



San Francisco
**Water
Power
Sewer**

Services of the San Francisco
Public Utilities Commission

**Transform
the Storm**



GREEN INFRASTRUCTURE GRANT PROGRAM GUIDEBOOK

September 2022

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How to Use this Guidebook



Welcome to the San Francisco Public Utilities Commission's (SFPUC) Green Infrastructure Grant Program! The purpose of this guidebook is to help applicants and grantees understand and navigate the Green Infrastructure Grant Program, from project inception to completion.

The introduction provides a summary of the program and its requirements. After that, the guidebook is broken up into 6 major sections, following how an applicant and then grantee will move through the program. It is important to **read the full guidebook before you submit an application**, so you can understand all of the requirements at each phase of the project.

Program Summary

Important information on program requirements, eligibility, and maximum grant award.

Project Visioning

Read this section before starting the application to develop a project vision that unlocks social and environmental co-benefits, and learn what you need to do to be ready to submit an application.

Application

Step-by-step instructions for how to fill out the application.

Grant Award

How to get the grant process initiated once you are awarded.



Design and Construction

Process and requirements for completing your design and constructing the project.

Operations and Maintenance

Important information on maintenance and inspection requirements.



Important tips  and links  to online resources are provided throughout the document and are denoted with icons.



Presidio, San Francisco | Photo source: uncommon



Program Summary



The San Francisco Public Utilities Commission's (SFPUC) Green Infrastructure Grant Program (Grant Program) is designed to encourage San Francisco property owners to design, build, and maintain performance-based green stormwater infrastructure (Green Infrastructure or GI) projects, including but not limited to: permeable pavement, bioretention, rainwater harvesting, rain gardens, and vegetated roofs. The goals of this program are to improve the performance of SFPUC's sewer system by reducing the amount of stormwater runoff entering the system, while delivering benefits that enhance the quality of life of San Franciscans.

Program Eligibility Criteria

To receive funding under the Grant Program an applicant must demonstrate that the project:

1. Is located on a parcel that is connected to an SFPUC-owned and operated sewer system service area. The project may be located in either the combined sewer system area or municipal separate storm sewer system area. Check out our **Grant Program Map** [\[📍\]](#) to determine if your project location is eligible.
2. Manages stormwater runoff from a minimum impervious area of 0.5 acres. The total area of impervious surfaces does not need to be contiguous and can be comprised of several smaller impervious drainage areas totaling 0.5 acres.
3. Captures the 90th percentile storm (0.75-inch depth) with the proposed green infrastructure features. Additional information on the stormwater performance requirements can be found in the Application section.
4. Provides at least two (2) of the identified co-benefits from the program list, which can be found in the following pages of this guidebook.
5. Has a grant team that collectively demonstrates a history of successful project implementation and has previous experience designing, constructing, and/or maintaining green infrastructure, and be in good standing in all currently active Green Infrastructure Grant Program projects. The grant team must include an identified grant or project manager and a licensed engineer or landscape architect.

The dollar amount of each grant award will be determined by your concept design and project budget. Individual grant awards are capped at a maximum of **\$930,000** per impervious acre managed (i.e., the amount of impervious surface that drains to the green infrastructure, or “impervious acres managed”), up to a maximum of \$2,000,000 per grant. Funds can only be used for green infrastructure elements of the project. Grant funds cannot be used to pay for non-green infrastructure project elements, such as play equipment or furnishings.

Applications can be submitted during the Program’s application cycle period. Please visit our website sfwater.org/gigrants for the latest application cycle information, including important due dates. Applications will be screened based on the five (5) eligibility criteria and ranked based on the evaluation criteria found on the Program website.

Applicants do not need to be the property owner, but the property owner will be required to enter into a 20-year Green Infrastructure Grant Agreement with the SFPUC. The **Green Infrastructure Grant Agreement** [🔗] requires the property owner to maintain the project for 20 years and includes a **Declaration of Deed Restriction** [🔗] that is recorded against the property.

The purpose of the Grant Program is to **fund stormwater retrofits** (meaning, construction of new GI projects on properties). Parcels undergoing new development or redevelopment that trigger the Stormwater Management Ordinance are not eligible for grant funds through the Grant Program.



TIP: Think about these Important Considerations:

- **Eligible Applicants:** A Grantee may be a property owner, a for-profit or nonprofit entity, an individual, or a governmental entity.
- **Taxes:** A grant counts as income and therefore may be taxable. It is the responsibility of the Grantee to determine whether a tax liability exists.
- **20-Year Green Infrastructure Grant Agreement and Declaration of Deed Restriction:** Property owners are required to provide 20 years of maintenance of the green infrastructure facilities and register a Declaration of Restriction against the property deed. This is a long-term commitment - read the **Green Infrastructure Grant Agreement** [🔗] and **Declaration of Deed Restriction** [🔗] templates before submitting an application! See the **SFPUC BMP Fact Sheets** [🔗] for examples of maintenance activities and suggested frequencies.
- **City Vendor:** In order to receive grant funds, Grantees will be required to become a registered vendor with the City and County of San Francisco. This has very specific tax and insurance requirements. Grantees should review these requirements at sfgov.org/oca/qualify-do-business to ensure they qualify to do business with the City.
- **Grant Disbursement:** Grant funds will be disbursed in four (4) payments: one disbursement for planning and design, and three disbursements for construction. The fourth and final construction payment (equaling 10% of the construction bid) will be retained until the Grantee has successfully completed the project. **Grantees must be able to cover the cost of completion of the project.** For more detailed information about funding disbursements, go to the “Grant Award” section.

For additional information or assistance, please contact the SFPUC Grant Administrator at: gigrants@sfwater.org or call 415-934-5709.



Roosevelt Community Center, San Jose

Approved Stormwater Management Features:

There are a variety of green stormwater infrastructure best management practices (or stormwater BMPs) that can help you meet your stormwater targets. **The stormwater BMPs you select for your project must be located and sized appropriately to capture runoff from the 90th percentile storm (0.75-inch depth).**

The type of stormwater BMP that is best for your project will depend on many factors, including available space, drainage area, soil type, and land use. Use the Stormwater Performance Calculator (see Application section of this document) as a tool to help determine how your project can meet the performance requirements. For more information on BMP types, siting, and selection, refer to the **SFPUC BMP Fact Sheets** [🔗]. Other technologies or unique BMP types may be eligible. These will need to be discussed with the Grant Administrator and approved on a case-by-case basis.

The following section features examples of a wide range of BMP's implemented in San Francisco.

Bioretention/ Rain Garden:

Stormwater facilities that rely on vegetation and specially engineered soils to capture, infiltrate, transpire, and remove pollutants from runoff.

Downspout flowing into bioretention



Streetscape bioretention



Rain gardens



Streetscape rain garden with trees



Photo source: nigeldunnett.com

Permeable Pavement:

Any porous, load-bearing surface that temporarily stores rainwater prior to infiltration or drainage to a controlled outlet.

Pervious concrete in parking lot



Presidio, San Francisco

Rainwater Harvesting:

Cisterns that collect roof runoff and provide water for indoor or outdoor use.

Rainwater cistern



One So. Van Ness Ave, San Francisco

Infiltration Trench/Gallery:

An unvegetated, rock-filled trench that receives surface stormwater runoff and allows it to infiltrate.

Downspout flowing into infiltration trench



RL Stevenson Elementary, San Francisco

Vegetated Roof:

Roofs that are entirely or mostly covered with vegetation and soil.

Vegetated roof



Ortega Library, San Francisco

Impervious Surface Removal:

The grant supports the conversion of impervious surfaces to planted and landscape conservation areas that contribute to new habitat creation. Landscape conservation areas may include native planting, trees, and bioretention planting.

Landscape conservation area



Sunset Blvd. Stormwater Project, San Francisco

Planted area



West Sunset Diamond Parking Lot, San Francisco



Trees and Green Infrastructure

Trees reduce stormwater runoff volume through interception and evapotranspiration. They help regulate soil moisture and facilitate stormwater infiltration and storage. Trees play an important role in the regulation of microclimate through evapotranspiration and by mitigating the effects of solar and heat radiation. In addition to hydrological and microclimatic benefits, trees provide habitat and cultural value.

The GI Grant Program encourages the integration of trees within stormwater features that can support healthy trees through maturity. Many of San Francisco's native tree and arborescent shrub species are evergreen, providing additional habitat, maintenance, and stormwater performance advantages.



West Sunset Diamond Parking Lot, San Francisco



Bioretention planting, NASA Mountain View, CA | Photo source: uncommon

Eligible and Ineligible Costs:

Grant funds can be used to cover all project costs related to the construction of the proposed green infrastructure facilities. Grant funds cannot be used to pay for non-green infrastructure project elements, such as play equipment or furnishings.

Eligible and ineligible costs may include, but are not limited to:

Eligible Costs

- Bid items related to green infrastructure BMPs (surface and subsurface):
 - Soil
 - Plants
 - Trees
 - Concrete
 - Excavation
 - Grading
 - Underdrains
 - Irrigation
- Artful and/or educational elements that foster hydrological, environmental, and stormwater awareness
- Regrading of surfaces draining to BMPs
- Permeable surfaces
- Impervious surface removal
- Non-construction activities (up to 30% of total grant amount):
 - Project management
 - Planning
 - Design
 - Environmental Review
 - Geotechnical investigations
 - Structural investigations
 - Engineering surveys
 - Construction management

Ineligible Costs

- On-going maintenance (including any contractor maintenance period)
- Non-green infrastructure components, including by not limited to:
 - Decorative items
 - Benches
 - Play equipment
 - Lighting
- Monitoring or research
- Land acquisition costs
- Public amenities



Disconnected Downspout, 350 Friedell Street, San Francisco

Co-Benefit Opportunities:

GI projects provide a variety of social and environmental co-benefits in addition to reducing the amount of stormwater runoff that enters the SFPUC's sewer system. The co-benefits of your project will depend on site conditions, stakeholders' priorities and your project design. Applicants are required to demonstrate that the proposed project will have at least two (2) of the identified co-benefits listed below. Please visit our website for the latest application evaluation criteria for each co-benefit. Evaluating how your project can achieve these co-benefits is covered in the Project Visioning section.



Environmental Justice

The SFPUC is committed to the goals of environmental justice to promote healthy communities in all SFPUC service areas by eliminating disproportionate environmental burdens and distributing public and environmental benefits equitably. To help address social and environmental issues, the SFPUC has adopted Environmental Justice and Community Benefits policies.

Projects can foster environmental justice by engaging with environmental justice communities throughout the project, providing new environmental benefits to a historically underserved community, helping to heal past environmental burdens, enabling proactive and community-led solutions, or by providing site-based programming that engages environmental justice communities.



Public Access, Open Space, and Recreation

Green infrastructure projects that prioritize public access, open space, and recreation can support the creation of high quality spaces that are engaging, aesthetically pleasing, and support the community's well-being by offering opportunities to socialize, recreate, and interact with green infrastructure. Projects that are open to the public also promote awareness of and education about the importance of stormwater management and the city's combined sewer system.

This can be achieved by locating the project in a publicly accessible space that is open and inviting for unstructured, daily public use. Public access must be advertised and promoted through signage that is clearly visible to the public or through other means of advertisement. If a project site is only open to the public during specific times of the day (e.g., after school programs, etc.) the schedule must be included in signage and advertisements. Public schools that select this co-benefit must be enrolled in the Shared Schoolyard Program. Other properties must be open for a minimum of 7 hours per weekend day or 3 hours per weekday.

This can also be achieved by integrating public gathering spaces into project design, by enhancing an existing public space, or by creating new opportunities to socialize, gather, recreate and interact with nature in a publicly accessible space.



Community Engagement, Collaboration, and Placemaking

Projects that prioritize community engagement, collaboration, and placemaking during the design process can empower communities and support outcomes that meet community goals. Engaging the community and key stakeholders can also support the long-term success and stewardship of the project and improve long-term maintenance outcomes.

This can be achieved by including members from the community or place stewards, in addition to the property owner and technical team, in the grant team. This must include a detailed community engagement strategy that prioritizes community members' input throughout the design process, including workshops, design charettes, or other outreach events that aim to integrate the community's vision and goals into the green infrastructure design.



Education and Watershed Stewardship

Projects that integrate art and/or educational elements can promote awareness of and education about the importance of stormwater management and green infrastructure for the city's combined sewer system, and help prepare the next generation of watershed stewards.

This can be achieved by providing detailed educational signage relating to the function of green infrastructure and its impact on the broader watershed and sewer system. This can also be achieved by delivering a long-term curriculum plan, creating lesson plans that incorporate learning related to specific project elements, or by integrating educational elements or an art installation with the green infrastructure elements.



Green Infrastructure Job Training

Providing jobs and job training in the green stormwater infrastructure sector is an important part of successfully implementing green infrastructure in San Francisco. As part of the Community Benefits policy, the SFPUC is committed to providing workforce development opportunities for residents of San Francisco.

This can be achieved by providing a long-term green infrastructure job training program or by serving as a training site for trainees learning about the design, construction, maintenance, or monitoring of green infrastructure. Projects that select this co-benefit must be open and accessible to trainees and their instructors for a minimum of 16 hours per year (during business hours).



Water Supply

Projects that support the use of rainwater and stormwater for alternative water supplies through non-potable reuse can reduce potable water demand and benefit the city's water supply.

This can be achieved by collecting, treating, and using rainwater or stormwater to satisfy non-potable water demands, including landscape irrigation or toilet flushing.



Climate Resilience

Projects that support the design of spaces to respond to future impacts of climate change, including urban heat and flooding can contribute to making San Francisco a climate-resilient city. Combating urban heat with nature-based solutions aligns with the city's Climate Action Plan goal of increasing urban tree canopy. Improving the city's resilience to flooding during large storms aligns with the city's Hazards and Climate Resilience Goals.

Heat resilience may be attained by prioritizing environmental cooling and shade (i.e. vegetation, tree canopy). For projects located in or upstream of flood-prone areas, flood resilience can be attained by achieving a higher stormwater performance than the 0.75" design storm (i.e., larger facilities that manage a 1.25" design storm).



Biodiversity

Projects that prioritize creating native habitat to support native wildlife can contribute to making San Francisco an ecological city. San Francisco has adopted citywide biodiversity goals to restore and maintain diverse native habitats in the city through the San Francisco Biodiversity Policy and Climate Action Plan.

This can be achieved through the project's landscape planting plan and integrated into the design through features such as native pollinator gardens, habitat connectivity plans, and increased tree canopy. This can also be achieved by identifying specific native species that the project is designed for and providing a plant palette selected to attract that species.

SF Environment [[🔗](#)] has a list of native plant nurseries in the Bay Area and the **SF Planning Green Connections Ecology Guides** [[🔗](#)] have recommendations for plants that promote target species.



Access our Technical Assistance Program to help!

Feeling overwhelmed? Our technical support team is available to help you work through your project concepts, co-benefits, and application process. Please reach out to our technical assistance program at gigrants@sfgwater.org.

Innovative Stormwater Project Examples

Bessie Carmichael Middle School San Francisco CA



Source: sfpuc.org



Bessie Carmichael Middle School is the third recipient of the SFPUC's Green Infrastructure Grant. The school is located in an area that used to be a tidal marsh on the edge of Mission Bay, and is part of the Channel Watershed. The Channel Basin was originally comprised of sand dunes, marshes, and a large bay called Mission Bay. Feeding into Mission Bay were Hayes Creek, Mission Creek, and Dolores Creek.

Stormwater from the school's roofs and play yard is collected and directed to rain gardens, where plants and a special soil mix slow down and clean the water before releasing it back to the combined sewer system. Through this process, rain gardens improve the performance of the combined sewer system, and have the additional benefit of greening our school yard. Each year, this project holds back and cleans 233,000 gallons of stormwater, comparable to the amount of water that 8 San Francisco homes use in 1 year*.

(*assuming 80 gallons per day for a multi-family residential unit with 2 occupants)

STORMWATER FEATURES: 7 different rain gardens - 3 of them are in the ground and 4 are above ground.

PROJECT CO-BENEFITS: Bessie Carmichael Middle School is located in and serves students who live in an area designated as an environmental justice area. The School District engaged students, teachers and artists in the creation of an educational mural that relates to stormwater elements on site.

SIZE: 0.6 acres

COMPLETION DATE: 2020

Innovative Stormwater Project Examples

Chester Arthur Schoolyard [\[🔗\]](#) Philadelphia, PA



Source: gsipartners.sbnphiladelphia.org

The Chester Arthur Schoolyard project is a great example of a project that integrates outdoor learning opportunities and curriculum in the project design. Organized into four different schoolyard “labs” – Systems, Energy, Motion, and Habitat – the design incorporates STEM curriculum in an active outdoor learning experience.

STORMWATER FEATURES: Rain gardens, porous asphalt, sub-surface reservoir

PROJECT CO-BENEFITS: Education, native wildlife habitat, and edible plantings

SIZE: 0.4 acres

COMPLETION DATE: 2017

Seattle Children’s PlayGarden [\[🔗\]](#) Seattle, WA



Source: landscapeperformance.org

The Seattle Children’s PlayGarden is an example of a public-private partnership project with the Seattle Parks Department. The project renovated a portion of a small urban park to provide stormwater benefits and equitable outdoor recreation opportunities by designing all park amenities to be handicap accessible.

STORMWATER FEATURES: Rain gardens, rainwater harvesting, disconnected downspouts, vegetated roof

PROJECT CO-BENEFITS: Non-potable reuse, education

SIZE: 1.2 acres

COMPLETION DATE: 2010

Innovative Stormwater Project Examples

Lafayette Elementary School San Francisco, CA



Source: sfpuc.org



Lafayette Elementary School is the second recipient of the SFPUC's Green Infrastructure Grant. The school is located in the Sunset Watershed, atop the Westside Basin aquifer system, the largest groundwater basin on the San Francisco Peninsula. Before urbanization, the Sunset Watershed was primarily sand, and rainwater traveled through the permeable dunes into the underlying groundwater basin. Today, sandy soils in the Sunset Watershed still have excellent infiltration rates.

Stormwater from the school's roofs and play yard is collected and directed to a central dry creek bed. Additional rain gardens and landscaped areas frame and shade seating areas and a small play yard. These stormwater features help recharge the Westside Basin aquifer, and have the additional benefit of greening the school yard and providing play opportunities. Each year, this project infiltrates 490,000 gallons of stormwater, comparable to the amount of water that 17 San Francisco homes use in 1 year*.

(*assuming 80 gallons per day for a multi-family residential unit with 2 occupants)

STORMWATER FEATURES: 1 feature dry creek bed, 2 rain gardens, 4 new landscaped areas (impervious to pervious conversion), and 1 improved landscaped area.

PROJECT CO-BENEFITS: (1) Groundwater recharge. (2) The School District engaged students, teachers and designers in the creation of educational signage for the play yard.

SIZE: 0.7 acres

COMPLETION DATE: 2020



Grey to Green, Sheffield, UK | Photo source: nigeldunnett.com



Project Visioning



After you have confirmed that your project location and size meet the program eligibility criteria, you are ready to proceed with the Project Visioning stage. The following steps will help you prepare for the application and develop a project vision and concept.

1. Assemble a Grant Team

At this stage, it is important that you identify key stakeholders that will support the project through its stages. Consider the community that regularly enjoys or visits your site, the team that maintains your facilities, the property owner, and the individuals that help make decisions in your organization. Key stakeholders need to be engaged early on to shape the project's vision, and help build broader community support and long-term ownership of the project.

Identify who will apply to be the Grantee and remember that they must be a registered City Vendor to receive funding. For projects where the Grantee is not the property owner, applications must include a letter of support from the property owner stating their intent to sign the 20-year ongoing maintenance agreement if the project is awarded.

To realize the project vision, key stakeholders will need the **leadership of a grant project manager**. You, the project initiator can take on this role, supported by a consultant team that must **include a licensed Professional Engineer or Landscape Architect** registered in the State of California. Teams are encouraged to include a design professional such as a landscape architect/designer, artist, or other creative that can support an integrated place-making approach. The consultant team will need to be identified as part of the application process and demonstrate previous experience successfully designing, constructing, and/or maintaining green infrastructure. Involvement of the consultant team in the project visioning stage is recommended, but not a requisite to apply for the grant.

2. Unlock Opportunities

Stormwater retrofit projects are multi-functional projects that can accomplish a variety of goals through an **integrated design process**. As you begin planning your project, it is important to evaluate the opportunities on your property and set priorities for improving the site. We recommend that you organize a group site walk with key stakeholders to visually survey your facilities and discuss challenges and opportunities. The goal is to identify a full range of opportunities and benefits that can be unlocked by the grant program. The following questions may help guide your initial brainstorming:

Identifying key opportunities

Site Programming Benefits

- Are there ongoing or planned projects for the site?
- What type of activities, does your site currently accommodate? Is there a need to better organize these activities or are there new activities that require consideration?
- What works well in the site? Are there any particular areas or features that are well-liked?
- Are there any areas that are currently under utilized or under-performing? How could this be improved?
- Identify access points and circulation routes for pedestrians and vehicles within your site. Are there opportunities to enhance pedestrian accessibility and safety?
- Is the connectivity between outdoor and indoor uses optimal?

Environmental Benefits

- Does the site have any flooding or drainage issues?
- Is your site located in an area where groundwater recharge is feasible?*
- Could your site and/or operations benefit from stormwater re-use opportunities?*
- From your direct observations, are there issues related to solar heat/radiation, noise, or air quality? Is there a need to increase environmental comfort in certain areas through shading or greening?
- Can you think of opportunities for habitat creation and biodiversity in your site?

Social Benefits

- Is your site publicly accessible? Are there opportunities for the wider community to share in the benefits of this project?
- Can you identify any opportunities to create a greener, healthier and more inclusive place for everyone?
- Considering the full life-span of the project (from inception, to implementation, to maintenance) can you think of strategies to keep your stakeholders and the wider community engaged? This could include job training opportunities related to stormwater management or creative interventions that raise awareness of the City's stormwater system and the hydrological cycle.

**SFPUC's grant technical team can help you identify if these opportunities are feasible for your site.*



TIP: *Unsure of who you can work with to complete your project? Check out the **Green Infrastructure Vendors List** [🔗]. Our Green Infrastructure Vendor List is intended to provide potential grantees with resources for designing and constructing green infrastructure.*

Which of These Opportunities Can the Grant Unlock?

Document your ideas and make a list of emerging opportunities, starting with what is most important to your Grant Team.



Sankt Kjelds Square and Bryggervangen, Copenhagen Photo source: worldlandscapearchitect.com



Place de l'Eveche, Saint-Pol-de-Léon, France Photo source: coloco.org



Cloudburst Project, Tasinge Plads, Copenhagen. Unlocking environmental, social and site programming opportunities.

Photo source: landscapeiskingston.wordpress.com



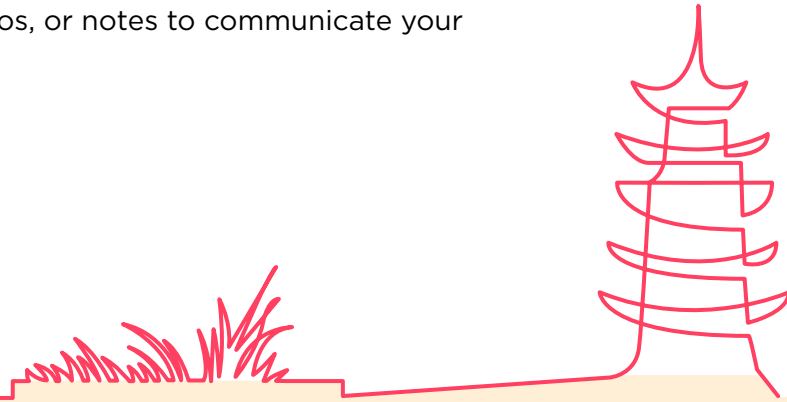
3. Schedule an Opportunities Assessment

If you are unsure how to begin or need assistance in developing initial stormwater concepts for your project, the SFPUC's Technical Assistance Team is available to help. A Green Infrastructure Opportunities Assessment will help grantees map out and measure the site's initial drainage areas and recommend potential types of green infrastructure that might be suitable on your property.

To schedule an opportunities assessment, please contact the SFPUC Grant Program Administrator at gigrants@sfgwater.org.

What to Bring to an Opportunities Assessment

1. Members of your Grant Team (key stakeholders and grant project manager).
2. Any available site information (e.g., existing floor and site plans, emergency access plans, any previous soil data available, existing topography, existing vegetated areas, impervious areas) and constraints (e.g., known utilities, steep slopes, setbacks).
3. Any questions you have on the application.
4. Any draft sketches, diagrams, example photos, or notes to communicate your initial ideas



TIP: Contact the Technical Assistance Team to help you calculate the impervious surface on your parcel.

4. Develop a Project Vision and Concept Design

After the site visit SFPUC may provide feedback on your initial ideas. Review this feedback with your Grant Team and write down your project vision. The project vision should state the goals of your project, recognize the role of your stakeholders, and describe how the proposed stormwater features will **unlock social and environmental co-benefits** over the life-span of the project.

You are now ready to start working on a concept design for your project (approximately equivalent to a 10% level of design). The concept should illustrate the proposed changes to your site through the integration of stormwater features.

A list of required concept level design information can be found on the next page.

Project Concept Requirements

Minimum Stormwater Performance Criteria

Stormwater management features must be large enough to capture stormwater runoff from the 90th percentile storm, equivalent to 0.75-inches of rain over the drainage management area (DMA). As you are developing your concept design, use the Stormwater Performance Calculator in the application to demonstrate that your design meets the minimum performance criteria.

The project concept must identify the following information in one or more plans or diagrams:

Before: Existing Conditions

- Impervious areas, e.g., roof, pavement, driveway
- Above ground stormwater infrastructure (drains, downspouts, inlets, etc.) and drainage management areas for those connections; below ground pipes or other structures, if known
- Utilities, e.g., water lines, electric lines, drains
 - Existing connections to the sewer system, if known
- Trees (drip line and trunk diameter, if known)
- Flow direction arrows for sheet/surface flow and pipe flow
 - Existing contours, if known
- Road labels
- Labels of existing uses (playground, parking, etc.)
- Exterior door locations and ADA access
- Fire truck access and emergency plan (if available)
- North arrow and scale
- Property and easement boundaries

After: Proposed Site Plan

(at a scale no greater than 1"=20')

- Project boundary
- Stormwater management practices (BMPs)
 - Footprint of each proposed BMP - Labeled with an ID number (e.g. for vegetated roof, VR-01, VR-02, etc.)
 - Corresponding Drainage Management Area (DMA) for each BMP
 - BMP drainage components (overflow, underdrain, outlet control structures for the BMP itself, etc.)
- Proposed connections to existing conveyance systems or sewers
- Proposed site drainage features (new drains, downspouts, etc.)
- Flow direction arrows for sheet flow and pipe flow
- Changes to land cover, including impervious surfaces
- Areas that require regrading or grading contours
- Labels of proposed uses (playground, parking, etc.)
- BMP Performance Summary Table
 - BMP ID Number
 - Facility type and sizing information, e.g., footprint (square feet), or storage volume (gallons)
 - Size of each DMA (square feet).

Innovative Stormwater Project Examples

Lycée Français San Francisco Ortega Campus San Francisco, CA



Source: sfpuc.org

The Lycée Français San Francisco (LFSF) Ortega campus is located in the Sunset neighborhood within the Westside Groundwater Basin. The site's well-draining soils allow for green infrastructure features that support infiltration and groundwater recharge. The school setting offers a unique opportunity for greening and educational benefits to be shared by students and the community.

Stormwater from the school's roofs and play yard will be collected and directed to the subsurface of a new permeable pavement area for infiltration. In the courtyard area, roof downspouts will be re-directed to a new cistern, where stormwater will be collected and used by students to irrigate indoor and outdoor plants. Downspouts facing the streets, will continue to drain to existing perimeter landscaped areas, where soils will be amended to support new, native, and low water use planting. LFSF is contributing funds to placemaking elements including public seating areas, which are beyond the scope of the GI Grant.

LFSF's stormwater features will reduce the amount of stormwater discharged to the combined sewer, help recharge the Westside Basin aquifer, and have the additional benefit of greening the school yard and public realm. Each year, this project will infiltrate or reuse 305,000 gallons of stormwater, comparable to the amount of water that 10 San Francisco homes use in 1 year*.

(*assuming 80 gallons per day for a multi-family residential unit with 2 occupants)

STORMWATER FEATURES: Permeable paving, cistern, 1 rain garden, and improved landscaped areas.

PROJECT CO-BENEFITS: (1) The project site is located within an Environmental Justice Area and Disadvantaged Community. (2) Groundwater recharge.

SIZE: 0.7 acres

COMPLETION DATE: 2020

Maplewood Mall Retrofit [🌱] Maplewood, MN



Source: rwmwd.org

The Maplewood Mall parking lot was retrofitted with rain gardens, permeable pavers, and a rainwater harvesting cistern that receives runoff from the mall roof. Interpretive signage and a conservation-themed mural draws attention to these improvements, and a large watershed map in the entry vestibule shows how water travels from the mall all the way to the Mississippi River.

STORMWATER FEATURES:

Permeable pavers, rain gardens, rainwater harvesting

PROJECT CO-BENEFITS:

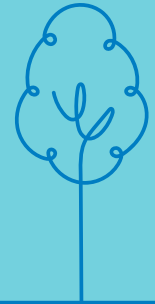
Public access, education, non-potable reuse

SIZE: 35 acres

COMPLETION DATE: 2012



Sunset Blvd. Stormwater Pilot Project, San Francisco



Application

Once you have completed the **project visioning tasks**, you are ready to complete the grant application. Please visit our program website sfpuc.org/gigrants for information on the latest Application cycle, including important due dates, a link to download the Application, application instructions, and scoring and evaluation criteria.

Complete the Application

Project Application Form

The project application form is where you provide general information about your proposed project including the location, proposed project team, and the total amount of funds that you are requesting. You must provide a brief project description that quickly summarizes the proposed project. This form also includes a checklist of the additional materials/documentation that you must include with your application.

Project and Grant Team Experience Narratives

This form includes sections for: project narrative and grant team experience. The project narrative should provide context around the project, including drivers, goals, etc. and a summary of the proposed scope. The experience narrative should describe your project team's previous experience with delivering green infrastructure projects of similar scale and complexity.

Project Budget

The budget template is where you will describe how you propose to spend the grant funds. **The dollar amount of each grant award will be determined by your concept design and project budget.** Your budget should be consistent with your proposed conceptual design and provide sufficient detail to demonstrate that your concept has been accurately estimated.

The budget template is divided into construction costs and non-construction costs. It includes typical GI line items for a concept level design. These are for information only and can be modified/edited/removed for your specific project. No more than 30% of the grant amount may be used for non-construction activities.

Standard contingencies consistent with a 10% level of design are included within the template to ensure accurate cost estimating of proposals. These contingency multipliers can be reduced if your design is farther along than 10% but cannot be increased without approval from the SFPUC Grant Program Administrator.

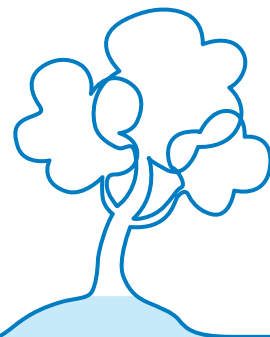
Individual grant awards are capped at a maximum of \$930,000 per impervious acre managed (i.e., the amount of impervious surface that drains to the green infrastructure, or “impervious acres managed”), up to a maximum of \$2,000,000 per grant. SFPUC may issue partial grants depending upon funding availability.

Stormwater Performance Calculator

The stormwater performance calculator determines the performance of the proposed BMP(s) based on their size and the impervious area draining to them. This allows you to demonstrate that your concept design meets the minimum stormwater performance requirement of capturing the 90th percentile storm from the impervious drainage areas.

First you must enter the stormwater service type for your site as either combined sewer system (CSS) or municipal separated storm sewer system (MS4). You must also input the predominant hydraulic soil group (HSG) type at your site, which the SFPUC uses to estimate the performance of infiltrating facilities. If you do not know the service system type or soil type at your site, you can view a map in the stormwater performance calculator.

To use the stormwater performance calculator you should divide your proposed project site by BMP type and aggregate the impervious area draining to each BMP type. The inputs in this section include the BMP type(s), BMP footprint size, and impervious drainage management area. For rainwater harvesting cisterns re-use rates (i.e. demand) are also required.



The stormwater performance calculator will not show the performance output of your project until the data entered shows that you are using approved GI practices that are appropriately sized, managing at least 0.5 acres of impervious area, and capturing the 90th percentile storm from the proposed drainage areas.

Project Vision & Co-benefits

This form is for you to describe your project vision and the social and environmental co-benefits that the proposed stormwater features will unlock. You must provide a description of how your project will deliver at least two (2) co-benefits from the list. The narrative should describe how the community engagement process will inform co-benefit outcomes, how co-benefits will be integrated in the project design, and how the co-benefits will contribute to the goals of the project's key stakeholders. Applicants should describe how the project will provide co-benefits using specific, measurable, and achievable design goals.

Communications Plan

Here you will describe the proposed communications plan to be implemented if awarded a grant. The communications plan should identify key stakeholders, propose a schedule with milestones for stakeholder engagement (including meetings or activities prior to award), and describe a process for communicating with stakeholders throughout the project.

Project Schedule

This template is where you will outline the major milestones of your proposed project schedule. The schedule must propose starting construction of the project within 2 years after execution of the Green Infrastructure Grant Agreement, and should take into account regulatory requirements, and SFPUC design reviews and inspections.

Maintenance Plan

This template is where you will outline the maintenance activities for the proposed green infrastructure facilities. Please refer to the SFPUC BMP Fact Sheets for recommended maintenance activities and frequencies for the proposed BMP types in your project.

If you are proposing to use proprietary BMPs, you should refer to the manufacturer for typical inspection and maintenance activities or prepared maintenance guides

As part of your application, you must also submit the following three (3) attachments:

Application Attachments



Conceptual Design

You must submit a conceptual design plan drawing(s) with the elements outlined in the Pre-Application section of this guidebook. See Step 4 in the Project Visioning Section for requirements on what to include in a concept design.



Site Photos

3-5 photos documenting existing conditions at the site. Consider what photos will be most compelling for before/after shots - they are a great way to show off your project!



Property Owner Letter of Support

For projects where the grantee is not the property owner, applications must include a letter of support from the property owner stating their intent to sign the 20-year ongoing maintenance agreement if the project is awarded.

Complete applications for the Green Infrastructure Grant Program must be sent via e-mail to gigrants@sfgwater.org. **Application packages must be condensed to a total file size of less than 10 MB.** Applicants will receive a confirmation e-mail with the date and time of your application. If you do not receive a confirmation e-mail within 5 business days, please e-mail the SFPUC Grant Administrator at gigrants@sfgwater.org or call **415-934-5709**.



Access our Technical Assistance Program to help!

Feeling overwhelmed? Our technical support team is available to help you work through your project concepts, co-benefits, and application process. Please reach out to our Technical Assistance Program at gigrants@sfgwater.org.

How your Application is Reviewed

Applications are accepted during the open application cycle period. The SFPUC will determine whether the application meets all minimum eligibility requirements. Applications that do not meet the eligibility requirements will not be evaluated further and will not receive grant funding. Applications that meet the eligibility requirements will be evaluated and ranked based on the following evaluation criteria. Specific application scoring and evaluation criteria can be found on the program website sfpuc.org/gigrants.

- **Stormwater Management:** Applications will be evaluated based on the size of the project's Drainage Management Area (DMA) and the total annual volume of stormwater captured by the project.
- **Co-Benefits:** Applications will be evaluated based on the number and variety of proposed community and environmental benefits, and how well the application narrative articulates the intended co-benefit outcomes and proposed process for delivering the co-benefit outcomes.
- **Proposed Concept Design and Budget:** Applications will be evaluated based on whether the application narrative, proposed budget, and concept design demonstrate a complete, accurate, and feasible stormwater management concept using approved green infrastructure BMP types.
- **Project Implementation Plan:** Applications will be evaluated based on the quality of the proposed project implementation plan, including the quality of the proposed communications plan, feasibility of the proposed schedule, completeness of the maintenance plan, and overall project readiness.

Resources

The following resources are available on the SFPUC website to help support the development of a successful grant application:

Stormwater Management Requirements and Design Guidelines (SMR) [\[🔗\]](#)

A regulatory document intended for projects complying with the Stormwater Management Ordinance, but it contains very helpful stormwater site design information.

BMP Fact Sheets [\[🔗\]](#)

An appendix to the SMR that details the function, design considerations, and maintenance and inspection activities for each green infrastructure best management practice (BMP) type.

Green Infrastructure Typical Details and Specifications [\[🔗\]](#)

An appendix to the SMR that includes a set of typical construction drawing details and specifications for the most popular BMP types that are intended to be customized by designers for each project.

Vegetation Palette for Bioretention BMPs [\[🔗\]](#)

An appendix to the SMR that includes a list of appropriate vegetation choices for vegetated bioretention BMPs

Green Infrastructure Construction Guidebook [\[🔗\]](#)

A how-to guidebook that outlines ideal construction practices for bioretention and permeable pavement technologies.

Green Infrastructure Maintenance Guidebook [\[🔗\]](#)

A how-to guidebook that outlines ideal maintenance for bioretention and permeable pavement technologies.

SFPUC Rainwater Harvesting Manual [\[🔗\]](#)

A step by step manual on how to design and build rainwater harvesting at a residential scale.

Green Infrastructure Permit Process Guidebook [\[🔗\]](#)

A step by step guide on how to identify and obtain the permits required for all approved green infrastructure BMP types.

SF Street Trees Species [\[🔗\]](#) Uncommon & Special Trees [\[🔗\]](#)

San Francisco Environment Guidelines on Trees



Lafayette Elementary School: Dry Creek Bed.



Grant Award



Congratulations, you have been awarded a grant by the SFPUC! You have now moved from being an applicant to a grantee. This section provides the steps you must take in order to actualize the grant that has been awarded. These important “paperwork” steps must be completed before any grant funds are disbursed.

Award Letter

If your project is selected for funding, you will receive a Award Letter from the SFPUC confirming the amount of grant funds reserved for your project. The Award Letter is provisional and subject to the execution of the Green Infrastructure Grant Agreement and submission of the required documentation for funding disbursements. SFPUC may provide partial award of requested grant funds based on review of the project’s proposed concept, budget, and eligible cost items.

You have 90 days from the date of the Award Letter to complete the City Vendor requirements and sign the Grant Agreement.

If the Grantee does not complete the above requirements within three months, the SFPUC reserves the right to rescind the grant award. You may request an extension of the grant reservation via email to the SFPUC. Approval of extension requests is at the discretion of the Grant Administrator.

Sign the Green Infrastructure Grant Agreement

The Green Infrastructure Grant Agreement has a term of twenty (20) years. The grant agreement requires the property owner to maintain the stormwater management function of the project for twenty years, which is considered the typical useful life of green infrastructure assets.

For projects where the grantee is not the property owner, **both the Grantee and the property owner must sign the Green Infrastructure Grant Agreement.** Make sure your property owner has read and understands all the requirements before you apply for a grant.

In addition, property owners must sign a Declaration of Deed Restrictions notifying subsequent property owners of the obligation to maintain the project during the 20-year term. The Deed Restriction will be recorded by the SFPUC. Templates for the Green Infrastructure Grant Agreement and the Declaration of Deed Restrictions can be found at sfwater.org/gigrants.

Become a City Vendor

In order to receive any of the four (4) grant disbursements, the grantee must become a qualified Supplier and Bidder with the City and County of San Francisco. To register as a City Vendor, follow the steps below:

1. **Register for a Bidder ID Number:** Access the San Francisco City Partner website to register as a bidder at sfcitypartner.sfgov.org/ and attach a W-9 form at irs.gov/pub/irs-pdf/.
2. **Complete 12B Equal Benefits Declaration:** Chapter 12B of the Administrative Code requires that all Suppliers to the City and County of San Francisco administer benefits equally to employees with domestic partners and employees with spouses. Complete a 12B Equal Benefits Declaration on the City Partner website at sfcitypartner.sfgov.org/. If you wish to seek a waiver of the 12B Equal Benefits Ordinance, please email the SFPUC Grant Administrator at gigrants@sfwater.org stating why compliance with 12B is not feasible.
3. **Send Bidder ID, Tax ID, and 12B Declaration to Grant Administrator:** Email your Bidder ID, Tax ID, and proof of 12B compliance to the SFPUC Grant Administrator at gigrants@sfwater.org.
4. **Complete Business Registration:** Business Registration is required for all entities that conduct business in SF and determines your tax responsibilities. Visit newbusiness.sfgov.org/vendor/ to determine if and how you are required to register.

Important Information on City Requirements

- A grant is classified as income and therefore may be taxable by the Internal Revenue Service. It is the responsibility of the grantee to determine whether a tax liability exists. The designated grantee will receive a 1099-Misc tax form from the City in the February after award of the grant. By issuing a 1099-Misc, the City is fulfilling its legal obligation for tax-reporting. In order to issue a 1099-Misc, SFPUC will request relevant tax information from a designated grantee through a W-9 IRS tax form, which must be completed and returned before a grant disbursement will be made.
- The City requires evidence of insurance for all funded activities. Prior to beginning work on an activity, the grantee must produce a Certificate of General Liability as well as proof of Worker's Compensation Insurance. The grantee's insurance policy shall name the City and County of San Francisco, the San Francisco Public Utilities Commission, its board members and commissions, and all authorized agents and representatives, and members, directors, officers, trustees, agents and employees as additional insureds.
- The Green Infrastructure Grant Agreement requires Grantees to comply with Chapter 14B of the Administrative Code, which sets Local Business Enterprise (LBE) participation requirements. Grantees must use good faith efforts to attempt to obtain at least three bids from Micro and/or Small LBEs to serve as contractors for design and construction. The City's directory of certified LBE firms is available on the City's website at mission.sfgov.org/hrc_certification/. If you are unable to utilize a LBE for design and/or construction, please email the SFPUC Grant Administrator at gigrants@sfgov.org stating why compliance with 14B is not feasible, and providing the firm names of the LBEs that you have performed outreach to and proof of your outreach efforts (for example, copies of emails).
- The Green Infrastructure Grant Agreement contains additional requirements related to taxes, insurance, and other matters.

Complete Grant Disbursement Requests

Grant funds will be provided to the grantee in four (4) disbursements at different phases of project completion: planning and design, construction, and final retention. Funding for construction will be disbursed in three payments, as outlined below.

1. Planning and Design

All non-construction related project costs (i.e. soft costs) will be disbursed upon the execution of the Green Infrastructure Grant Agreement and the grantee's submission of all initial required funding documentation to the SFPUC. The SFPUC will disburse up to **30% of the total project costs** solely for planning and design activities. To receive the first grant disbursement, the grantee must submit the following documentation to the Grant Administrator:

1. Signed Green Infrastructure Grant Agreement
2. All required insurance documentation
3. Completed Request for funds (Appendix D of the Grant Agreement)

2. Construction Payment 1

The first construction payment will be **50% of the approved construction bid from the contractor**. The payment will be processed no earlier than 90 days before the start of construction. To receive the first construction payment, the Grantee must submit the following documentation to the Grant Administrator:

1. Completed Request for Funds, including copies of paid invoices for planning and design expenditures.
2. SFPUC Approval Letter of 100% Design
3. Contractor Bid for Construction
4. Construction Schedule
5. Proof of Contractor Insurance
6. Signed Declaration of Deed Restrictions

3. Construction Payment 2

The second construction payment will be **40% of the approved construction bid from the contractor**. The SFPUC will not process this payment until the Grantee has submitted paid invoices showing that at least 80% of the first construction payment amount has been spent. This payment will not cover the full cost of construction - **Grantees must be able to front at least 10% of the project construction cost to get through completion!** To receive the second construction payment, the Grantee must submit the following documentation to the Grant Administrator:

1. Completed Request for Funds, including copies of paid invoices showing payment of 80% of previously disbursed construction funds.

4. Final Retention

The final construction payment will be the remaining **10% of the approved construction bid from the contractor**. The final retention payment will be disbursed upon the SFPUC's final approval of the constructed project (via a final walkthrough) and the Grantee's submission of the Final Grant Report. To receive the final grant disbursement, a Grantee must submit the following documentation to the Grant Administrator:

1. Completed Request for Funds, including copies of paid invoices for all grant expenditures.
2. SFPUC Project Completion Notification
3. Completed Final Report



Lafayette Elementary School: Dry Creek Bed.



Design and Construction



Now that all of the required paperwork is out of the way, you are ready to start the project! This section covers the steps and requirements for completing your project's design, finding a qualified contractor, and building the project.

Design the Project

Grantees are required to schedule a pre-design meeting with SFPUC prior to detailed design. The property owner, grant manager, and community stakeholders must be present at the pre-design meeting. Grantees will be expected to present how the results of initial community engagement activities, geotechnical investigation, and engineering survey have further informed or updated the project concept design.

Grantees are required to submit documentation of successful completion of design milestones for review and approval by the SFPUC via e-mail. Designs must be submitted at 35/65/95% completion (equivalent to 100% DD, 50% CD, 90% CD for architectural drawings) for review to ensure the green infrastructure features will function and meet the expected performance metrics. **Design Submittal Checklists** [🔗] for each milestone can be downloaded from the program website. Please reach out to our Technical Assistance Team at gigrants@sfgwater.org.

Final design documents (100% Construction Documents) must be submitted to the Grant Program Administrator via e-mail. The Grant Program Administrator will then issue final approval of the design to the Grantee. Once the Grant Program Administrator has issued final approval of the design, the Grantee may select a contractor.

Required Site Investigations

All required site investigations, such as a topographic survey, geotechnical analysis, structural survey, utility locating, etc. should be completed prior to the 35% design submittal. These services can often take a long time to complete – start early!

Permits and Environmental Review

All projects must comply with applicable local, state, and federal permit requirements. If you are unsure of what permits your project may require, check out our **Green Infrastructure Permit Process Guidebook**. [🔗] Funds for construction will not be issued until the project has undergone environmental review in compliance with the California Environmental Quality Act (CEQA) and San Francisco Administrative Code Chapter 31.

Find a Contractor/Bid the Project

The grantee is responsible for procuring a licensed contractor to complete the construction of the project. The project bid form must include separate bid items for green infrastructure facilities. All GI bid items shall include unit prices. It is the grantee's responsibility to ensure that all contractors and subcontractors comply with City insurance requirements.

Grantees must use good faith efforts to attempt to obtain at least three bids from Micro and/or Small LBEs to serve as contractors for construction.



TIP: Contractor Training - While not required, the SFPUC highly recommends contractors who have not built green infrastructure before receive training prior to starting construction. Contractor training is available through the SFPUC by request.

Construct the Project

During construction the SFPUC reserves the right to enter the construction site and inspect the project at any time. The grantee will be responsible for alerting the Grant Program Administrator of critical construction activities related to the installation of the stormwater management features and keeping them updated on general construction progress. It is the grantee's responsibility to construct a project that delivers the benefits and performance committed in the grant application, and to hire a design/construction management team to monitor and control construction.

Once construction is complete, the SFPUC will conduct a final walkthrough of the project to ensure that all stormwater management features were built to the plans and specifications. If the project is determined to be complete, the SFPUC Grant Program Administrator will issue a Project Completion Notification to the grantee.

Submit the Final Report

Before receiving the final grant disbursement, you will be required to submit a Final Report to the SFPUC documenting all final project information. The final report must include construction as-builts, stormwater performance calculations, final accounting of total project costs (grant-funded as well as additional funding that may have been raised to fund the project), and a final maintenance checklist. **The Final Report is due within ninety (90) days of the issued Project Completion Notification.** The Final Report template can be found on the program website.



Operations and Maintenance



Congratulations – your project is constructed! However, your grant obligation is just getting started. This section describes the ongoing maintenance responsibilities and inspection protocols for the remaining duration of the 20-year Green Infrastructure Grant Agreement.

Maintenance

The property owner will be responsible for all operations and maintenance of the project for the entirety of the 20-year grant term. The property owner must submit annual maintenance reports to the SFPUC for the entire duration of the project. Templates for the annual maintenance report can be found on our website.



TIP: Maintenance Training – Properly trained maintenance staff can save you a lot of time and money. Maintenance training for your identified maintenance staff is available upon request to the SFPUC.

Inspection

The SFPUC has the right to inspect the project at any time throughout the term of the Green Infrastructure Grant Agreement. If the stormwater management function of the project is found to be impaired, the SFPUC will issue a notice to perform in writing to the property owner to complete all required maintenance activities.

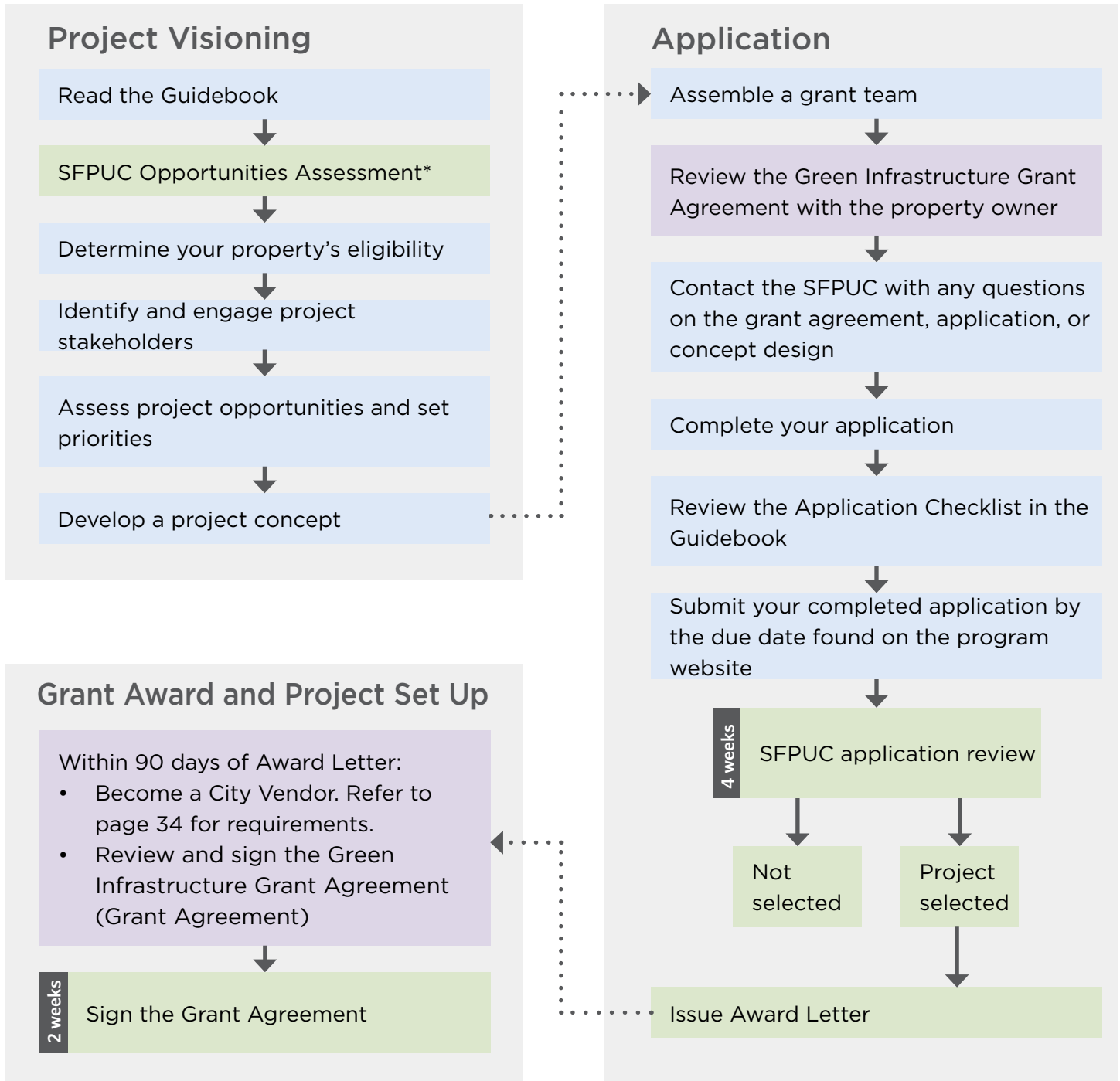
Project Closeout (Year 20)

Upon satisfaction of the obligation to operate and maintain the project for twenty (20) years, the SFPUC will, upon request, record a release of the Declaration of Deed Restrictions in the official records of the City and County of San Francisco's office of the Assessor-Recorder. That request must be made to the Grant Program Administrator.



Sunset Boulevard Greenway

Green Infrastructure Grant Process Diagram

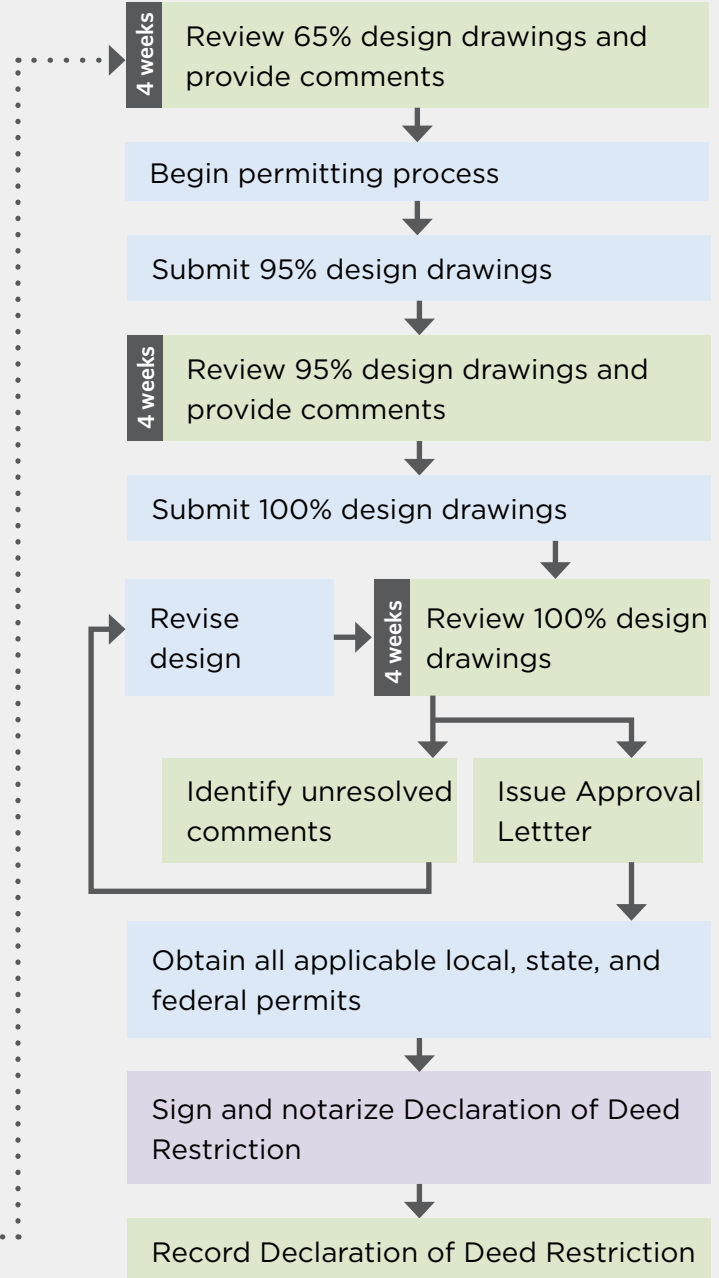
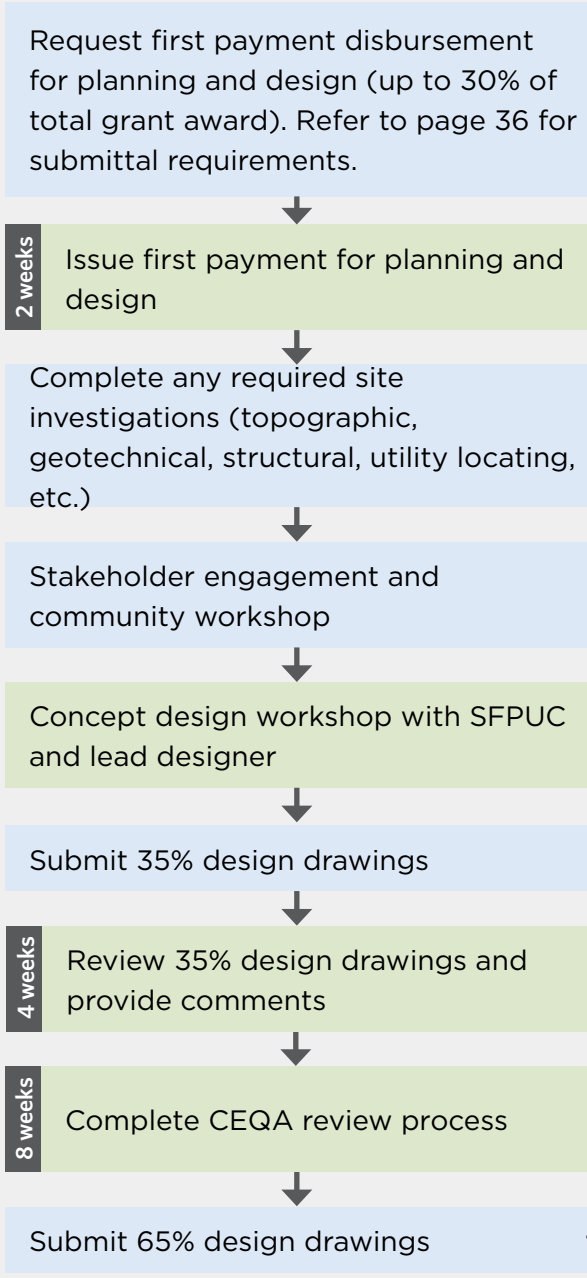


Key

SFPUC responsibility	Estimated timeline
Grant Project Manager responsibility	Property Owner responsibility

*Optional SFPUC technical assistance

Planning and Design

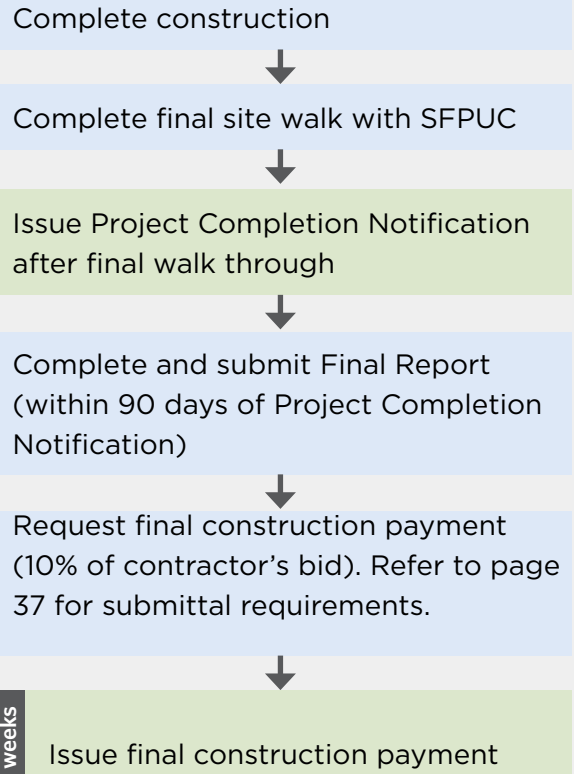
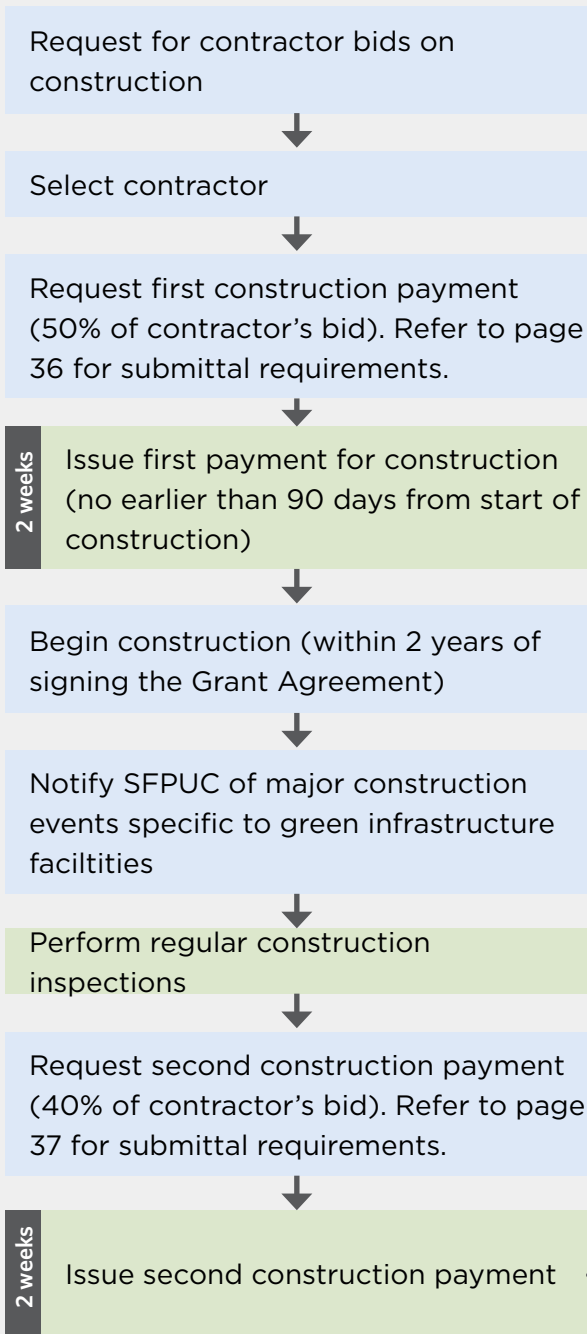


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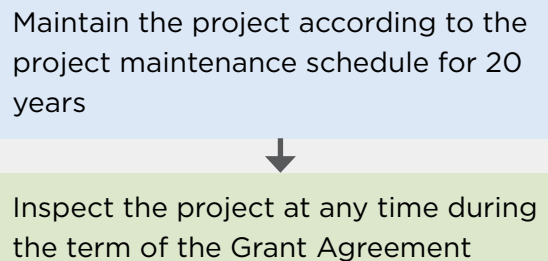
SFPUC responsibility	Estimated timeline
Grant Project Manager responsibility	Property Owner responsibility

*Optional SFPUC technical assistance

Construction



Maintenance and Inspections



Key

SFPUC responsibility	*Optional SFPUC technical assistance
Grant Project Manager responsibility	Estimated timeline
	Property Owner responsibility



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Published in 2022