Grant Progress Report

Bay Area Green Infrastructure Master Planning Project

GA# 12-415-550

Progress Report # 1

Reporting Period: 08/01/2013 to 10/30/2013

Submittal Date 11/13/2013

Grant Agreement No: 12-415-550
Project Name: Bay Area Green Infrastructure Master Planning Project
Contractor Name: San Francisco Estuary Partnership / ABAG

I certify under penalty of law that this document and any attachment was prepared by me or under my direction in accordance with the terms and conditions of each Grant Agreement Exhibit. Based on my inquiry of the persons or persons who manage the project, or those directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. All information submitted in this document and all attachments conform to and is in accordance with the state and federal laws and I so here certify with my signature. I am aware that there are significant penalties for submitting false or misleading information.

Project Director: _____ _____

Judy Kelly – Printed Name | Signature

Summary of Work Completed To Date

Work Item	Items for Review	Critical Due Date	Estimated Due Date	Percent Work Complete	Date Submitted
EXHIBIT A – SCOPE OF WORK TO BE PERFORMED BY THE GRANTEE					
A.	PLANS AND GENERAL COMPLIANCE REQUIREMENTS				
1.	GPS information for Project site and monitoring locations	Day 90		100%	10/26/13
2.	Monitoring and Reporting Plan	N/A	N/A	N/A	N/A
2.1	Project Assessment and Evaluation Plan (PAEP)	Day 90		100%	10/26/13
2.2	Monitoring Plan (MP)	N/A	N/A	N/A	N/A
2.3	Quality Assurance Project Plan (QAPP)	N/A	N/A	N/A	N/A
2.4	Proof of Water Quality Data Submission to CEDEN	N/A	N/A	N/A	N/A
3.	Copy of final CEQA/NEPA Documentation	Day 90		100%	10/26/13
4.	Public Agency Approvals, Entitlements, or Permits	N/A	N/A	N/A	N/A
B.	PROJECT-SPECIFIC REQUIREMENTS				
1.	Project Management				
1.2	Notification of Upcoming Meetings, Workshops, and Trainings		15 Days In Advance		
2.	TAC				
2.1	List of TAC Members, Their Affiliated Organizations, and Their Roles and Responsibilities		November 2013		
2.2	Three (3) TAC Meeting Agendas, Sign-In Sheets, and Minutes		As Needed	33%	11/14/13
2.3	TAC Status Report	December 31, 2014			
3.	Toolkit				
3.4	The Packaged Toolkit		February 2015		
3.5	Toolkit Technical Memorandum	April 30, 2015			
3.6	List of Communities and Staff Contact Information that Participated in Toolkit Demonstration		May 2015		
4.	Green Infrastructure Master Plans		May 2015		
4.1	Preliminary Meeting Minutes and a List of Selected Watersheds		February 2014		
4.2	Toolkit Results and Secondary Meeting Minutes		December 2014		

Work Item	Items for Review	Critical Due Date	Estimated Due Date	Percent Work Complete	Date Submitted
4.3	List of Potential LID Retrofit Sites Selected for Field Verification		December 2014		
4.5	List of Selected Sites for LID Conceptual Design		April 2015		
4.6	Green Infrastructure Master Plans		May 2015		
5.	Evaluation of Potential Funding Mechanisms				
5.1	Meeting Agendas, Sign-In Sheets, and Minutes		April 2015		
5.2	In-Lieu Fee Program Memorandum		May 2015		
6.	Education and Outreach				
6.1	Website Link		October 2013	100%	10/26/13
6.3	Webinar Material		July 2015		
6.5	Project Results Presentation Material		July 2015		
EXHIBIT B – INVOICING, BUDGET DETAIL, AND REPORTING PROVISIONS					
A.	INVOICING		Quarterly		
G.	REPORTS				
1.	Progress Reports within forty-five (45) days following the end of the calendar quarter (March, June, September, and December)		Quarterly	11% (1/9)	11/14/13
2.	Annual Progress Summaries		Annually by 9/30		
3.	Natural Resource Projects Inventory (NRPI) Survey Form	Before Final Invoice			
4.	Draft Final Project Report	August 31, 2015			
5.	Final Project Report	October 31, 2015			
6.	Final Project Summary	Before Final Invoice			
7.	Final Project Inspection and Certification	Before Final Invoice			

Progress Report Narrative

Introduction

GreenPlan Bay Area is a collaborative effort between San Francisco Estuary Partnership (SFEP), San Francisco Estuary Institute (SFEI) and several Bay Area municipalities. SFEI will develop spatial tools which will be used by several Bay Area municipalities to develop plans that identify the optimal combination of Green Infrastructure (GI)/Low Impact Development (LID) features for achieving desirable outcomes at the watershed scale.

The spatial tools, aka Green-Plan-it, will include four components: a GIS siting tool with user interface to determine site suitability, a watershed model to identify high-yield runoff and pollutant areas ('hot spot'), optimization techniques to search for optimal combinations of LID locations, types and configurations, and a post-processor to compile and display outputs in user-friendly formats.

After development, Green-Plan-it will be pilot tested in several municipalities/watersheds. The results of Green-Plan-it will serve as the basis for municipal Green Infrastructure Master Plans and/or a list of priority LID sites for each jurisdiction. Conceptual designs will be developed for 8 LID sites/projects. Jurisdictions will also collaborate with ABAG/SFEP to explore potential funding frameworks (such as alternative compliance programs) for LID retrofits.

Summary of Items for Review

Invoice #1

Project Administration (Cumulative 11 % complete)

Project administration included the completion of Invoice 1, project organization including arranging development and kickoff meetings, creating and distributing an online participant survey, completing 90-day deliverables, setting up project webpage and making initial selections of participating municipalities and project area watersheds based on survey results.

Project Design (Cumulative 4 % complete)

Project design included the tasks listed on the attached SFEI quarterly progress report.

PAEP

No work completed during this quarter.

Exhibit A

The following items (A.1, A2.1, A3 and A(B)6.1) were sent to the state board on October 26, 2013 in an email memo. The signed CEQA documentation was sent in hard copy on the same day.

A.1	GPS info for project site locations
A2.1	Project Assessment and Evaluation Plan (PAEP)
A3	CEQA/NEPA documentation
A(B)6.1	Website Link
A(B)2.2	TAC meeting minutes, agenda, sign-in sheets

Exhibit B

B(G)1 Progress Reports (Cumulative 11%, 1 out of 9 complete) – continues on a quarterly basis; no delays or issues to report.

Attachments

1. Questionnaire/survey sent to municipalities
2. Responses to questionnaire
3. SFEI progress report #1 (Quarter 1- August 1, 2013 through September 2013)

Summary of Activities

1) A project kick-off meeting was held on September 19, 2013 and was attended by cities of San Jose, Oakland, San Mateo, El Cerrito, and Redwood City. This meeting also served as the first TAC meeting as the municipalities had the opportunity to discuss project integration of available GIS data. The minutes for this meeting can be found at the following web link: (http://www.sfestuary.org/wp-content/uploads/2013/09/Green-Plan-Bay-Area-Kickoff-Meeting-Minutes-9-19-13.pdf)
2) SFEP and SFEI conducted a survey of municipalities for interest in participation in GreenPlan Bay Area development, data needs, and more. The survey questions as well as the responses are attached to this report and can be found on the GreenPlan Bay Area project Basecamp webpage at the following links: (https://asset1.basecamp.com/2062397/projects/3399862-greenplan-bay-area/attachments/60248038/2c23b13bdecf38710d5aed1b29b95a240010/original/GreenPlan%20Bay%20Area%20Questionnaire.pdf) (https://asset1.basecamp.com/2062397/projects/3399862-

greenplan-bay-area/attachments/58138617/e2d26a08d87baee237abc95388c92f8d0010/original/Muni%20Survey%20Responses.pdf)

3) Initial Selection of Master Planning Cities
   - City of San Jose
   - City of San Mateo

   Master Planning Agencies will provide GIS data/other information for the GreenPlan-IT GIS toolkit and adopt the results of GreenPlan-IT GIS toolkit as a Green Infrastructure Master Plan.
4) Initial Selection of Watersheds of Interest
   - City of San Jose Watersheds – Guadalupe River,Coyote Creek, Los Gatos Creek, Ross Creek, Los Alamitas Creek, Canoas Creek
   - City of San Mateo Watersheds – San Mateo Creek, Laurel Creek
5) Initial Selection TAC participants
   - San Mateo C/CAG (Matt Fabry)
   - SCVURPPP (Jill Bicknell)
   - City of Oakland (Kristin Hathaway)
   - City of El Cerrito (Emily Alter)
   - City of San Jose (Bryan Apple)

   TAC members will join national and regional experts to ensure that the project outputs are relevant and useful. SFEI will recruit 2-3 additional paid technical expert TAC members. The participation level of the municipal TAC members may fluctuate as they will be participating as unpaid. A final working list of TAC members will be submitted by the end of November 2013.
6) Initial Selection of interested parties
   - Interested parties include all kickoff meeting attendees as well as the initial selection of TAC members.

   Any Bay Area city or county may be added to this list at any time.

   Interested parties will receive project updates and may choose to attend the webinar training on how to use GreenPlan-IT

Summary of Items in Progress

Exhibit A

A2.1 List of TAC Members, Their Affiliated Organizations, and Their Roles and Responsibilities
A2.2 2nd TAC meeting- Three (3) TAC Meeting Agendas, Sign-In Sheets, and Minutes
A4.1 Preliminary Meeting Minutes and a List of Selected Watersheds

Exhibit B

B(G)1 Progress Reports (Cumulative 11%, 1 out of 9 complete) – continues on a quarterly basis; no delays or issues to report.

Photographs

No photographs were provided for this report.

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Green Infrastructure Master Planning Project Quarterly Progress Report
August through September 2013

Task 1: Project Assessment and Evaluation Plan
Work Completed during the Period

- No work completed during invoice period

Task 2: Technical Advisory Committee
Work Completed during the Period

- No work completed during invoice period

Task 3: LID Toolkit

Work Completed during the Period

- SFEI staff prepared for and participated in 2 team kickoff meetings; one meeting with SFEP and a 2nd meeting with SFEP and project partners
- SFEI staff held multiple internal meetings to develop detailed work plans for development of the toolkit. SFEI staff developed questions for municipalities in order to design toolkit with municipal needs Incorporated.
- SFEI staff prepared for and participated in a TAC meeting with potential municipal partners
- SFEI staff collaborated with SFEP to design a survey for municipal partners. Survey included questions on data availability, green infrastructure needs/constraints, status of development on city master plans, and needs/desired outcomes of an LID siting toolkit.
- SFEI staff developed a list of data needs for development of the toolkit.
- SFEI staff began development of detailed work plans for the individual toolkit modules as well as the GIS interface and siting module.
- SFEI staff worked with SFEP to select primary municipal partners as well as began discussions on selecting the 3 watersheds for inclusion as pilot watersheds in the toolkit.

Task 4: Green Infrastructure Master Plans
Work Completed during the Period

- No work completed during invoice period

Task 5: Education and Outreach
Work Completed during the Period

- No work completed during invoice period

GreenPlan Bay Area
Survey of Municipal Agencies Interest in Project

Question	City of San Mateo	City of San Jose	Redwood City	El Cerrito	City of Oakland
What is your level of interest in the following roles? [TAC Member]	Medium Interest	Medium Interest		Medium Interest	HIgh Interest
What is your level of interest in the following roles? [Master Planning Agency]	HIgh Interest	HIgh Interest	Medium Interest	Medium Interest	Low Interest
What is your level of interest in the following roles? [Interested Party]	Low Interest	HIgh Interest	HIgh Interest	HIgh Interest	HIgh Interest
Do you have any current or recent LID siting projects, grants etc.? If so, please describe the major project objectives, outcomes, and how this project might tie into GreenPlan Bay Area?	The Delaware Streetscape project was just recently completed and it includes LID's as part of the project. The project was a Complete Streets project that included a road diet, wider sidewalks, bicycle lanes and green infrastructure. The project could tie into the GreenPlan Bay Area as an example project of how LID's can be incorporated into Complete Street Projects.	The City of San Jose is currently developing a Storm Sewer Master Plan to evaluate the capacity performance of the city's 1,500 miles of storm sewer system. One aspect of this project is to analyze and identify locations for LID and HM facilities. Modeling results from GreenPlan Bay Area's LID GIS toolkit may offer valuable data and information to be included the Storm Sewer Master Plan, specifically related to the identification of optimal LID retrofit sites.	Small scale (one watershed) LID siting project in the RFP process.	The San Pablo Avenue Raingarden Projects - implemented in 2010 - the project was designed to demonstrate the benefits of small-scale LID infrastructure projects as part of a larger Streetscape Improvement Project to improve the aesthetics along the City's major commercial corridor, while capturing and treating 1.7 acres of stormwater along different portions of the Avenue. The San Pablo Avenue Stormwater Green Spine Project (at Fairmount Avenue) - the project is currently in design and will include one LID project on the Avenue in El Cerrito with the intention of quantifying the costs and benefits of LID retrofits, educating the public about green infrastructure, providing hands-on training and demonstrating sustainability through green infrastructure projects. The San Pablo Avenue Urban Greening Project (at Stockton Avenue) - in design, this project is intended to treat and capture stormwater and improve pedestrian comfort, while maintaining existing landscaping and supporting local businesses.	We are in development of an Urban Greening Stormwater Retrofit plan for the City of Oakland that is identifying and prioritizing opportunities to retrofit existing city facilities and infrastructure to LID systems/green infrastructure for stormwater and climate change benefit. We are happy to meet with you to discuss lessons learned along the way and share resources.
What master plans or capital improvement plans (sustainable streets, green streets, stormwater plans, etc.) are currently being implemented, or are in development or planned? What are your agency's timelines for developing or implementing these plans?	The following plans are in development and/or are being implemented: Sustainable Streets Plan - In development Pedestrian Master Plan - completed in 2012 - being implemented Bicycle Master Plan - completed in 2011 - being implemented Storm Drain Master Plan - completed in 2004 - being implemented	The City of San Jose is currently developing a Storm Sewer Master Plan to evaluate the capacity performance of 24-inch and larger diameter pipes of the city's 1,500 miles of storm sewer system. The project will provide a working document that will establish long-term solutions for deficiencies within the storm sewer system to meet capacity objectives and regulatory compliance with current and future Municipal Regional Stormwater NPDES permit requirements. One facet of the project involves analyses and identification of locations suitable for LID and hydromodification management (HM) facilities. The Storm Sewer Master Plan is an ongoing long-term project, and is scheduled to conclude in 2017.	Request for proposal in progress for Stormwater Master Plan and a Watershed Improvement Plan for the Bayfront Canal/Atherton Channel watershed.	Stormdrain Master Plan - 1999 Urban Greening Plan (to include stormwater and green infrastructure projects) - anticipated June 2014 adoption	We've already installed a couple of green roofs. We have a bioswale as part of the landscaping at the new Lake Chalet restaurant at Lake Merritt. A parking lot retrofit is currently under construction with permeable pavers and a raingarden/bioretention area, planter strips, and trees that perform better for stormwater capture. Raingardens and bioswales will be installed as part of the Snow Park project near Lake Merritt. We just issued the NTP on a project to install 25 Filterra tree wells in West Oakland. We are in design on the retrofit/reconstruction of the parking lot of the sailboat house at Lake Merritt that will include rain gardens and bioswales. We probably have others as part of streetscape project
Do you have any funding set aside for LID implementation (grants, local funding sources, etc.)?	No	San Jose was awarded grant funding for construction of two green street LID retrofit projects through Round 1 of the Proposition 84 Stormwater Grant Program (Martha Gardens Green Alleys Pilot Project and Park Avenue Green Avenue Project). San Jose is also a participant in ABAG's Integrated Regional Watershed Management Grant Program (IRWM) application that was recently awarded full funding. Two additional LID green street retrofit projects will be constructed using IRWM grant funds; Chynoweth Avenue in south San Jose and additional alleyways in the Martha Gardens neighborhood. San Jose has an established cost recovery annual storm sewer service charge for stormwater pollution control and permit compliance, street sweeping, and management, operation, maintenance, and improvements to and rehabilitation of the storm sewer system.	no designated funding.	No.	We don't have a pot of funding for LID per se, but we are looking to utilize funding for existing projects (i.e. transportation projects, parking lot resurfacing, etc.) and incorporate these measures into the design. We will also seek outside funding for these projects.
Is your municipality interested in participating in an alternative compliance program?	yes	no	yes	yes	yes
Other than permit compliance/water quality objectives, what other interests does you municipality see from implementing LID projects?	Traffic calming, Heat/shade, Reduction in stormwater flow, Water quality improvement, Flood mitigation, Aesthetics	Traffic calming, Heat/shade, Reduction in stormwater flow, Water quality improvement, Flood mitigation, Wildlife habitat, Aesthetics	Reduction in stormwater flow, Water quality improvement, Flood mitigation	Traffic calming, Heat/shade, Reduction in stormwater flow, Water quality improvement, Flood mitigation, Aesthetics	Traffic calming, Heat/shade, Reduction in stormwater flow, Water quality improvement, Flood mitigation, Wildlife habitat, Aesthetics, build resilience to climate change impacts; reduce infrastructure capital improvement and maintenance costs; community engagement; hydrograph modification responsiveness;

Have you completed any cost/benefit analyses on green versus grey infrastructure for solutions to hydrologic and/or water quality problems? If so, briefly describe.	No	The projected LID implementation of the Martha Gardens Green Alleys Pilot Project, which includes onsite storage and infiltration of stormwater, costs $394,000 for construction, as compared with $728,000 to construct new drains and conveyance pipes from the alleys to the storm drain system.	no	No.	No.
In your opinion, what are the major barriers to LID implementation in your city?	Financial	Technical, Financial, Political	Financial, maintenance	Technical, Financial	Technical, Financial, Political, These are all potential barriers though not a barrier at every site.
What are the main technical problems/difficulties you have encountered or foresee in planning and implementing LID projects in your city?	Maintenance costs and departmental responsibilities shift	- Land availability/available right-of-way - Utility conflicts - Ability to tie LID retrofit facilities into existing storm system/topography - Soil types and groundwater depth	Maintenance - so the LID functions as it should.	Lack of planning and analysis tools to quantify the benefit of LID. Technical design expertise to accommodate competing needs for the Public Right of Way - balancing bicycle, pedestrian, street tree, storefront, parking, etc. needs with effective green infrastructure improvements.	Grading, infrastructure and utility conflicts, lack of space, encroachment permits, unfamiliarity of staff with technologies/lack of confidence in functionality, internal resistance because of maintenance burdens, lack of distinct funding source for projects, because Oakland is a mostly built-out city, many LID projects have to be retrofits which is more challenging than installing as part of a new project.
Does your municipality have a particular watershed of interest for a green infrastructure master plan? Or a watershed targeted for development/redevelopment?	No	Guadalupe or Coyote watershed	Yes, Bayfront/Atherton	Cerrito Creek, 37.8969° N, 122.3119° W	We are looking at a master plan for the entire city.
Based upon your assessment of the strengths and weaknesses of your municipality, how likely do you think your municipality is to adopt a master green infrastructure plan within 2 years?	Very likely	San Jose will continue developing the Storm Sewer Master Plan, which involves a green infrastructure/LID location analysis component. The City currently has no plans to develop a standalone green infrastructure plan.	likely	Not likely for a complete master plan, unless connected with this effort. The City is completing an Urban Greening Plan that will include stormwater recommendations and green infrastructure projects. The Plan is a citywide effort that thus far has included analysis of existing stormwater infrastructure and has highlighted maintenance issues to design projects to address existing needs.	Highly likely. Plan under development.
There are multiple methods that can be utilized for placement of LID features within a city/watershed. What data sets or types of information does your agency think are relevant for locating and optimizing LID placement?	Site Feasibility Information, Identification of "Hot Spot" areas for flow and contaminants, Watershed scale plan for optimally placing LID (maximum benefit, minimal cost)	Site Feasibility Information, Identification of "Hot Spot" areas for flow and contaminants, Watershed scale plan for optimally placing LID (maximum benefit, minimal cost), Land availability/Right-of-Way; existing utility locations and depth, efficiency information/data of LID treatment controls.	Site Feasibility Information, Watershed scale plan for optimally placing LID (maximum benefit, minimal cost)	Site Feasibility Information, Identification of "Hot Spot" areas for flow and contaminants, Watershed scale plan for optimally placing LID (maximum benefit, minimal cost)	Site Feasibility Information, Identification of "Hot Spot" areas for flow and contaminants, Watershed scale plan for optimally placing LID (maximum benefit, minimal cost)
The Green Plan-IT toolkit can produce a large variety of outputs. What type of outputs would be most helpful for your municipality in developing a green infrastructure master plan? In what formats?	Maps, Lists, GIS data , Conceptual site plans	Maps, Lists, GIS data , GIS tool/model (i.e. GreenPlan-IT) for running other analyses outside of this project	GIS tool/model (i.e. GreenPlan-IT) for running other analyses outside of this project, Conceptual site plans	Maps, GIS data , GIS tool/model (i.e. GreenPlan-IT) for running other analyses outside of this project, Conceptual site plans	GIS data , GIS tool/model (i.e. GreenPlan-IT) for running other analyses outside of this project
Is there any hydrology or stormwater modeling work that has been done for your city/river/creeks/watersheds?	Not sure at this time	Yes. The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) has conducted hydrology/stormwater, PCBs, and steelhead modeling in the south Bay. (Contact: Courtney Siu, EOA Inc.) The Regional Monitoring Program (RMP) has conducted modeling for Mercury and PCBs (Contact: Carol Boland, City of San Jose) The Santa Clara Valley Water District (SCVWD) has conducted general hydrology and stormwater modeling. (Contact: Liang Lee)	Yes, Bayfront Canal/Atherton Channel area. Grace Le	Yes, the Stormdrain Master Plan (1992) provided stormwater hydrology for the entire City. This data has not been verified or updated. Yvetteh Ortiz, Interim Public Works Director (510) 215-4345 yortiz@ci.el-cerrito.ca.us	Yes. Please contact me, Kristin Hathaway (510) 238-7571, for information. I will be the point of contact for this project and will coordinate with any staff that have additional information.
Do you have any flow or water quality data for creeks/rivers in your jurisdiction? If so, please provide a staff contact for this information.	Not sure at this time. Susanna Chan/Deputy Director of Public Work would know (650) 522-7308	Yes. SCVWD and USGS flow data. (Contact: Liang Lee) City of San Jose water quality data. (Contact: Carol Boland) SCVWD and SCVURPPP water quality data. (Contacts: SCVWD - Liang Lee; Courtney Siu, EOA Inc.)	Yes, flow and water quality data for Bayfront Canal & Atherton Channel. Some flow data for Redwood Creek. Grace Le	No. The Stormdrain Master Plan looked at creek flows, but have not been verified since. There is no water quality data.	Yes. Please contact me, Kristin Hathaway (510) 238-7571, for information. I will be the point of contact for this project and will coordinate with any staff that have additional information.
Do you have information on LID implementation costs for your agency (capital, construction, maintenance)?	No	Yes; this information could be provided upon request.	No	Yes, the City's current Urban Greening Plan includes environmental impact and benefit analysis, including a Pollutant Removal cost-benefit analysis that looks at dollars per pound of pollutant removal.	We have cost estimates, and some as-built costs, for the projects listed in the first question. We could provide some sample costs upon request.

Which data sets (GIS or otherwise) does your municipality consider important for LID siting and implementation?	Storm drainage, topography, vehicle volumes, adjacent impaired waterways, sewer storm overflows, flooding, other...	- General: Transportation, Public ROW, Municipally Owned Utilities, Sidewalk Area - Environmental: Soils, Meteorology, Hydrology, Special Status Species - Private Utilities: PG&E, Water, Gas, Telecommunications - Areas of Concern: Pollutants, Flows, Percent Impervious Area - Planning: General Plans, Capital Improvement Projects, Zoning, Land Usage	Soils report, land-use, GIS, topography,	Stormdrain Infrastructure Equivalent Runoff Volume (water capture projections) Tributary Areas Directions of Gutter Flow Pervious/impervious areas	Municipal data (i.e. location of city-owned properties, buildings, and ROW areas); topography;watershed and catchment boundaries, existing hydrological data and flow models; storm drain system information including location and capacity; locations of creeks, lakes, and wetlands; impervious surface coverage; land use; LiDAR; tree surveys; planned streetscape and municipal infrastructure projects; rainfall data; soil type. Utility information is also very valuable but doesn't exist at the scale on which we need it.
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Topography (elevation, slope, LiDAR)]	High Accuracy	High Accuracy	Unknown Accuracy	We don't have this data	High Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Topography contours]	Medium Accuracy	High Accuracy	Unknown Accuracy	Unknown Accuracy	High Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Landslides or Liquifaction risk]	Medium Accuracy	High Accuracy	We don't have this data	Low Accuracy	Unknown Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Catchment Delineation]	High Accuracy	High Accuracy	Medium Accuracy	Low Accuracy	Medium Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Land cover or land use]	High Accuracy	Medium Accuracy	Medium Accuracy	Medium Accuracy	Medium Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Parcel and ownership]	High Accuracy	High Accuracy	Medium Accuracy	High Accuracy	Medium Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Roads]	High Accuracy	High Accuracy	Medium Accuracy	High Accuracy	High Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Impervious cover]	We don't have this data	High Accuracy	Unknown Accuracy	We don't have this data	Unknown Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Stream network]	Medium Accuracy	High Accuracy	Unknown Accuracy	Medium Accuracy	Medium Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Storm drainage network]	Medium Accuracy	High Accuracy	Medium Accuracy	Medium Accuracy	Medium Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Wetlands]	Low Accuracy		Unknown Accuracy	We don't have this data	We don't have this data
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Depth to groundwater]	We don't have this data	High Accuracy	Unknown Accuracy	We don't have this data	We don't have this data
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Soils]	Unknown Accuracy	High Accuracy	Unknown Accuracy	We don't have this data	Medium Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Depth to bedrock]	We don't have this data		Unknown Accuracy	We don't have this data	We don't have this data
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Aerial photography]	High Accuracy	High Accuracy	Medium Accuracy	High Accuracy	High Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Precipitation]	We don't have this data	Medium Accuracy	Unknown Accuracy	Low Accuracy	We don't have this data
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Air temperature]	We don't have this data	We don't have this data	We don't have this data	Low Accuracy	We don't have this data
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Solar radiation]	We don't have this data	We don't have this data	We don't have this data	We don't have this data	We don't have this data
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Wind speed]	We don't have this data	We don't have this data	We don't have this data	Low Accuracy	We don't have this data

Edit this form

GreenPlan Bay Area Questionnaire

This questionnaire follows up on the discussion from the Kick Off Meeting: to elicit from municipalities their interest in GreenPlan Bay Area & to guide the GreenPlan-IT development. Responses to be submitted by interested municipalities by 10/15/2013. Questions or comments - call Jesse Mills at 510-622-2465.

What master plans or capital improvement plans (sustainable streets, green streets, stormwater plans, etc.) are currently being implemented, or are in development or planned? What are your agency's timelines for developing or implementing these plans?

Other than permit compliance/water quality objectives, what other interests does you municipality see from implementing LID projects?

Choose as all that apply

- ☐ Traffic calming
- ☐ Heat/shade
- ☐ Reduction in stormwater flow
- ☐ Water quality improvement
- ☐ Flood mitigation
- ☐ Wildlife habitat
- ☐ Aesthetics
- ☐ Other:

Project Data Needs

Which data sets (GIS or otherwise) does your municipality consider important for LID siting and implementation?

What local scale data sets from the following list does your agency have? Please indicated the accuracy of each.

	High	Medium	Unknown	We don't

	Accuracy	Accuracy	Low Accuracy	Accuracy	have this data
Topography (elevation, slope, LiDAR)	○	○	○	○	○
Topography contours	○	○	○	○	○
Landslides or Liquifaction risk	○	○	○	○	○
Catchment Delineation	○	○	○	○	○
Land cover or land use	○	○	○	○	○
Parcel and ownership	○	○	○	○	○
Roads	○	○	○	○	○
Impervious cover	○	○	○	○	○
Stream network	○	○	○	○	○
Storm drainage network	○	○	○	○	○
Wetlands	○	○	○	○	○
Depth to groundwater	○	○	○	○	○
Soils	○	○	○	○	○
Depth to bedrock	○	○	○	○	○
Aerial photography	○	○	○	○	○
Precipitation	○	○	○	○	○
Air temperature	○	○	○	○	○
Solar radiation	○	○	○	○	○
Wind speed	○	○	○	○	○
Potential evapotranspiration	○	○	○	○	○
Existing LID locations	○	○	○	○	○
Existing LID types	○	○	○	○	○
LID removal efficiency	○	○	○	○	○
LID design capacity	○	○	○	○	○

Post LID implementation monitoring data	○	○	○	○	○
Water diversion uses	○	○	○	○	○
Capital Improvement Plan projects	○	○	○	○	○
Stormwater Master Plan projects	○	○	○	○	○
Stormwater detention sites	○	○	○	○	○
Pavement condition rating (pavement repair needs)	○	○	○	○	○

There are multiple methods that can be utilized for placement of LID features within a city/watershed. What data sets or types of information does your agency think are relevant for locating and optimizing LID placement?

- ☐ Site Feasibility Information
- ☐ Identification of "Hot Spot" areas for flow and contaminants
- ☐ Watershed scale plan for optimally placing LID (maximum benefit, minimal cost)
- ☐ Other:

The Green Plan-IT toolkit can produce a large variety of outputs. What type of outputs would be most helpful for your municipality in developing a green infrastructure master plan? In what formats?

- ☐ Maps
- ☐ Lists
- ☑ GIS data
- ☐ GIS tool/model (i.e. GreenPlan-IT) for running other analyses outside of this project
- ☐ Conceptual site plans
- ☐ Other:

Is there any hydrology or stormwater modeling work that has been done for your city/river/creeks/watersheds?

yes/no. If yes, please provide a staff contact.

Do you have any flow or water quality data for creeks/rivers in your jurisdiction? If so, please provide a staff contact for this information.
yes/no. If yes, please provide a staff contact.

Do you have information on LID implementation costs for your agency (capital, construction, maintenance)?

Who is/are the primary contact person/people for data acquisition in your agency?

What other data sets, not listed above, do you have that might be helpful in the development of the toolkit? Please also indicate data accuracy (if known)?

Does your municipality have a particular watershed of interest for a green infrastructure master plan? Or a watershed targeted for development/redevelopment?
if yes, please name the watershed and provide a lat/long point.

Have you completed any cost/benefit analyses on green versus grey infrastructure for solutions to hydrologic and/or water quality problems? If so, briefly describe.

What are the main technical problems/difficulties you have encountered or foresee in

planning and implementing LID projects in your city?

Do you have any current or recent LID siting projects, grants etc.? If so, please describe the major project objectives, outcomes, and how this project might tie into GreenPlan Bay Area?

Do you have any funding set aside for LID implementation (grants, local funding sources, etc.)?

In your opinion, what are the major barriers to LID implementation in your city?

- ☐ Technical
- ☐ Financial
- ☐ Political
- ☐ Other:

GreenPlan Bay Area Participation Interests

Please select all that apply. Selection will be determined by a variety of factors elicited by this questionnaire.

What is your level of interest in the following roles?

TAC members will join national and regional experts to ensure that the project outputs are relevant and useful. Master Planning Agencies will provide GIS data/other information for GreenPlan-IT and adopt the results of GreenPlan-IT as a Green Infrastructure Master Plan. Interested parties will receive project updates and may choose to attend the webinar training on how to use GreenPlan-IT.

	Low Interest	Medium Interest	HIgh Interest

TAC Member	○	○	○
Master Planning Agency	○	○	○
Interested Party	○	○	○

Is your municipality interested in participating in an alternative compliance program?
In an alternative compliance program, developers who find it unfeasible to implement on-site LID features would contribute funds to a local or regional entity for use on an approved LID feature elsewhere.

- ○ yes
- ○ no

Based upon your assessment of the strengths and weaknesses of your municipality, how likely do you think your municipality is to adopt a master green infrastructure plan within 2 years?
Please provide a yes/no and your reasons for the answer.

What is your name? Municipality? Contact Information?

Submit

Never submit passwords through Google Forms.

100%: You made it.

What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Potential evapotranspiration]	We don't have this data	We don't have this data	We don't have this data	We don't have this data	We don't have this data
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Existing LID locations]	Low Accuracy	Medium Accuracy	Unknown Accuracy	High Accuracy	High Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Existing LID types]	Low Accuracy	Medium Accuracy	Unknown Accuracy	High Accuracy	High Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [LID removal efficiency]	We don't have this data		Unknown Accuracy	Medium Accuracy	We don't have this data
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [LID design capacity]	Unknown Accuracy	High Accuracy	Unknown Accuracy	High Accuracy	Medium Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Post LID implementation monitoring data]	We don't have this data		Unknown Accuracy	Medium Accuracy	We don't have this data
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Water diversion uses]	We don't have this data		We don't have this data	High Accuracy	We don't have this data
Who is/are the primary contact person/people for data acquisition in your agency?	Depends on the data	Vicky Gallardo	Grace Le	Laurenteen Brazil, Management Assistant Public Works, (510) 215-4369	Kristin Hathaway (510) 238-7571
What other data sets, not listed above, do you have that might be helpful in the development of the toolkit? Please also indicate data accuracy (if known)?	Street widths - medium accuracy Street trees - high accuracy Average Daily Traffic Volumes - medium accuracy	- Rare Species: Accuracy Unknown - Disadvantaged Communities: Accuracy High - Municipal Utilities (Water, Recycled Water and Sanitary Sewer): Accuracy High - Contaminant Hotspots (Hg and PCBs): Accuracy Unknown but the source is SFEI, 2005 - 303d Listed Waterbodies: Accuracy High - Hydromodification Management Zones: Accuracy High - Public R-O-W: Accuracy High - Structures: Accuracy High - Trees, Accuracy Unknown - General Plan Growth Areas: Accuracy Unknown			Municipal data (i.e. location of city-owned properties, buildings, and ROW areas); hydrological data and flow models; storm drain system information including location and capacity; locations of creeks, lakes, and wetlands; impervious surface coverage; tree surveys; planned streetscape and municipal infrastructure projects; rainfall data; soil type. Utility information is also very valuable but doesn't exist at the scale on which we need it.
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Capital Improvement Plan projects]	High Accuracy	High Accuracy	Medium Accuracy	Low Accuracy	High Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Stormwater Master Plan projects]	High Accuracy	High Accuracy	Unknown Accuracy	Medium Accuracy	We don't have this data
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Stormwater detention sites]	Low Accuracy	High Accuracy	We don't have this data	Medium Accuracy	Unknown Accuracy
What local scale data sets from the following list does your agency have? Please indicated the accuracy of each. [Pavement condition rating (pavement repair needs)]	High Accuracy	Medium Accuracy	Medium Accuracy	Medium Accuracy	High Accuracy
What is your name? Municipality? Contact Information?	Kenneth Chin City of San Mateo (650) 522-7313 kchin@cityofsanmateo.org	Jared Hart City of San Jose, Environmental Services Department Watershed Protection Division 200 E. Santa Clara Street, 7th Floor San Jose, CA 95113 (408) 793-4383	Grace Le, PE Senior Civil Engineer City of Redwood City Tel: (650) 780-7258 Fax: (650) 780-7309 gle@redwoodcity.org	Emily Alter City of El Cerrito ealter@ci.el-cerrito.ca.us (510) 215-4385	Kristin Hathaway City of Oakland (510) 238-7571