CITY OF PACIFIC GROVE

300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO:	Honorable Mayor and Members of City Council
FROM:	Jessica Kahn, Environmental Programs Manager
MEETING DATE:	May 4, 2016
SUBJECT:	Authorize the City Manager to Enter into an Agreement with Fall Creek Engineering, Inc. for the development of the Stormwater Low Impact Development Infrastructure Plan and completion of the Urban Greening Plan
CEQA:	This action is categorically exempt under California Environmental Quality Act (CEQA), Section 15262, Feasibility and Planning Studies

RECOMMENDATION

Approve a resolution authorizing the City Manager to enter into an agreement with Fall Creek Engineering, Inc. for the development of the Stormwater LID Infrastructure Plan and completion of the Urban Greening Plan in an amount not to exceed $110,000.

BACKGROUND

On May 29, 2012, the City was notified it had been selected for the Prop 84 grant award under the Urban Greening for Sustainable Communities Program in the amount of $240,000 for the Urban Greening Plan. The proposed project will implement the final two items in the Prop 84 Urban Greening Grant Scope of Work to "Identify conceptual Low Impact Development (LID) designs and priority areas for green infrastructure retrofit" and complete a "Final Urban Greening Plan".

The Stormwater LID Infrastructure Plan will focus on the siting, feasibility, prioritization, and conceptual/preliminary engineering of green infrastructure practices to maximize reductions in pollutant loading at the City's 34 outfalls. "Green Infrastructure" refers to structural or non-structural practices that mimic or restore natural hydrologic process within the built environment. The benefits of LID implementation include reducing stormwater and pollutant loading to receiving waters, conserving water, and creating resilient infrastructure. The community benefits created by incorporating landscape based LID features include increasing property values and improving quality of life. Specifically this planning effort consists of:

- Review of existing work completed to date, including the three previously completed Urban Greening Plan components to identify recommendations and Action Steps;
- Establishing community linkages that connect previous plan recommendations and educational opportunities during the LID retrofit inventory and development of 15 LID concept plans;
- Draft an Urban Greening Plan that incorporates the findings and recommendations from the LID retrofit inventory and LID concept designs; and

- Conduct a two-part public workshop to solicit input on the LID concept designs and the Draft Urban Greening Plan.

The City is required by the General Stormwater Permit (WQ Order No. 2013-0001- DWQ), to complete baseline pollutant loading estimates to receiving waters (Monterey Bay and Pacific Ocean). This effort is inclusive of defining catchment delineations, land use and other relevant mapping. This task can partially be funded through the Urban Greening Grant as a supplemental task in the Stormwater LID Infrastructure Plan.

DISCUSSION

On March 8, 2016, the City issued a request for proposals (RFP) to prepare the Stormwater LID Infrastructure Plan with an optional supplemental scope for the completion of the Urban Greening Plan. The deadline for submittals was March 22, 2016. Staff received four proposals responding to the base scope of the RFP.

Geosyntec Consultants, Inc.	$69,991
Fall Creek Engineering, Inc.	$69,980
Tetra Tech	$67,542
Urban Rain|Design	$73,875

Staff evaluated proposals based on the following criteria: understanding of project objectives and timeline; proposed project approach and design principles; ability to provide high-quality, cost-effective solutions; and comparable experience and staffing plan. Based on these criteria, interviews were conducted with Geosyntec Consultants, Inc. and Fall Creek Engineering, Inc. References for both firms were also contacted. In addition to the base scope, both firms submitted cost proposals to complete the Urban Greening Plan. Proposals for the development of the Stormwater LID Infrastructure Plan and completion of the Urban Greening Plan:

Geosyntec Consultants, Inc.	$87,116
Fall Creek Engineering, Inc.	$95,995

Fall Creek Engineering, Inc. is the lead consultant on the ASBS Compliance Plan Update. During the development of the Stormwater LID Infrastructure Plan and completion of the Urban Greening Plan there will be opportunities to integrate both efforts to save limited resources during the evaluation of existing conditions, completion of a desktop evaluation of retrofit locations, and in conducting the LID retrofit inventory. LID concepts developed in the ASBS Compliance Plan Update can be integrated into the Urban Greening Plan, resulting in added value to both projects.

In addition to the development of the Stormwater LID Infrastructure Plan and completion of the Urban Greening Plan, Fall Creek Engineering, Inc. included a supplemental scope to review and refine the catchment delineation, land use and other relevant mapping to finalize the critical attributes necessary to complete baseline loading estimates to receiving waters. Both the mapping requirement and baseline loading estimates will meet the City's General Stormwater Permit requirements. Approximately $9,000 of the $14,000 cost of this supplemental scope would be funded by the Urban Greening Grant.

Based on the review criteria, interview, reference checks, and overall value of the final scope, staff is recommends awarding an agreement to Fall Creek Engineering, Inc. for the development of the Stormwater LID Infrastructure Plan and completion of the Urban Greening Plan in an amount not to exceed $110,000.

FISCAL IMPACT
The Urban Greening Grant consists of $240,000 in funds for various components. There is approximately $105,000 remaining in the grant funding for the completion of the Stormwater LID Infrastructure Plan and completion of the Urban Greening Plan. The additional modeling required by the City's stormwater permit in the amount of $5,000 is available in Fund 1 Division 505 "Streets".

ATTACHMENT
1. Resolution
2. Scope of Work

RESPECTFULLY SUBMITTED:

Jessica Kahn

Jessica Kahn
Environmental Programs Manager

REVIEWED BY:

Ben Harvey

Ben Harvey
City Manager

RESOLUTION NO. 16-____

AUTHORIZING THE CITY MANAGER TO ENTER INTO AN AGREEMENT WITH FALL CREEK ENGINEERING, INC. FOR THE DEVELOPMENT OF THE STORMWATER LID INFRASTRUCTURE PLAN AND COMPLETION OF THE URBAN GREENING PLAN IN AN AMOUNT NOT TO EXCEED $110,000

1. On May 29, 2012, the City was notified it had been selected for the Prop 84 grant award under the Urban Greening for Sustainable Communities Program in the amount of $240,000 for the Urban Greening Plan. The proposed project will implement the third item in the Prop 84 Urban Greening grant Scope of Work to "Identify conceptual Low Impact Development (LID) designs and priority areas for green infrastructure retrofit" and complete a "Final Urban Greening Plan". The Pacific Grove Municipal Code Chapter 2.16.320 requires projects involving an expenditure of more than $35,000, are approved by City Council by resolution.

2. On March 8, 2016, the City issued a request for proposals to prepare a Stormwater LID Infrastructure Plan. The deadline for submittals was March 22, 2016. Four proposals were received.

3. Fall Creek Engineering, Inc. was selected as the winning proposal based on understanding of project objectives and timeline; proposed project approach and design principles; ability to provide high-quality, cost-effective solutions; comparable experience and staffing plan; interview; reference checks; and overall value.

4. This project will be funded by the Proposition 84 Urban Greening Grant.

5. This action is exempt under California Environmental Quality Act (CEQA), Section 15262, Feasibility and Planning Studies.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PACIFIC GROVE:

1. The foregoing Findings set forth above, are by this reference incorporated as an integral part of this Resolution.

2. The City Manager is authorized to execute all documents and to perform all other necessary City acts to enter into an agreement with Fall Creek Engineering, Inc. for the development of the Stormwater LID Infrastructure Plan and completion of the Urban Greening Plan in an amount not to exceed $110,000.

3. This Resolution shall become effective immediately following passage and adoption hereof.

PASSED AND ADOPTED BY THE COUNCIL OF THE CITY OF PACIFIC GROVE this 4th,

day of May 2016, by the following vote:

AYES:

NOES:

ABSENT:

APPROVED:

_____
BILL KAMPE, Mayor

ATTEST:

_____
SANDRA KANDELL, Deputy City Clerk

APPROVED AS TO FORM:

_____
DAVID C. LAREDO, City Attorney

PROJECT APPROACH AND SCOPE OF WORK

Low Impact Development (LID) or "green infrastructure" refers to structural or non-structural practices that mimic or restore natural hydrologic process within the built environment[1]. The benefits of LID implementation include reducing stormwater and pollutant loading to receiving waters, conserving water, strengthening the local economy, and creating resilient infrastructure. The community benefits created by incorporating landscape based LID features include increasing property values and improving quality of life. Though we often think of bioretention facilities or rain gardens when we refer to LID, LID practices cover a wide range of site design and structural BMP solutions.

Our proposed approach to identify potential LID projects will use a GIS based inventory as the basis for site-specific evaluations and LID retrofit concepts. FCE will bring a pragmatic and innovative design approach to the retrofit evaluation, drawing upon our teams experience in municipal scale prioritization to identify LID opportunities, site-specific concept plans, and LID engineering designs throughout the Monterey Bay and the Central Coast region.

FCE and JLJA understand the Stormwater LID Infrastructure Plan is only one of four[2] elements in the City's Urban Greening Plan. FCE has drafted the following scope to support the City in producing a cohesive Urban Greening Plan document that weaves together development of the Stormwater LID Infrastructure Plan along with production of the Urban Greening Plan document. The following tasks describe how our team envisions supporting the City's preparation of its Urban Greening Plan.

TASK A. REVIEW OF PREVIOUS WORK AND EXISTING CONDITIONS

Task A1. Kick-Off Meeting and Data Acquisition

As the initial task, FCE will lead a project kick-off meeting to confirm any adjustments or changes to the project scope and schedule. The kick-off meeting will provide FCE the opportunity to review data needs, receive data from the City of Pacific Grove, and review and update the project schedule.

Deliverables: FCE will prepare and email meeting minutes summarizing the points of discussion during the meeting and identifying the data acquisition needs and the parties responsible to provide this information. FCE will also provide an updated project schedule of project milestones and deliverables.

Task A2. Review of Existing Data and Plans

FCE will review existing work completed or underway within the City, related to development of a City-wide LID Infrastructure Plan and the Urban Greening Plan. Through FCE's work on the PG ASBS Compliance Plan Update, we anticipate being familiar with, and having the latest information related to the City's current stormwater infrastructure, specifically the location and condition of stormwater outfalls, sub-watershed delineations, stormwater and dry-weather

[1] EPA Region 3, Addressing Green Infrastructure Design Challenges in the Pittsburgh Region, January 2014, https://www.epa.gov/sites/production/files/2015-10/documents/pittsburgh-united-steep-slopes-508.pdf

[2] Previously five elements were identified as part of the Urban Greening Plan, but the modeling effort by CSUMB has been suspended (personal communication, J. Kahn, 4/4/16).

conveyance infrastructure. Upon availability, the FCE team will review and build upon the GIS based watershed modeling data and results from the CSUMB advanced watershed management class under the direction of Assistant Professor Fred Watson.

FCE will review the three already complete elements of the Urban Greening Plan: (1) Pacific Grove Landscape Guidelines & Plant Palette, (2) Urban Runoff and Artificial Turf Ordinances, and (3) a 'Tree Inventory'[3] and 'Resource Analysis'[4] that identifies near and long term recommendations for maintaining and enhancing the City's "urban forest". During our review of the completed Urban Greening Plan elements we will be compiling summaries and recommendations that will inform the Urban Greening Plan document. FCE will also look for opportunities to incorporate recommendations from each of these studies into the LID Infrastructure Plan. For example, FCE concurs with the findings of the Tree Resource Analysis that "Pacific Grove has an established public tree population with a large portion of native trees … that are an important and iconic component of the community"[5]. FCE will review locations where 1,341 tree sites should be available for planting in the next 7 years through either removal ("Priority 1 Removal" and "Priority 2 Removal"[6]) or where new tree sites have been identified ("Plant Tree": small, medium, or large[7]). FCE will incorporate these locations into the evaluation of possible LID retrofit sites (Task B), with the goal of enhancing the urban forest by opportunistically co-locating new LID stormwater features.

FCE will review prior plans with greening elements that have been developed by the City. Two relevant plans include the Pacific Grove Stormwater Management Plan (SMP) 40% Design Engineering Report and EIR (FCE, 2013) and the Pacific Grove ASBS Compliance Plan Update (FCE, in progress). The SMP includes a project component to divert stormwater flows along Pine Avenue, and as originally conceived the SMP identified Pine Avenue as uniquely situated for stormwater management and as a green street retrofit opportunity. One component of the ASBS Compliance Plan Update (Task 2.7) will identify stormwater management opportunities for priority subwatersheds draining to the ASBS. FCE anticipates new LID features to be an element of the proposed structural best management practices for improving the quality of runoff into the ASBS. FCE will review and incorporate appropriate elements from these and other prior plans to ensure the proposed Stormwater LID Infrastructure Plan is up to date and consistent with previous and on-going efforts.

Deliverables: FCE will communicate in a summary letter emailed to the City the findings of the existing data and plan review. The letter will summarize existing information and the proposed approach to incorporate relevant data and LID opportunities into the identification and evaluation of LID retrofit locations in subsequent project tasks. The summary letter will also include an overview of the key recommendations and Action Steps in each of the previously completed Urban Greening Plan elements.

[3] Davey Resource Group (DRG), July 2015
[4] Ibid.
[5] Ibid.
[6] "Priority 1 removal was recommended for 174 trees and Priority 2 removal was recommended for 544 trees, a combined total of 8.8% of the population" (DRG, 2015).
[7] "Pacific Grove's community urban forest currently includes 623 available planting sites, including 351 vacant sites and 272 stumps" (DRG, 2015).

TASK B. IDENTIFICATION OF POTENTIAL LID RETROFIT LOCATIONS

FCE's approach to screening and selecting site-specific LID opportunities is based on our recent experience with similar efforts in Monterey and Santa Cruz Counties and at the Presidio of Monterey. The process begins with a desktop evaluation using spatial data that identifies priority parcels for on-site review. For priority parcels a site check-list with scoring criteria will assist with concept development and objectively selecting projects for concept design development (Task B3). This detailed and objective approach will provide information about City-wide LID opportunities and a clear methodology to convey to the public about the project development and selection process (Task C).

Task B1. Evaluation of LID Practices

FCE will provide the City with updated information about available and common LID practices, specifically related to the retention, infiltration, and filtration of stormwater runoff. LID practices that FCE will evaluate for suitability within the City include: Downspout Disconnection, Rainwater Harvesting, Green Roofs, Permeable Pavements, Green Alleys and Streets, Green Parking, Land Conservation, and Urban Tree Canopy and other site design improvements. FCE will compile and or prepare illustrations and descriptions of these practices into a technical memorandum for the City.

Deliverables: FCE will provide a summary memorandum of the LID Practices resources.

Task B2. Desktop Evaluation of LID Retrofit Locations

Task B2 will provide the GIS based evaluation identifying which catchments are the priority locations for LID opportunities. A more detailed evaluation will be conducted in the priority parcels identified in the GIS evaluation (Task B3).

FCE Consistency & Coordination Opportunity: Through our previous GIS based watershed modeling on the ASBS SMP project, and familiarity with the CSUMB watershed modeling effort, the FCE team will efficiently complete the Desktop Evaluation

Characteristics commonly used in the evaluation of LID suitability include soil type as it relates to infiltration capacity[8] and percent slope[9]. FCE will coordinate with the City to select criteria for consideration, such as:

- publicly owned parcels;
- percent impervious surface (as estimated from land use GIS data);
- parcel size;
- proximity to an available tree planting site[10];

[8] The Natural Resource Conservation Service classifies soils into one of four hydrologic soil groups (HSG): A,B, C and D. Group A soils typically have the highest infiltration rates with Group D the lowest infiltration rate. Soils with higher infiltration rates are typically more promising for infiltration-based practices (e.g. bioretention).
[9] Areas with low slopes (typically <5%) are preferable for LID implementation, because runoff rates are slower and infiltration areas more available without significant site (re)grading.
[10] FCE will review locations where 1,341 tree sites should be available for planting in the next 7 years through either removal ("Priority 1 Removal" and "Priority 2 Removal") or where new tree sites have been identified ("Plant Tree": small, medium, or large) (DRG, 2015).

- proximity to existing or planned parks;
- parcels located in a priority sub-watersheds (i.e. draining to the ASBS); and
- proximity to a known maintenance or management (i.e. flooding) issue.

Points will be assigned to each of the selected factors and a single prioritization shapefile will be created based on a union of the overlapping factors. The total points will be tallied for each parcel to indicate a relative *high*, *medium*, or *low* opportunity for LID implementation. The 40 highest scoring parcels will be selected for a subsequent site visit and LID retrofit inventory (Task B3).

Deliverables: FCE will coordinate with the City to confirm and select the evaluation criteria and point assignments. FCE will provide a technical letter summarizing the desktop evaluation methodology and findings. The letter will include maps showing LID opportunity results for the entire City and detailed maps identifying high priority parcels. Maps will be provided to the City in GIS compatible formats (*.mxd and *.shp) for review and future use.

Task B3. LID Retrofit Inventory

Based on the priority parcels identified in the Desktop Evaluation (Task B2), FCE will visit up to 40 priority parcels. At each of these parcels, FCE will systematically evaluate each site for potential LID implementation strategies and designs using a common field evaluation worksheet and scoring template. FCE will develop field maps identifying known locations of existing utilities or potential proximity to hazardous materials (e.g. underground storage tanks) to detect potential conflicts early in the evaluation process. The top ranking 15 parcels will be developed into LID Concept Plans.

FCE Consistency & Coordination Opportunity: Time savings is anticipated in the retrofit inventory due to FCE's familiarity with City sub-watersheds through our work on the SMP and ASBS Compliance Plan Update

For the top 15 parcels FCE will be looking for opportunities to link LID and tree planting opportunities with parks, trails, parking, tourism, pedestrian and bicycle routes in a *Complete Streets* approach. Throughout, FCE would identify opportunities for locations to integrate educational opportunities for the community. These design concepts and linkages will be included in the Draft Urban Greening Plan (Task C).

Deliverables: FCE will provide a technical letter summarizing the LID retrofit inventory, findings, and recommendations. A database of the field sheets and scores for all the inventoried parcels will be provided to the City, along with an updated GIS shapefile summarizing relevant on-site opportunities and constraints.

Task B4. LID Retrofit Concepts

Based on the LID retrofit inventory results, FCE and Joni L. Janecki and Associates (JLJA) will develop LID Retrofit Concept plans for up to 15 of the highest scoring parcels. The concept plans will identify the parcel location, a narrative of the proposed LID strategy with planning level cost estimates, a plan view map depicting the proposed LID practices, and example photos or cross sections to convey

FCE Consistency & Coordination Opportunity: The LID Retrofit Concepts will follow the same format as those FCE will develop for the ASBS Compliance Plan, for streamlined integration into the LID Infrastructure Plan

the design concept.

Deliverables: FCE will combine the previous technical letters and LID resource sheets into a combined DRAFT Stormwater LID Infrastructure Plan that summarizes the Task B methodology, findings, and recommendations. The report will include up to 15 single page LID Retrofit Concept Plans in 11x17 format.

TASK C. DRAFT URBAN GREENING PLAN

Careful evaluation for how the Urban Greening Plan can be integrated with existing plans, policies and programs will be crucial to making the plan a valuable resource for the City decision and policy makers. For example, the Urban Greening Plan would identify how LID and City tree planting opportunities fit into the City master planning process; so future utility projects (for example) would be evaluated for their opportunity to tie into a proposed LID projects.

The FCE team would coordinate with the City to clearly identify and articulate the *draft* Urban Greening Plan goals and objectives prior to conducting a community workshop to solicit input on the draft plan (Task D).

The following draft outline depicts how FCE envisions the opening chapters of the Urban Greening Plan could unfold.

<u>Section 1. Program Overview</u>
What is Urban Greening?
Urban Greening in PG – Previous and Current Planning Efforts
Overarching Goals and Objectives
Integration with Existing Plans, Policies, and Programs

<u>Section 2. Urban Greening Planning Process</u>
Overview of Planning Process
Project Team and Resources
Public Involvement Methods

<u>Section 3. Urban Greening Plan Components – Overview & Action Steps</u>
1. Pacific Grove Landscape Guidelines & Plant Palette
2. Urban Runoff and Artificial Turf Ordinances
3. Tree Inventory and Resource Analysis
4. Stormwater Low Impact Development (LID) Plan

<u>Section 4. Full Plans</u>
The full plan for each of the Urban Greening Plan Components

Section 3 would provide an overview of the four Urban Greening Plan Components with a summary of Action Steps and recommendations from each (as identified through our review of previous work in Task A). Section 4 would provide the entirety of the documents completed for each Urban Greening Plan Component.

The goal of Section 3 is to integrate the plan pieces to identify opportunities for long range planning Urban Greening efforts; providing a series of recommendations for a community wide

comprehensive plan. The proposed Action Steps in Section 3 would provide phased recommendations for incorporating the vision into development over the next 20 years.

Deliverables: The FCE team will solicit feedback from the City on the proposed Urban Greening Plan Document Outline, presented in this scope. After incorporating feedback and comments, the FCE team would develop a Draft Urban Greening Plan for the City's review. Drawing upon our cumulative experience preparing public documents and reports, the FCE team would develop an attractive document design and layout, with the dual goals of providing a visually appealing plan along with clear and easy to understand graphics and text. The design would match the visual character of the previously completed elements to create a cohesive Urban Greening Plan document.

TASK D. PUBLIC WORKSHOP: URBAN GREENING GOALS AND OBJECTIVES & REVIEW OF LID CONCEPTS

FCE and Joni L. Janecki and Associates (JLJA) will jointly facilitate a two-part public workshop. Part One of the workshop would present the approach for identifying Potential LID Practices within the City of Pacific Grove, from Task B, and a presentation of the 15 LID concept plans. Part Two of the workshop would be designed to solicit input from the community on the Draft Urban Greening Plan, including the Goals and Objectives.

Our team has experience hosting public workshops in Pacific Grove and in other municipalities across the Monterey Bay. We appreciate the importance of providing background information about stormwater management using LID practices along with transparent information about the project approach, possible retrofit locations, and timeline.

Task D1. Workshop Preparation

The FCE/JLJA team will prepare a meeting agenda, press release, and a flyer for the public workshop. The team understands that the City will be responsible for securing a location for the meeting and printing the flyer for distribution and posting. FCE/JLJA will assist and coordinate distribution of the meeting materials to a broad audience to maximize public participation.

Deliverables: The FCE/JLJA team will provide the City with a meeting agenda, press release, and flyer and assist with publicizing the meeting in local news and media venues.

Task D2. Public Workshop Facilitation

A facilitated public workshop provides an opportunity for community to provide valuable input on the LID and Urban Greening Plan development. The FCE team will facilitate a two-part public workshop and present an overview of the DRAFT Stormwater LID Infrastructure Plan and the Draft Urban Greening Plan, including the project approach, possible LID retrofit locations, and timeline.

The team proposes that a portion of the meeting be dedicated to small group break-outs, moderated by members of the design team, to support community feedback on specific elements of the Draft Plans and specific LID Retrofit Concepts.

The FCE team will meet with the City after the public workshop to review input received and how best to integrate community feedback into the final Urban Greening Plan.

Deliverables: The FCE team will attend the workshop and present an overview of the DRAFT Stormwater LID Infrastructure Plan and DRAFT Urban Greening Plan and LID Retrofit Concepts. The team will facilitate and moderate the meeting to maximize community feedback on the proposed plan elements. The team will take detailed notes on feedback, questions, and comments during the meeting and summarize these in meeting notes that will be provided to the City and incorporated into the Final Stormwater LID Infrastructure Plan. The FCE team will meet with the City after the workshop to review community comments and their incorporation into the final Plan.

TASK E. INITIAL ENGINEERING FOR TOP RANKED LID PROJECTS

Based on input from the Public Meeting and the City, FCE will develop 15% Concept Plans for the top five ranked LID Retrofit Concepts. As needed to identify the top 5 projects, FCE will develop a prioritization approach to compare the 15 LID Retrofit Concepts. Once selected, FCE will conduct additional field engineering to develop the 15% Schematic Designs.

E1. Field Engineering and Investigation

As the initial design task, FCE will collate available existing site data available in the vicinity of the selected projects and conduct a site visit to collect site information to identify key features, buildings, utilities, heritage trees, hardscape and other features or site constraints that could impact the potential project.

E2. Five (5) LID Schematic Designs (15% Design Plans, Basis of Design and Preliminary Cost Estimate)

Once the site information, survey, and soils investigation is complete, FCE will prepare schematic design plans completed to the 15% level of completion. FCE will also prepare a preliminary construction cost estimate based on the 15% design plans. The preliminary engineering design plans will include a site improvement plan, and preliminary grading and drainage plan for stormwater LID projects. JLJA will prepare a conceptual landscape plan for projects that include landscape based LID practices.

Deliverables: FCE will provide the City with a Basis of Design (BOD) letter along with the 15% Design Plans and Preliminary Cost Estimate in electronic format for review and comment. The BOD letter will describe the project components, design decisions, considerations for final engineering, and provide engineering calculations.

E3. Finalize Remaining Ten (10) LID Retrofit Concepts and Cost Estimates

For the ten sites not selected for Schematic Plan development, FCE will update the LID Retrofit Concepts developed in Task B based on comments received at the Public Workshop and from the City. The final designs and revised cost estimates will be included in the Final Stormwater LID Infrastructure Plan (Task E). Typical pollutant load reductions will be incorporated into the LID Retrofit Concept (within the single sheet 11"x17" layout for each project).

TASK F. FINAL STORMWATER LID INFRASTRUCTURE AND URBAN GREENING PLAN DOCUMENT

Upon receiving comments on the LID and Urban Greening Plans from the City and the community at the workshop, the FCE team will incorporate edits and provide the City with a Final Urban Greening Plan document suitable for public distribution and City Council adoption.

The Final Stormwater LID Infrastructure Plan will incorporate and address comments received on the Draft Plan (Task B) at the Public Workshop (Task D) and from the City, and include the 15% Schematic Designs developed for the five (5) top ranked projects and the revised ten (10) LID Retrofit Concepts.

Deliverables: FCE will provide the City with an electronic Urban Greening Plan document and two printed bound copies, along with all the supporting electronic GIS shapefiles.

TASK G. MEETINGS AND PROJECT COORDINATION

Throughout the course of the project, FCE anticipates a minimum of eight (8) progress/coordination meetings or conference calls with the City staff including:

- Kick-off Meeting (Task A1) – in-person
- Upon Completion of the Desktop Evaluation and Review of (Task B2) – conference call
- Review Comments on Draft Urban Greening Plan (Task C) – in-person
- Workshop Preparation (Task D1) – conference call
- Public Workshop (Task D) – in-person
- Workshop Debrief (Task D2) – conference call
- Review Comments on Initial Engineering Concepts (Task E) – in-person
- Review Comments on Final Urban Greening Plan (Task F) – in-person

These meetings are identified in the accompanying schedule in Section 7.

The progress and coordination meetings will allow the City and the design team to review the progress of the project, explore issues, identify resolutions, and provide recommendations regarding the project development. As part of this task, FCE will prepare meeting agendas, compile and distribute meeting minutes, and participate in conference calls. This task will also cover internal design meetings and day to day correspondence by phone and e-mail. This task also includes time for financial and project data management.

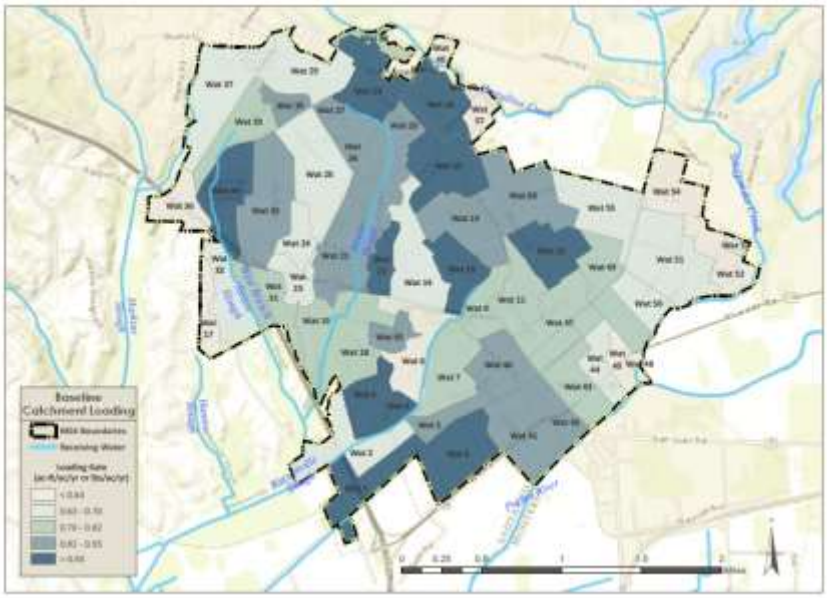
OPTIONAL TASK H

This LID planning effort provides an excellent opportunity for our partner, 2ND NATURE (2N), to review and refine the catchment delineation, land use and other relevant mapping to finalize the critical attributes necessary to complete baseline loading estimates to receiving waters using the Tool to Estimate Load Reductions (TELR). Both the mapping requirement and baseline loading estimates will meet PG's specific Phase II MS4 permit requirements. The development of the guidance and computation tools (i.e. TELR) are funded separately by the RWQCB.

OPTIONAL TASK H1: TELR: BASELINE MODELING AND POLLUTANT LOAD REDUCTION MODELING

2N will incorporate final catchment delineation and land use mapping from the LID Infrastructure Plan, and other hydrology modeling efforts in Pacific Grove, to generate TELR baseline modeling inputs. The TELR baseline pollutant loading estimates will identify critical sub-watersheds in Pacific Grove with results provided in both map (Figure 1) and tabular formats. In the Figure 1 example, the dark urban catchments are a relatively higher water quality threat to receiving waters.

Figure 1. Example baseline catchment loading map for runoff delivery to receiving waters



One to three catchment scale LID retrofit alternatives will be modelled as planning scenarios in TELR by 2N. The TELR comparisons will provide directly comparable estimates of the runoff and pollutant load reductions predicted for each alternative to receiving waters. These relative water volume and water quality benefits can be evaluated in terms of costs to inform the predicted water quality return on investments. The predicted water quality benefit of the preferred alternative will provide a great communication tool to the community and to funders to justify the expected return on investment.

As LID practices are implemented, they can be inventoried by the City as either parcel site design improvements or structural BMPs and the actual water quality benefits reported to comply with annual ASBS or MS4 reporting requirements.

Optional Task E3 would provide a one (1) day BMP RAM training to the City in continued use and application of the tool to streamline Phase II MS4 permit submittals.

Deliverables: 2N will provide the City with TELR inputs and modeling results. The pollutant load reduction estimates from TELR can be included in the LID design development tasks.