

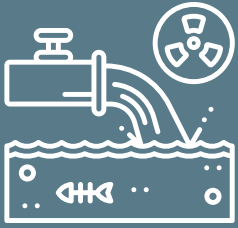
NEXT GENERATION URBAN GREENING

Project progress update March 2023

Next Generation Urban Greening seeks to help Bay Area cities achieve more benefits through green infrastructure. The project includes a focused case study in Islais Creek watershed in San Francisco showcasing benefit quantification and spatial prioritization tools. These tools will support the regional framework, which integrates quantitative methods and qualitative guidance with applied implementation project examples. The regional framework and interim results will be shared with the regional forum throughout the project for input and feedback. The project is funded by the EPA Water Quality Improvement Fund, in partnership with SFPUC and SFRPD.

Learn more at SFEI.ORG

Stormwater Sampling



Sample water quality at three green stormwater infrastructure features to quantify capture of microplastics and other contaminants of emerging concern.



Benefit Quantification



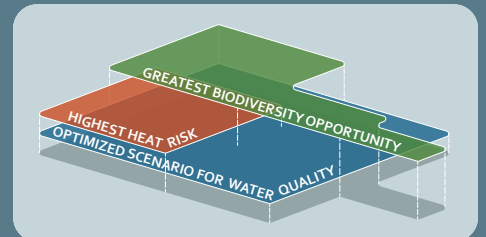
Quantify the multiple benefits of urban greening, including biodiversity and heat reduction benefits, as well as benefits for human communities. See next page for more details.



Spatial Prioritization



Use the quantified benefits to evaluate options for spatial placement and type of green infrastructure. Assess how landscape context and selection of benefits affect prioritization.



Implementation Projects



Design and build green stormwater infrastructure projects to improve water quality and manage runoff in San Francisco. These projects are led by SFPUC & SFRPD in McLaren Park.



Regional Forum & Framework



Gather input and foster shared learning with regional stakeholders. Develop a report outlining key guidance for implementation, spatial placement, and potential benefits of green infrastructure.



CASE STUDY

Benefit Quantification

SFEI worked with SFPUC to assess the public benefits of a series of potential green stormwater infrastructure opportunities in the upper Islais Creek watershed, as shown in the map below. As part of a feasibility assessment, SFEI used modeling to quantify potential benefits of the proposed bioswales and street trees to both the human community and native species. Quantifying potential public benefits enabled the team to more accurately compare alternatives, and particularly highlighted the public value of trees. The larger Next Generation Urban Greening project will continue to build on this case study.

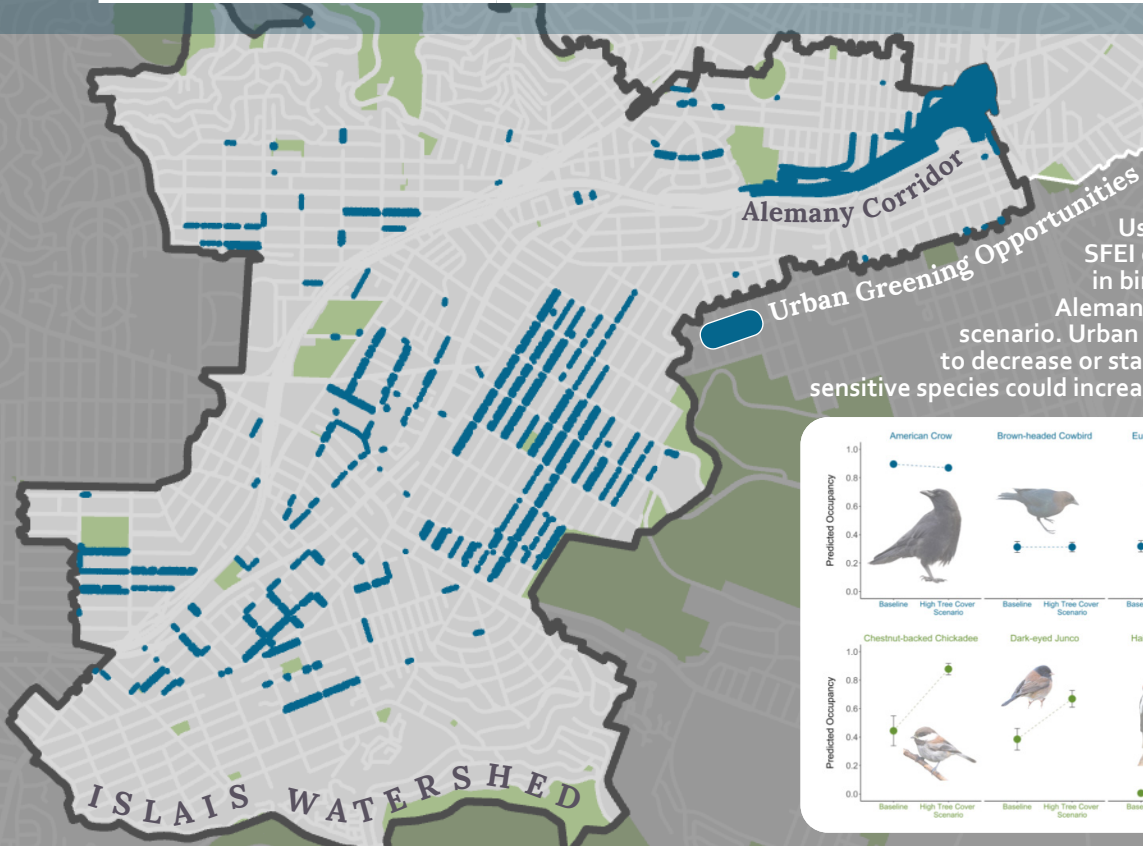


Human Community Benefits

Increased access to greenery	85% of new canopy cover would be in areas with a moderate or high EJ burden
Increased sidewalk shading	10 miles of sidewalks could receive an additional 20-60% canopy cover
Reduced extreme heat	13 miles of cooling would be along sidewalks in high priority areas for heat vulnerability

Biodiversity Benefits

Additional habitat	An additional 30+ acres of greenspace could function as habitat for plants and wildlife
Increased connectivity	Greening could create a new connectivity corridor for wildlife
Additional bird species	Improved habitat could attract 11 more bird species along the Alemany Corridor, including urban sensitive species (see below)



Using occupancy modeling, SFEI estimated the likely change in bird species presence along the Alemany Corridor under the greening scenario. Urban adapted species were expected to decrease or stay constant (top), while urban sensitive species could increase with greening (bottom).

