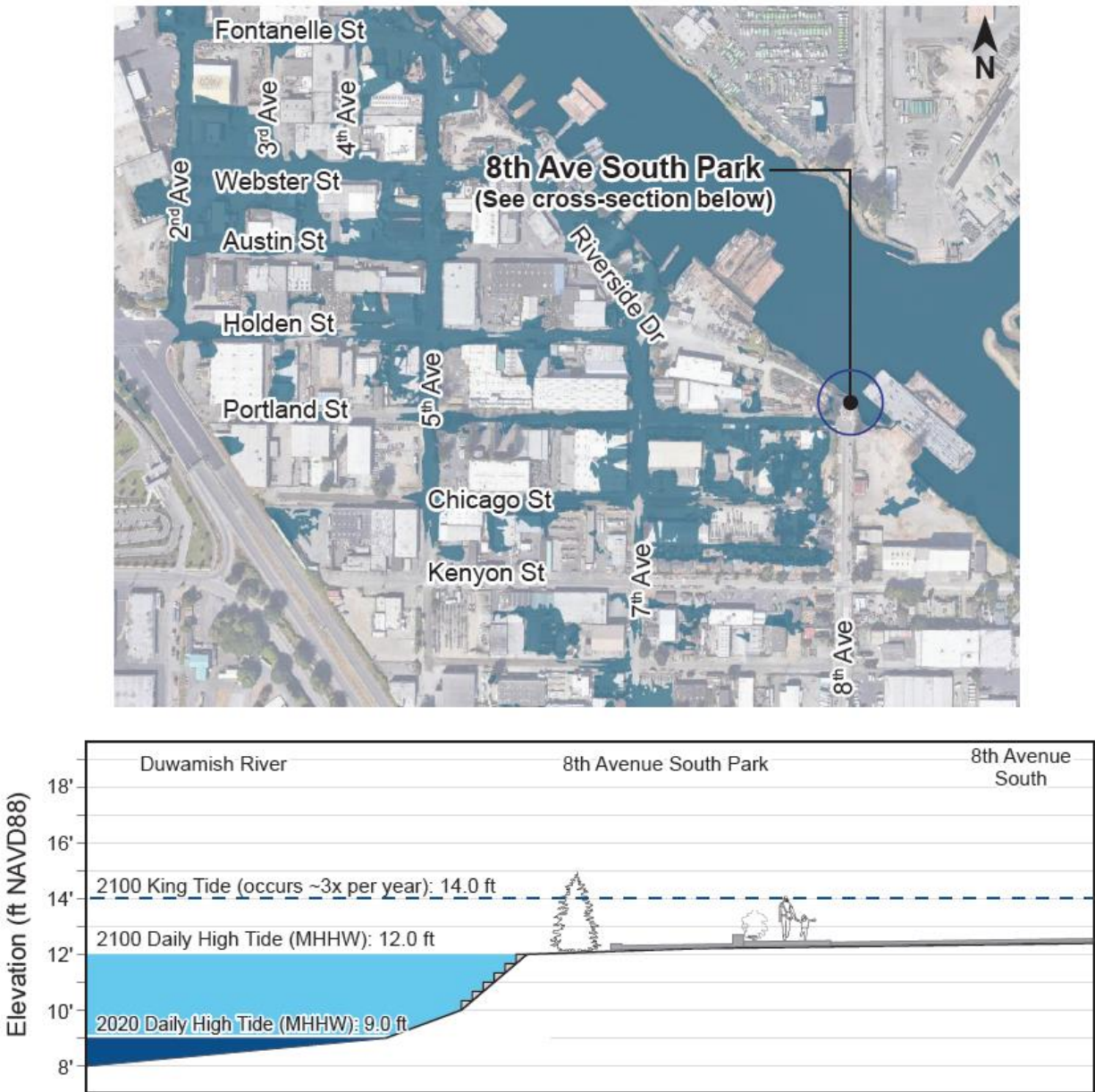


Figure 2. Plan View and Cross Section at the 8th Ave South Park Showing SLR Projections for the City of Seattle

Source; Miller et al., 2018.

Notes: A “king tide” is an annual high tide that occurs approximately three times per year.

MHHW = mean higher high water; NAVD88= North American Vertical Datum of 1988

4. Prior Work

Given that stormwater and king tide flooding is already an issue in South Park, the City has already started taking actions, including the following projects, to address current and anticipated future flooding in the neighborhood:

- **South Park Pump Station**¹ will pump stormwater into the Duwamish River during periods of time where the existing stormwater trunk is backed up with high tide water.
- **South Park Roadway and Drainage Improvements**² will address a portion of the localized flooding issues and convey stormwater to the South Park Pump Station.
- **South Park Water Quality Facility**³ will treat stormwater runoff collected from the neighborhood prior to discharging flows to the Duwamish River.

These projects represent a \$105 million investment in public infrastructure and will address stormwater-related flooding in the neighborhood. The stormwater system is currently unable to convey flows off of streets and private property, either because the needed infrastructure is missing, or because the pipes have insufficient capacity. These projects do not address flooding related to water overtopping the banks of the Duwamish River due to SLR.

To address hazards, shocks, climate change impacts, and SLR, the City has prepared several overarching plans, along with a South Park-specific evaluation:

- **Preparing for Climate Change** (City of Seattle 2017) summarizes climate change and SLR impacts, outlines the City's equity-centered approach to adapting to them, and identifies sector-specific actions to take (for example, transportation, parks, electrical, and drainage). This plan illustrates how the City will balance multiple objectives while preparing for climate change impacts.
- **2015 – 2021 All-Hazards Mitigation Plan** (City of Seattle 2016) presents the City's plan for addressing the various hazards that face the City, including flooding. This plan is mandated by the Federal Emergency Management Agency (FEMA) and prioritizes reducing loss of life and property by minimizing the impact of disasters. The *2015 – 2021 All-Hazards Mitigation Plan* does not explicitly discuss mitigation actions addressing climate change impacts or SLR; future updates to this plan will include these elements.
- **Preliminary Flood Risk Management Study for the Duwamish River at South Park** (USACE 2017) was prepared in partnership with the U.S. Army Corps of Engineers (USACE) and Seattle Public Utilities (SPU), investigated tidal flooding risk in South Park, and evaluated preliminary alternatives to address the risk.

¹ More information is at <http://www.seattle.gov/utilities/neighborhood-projects/south-park-pump-station>.

² More information is at <https://www.seattle.gov/utilities/neighborhood-projects/south-park-drainage>.

³ More information is at <http://www.seattle.gov/utilities/neighborhood-projects/south-park-water-quality>.

5. City Strategy to Addressing Sea Level Rise in South Park

The plans described above provide important context for advancing a vision to address SLR in South Park – they provide a framework for adapting to climate change and SLR, responding to emergencies, and a community-centered direction and vision for the South Park neighborhood.

In addition, the USACE also conducted baseline technical analyses and evaluated several alternatives for providing flood protection in South Park, documented in the *Preliminary Flood Risk Management Study for the Duwamish River at South Park* (USACE 2017).

Most importantly, the City has established that SLR mitigation in South Park must center around an anti-displacement strategy. As agencies and private interests invest in the neighborhood and climate adaptation, existing businesses and residents will face economic displacement pressures. The City’s strategy will prioritize efforts that help the incumbent communities thrive.

The next steps for addressing the risks of SLR in South Park were to assess the flood protection alternatives presented in the 2017 USACE report and advance a draft City vision for the neighborhood to address climate change, SLR, and hazard mitigation. This effort included refining the alternatives for physical SLR protection infrastructure, along with identifying potential efforts that focus on building overall community resilience through holistic infrastructure and program investments (see sidebar).

The Language of Resilience

Resilience is a word heard often today, yet definitions and personal impressions vary. The Rockefeller Foundation 100 Resilient Cities global program defined resilience as the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.

In Seattle, resilience is the ability of communities to use their assets to strengthen the health of individuals and organizations and improve the community’s capacity to withstand, adapt to, and recover from adversity. Therefore, the concepts presented here are not only physical engineered interventions that reduce risk, but they are also policies and plans for people – for the community and for internal city stakeholders that provide critical services and programs in South Park.

*Additionally, for this report **climate adaptation** is adjusting to the actual or expected climate and its effects. And **hazard** mitigation is taking action to reduce risk from all hazards (or shocks and stresses). Hazard mitigation is language commonly used among emergency managers.*

To develop the draft City vision for SLR mitigation in South Park, the City and consultant team, led by SPU and the City’s Office of Planning and Community Development, took the following four steps:

1. Researched case studies of how other similar communities have addressed SLR,
2. Convened a City-family stakeholder group to guide the development of SLR mitigation in South Park,
3. Established a draft integrated strategy for addressing SLR in South Park, and
4. Outlined a series of next steps to begin advancing and vetting this strategy.

The following subsections summarize these steps.

5.1 Case Studies

Seattle is not alone in experiencing extreme weather today and SLR over time. A sample of the following communities was reviewed to gain better insight into adaptation approaches:

- [Rebuild by Designs - Hunts Point Lifelines, Bronx, New York](#)
- [Hunter’s Point, Queens, NY](#)
- [NOLA Gentilly Resilience District](#)
- [C 40 Case Studies:](#)

- [Melbourne](#)
- [Hong Kong](#)
- [Bogota](#)
- [Virginia Beach Sea Level Wise](#)
- [Miami Beach Rising Above](#)
- [Resilient Oakland](#)
- [New York City Urban Waterfront Adaptive Strategies](#)
- [Olympia Sea Level Rise response Plan](#)

While no two communities are alike, the following themes emerged with cities that are proactively adapting to climate change:

- **A holistic and inter-disciplinary approach**—Engineered climate adaptation intervention alone cannot single-handedly ward off rising seas threatening communities. Urban planners, housing professionals, public utilities, and economic development specialists also play a role in updating antiquated regulations and programs that could be barriers to adaptation or could support a resilient community. In South Florida cities are taking action to increase elevation requirements for new construction, seawalls, roads, and critical infrastructure. In [Miami Beach](#), land use ordinances promoting resilient development transform the way buildings and communities are designed, built, and operated, to create buildings and communities that are environmentally and socially responsible, healthy, and prosperous.

A combination of grey, green, and blue infrastructure investments and workforce development—The City of New Orleans received U.S. Department of Housing and Urban Development (HUD) National Disaster Resilience (NDR) Competition funding in the amount of \$141.2 million to address remaining damage from Hurricane Isaac in 2012. New Orleans undertook projects and programs to fix the damage, build more disaster resilience, and address ongoing stresses such as environmental challenges, public health disparities, and workforce development.

The [Gentilly Resilience District](#) in New Orleans is a combination of efforts across the Gentilly portion of New Orleans to reduce flood risk, slow land subsidence, improve energy reliability, and encourage neighborhood revitalization. The district successfully piloted various approaches to water and land management, stormwater gardens, blue and green corridors, green streets, and wetlands. The Blue & Green Corridors project includes a combination of natural features, trees, landscaping, and canals to manage water, with co-benefits that include recreation and mobility features such as pedestrian and bicycle dedicated spaces.

A total of \$3 million of the NDR funds was allocated to provide workforce development training services that aim to train the local workforce in green infrastructure and water management. These efforts focus on job readiness and developing the next generation of builders, problem-solvers, and green infrastructure specialists. The funding also supported programs to hire and train a skilled workforce to build and support the maintenance of NDR-funded projects.

Not every community can compete for and secure federal disaster grants, but lessons can be gleaned. In this case, the process and the ownership of solutions are as important as the solutions themselves. Best practices include securing funding from a variety of sources and levels (local, state and federal) and integrated solutions that deliver co-benefits, like infrastructure investment that leads to job creation.

- **A commitment to stakeholder outreach, education, engagement, and dialogue**—Direct flood risk outreach and education takes place through community-based organizations, institutions, academia, nonprofits, professional associations, and the private sector. In [Virginia Beach](#), outreach channels include meetings, resident surveys, business outreach, public facing documents, social media and website information (including participation in the FEMA National Flood Insurance Program Community Rating System), and interactive mapping tools. The City has been advancing shared decision-making and community-centered infrastructure development. The implementation of SLR mitigation in South Park provides an excellent opportunity to continue advancing and evolving those

practices. Genuine engagement creates transparency and trust when addressing complex issues that disrupt communities and more confidence in the solutions implemented.

5.2 (Discussion Draft) Guiding Principles for Climate Resilience

The City convened a City-family stakeholder group for a workshop on August 13, 2020. This group included representatives from numerous City agencies, departments, and offices, including the following:

- SPU
- Seattle Department of Transportation
- Department of Construction and Inspection
- Department of Neighbourhoods
- Seattle Parks and Recreation
- Office of Planning and Community Development
- Office of Sustainability and Environment
- Office of Economic Development
- Mayor's Office

The purpose of the workshop was to understand climate risks in South Park, reach consensus on the need to start planning and collaborating now, and commit to evaluate and pursue funding alternatives.

A key outcome from the workshop was beginning to articulate examples of guiding principles for climate resilience in South Park, which are presented in Figure 3. These are a start for community conversation to establish shared principles that will ultimately provide a beacon during decision making, strategy development, and implementation. At the core, the driver to adapt and thrive is borne in the belief that the community will not be displaced.



Figure 3. Preliminary Guiding Principles for Climate Resilience in South Park

5.3 (Discussion Draft) Integrated Vision to Sea Level Rise Adaptation

5.3.1 Adaptation Overview – Accommodate and Resist

During the City-family workshop, the following SLR adaptation strategies were reviewed and discussed:

- Do nothing
- Avoid (restrict construction in at risk areas)
- Resist (improve reinforcements)
- Accommodate (upgrade existing properties)
- Move (planned relocation)

South Park is a diverse neighborhood with vibrant cultural communities, and the industrial areas are part of an important manufacturing and industrial center in Seattle. As such, the project team quickly determined that the “do nothing” and “move” strategies were not desired strategies. The project team agreed, like most cities, to a vision of integrated and incremental adaptation to SLR.

An integrated vision provides a combination of interventions that avoid, resist, and accommodate. An integrated vision could also include actions to address City policies, plans, and community resilience. An incremental vision would allow for planning in the short-term (for example, funded through annual budgets), medium-term (for example, funded through capital plans and identified in departmental plans) and long-term (for example, funded through financing options like bonds).

The elements of the SLR mitigation vision discussed in the City-family workshop can be summarized in three categories:

- **People**—These actions would make the community more resilient and set the foundation for greater collaboration among the City and community partners.
- **Planning and policy**—These actions would be focused on the broader parameters required for adaptation and can include things like building ground-floor elevation standards and incorporating a SLR lens to other planning efforts.
- **Places and projects**—These actions would physically mitigate the risk of flooding and include floodwalls, berms, and elevating streets.

5.3.2 People

People approaches would be focused on three areas – interdepartmental collaboration, community capacity and leadership, and community preparedness; these are described in the following subsections.

Interdepartmental Collaboration

During the August 2020 City-family workshop, agencies recognized that planning for and implementing SLR mitigation is not the responsibility of just one organization or agency. Interdepartmental collaboration will be needed across city, state, and federal government, along with industry and community organizations. This collaboration has already started with the convening of City-family representatives, along with developing the *Duwamish Valley Action Plan* (City of Seattle 2018).

Participants also recognized that, because the City will become one of the largest owners of shoreline in South Park through the completion of the South Park Pump Station and South Park Water Quality Facility, it therefore plays a large role in planning and leveraging outcomes through funding, partnerships, development, maintenance, and programming of SLR mitigation efforts.

Community Leadership

A resilient community can use their resources to improve the health of individuals and organizations and withstand, adapt to, and recover from adversity. The City is currently working with stakeholders to consider establishing a Resilience District that will build community capacity and formalize partnerships that address health inequities and environmental justice issues. This builds community leadership by ensuring participation of communities who disproportionately bear the impacts of disparities in decision-making.

Community Preparedness

The City of Seattle Community Emergency [Hubs](#) are places where people gather after a disaster to help each other. Hubs serve as a central gathering place among neighbors in homes, apartments, and condominiums, and are focused on addressing a wide variety of threats (such as heat, smoke, earthquakes, pandemics, flooding, etc.). According to the City website, 135 community emergency hubs are designated throughout Seattle. To advance community preparedness, the City could consider evolving this concept further through South Park Resilience Hubs that function year-round, and targeted and dedicated Community Emergency Response Teams training in South Park.

Resilience hubs can be created in neighborhood community facilities (or other facilities) that are used year-round as centers for community-building activities. Hubs are tailored to address a community's vulnerabilities, fit its cultural identity, and succeed in large part due to the dedication of established trusted leaders and volunteers. A South Park Resilience Hub could serve as a source of flooding and SLR planning information.

A South Park [Community Emergency Response Team](#) program could educate volunteers about disaster preparedness and train them in basic disaster response skills. The program model offers a consistent, nationwide approach to volunteer training and organization that professional responders can rely on during disaster situations, allowing them to focus on more complex tasks.

5.3.3 Policy and Planning

Policy and planning approaches would be focused on three areas – anti-displacement, National Flood Insurance Program Community Rating System, and land development process; these are described in the following subsections.

Anti-Displacement

As agencies and private interests invest in the neighborhood and climate adaptation, existing businesses and residents will face continued, and potentially increased, economic displacement pressures. By centering anti-displacement in its climate adaptation work, the City can ensure that it advances anti-displacement strategies alongside physical adaptation strategies. Plans and policies will need to prioritize strategies that help the incumbent communities thrive. For residential communities, this will mean continued partnerships to preserve and develop affordable housing alongside investments in parks and river cleanup. For businesses, this means considering the role that community-owned spaces, zoning, and development standards play in preserving affordable, and healthy, commercial and industrial lands. For both residents and businesses, workforce development initiatives connect them to the investments made in their neighborhoods, and to regional prosperity.

National Flood Insurance Program Community Rating System

The Community Rating System of the National Flood Insurance Program is a voluntary program allowing communities to earn flood insurance discounts based on a city's overall rating score and property characteristics. With the costs of flood insurance continuing to rise, the City would benefit by joining the program, adopting higher regulatory standards than FEMA and thereby providing insurance relief and education to residents and business. Successful Community Rating System programs have a strong communications and outreach component to encourage flood awareness, education, prevention, and expansion of insurance. City staff availability to implement this recommendation would need to be considered.

Land Development Process

As public infrastructure is designed and constructed with future conditions in mind, private development should also be informed by the best available science and data. The City should consider *formally* adopting SLR planning projections and requiring all new development and renovation to consider and address this risk during the planning and permitting development process.

After Superstorm Sandy in 2015, New York City embarked on an aggressive review of their land use and building code to advance resilience against future storms. In 2015, Miami Beach began a similar process of reviewing the land use code to address flooding and SLR. Both cities carefully studied and adapted policies to local conditions and projected future conditions. The City of Seattle could similarly review its land development process to identify opportunities to adapt within the context of local climate conditions and community visions. These modifications could include requirements for higher elevations, grades, and setbacks to retain more water, and conservation easements. Where broader public benefits are provided through development, the City could include incentives such as an easier and faster permitting process, permit fee discounts, increased height, flood-to-area ratio bonuses, increased development rights, and density in exchange for incorporating resilience.

5.3.4 Places and Projects

Protecting South Park from flooding will ultimately require physical infrastructure to keep the Duwamish River from flooding the neighborhood.

City staff developed a draft phased vision for multipurpose flood protection infrastructure that is based on the USACE's baseline work in the *Preliminary Flood Risk Management Study for the Duwamish River at South Park* (2017). The phased vision highlights the potential transformation of South Park from its current state into a resilient area where residents can thrive in place, industries can continue to operate, and the area is protected from SLR. The interventions and co-benefits visualized include levees, floodwalls, fill, landscaped berms, nature-based solutions, and pedestrian and bicycle river-walk and mitigation strategies that include habitat enhancements.

The City identified these interventions to begin planning and stakeholder dialogue, and for developing a funding strategy for incremental adaptation to changing climate. The exact location, shape, and size of interventions will be determined through these conversations and as the technical analyses and design progresses toward construction in the future. Figures 4, 5, and 6 illustrate a *potential* vision for SLR mitigation in South Park for the mid, near, and long term, respectively. Figure 7 compares a long-term (approximately to 2100) potential vision for SLR mitigation with the USACE alternative for flood protection, and highlights the key differences in terms of outcomes of the alternatives.

6. Next Steps

The City's next steps are presented in the following subsections and fall into two categories – internal City coordination and external stakeholder engagement, both of which will include the evolution of anti-displacement strategies. Table 2 summarizes the high-level schedule for climate adaptation in South Park.

6.1 Internal City Coordination

At the city staff workshop held this summer, the project team verbalized their commitment to plan and collaborate around SLR mitigation in South Park. The project team should continue to collaborate on a regular basis throughout the year, and potentially seek a “formal” status. The five steps described in the following subsections are recommendations that the City-family stakeholder team will evaluate.

6.1.1 Review City Policies and Regulations to Identify Ways to Incorporate Climate Adaptation and Community Resilience

The project team researched communities around the country for best practices and inspiration for not only physically adapting to climate change, but also for adapting and updating policies and ordinances that promote resilience. City policies and procedures may be decades old, before climate change was recognized and SLR and global pandemics were part of our daily vocabulary. The City should comprehensively review building, land use, zoning, transportation, and emergency management codes to flag barriers to resilience and to incorporate SLR thresholds, standards, and review checkpoints.

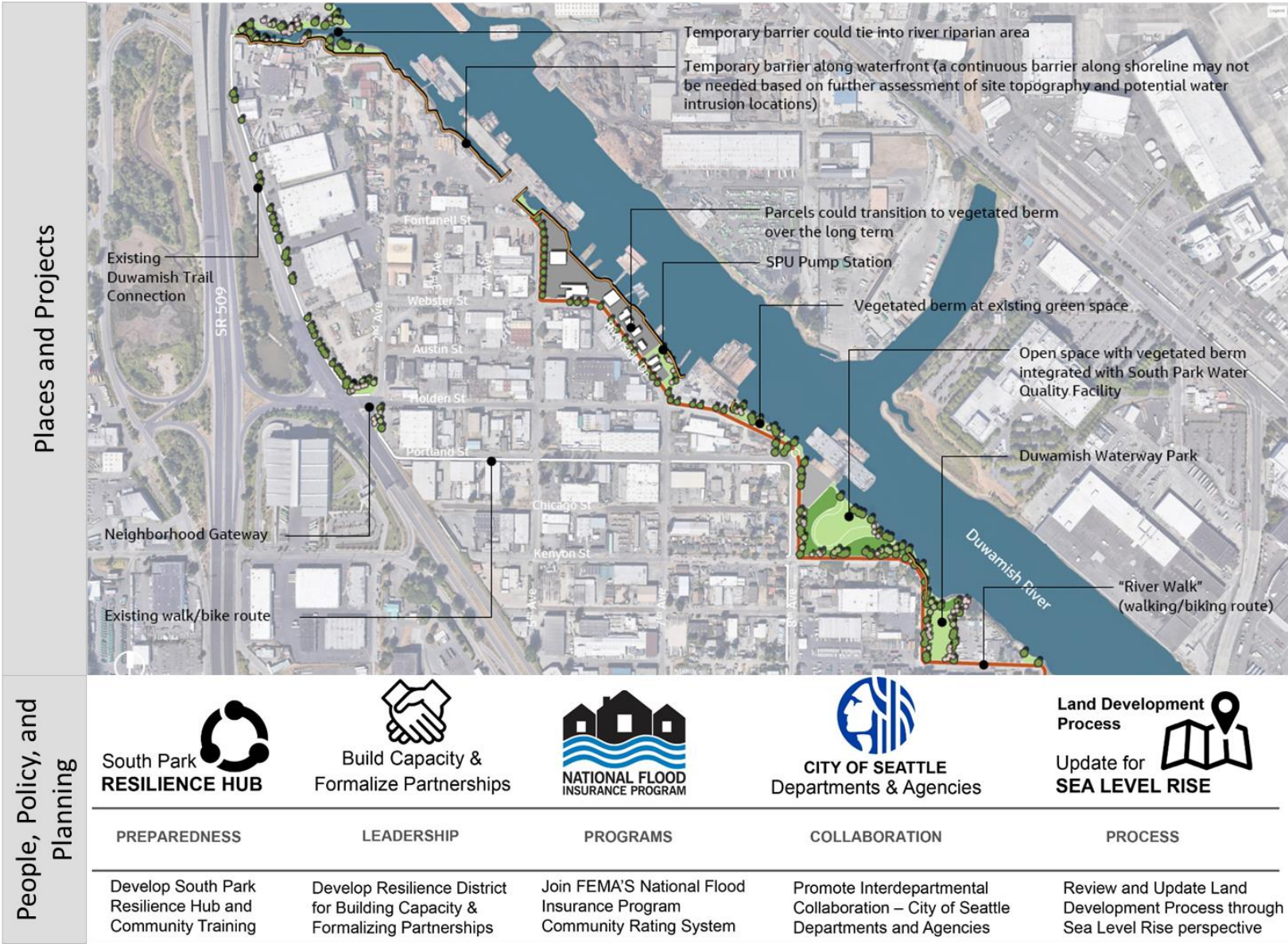


Figure 4. Near-Term (approximately 2040) Sea Level Rise Mitigation Vision for South Park

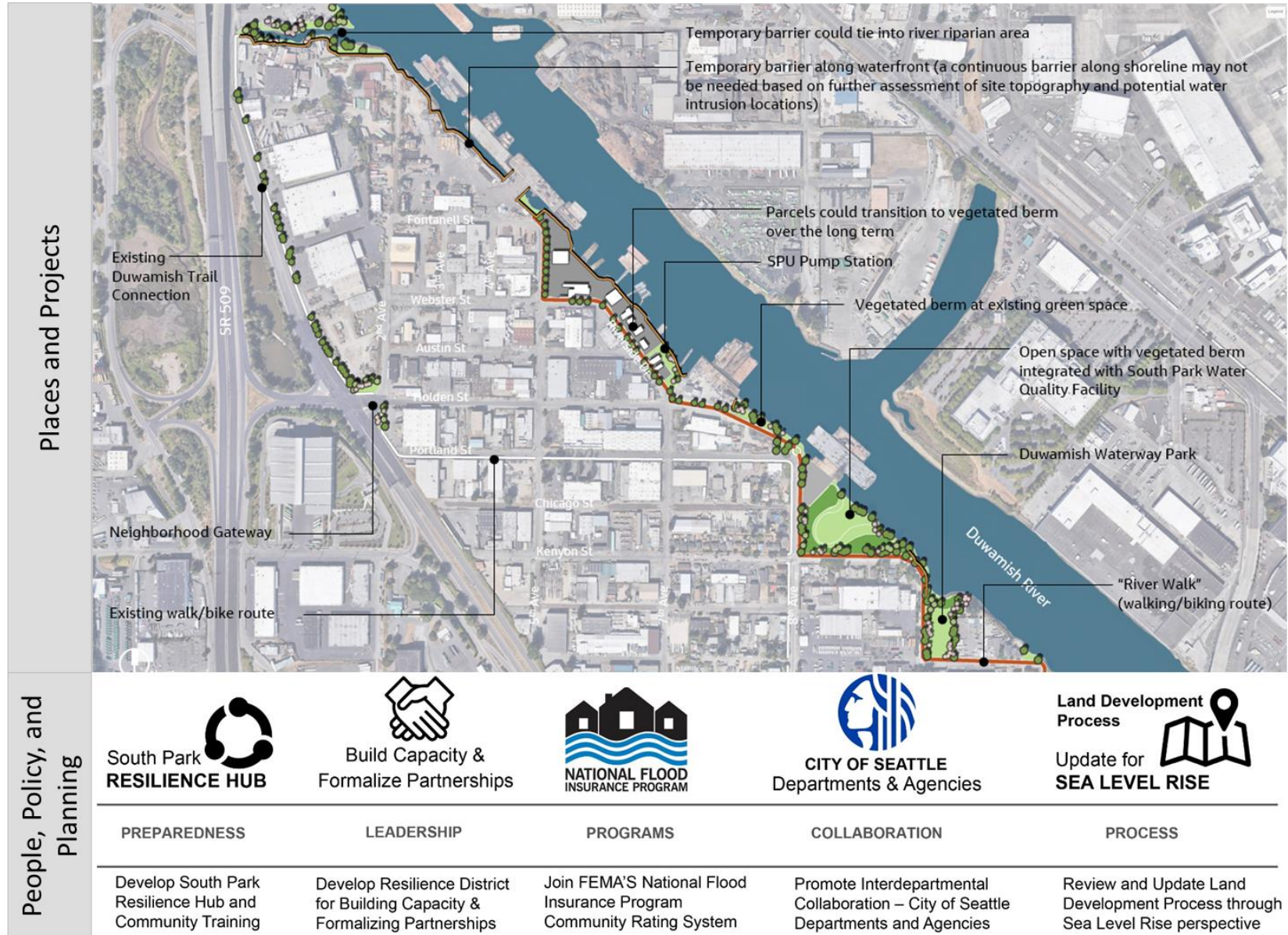


Figure 5. Mid-Term (approximately 2070) Sea Level Rise Mitigation Vision for South Park

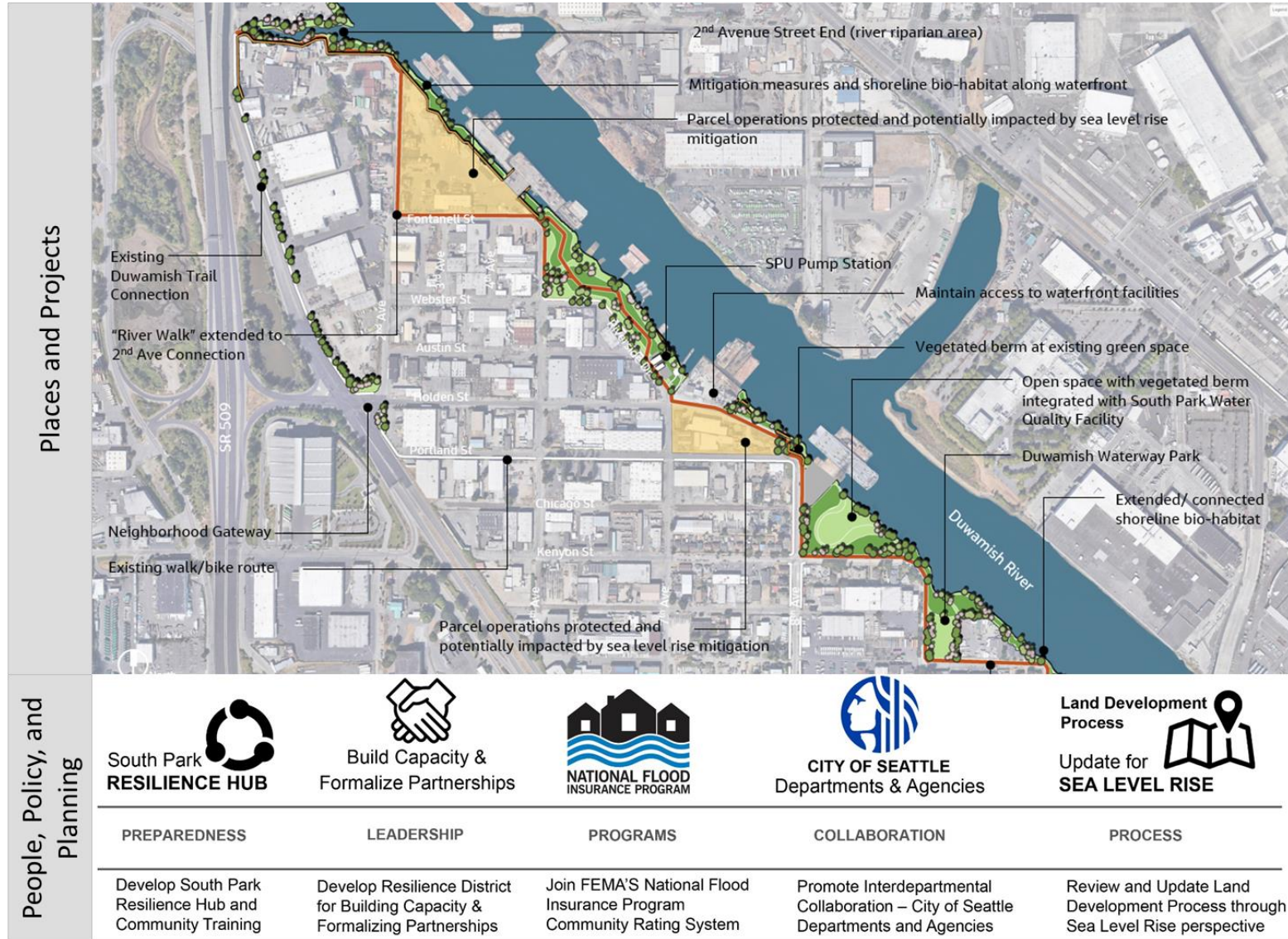


Figure 6. Long-Term (approximately 2100) Sea Level Rise Mitigation Vision for South Park

Traditional SLR Infrastructure Approach



- Fewer properties protected
- No community amenities created
- No additional open space provided
- No bio-habitat mitigation or restoration
- Not aligned with Green Space Vision Plan
- Construction/implementation less costly
- Some short term impacts due to construction / interventions
- Water access maintained for most parcels

Expanded SLR Infrastructure Approach



- More properties protected from sea level rise
- More community amenities created
- More open space created
- More bio-habitat mitigation or restoration
- Aligns with Green Space Vision Plan
- Construction/implementation more costly
- More short term impacts due to construction / interventions
- Water access will shift for some parcels

Figure 7. Comparison of the Traditional and Expanded Sea Level Rise Infrastructure Approach

Table 2. High-Level Schedule for South Park Sea Level Rise Mitigation

Project	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2050	2060	2070	2080	2090	2100
Planning																											
Options Analysis/Design																											
Construction																											
Operation/Implement																											
Related South Park Projects																											
South Park Pump Station																											
South Park Roadway and Drainage Improvements																											
South Park Water Quality Facility																											
South Park SLR – People Approaches																											
Interdepartmental Coordination																											
South Park Resilience District																											
Community Preparedness (Hubs + CERTs)																											
South Park SLR – Policy Approaches																											
Join National Flood Insurance Program																											
Land Development Process Review																											
South Park SLR – Projects																											
Stakeholder Engagement																											
Vision Development (this current body of work)																											
Conceptual Design (funded by the RWJF)																											
Preliminary Design (Potentially funded by BRIC)																											
Phase I Implementation																											
Monitoring/Adaptive Planning																											
Phase II Implementation																											
Monitoring/Adaptive Planning																											
Phase III Implementation																											

CERT = Community Emergency Response Team RWJF = Robert Wood Johnson Foundation BRIC = Building Resilient Infrastructure and Communities

6.1.2 Leverage and Align Existing Plans

The City has developed preliminary citywide climate preparedness plans. Citywide plans have a variety of goals and objectives and are needed to successfully operate and maintain each department. The City should review City plans to prioritize, coordinate, and align actions and budgets to create a neighborhood-specific SLR plan that elevates resilience-building actions and delivers multiple outcomes, which would also involve updating the *All-Hazards Mitigation Plan* to include climate change impacts and SLR.

6.1.3 Coordinate and Collaborate on the Fiscal Planning of Existing Funds and Annual Budgets

Several City, King County, and regional departments and agencies invest in infrastructure and programs in South Park. In the absence of new or dedicated funding, departments can analyze existing plans and budgets to best schedule and align neighborhood investments. As the City prepares to assemble the budget, departments can coordinate their efforts to identify area investments and perhaps leverage for accelerated outcomes; coordination and collaboration are not expensive. The City should consider identifying South Park projects across departments and creating a neighborhood budget to leverage and time investments that build resilience in both projects and people. For example, SPU's budget allocated to build the pump station and water quality facility could be pooled with other departments and agencies to identify other projects that can be leveraged and timed to include community co-benefits (e.g. green space, community-serving buildings).

6.1.4 Identify and Secure Funding

Beyond existing funding sources, over the next budget cycles the City is encouraged to dedicate time and resources to exploring other funding sources at the federal, state, and local levels, as well as philanthropy. With changes in administration at the federal level, more opportunities for infrastructure investments may be available. These sources and funding strategies, some of which are listed below, are further discussed in *Integrated Funding for Expanded Outcomes – Funding/Financing Strategy* (Storm and Stream, 2020):

- Federal – USACE, FEMA, HUD
- State – funds, revolving loans, grants
- County – King County Flood Control District
- Local – General obligation bond, revenue bonds, catastrophe bonds, parametric insurance, social impact bonds, mitigation bans, resilience bonds, grants, municipal revenue realignment
- Aligned City investments in capital projects and programs
- TIF-light Washington State compliant value capture mechanisms
- Private – foundations, public-private partnerships
- Philanthropy – The City's Duwamish Valley Program received a [\\$600,000, 2.5-year grant](#) from the Robert Wood Johnson Foundation (RWJF) to collaborate with Duwamish Valley residents and businesses to improve health outcomes, increase community resilience, and adapt to the impacts of a changing climate. The grant will fund conceptual design of SLR infrastructure, community engagement and capacity building, and exploration of sustainable funding sources.

6.1.5 Invest and Adapt

The City should invest 2 years in collaboration and coordinated budgeting, while engaging with community stakeholders to develop shared principles that guide refining the adaptation scenarios in this report. Internal collaboration and external engagement will take time—both require transparency to build trust. By 2022 or 2023, the City should be able to build a community-based collaboration to refine these concepts through design and toward becoming construction projects.

6.2 Stakeholder Engagement

The City of Seattle has a rich history of successful stakeholder engagement. The International Association for Public Participation sets the standard for meaningful public dialogue between governments and their communities. The public participation spectrum illustrated on Figure 8 should guide the City’s next steps in community outreach to discuss climate change and SLR vulnerabilities specific to South Park; proposed possible physical interventions over time; and the accompanying plans, policies, and programs that build community resilience.

The stakeholder strategy has several goals:

- Inform the community of climate risks and vulnerability by sharing best available science and data
- Inform the community about the work done to date by their local government to address these challenges
- Listen to the community reactions and concerns
- Inform the City’s process of designing adaptive infrastructure
- Develop anti-displacement policies and programs for the community in parallel with the infrastructure program.

Through the RWJF grant, the City and community will move toward engagement that is collaborative and empowering.

The community and City will collaborate to identify ways to work together for every step to the climate adaptation journey. In early phases of community dialogue, the commitment will be a need to use this document and other sources to share as much information as possible, and build a basis for collaboration. As work progresses, the City will need to collaborate and empower, in order to achieve the shared goals for environmental justice and equitable development.



- **Inform** – one-way communication, no real participation
- **Consult, engage** – two way, we want your feedback, we may or may not use it in the end
- **Involve** – working together throughout the process
- **Collaborate** – sharing power
- **Empower** – we will implement what you decide

Important to decide upfront and make that part of the agenda to manage expectations. Each group can be different

Figure 8. SPU’s Stakeholder Engagement Strategy

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