Prepared for

City of Redding

Stormwater Resource Plan

Redding, CA

Prepared by

Geosyntec consultants

engineers | scientists | innovators

924 Anacapa Street, Suite 4A
Santa Barbara, CA 93101

Geosyntec Project #: LA0443

March 2019

TABLE OF CONTENTS

Executive Summary i
1 Introduction 1
1.1 Regulatory Context 1
1.2 SWRP Purpose 2
1.3 SWRP Overview 4
2 Organization, Coordination, and Collaboration 6
2.1 Organization of the SWRP Developers 6
2.2 Stakeholder Identification, Engagement, and Participation 8
3 Background 10
3.1 Existing Relevant Reports and Data 10
3.2 Watershed Characterization 12
3.2.1 Water Quality Priorities 21
3.3 Water Quality Compliance 27
4 Identification and Prioritization of Projects 30
4.1 Project Identification and Ranking 33
4.1.1 GIS-Based Parcel Screening and Initial Feasibility Screening 33
4.1.2 Project condition evaluation (Phase I. GIS-based Ranking) 35
4.1.3 Drainage area delineation and desktop feasibility evaluation (Phase II. Desktop Ranking) 35
4.2 Conceptual Project Design 36
4.3 Quantitative Analysis of Project Benefits 37
4.4 Multiple Benefits Prioritization 38
5 Implementation Strategy and Schedule 41
5.1 Specific Actions for Implementation 41
5.2 Resources for Implementation 42
5.3 Implementation Schedule 43
5.4 Ongoing Collaboration 44
5.5 Adaptive Management Tools 45
5.6 Implementation Performance Measures 46
6 References 47

LIST OF TABLES

Table 1. TAC Members 7
Table 2. Summary of Existing Reports 11
Table 3. Estimated Volume of Potable Water Provided 15
Table 4. Pollutant Generating Activities 22
Table 5. California's Groundwater Bulletin 118 (2004) groundwater monitoring 23
Table 6. 303(d) and TMDL Pollutants by Watershed and Pollutant Category 24
Table 7. Critical Salmonid Stream Habitats 25
Table 8. Applicable Surface Water Quality Regulations 29
Table 9. Summary of Project Screening Results 34
Table 10. Stormwater Management Benefits (Table 4 in the SWRP Guidelines) 39
Table 11. Estimate Conceptual Project Costs 43
Table 12. SWRP Schedule 44

LIST OF FIGURES

Figure ES-1. Overall SWRP Approach ii
Figure 1. SWRP Planning Area 3
Figure 2. Boulder Creek Elementary Flooded (KRCR News February 2017) 4
Figure 3. Collaboration of key groups during the SWRP development 7
Figure 4. Watersheds in SWRP Planning Area 13
Figure 5. Subwatersheds in SWRP Planning Area 14
Figure 6. Surface and Ground Water Resources 16
Figure 7. Localized flooding intensified by urban development 17
Figure 8. Land Cover 19
Figure 9. Land Use 20
Figure 10. Water Quality Priorities 26
Figure 11. Identification and Prioritization of Projects Flowchart 32
Figure 12. Three step project identification and ranking process 33

APPENDICES

Appendix A – Completed SWRP Checklist and Self-Certification Form

Appendix B – Summary of Conceptual Projects

Appendix C – Stakeholder Involvement

Appendix D – Summary of Relevant Reports and Data

Appendix E – Project Identification and Ranking Technical Report

Appendix F – Conceptual Project Analysis and Prioritization Technical Report

Appendix G - Project Design, Analysis, and Prioritization Results Technical Report

LIST OF ABBREVIATIONS

BMP – Best Management Practice

CDPH – California Department of Public Health

CEQA – California Environmental Quality Act

City – City of Redding

CPI – Catchment Prioritization Index

DAC – Disadvantaged Communities

DEM – Digital Elevation Model

EMC – Event Mean Concentration

GIS – Geographic Information System

GSA – Groundwater Sustainability Agency

GSP – Groundwater Sustainability Plan

SWRP Guidelines – Stormwater Resource Plan Guidelines

GWBP – Groundwater Basin Plan

IRWM – Integrated Regional Water Management

IRWMP –Integrated Regional Water Management Plan

LA – Load Allocation

LPR Model – Load, Prioritization, and Reduction Model

MEP – Maximum Extent Practicable

MS4 – Municipal Separate Storm Sewer System

NGO – Nongovernmental Organization

NPDES – National Pollutant Discharge Elimination System

Outreach Plan – Stakeholder Outreach, Education, and Engagement Plan

PEAIP – Program Effectiveness Assessment and Improvement Plans

Phase II MS4 Permit – California Phase II Small Municipal Separate Storm Sewer System General Permit

QAPP – Quality Assurance Project Plan

Regional Water Board – Regional Water Quality Control Board

SBPAT – Structural BMP Prioritization and Analysis Tool

SGMA – Sustainable Management Groundwater Act

SQDV – Stormwater Quality Design Volume

State Water Board – California State Water Resources Control Board

SWGP – Stormwater Grant Program

SWMM – Storm Water Management Model

SWRP – Stormwater Resource Plan

TAC – Technical Advisory Committee

TMDL – Total Maximum Daily Load

USGS – United States Geological Survey

WAAP – Wasteload Allocation Attainment Plan

WLA – Wasteload Allocations

EXECUTIVE SUMMARY

This Stormwater Resource Plan (SWRP) was developed for the City of Redding (City) to identify and prioritize stormwater and dry weather runoff capture projects that provide multiple benefits, including to water quality, water supply, flood management, environment, and community. The 2014 Water Quality, Supply, and Infrastructure Improvement Act (Proposition 1) was approved to provide a source of funding to agencies for implementation of multi-benefit stormwater management projects in California. In order for projects to qualify for this funding, the Stormwater Resource Planning Act (Senate Bill 985) requires that projects be included in a SWRP.

The State Water Resources Control Board (SWRQCB) adopted the SWRP Guidelines to establish guidance for agencies developing SWRPs. This SWRP includes all required and recommended elements per the Water Code and SWRP Guidelines and will be submitted to the North Sacramento Valley Integrated Regional Water Management (IRWM) Group, thereby satisfying the Proposition 1 Stormwater Grants Program funding eligibility requirements. The SWRP Guidelines self-certification checklist, including the applicable section within the SWRP that addresses each required and recommended element, is included in Appendix A.

Collaboration between the City (as the Project Manager), the Technical Advisory Committee (TAC) (including State Regulators) and the stakeholders (including other public agencies, NGOs, community members, and other interested parties) was important for developing a far-sighted yet innovative SWRP that reflects local priorities. An Outreach Plan established strategies for effective engagement and community participation of local agencies and non-governmental organizations, through a variety of communication tools and well-attended public meetings.

A thorough compilation and review of existing reports relating to water management within and near the City was used as a foundation for the development of the SWRP. Relevant attributes of the three major City watersheds (Clear Creek, Churn Creek-Sacramento River, and Stillwater Creek) were characterized. These attributes include surface and groundwater resources that typically provide the area's water supply, and land development (agricultural and urban) that affect various watershed processes and may contribute to decreased water supply, increased flooding, and surface and groundwater pollution. Water quality priorities for each watershed were identified based on waterbodies with current water quality regulatory actions as well as the pollutant generating activities in each watershed, including land development.

The City is required to comply with certain water quality rules, regulations, and permits, including the California Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit (Phase II MS4 Permit) (Order 2013-0001-DWQ), the Statewide Trash Provision, and the Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin. Through the watershed-based approach for identifying SWRP projects, using a quantification methodology that allows projects to be evaluated based on their potential ability to provide multiple benefits that address watershed-specific issues, the SWRP may assist in compliance with these various

documents. Additionally, the SWRP will contribute to achieving regional objectives established in the Northern Sacramento Valley Integrated Regional Water Management Plan (IRWMP).

A primary goal of the SWRP is to establish and apply a process to identify and prioritize, using accurate quantitative metrics, stormwater projects that address water quality concerns while providing multiple benefits. To accomplish this, an overarching project selection and development framework was developed and executed as illustrated in Figure ES-1. Projects were identified by locating publicly owned parcels (or non-public parcels with a potentially willing land owners) within the City that were suitable for project implementation. Assessment of a parcel's suitability was based on eliminating areas characterized by a series of constraints that could inhibit or severely limit the feasibility of implementing certain project types. Additionally, project ideas were solicited from the TAC and stakeholders. Potential projects were compared to one another and ranked based on feasibility and ability to achieve the greatest benefits (Attachment E-1 contains the current ranked list of all potential projects and Attachment E-2 contains the current ranked list of individually screened projects).

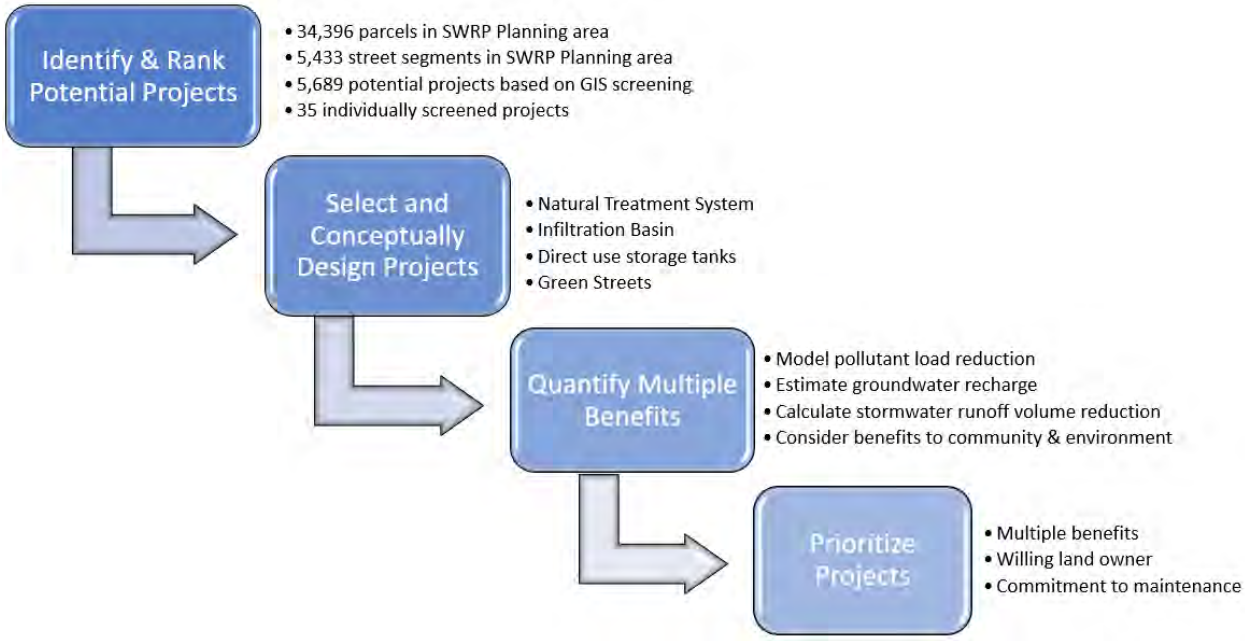


Figure ES-1. Overall SWRP Approach

Guidance for conceptually designing projects describes how to develop basic design parameters (e.g., area draining to the project, storage capacity, depth, side slopes) and determine the project footprint based on visual assessment of site specific constraints and existing infrastructure. Various models were considered for estimating project benefits, ultimately an approach was developed for utilizing the City-specific Load, Prioritization, and Reduction (LPR) Model to quantify the potential water quality, water supply, and flood management benefits. These benefits are estimated for the average annual pollutant load reduction for twelve different pollutants, the average annual recharge volume of groundwater, and the average annual runoff volume controlled, respectively.

Projects that achieve multiple benefits support a watershed-based approach to managing stormwater and dry weather runoff as a resource rather than an environmental nuisance or flood hazard. A project prioritization approach was developed based on a projects' potential to be implemented and maintained and to achieve multiple benefits in the five benefit categories identified by the SWRP Guidelines: water quality, water supply, flood management, environmental, and community benefits. For projects with conceptual designs, modeling results are used to determine quantitative metrics for the benefit categories, which are combined with qualitative assessments of each project's benefits to determine a multi-benefit index. After multi-benefit indices are determined, projects are prioritized into low, medium, and high designations based on their multi-benefit indices and whether a willing land owner has committed to maintenance. Appendix B includes a summary table of conceptually designed, modeled, and prioritized projects, as well as two-page conceptual design and benefit summary sheets. All conceptually designed projects are also prioritized and stored in a formatted Microsoft Excel tool for easy reference.

For other project ideas that do not have a formal project concept with sufficient detail to support benefit quantification, a modified multiple benefit approach is used that is based solely on a qualitative assessment of the ability of each project idea to achieve multi-benefits. As with the conceptual projects, the "non-modeled" projects also utilized a low, medium, high prioritization. A current prioritized list of these project ideas can also be found in the Microsoft Excel tool.

To support the long-term implementation and overall effectiveness of the SWRP, a prescriptive yet flexible implementation strategy was also developed. Strategies for implementation of the SWRP include:

- identification of available and potential resources and funding,
- a schedule for major implementation activities,
- a plan for ongoing TAC and stakeholder participation,
- an adaptive formatted Microsoft Excel tool, and
- tracking and evaluation of performance measures.

The collaborative planning process resulted in the City of Redding Stormwater Resource Plan that fulfills the Water Code requirements and the primary goals (most notably addressing water quality issues in the City) of the TAC and stakeholders. Stormwater capture projects were identified, conceptually designed, quantified and prioritized resulting in a SWRP anticipated to yield multiple long-term benefits for the City and its watersheds.

1 INTRODUCTION

In recent years, stormwater management approaches in California have shifted from providing limited treatment and off-site conveyance to promoting watershed-based solutions that manage stormwater and dry weather runoff onsite and seek to implement treatment through projects that replicate natural hydrology and watershed processes, as well as provide multiple benefits (e.g., water quality, flood control, water supply, community, and environmental benefits). This watershed-based approach utilizes existing practices in combination with natural physical and biological functions to capture, treat, and use stormwater and dry weather runoff. This framework for stormwater management provides water quality benefits by reducing the volume of runoff and associated pollutants entering receiving waters, in addition to maintaining a healthy watershed and providing other social, community, and environmental benefits. This is the framework under which the City of Redding Stormwater Resource Plan (SWRP) was developed.

1.1 Regulatory Context

To provide a funding source for planning and implementation of watershed-based stormwater solutions, the Water Quality, Supply, and Infrastructure Improvement Act (Proposition 1) was approved on November 4, 2014 to provide $200 million from the Stormwater Grant Program (SWGP) for matching grants to public agencies (among other stakeholders) to implement multi-benefit stormwater management projects in California. Prior to the passage of Proposition 1, Senate Bill 985, the Stormwater Resource Planning Act, was adopted to amend the Water Code to require the development of a SWRP in order to receive grants for stormwater and dry weather capture projects from a bond act approved after January 1, 2014. A SWRP must comply with the relevant Water Code provisions in sections 10561 through 10565, which were amended by Senate Bill 985, in order to render a stakeholder eligible for bond funds.

Proposition 1 allows up to ten percent of the designated SWGP funds for "planning and monitoring necessary for the successful design, selection, and implementation of the projects authorized…" Under this earmark, $19 million in grant monies were made available to fund a SWRP or preparation of planning documents for a specific project. Solicitations for such monies closed on March 18, 2016 and after reviewing applications, the Division of Water Quality recommended funding for 28 projects, including the City of Redding (City) SWRP which was awarded $89,700[1] for SWRP preparation.

The SWRP Guidelines (State Water Resources Control Board, 2015b) were adopted on December 15, 2015 to establish guidance for agencies developing SWRPs and serve as a guide for the State Water Board or other bond fund-dispensing agency to determine if SWRP's adequately qualify a stakeholder to receive grant funds for stormwater and dry weather runoff projects. The SWRP

[1] To receive these funds the Grantees were required to provide matching contributions for at least 50% of the total project cost.

Guidelines provide a self-certification checklist for ensuring all required and recommended elements are completed[2].

1.2 SWRP Purpose

This SWRP was developed for the City as a framework for ongoing identification and prioritization of stormwater and dry weather runoff capture projects that provide multiple benefits, including water quality, water supply, flood management, environmental, and community. Since no neighboring agencies had the resources or interest in funding and developing a regional SWRP, the SWRP planning area was selected to include only the area within the incorporated City (i.e., only the area where the City has jurisdiction). The SWRP planning area is shown in Figure 1.

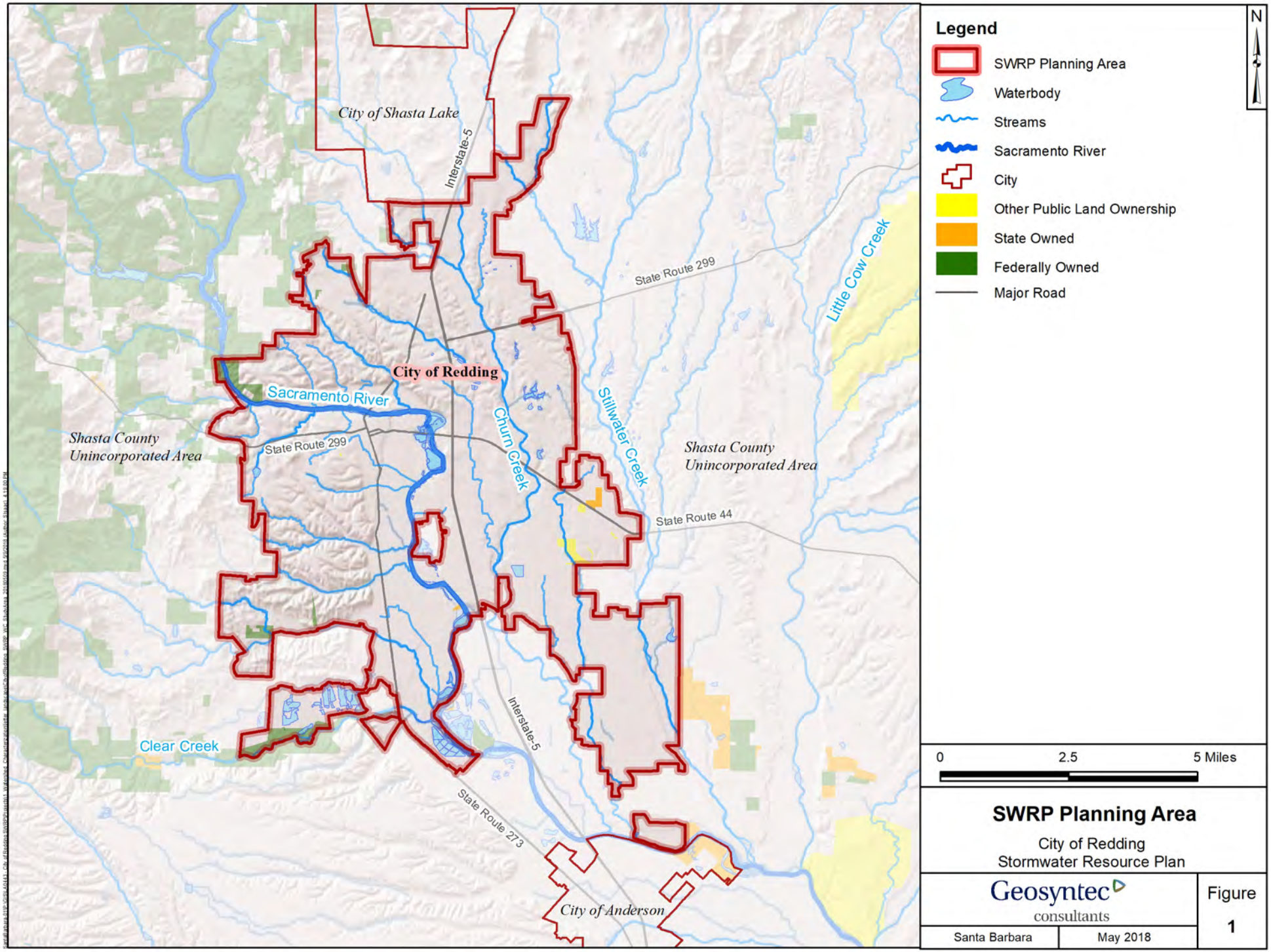
To satisfy the Proposition 1 Stormwater Grants Program funding eligibility requirements this SWRP includes all required and recommended elements per the Water Code and SWRP Guidelines and will be submitted to the North Sacramento Valley Integrated Regional Water Management (IRWM) Group. Appendix A contains the completed SWRP Checklist and Self-Certification Form.

In addition to the meeting the SWRP Guidelines, the City, the Technical Advisory Committee (TAC), and the stakeholders discussed and highlighted goals that were of special importance in developing and implementing the SWRP (see Sidebar). These primary goals steered the customized development the SWRP.

Primary goals of the SWRP

- Provides a forward-thinking and living framework for implementation
- Emphasizes water quality
- Identifies projects that bring value and benefit to the community
- Collaboratively developed and implemented
- Has local project support
- Provides opportunities for community education
- Prepares opportunities for future grant funding

[2] The SWRP is also reviewed by the State Water Board and Regional Water Board, for consistency with these guidelines and the checklist.



SWRP Planning Area

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | May 2018

Figure 1

State and regional requirements and objectives were also considered during SWRP development. Stormwater discharges from the City are regulated by the California Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit (Phase II MS4 Permit) (Order 2013-0001-DWQ) (State Water Board, 2013), and may be affected by Total Maximum Daily Loads (TMDLs) for watersheds that encompass the City. Effective SWRPs and implementation of associated projects could support compliance with the Phase II MS4 Permit and TMDL requirements.

Figure 2. Boulder Creek Elementary Flooded (KRCR News February 2017)

The Sustainable Management Groundwater Act (SGMA), enacted in 2014, requires locally governed Groundwater Sustainability Agencies (GSAs) to develop Groundwater Sustainability Plans (GSPs) to effectively study and manage groundwater resources. The ultimate SGMA objective is to reach sustainable groundwater conditions within 20-years of implementing the GSP. Effective SWRPs and implementation of associated projects could support GSAs to achieve GSP goals to augment and diversify local/regional water supplies. Stormwater capture and infiltration is an option for recharging local groundwater supplies.

Additionally, the Northern Sacramento Valley IRWMP (West Yost Associates, 2014) identifies regional objectives that include water supply reliability, flood protection and planning, and water quality protection and enhancement. The Redding Basin Water Resources Management Plan Environmental Impact Report (CH2MHILL, 2007) also identifies regional objectives that include protecting and augmenting water supplies, and protecting and improving water quality. This SWRP's watershed-based approach identifies and prioritizes stormwater management projects with multiple benefits that will directly address these regional objectives.

1.3 SWRP Overview

This SWRP contains the main sections outlined below. References to relevant Water Code requirements are included throughout to demonstrate compliance.

- **Section 2 – Organization, Coordination, and Collaboration**: describes the overarching organization of agencies developing the SWRP and the community engagement process that occurred during plan development, including identification of stakeholders, the mechanisms and processes used to engage the public, and a summary of the stakeholder participation.
- **Section 3 – Background**: summarizes the general information contained within relevant reports and datasets, describes the relationship of the SWRP to other existing planning documents, ordinances, and programs established by local agencies, identifies watersheds

and subwatersheds within the SWRP area, summarizes existing water quality issues and potential causes of impairments within the major watersheds, including 303(d) listings and TMDLs, and describes existing permits and plans relevant to the SWRP and how the SWRP will be consistent, and assist in compliance, with these requirements.

- **Section 4 - Identification and Prioritization of Projects**: discusses the overall approach used for identification and prioritization of projects. Includes the evaluation of potential models for quantifying multiple benefits of projects, process of conceptual project selection, conceptual designs for each project, the methodology and results for quantification of the multiple benefits of conceptual projects, and prioritization of projects.
- **Section 5 - Implementation Strategy and Schedule**: describes the processes for the SWRP projects to be implemented in the future, including ongoing coordination, an implementation schedule, resources for SWRP implementation, tracking project status, an adaptive management approach, strategy for obtaining necessary permits, potential monitoring needs, and data management.

2 ORGANIZATION, COORDINATION, AND COLLABORATION

The collaboration of the City (as the Project Manager), the TAC (including various departments within the City) and stakeholders (including other local agencies, NGOs, community members, etc.) have been integral to the development of a far sighted yet implementable SWRP that is representative of local priorities (Figure 3).

This section of the SWRP describes the organization and roles of the SWRP developers and the community engagement process that occurred during SWRP development, while Section 5.4 describes the plan for ongoing collaboration during the SWRP implementation.

Relevant California Water Code Requirements

- Section 10565(a) requires that local agencies and nongovernmental organizations (NGOs) be consulted in the SWRP development.
- Section 10562(b)(4) requires that a stormwater resource plan shall provide for community participation in plan development and implementation.

2.1 Organization of the SWRP Developers

The City served as the lead agency for SWRP development and was responsible for managing SWRP development and the State Grant agreement, in addition to coordinating collaboration of the TAC, stakeholders, and consultants. The City also contributed financially and with in-kind time directly to development of the SWRP.

To support the development and implementation of the SWRP, a TAC was established to provide oversight and review during the development process. The TAC is comprised of various departments within the City. Each member represented specific interests and was helpful in both soliciting and conveying their agency's priorities and in communicating important information to their specific public audience. At regularly scheduled meetings and through email communication, the TAC assisted with important decisions and provided necessary feedback and guidance. The name, affiliation, and contact information for each TAC member is listed in Table 1.

Table 1. TAC Members

Name	Affiliation	Email
Mieke Sheffield	Redding Storm Water Management	msheffield@ci.redding.ca.us
Amber Kelley	Redding Storm Water Management	akelley@ci.redding.ca.us
Josh Watkins	Redding Water Utility	jwatkins@ci.redding.ca.us
Marty Wayne	Redding Storm Drain Utility	mwayne@ci.redding.ca.us
Joe Forseth-Deshais	Redding Parks and Recreation	jforseth@cityofredding.org
Randy Campbell	Redding Streets Department	rcampbell@cityofredding.org
Jaclyn Kong	Redding Water Conservation	jkong@cityofredding.org
Paul Hellman	Redding Planning	phellman@ci.redding.ca.us
Jon Oldham	Redding Storm Water Management	
David Braithwaite	Redding Engineering	dbraithwaite@cityofredding.org
Ryan Bailey	Redding Wastewater Utility	rbailey@cityofredding.org
Christina Piles	Redding Solid Waste	cpiles@cityofredding.org
Bryant Garrett	Redding Airports	bgarrett@cityofredding.org

The key roles and responsibilities of the TAC included the following:

- participation in the TAC kickoff meeting (to establish project goals and roles) and three progress meetings (to provide updates on the development of the SWRP and to solicit input and feedback),
- participation in the three stakeholder/public outreach meetings,
- making decisions regarding project modeling and design priorities,
- providing experienced knowledge and understanding of local infrastructure, hydrology, groundwater, and potential project constraints,
- soliciting feedback from others within their agency regarding feasibility of potential projects,
- providing timely responses to data requested for the development of the SWRP, and
- reviewing the administrative draft and final draft SWRP.

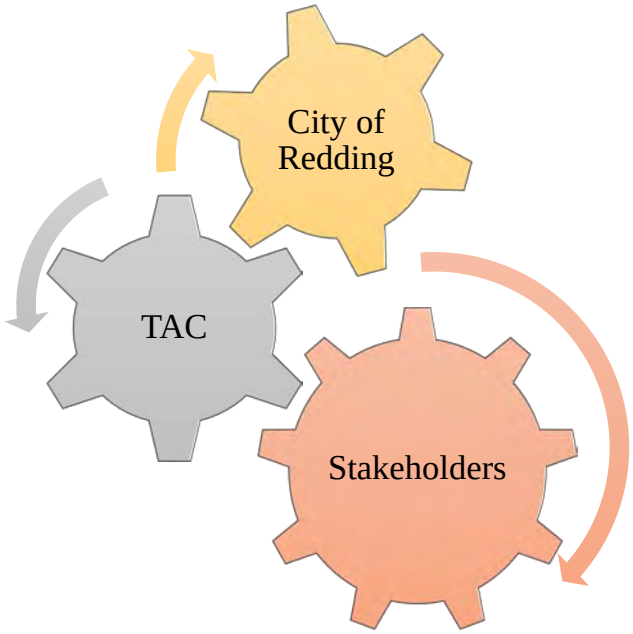


Figure 3. Collaboration of key groups during the SWRP development

Effective stormwater planning and management on a watershed level includes collaboration of local and regional governments, utilities, and other stakeholder groups. Therefore, numerous agencies and other groups were involved in the development of the SWRP. Interested stakeholders provided valuable input into the planning process and informed potential project opportunities. The stakeholders were individuals, groups, coalitions, agencies, and other entities that were involved in, affected by, or had an interest in the implementation of the SWRP. Appendix C contains a list of stakeholders involved in the development of the SWRP and their contact information.

The roles and responsibilities of the stakeholders included the following:

- providing input into development of the SWRP,
- attending public meetings,
- recommending potential locations for project development,
- providing local knowledge and input regarding conceptual project designs,
- commenting on draft sections of the SWRP, and
- providing letters of support for the SWRP and projects.

2.2 Stakeholder Identification, Engagement, and Participation

The Stakeholder Outreach, Education, and Engagement Plan (Outreach Plan) is included in Appendix C and summarized briefly in this section. The Outreach Plan establishes strategies for effective engagement, in order to meet or exceed the requirements for consultation of local agencies and NGO's (Water Code Section 10565[a]) and community participation (Water Code Section 10562 [b][4]) in SWRP development and implementation as well as the additional elements listed in the SWRP Guidelines Section VI.B and VI.F.

The Outreach Plan outlines a variety of communication systems that were used to disseminate information about the SWRP, in part relying on groups that have similar concerns and issues as those addressed in the SWRP. Public outreach and involvement was sustained throughout the development of the SWRP with the intention of forming alliances that further the goals and sustainability of the SWRP and projects. Section 5.4 below discusses how public engagement will be continued through the implementation of the SWRP.

Public meetings are an established and effective mechanism to engage communities in planning efforts and projects. The first stakeholder meeting was held on January 11, 2018, with over ten stakeholders attending the meeting. An overview of the SWRP process and the draft project identification and ranking was presented. Additionally, attendees were requested to submit other potential locations and projects for consideration. At the second stakeholder meeting, held on March 1, 2018, an overview of the SWRP conceptual projects was presented, including a discussion of the project descriptions, benefits, and prioritization results. Stakeholders present during this meeting were able to provide comments and feedback on the draft conceptual projects. The third (and final) stakeholder meeting, was held on June 6, 2018. During the meeting, an

overview of the draft public SWRP was presented and discussed along with the findings of the feasibility assessment and initial design considerations for three of the five conceptual projects (the sewer ponds, Mary Lake, and Pine-Market Alley). A draft public SWRP was provided to the stakeholders on July 11 for a two-week comment period and all comments were reviewed and incorporated (as appropriate) in the final draft SWRP. Records from the stakeholder meetings, including the meeting advertisement, attendees sign-in sheets, and presentations are included in Appendix C.

A large part of the SWRP planning area contains economically disadvantaged communities (DAC) and economically distressed areas (EDA): approximately 49 percent of the area (and 72 percent of the population) within the City is disadvantaged[3] including 25 percent (and 36 percent) that is considered severely disadvantaged. The Outreach Plan describes an approach to identify DACs that have an interest and stake in the planning outcome. Participation from DAC community representatives at the public workshops provided opportunities to identify and address specific runoff-related environmental justice issues.

[3] Based on the 2014 American Community Survey median household income by census block group. The severely disadvantaged area is a subset of the disadvantaged area. Disadvantaged areas have a median household income of less than 80% of the state's median household income, while severely disadvantaged areas have less than 60%. This corresponds to a median income below $49,191 in disadvantaged areas and below $36,893 in severely disadvantaged areas.

3 BACKGROUND

3.1 Existing Relevant Reports and Data

Numerous reports have been developed by the City and other stakeholders relating to water management within the SWRP planning area. A thorough understanding of this applicable information was a critical starting point in the development of the SWRP (as required by Section VI.B of the SWRP Guidelines). These reports were used throughout all stages of the SWRP development. Examples of how the SWRP drew from previous reports and data include:

- the project rankings considered land use, proximity to surface water and groundwater resources, surface water and groundwater quality issues, soil characteristics, and existing stormwater infrastructure, among other factors; and
- potential projects that were previously identified (e.g., Downtown Mall Alley) were included in the project quantification and prioritization process.

Table 2 includes a summary of the general categories of information that are contained within relevant reports. Appendix D contains a description of each report and identifies the specific relevant information.

By identifying and ranking potential stormwater and dry weather management projects, the SWRP contributes to water supply, water quality, flood management, environmental, and community enhancement (i.e., recreational areas, open space, etc.) goal attainment established in other planning documents, ordinances, and programs. This includes the IRWMP (water supply, water quality, flood management, environmental, and community enhancement goals), the comprehensive stormwater management plan (water quality goals), the stormwater management plans and Program Effectiveness Assessment and Improvement Plan[4] (PEAIP) (water quality goals), and the groundwater management plan (water quality and water supply goals). Additional discussion of how the SWRP connects with the water quality goals of many of these planning documents is included in Section 3.3.

[4] A requirement of the Phase II MS4 Permit intended for MS4 Permittees to assess the status of compliance with permit conditions, the appropriateness of identified control measures, and progress towards measurable goals.

Table 2. Summary of Existing Reports

Name of Report	Relevant Data Categories Available							
	Surface Water/Hydrology	Groundwater/Geology	Agency Details	Water Supply	Flood Management	Environmental	Community	Proposed BMPs
Final California 2014 and 2016 Integrated Report (303(d) List/305(b) Report), 2017, State Water Resources Control Board	x					x		
City of Redding Program Effectiveness Assessment and Improvement Plan (PEAIP), 2015, WGR SOUTHWEST, INC.	x				x		x	
Urban Water Management Plan, 2015, City of Redding			x	x				
Northern Sacramento Valley Integrated Regional Water Management Plan, 2014, West Yost Associates	x	x	x	x	x			
Water Quality Control Plan for the Sacramento and San Joaquin River Basins, 1998 (amended 2014), Central Valley Regional Water Quality Control Board	x					x		
A Roadmap to Watershed Management, 2010, Sacramento River Watershed Program	x					x		
Groundwater Management Plan for the Redding Groundwater Basin, 2007 update, Shasta County Water Agency		x	x	x				
Redding Basin Water Resources Management Plan Environmental Impact Report, 2007, CH2M HILL			x	x		x	x	
Sacramento and Feather Rivers Diazinon and Chlorpyrifos Basin Plan Amendment, 2007, Central Valley Regional Water Quality Control Board	x					x		
Sacramento Valley Integrated Regional Water Management Plan, 2006, Northern California Water Association, CH2M HILL, GEI Consultants	x	x	x	x	x			
Sacramento River Hydrologic Region Redding Groundwater Basin - CA Groundwater Bulletin 118, 2004	x	x		x				
Shasta County General Plan, 2004	x	x	x		x	x	x	
Storm Water Quality Improvement Plan, 2003, City of Redding	x				x			
Upper Sacramento River TMDL for Cadmium, Copper & Zinc, 2002, Sacramento River TMDL Unit	x		x			x		
City of Redding 2000-2020 General Plan	x	x			x	x	x	
Draft Enterprise Area Groundwater Study, 1996, CH2M HILL		x	x					
City-Wide Master Storm Drain Study Final Report, 1993, City of Redding	x		x		x		x	x
Redding Region Water Supply Alternatives, 1975, CH2M HILL		x	x	x				

3.2 Watershed Characterization

As required by Water Code Sections 10565(c) and 10562(b)(1), the SWRP planning area was divided into the three watersheds and 18 subwatersheds that pass through the City. The watersheds include the following:

- Churn Creek-Sacramento River watershed (51 sq. mi of which is in the SWRP planning area, or 29% of the total watershed area);
- Clear Creek watershed (2.7 sq. mi of which is in the SWRP planning area, or 1.1% of the total watershed area); and
- Stillwater Creek watershed (7.3 sq. mi of which is in the SWRP planning area, or 11% of total watershed area).

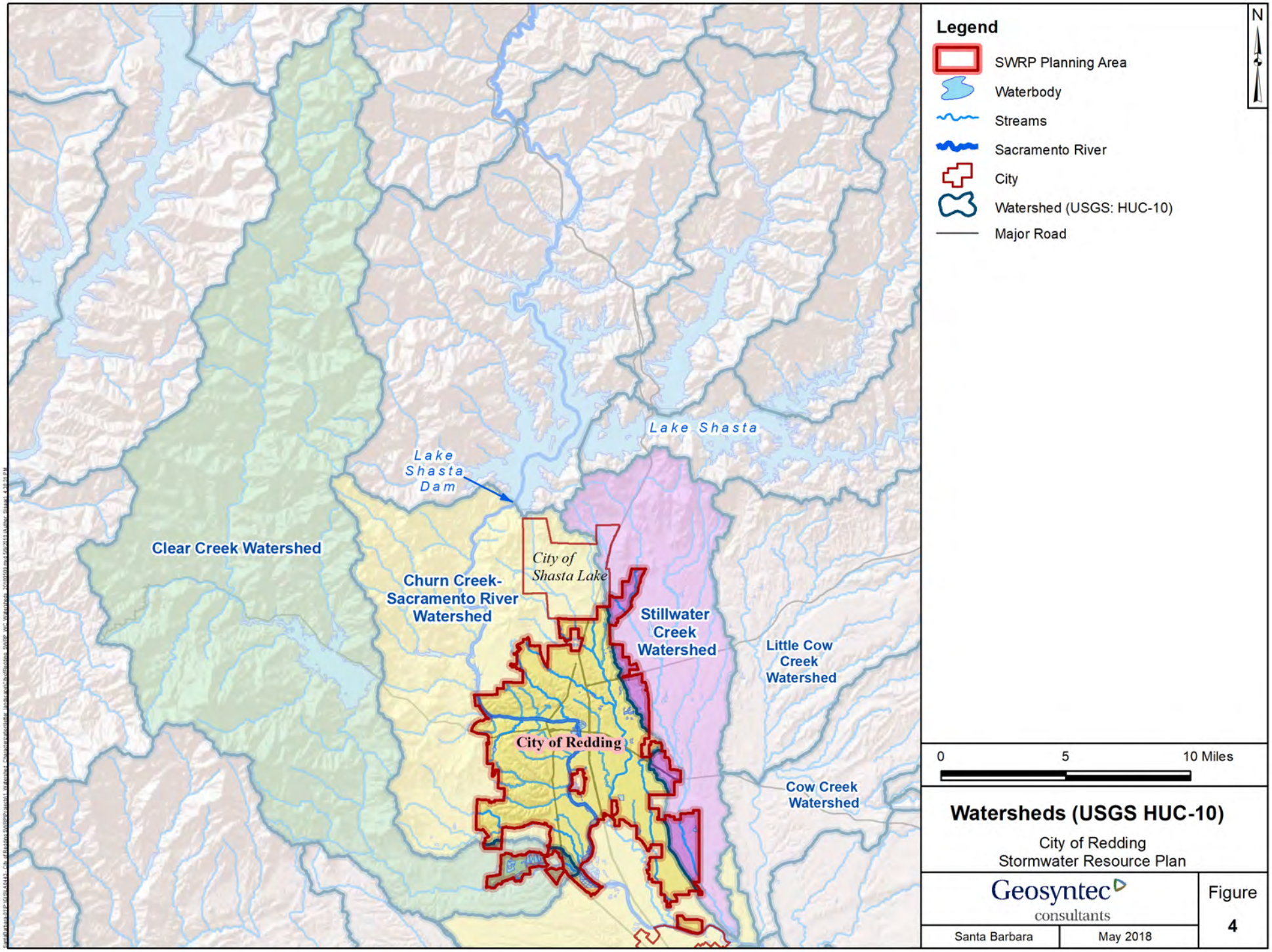
The subsequent information presented in this section fulfills requirements in Section VI.A of the SWRP Guidelines. These watersheds were selected because they encompass the City and are based on the United States Geological Survey (USGS) hydrologic unit code (HUC)-10 watersheds (defined as the "watershed" watershed level). The USGS HUC-10 watershed definition provides the largest practical definition that allows for comprehensive and integrated stormwater management. A Roadmap to Watershed Management[5] and North Sacramento Valley IRWMP[6] provide a description of these watersheds including: watershed geography, management issues (e.g. water quality, water supply, flood management), flow characteristics, vegetation, and habitat. The subwatersheds were defined by areas draining to major creeks as identified in the Redding Stormwater Quality Improvement Plan[7], which also provides a description of these subwatersheds including: watershed geography, flow characteristics, land use, and habitat.

In addition to the reasons stated above, the selected watersheds and subwatersheds also provide an appropriate scale for the quantitative analyses of stormwater runoff and pollutant loading. The SWRP approach quantifies multiple benefits for projects, to allow comparison within the same watershed or subwatershed, and this comparison can incorporate water quality priorities by watershed or subwatershed (e.g., TMDLs). Additionally, by utilizing the smaller subwatersheds, the impact a project could have on local issues can be better understood. The watersheds and subwatersheds are indicated in Figure 4 and Figure 5, respectively.

[5] A Roadmap to Watershed Management, Executive Summary, pg. 51-55, and pg. 85-89.

[6] North Sacramento Valley IRWMP, Chapter 1

[7] City of Redding Storm Water Quality Improvement Plan, Section 4 and Appendix C.



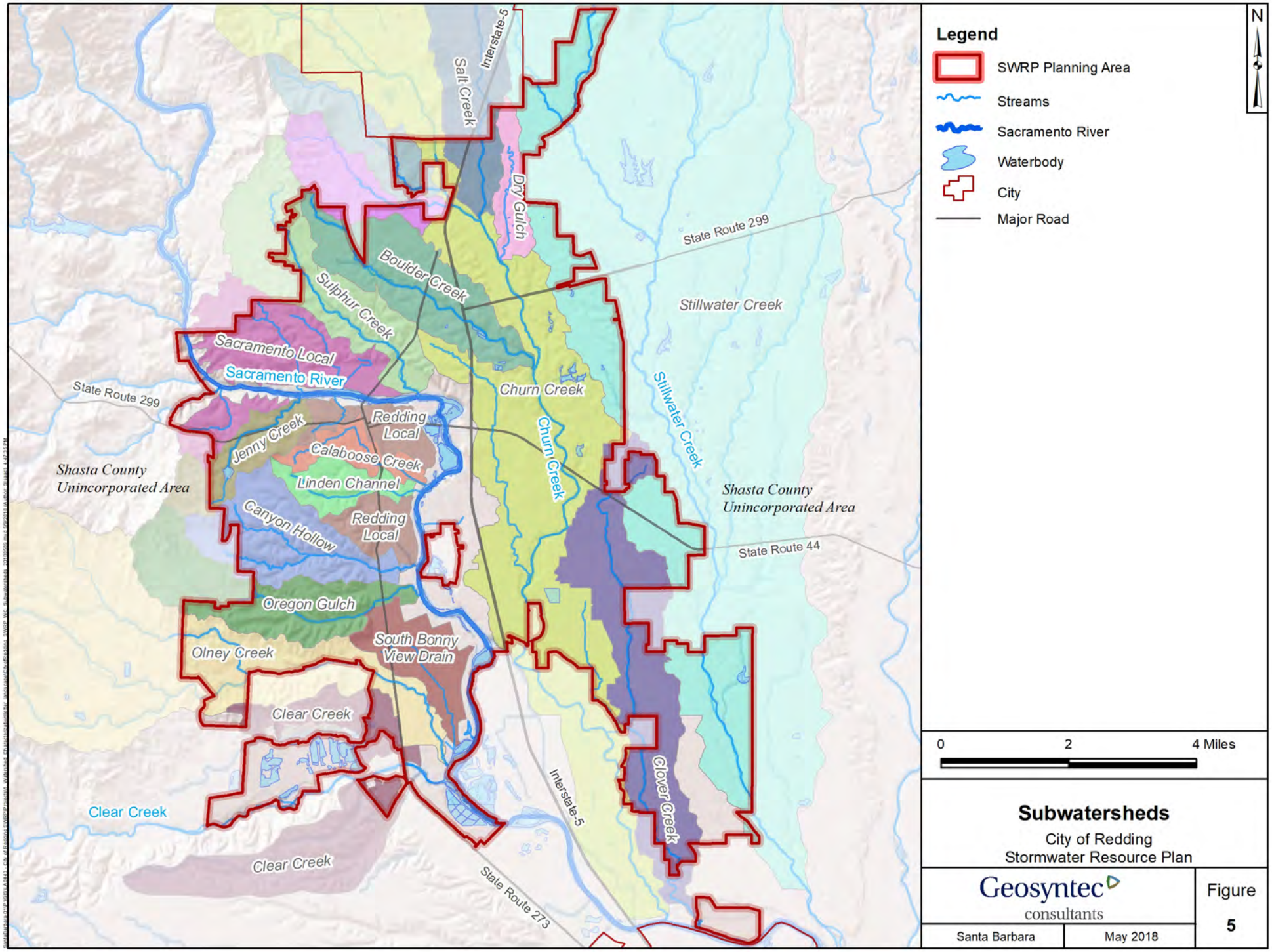
Watersheds (USGS HUC-10)

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | May 2018

Figure 4



Subwatersheds

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | May 2018

Figure 5

The groundwater basins and reservoirs/lakes that reflect the water resources present within the SWRP planning area are shown in Figure 6. The Sacramento River and Whiskeytown Lake provide 74 percent of the City's annual water supply, with groundwater providing the remaining 26 percent. The surface water and groundwater sources generally have high-quality water, with a few groundwater locations having elevated arsenic and manganese concentrations (City of Redding, 2016b). The Redding 2015 Urban Water Management Plan[8], Redding Storm Water Quality Improvement Plan[9], Redding Groundwater Basin Plan[10], and North Sacramento Valley IRWMP[11] describe the groundwater basins (including size, water quality, and overlaying land use), and the surface water infrastructure (including water quality, reservoir storage capacity, and associated distribution systems) in more detail.

The City of Redding Water Utility, Anderson-Cottonwood Irrigation District (ACID)[12], Bella Vista Water District (BVWD), and Centerville Community Services District (Centerville CSD) provide water service within the Redding SWRP planning area. Figure 6 shows the service area for each provided and the estimated volume supplied by each provider are shown in Table 3[13].

Table 3. Estimated Volume of Potable Water Provided

Water Suppliers	Estimated Volume Provided (acre-feet/year)
City of Redding Water Utility (City of Redding, 2016b)	19,001
Bella Vista Water District (Provost & Pritchard Consulting Group, 2016)	14,252
Centerville Community Services District (CH2MHILL, 2003)	3,800
Total Volume Provided	37,053

[8] City of Redding 2015 Urban Water Management Plan, Section 5 and 6

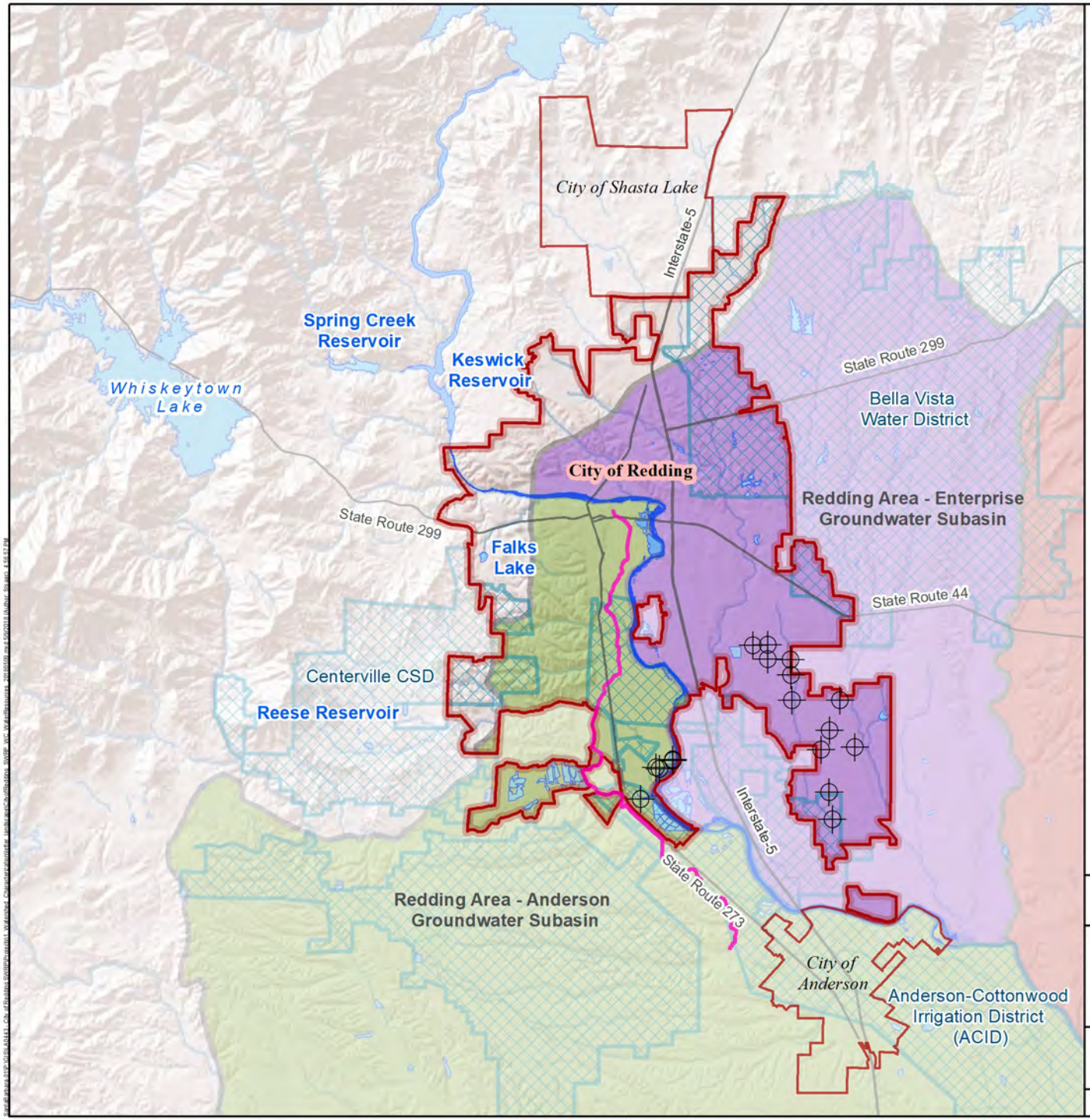
[9] City of Redding Storm Water Quality Improvement Plan, Section 4 and Appendix C.

[10] Groundwater Management Plan for the Redding Groundwater Basin, pages 3 through 12.

[11] North Sacramento Valley IRWMP, Chapter 1

[12] Although ACID service area overlaps the SWRP planning area, ACID does not currently provide water to municipal or industrial users in the SWRP planning area (CH2MHill, 2006)

[13] SWRP planning area specific potable water supplies are not available since the service areas of the potable water suppliers cross the SWRP planning area. Therefore the table shows the total water provided by each provider.



Legend

- SWRP Planning Area
- Water Supply Production Well
- ACID Canal
- Waterbody
- City
- Service Areas and Districts (Note: only those overlapping the SWRP study area are shown)

Groundwater Basin

- Anderson
- Enterprise
- Millville

N

0 3 6 Miles

Surface and Groundwater Resources

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | May 2018

Figure 6

Development (including urbanization, agriculturalization, and mining activity) within the watersheds has significantly altered various watershed processes and in some areas resulted in increased flooding and surface water pollution, while decreasing water supply resources. To address these impacts the SWRP utilizes watershed-based natural solutions to capture, treat, and use stormwater and dry weather runoff. Figure 8 and Figure 9 show the existing land cover and land use, including native habitats, parks, and other open space. Additionally, the City of Redding 2000-2020 General Plan[14] and Sacramento River Watershed Program[15] describe the significant ecological processes occurring within the SWRP planning area which might need additional protection from watershed-altering processes, including sensitive aquatic species, freshwater habitats, vernal pools, and areas of special biological significance.

Figure 7. Localized flooding intensified by urban development

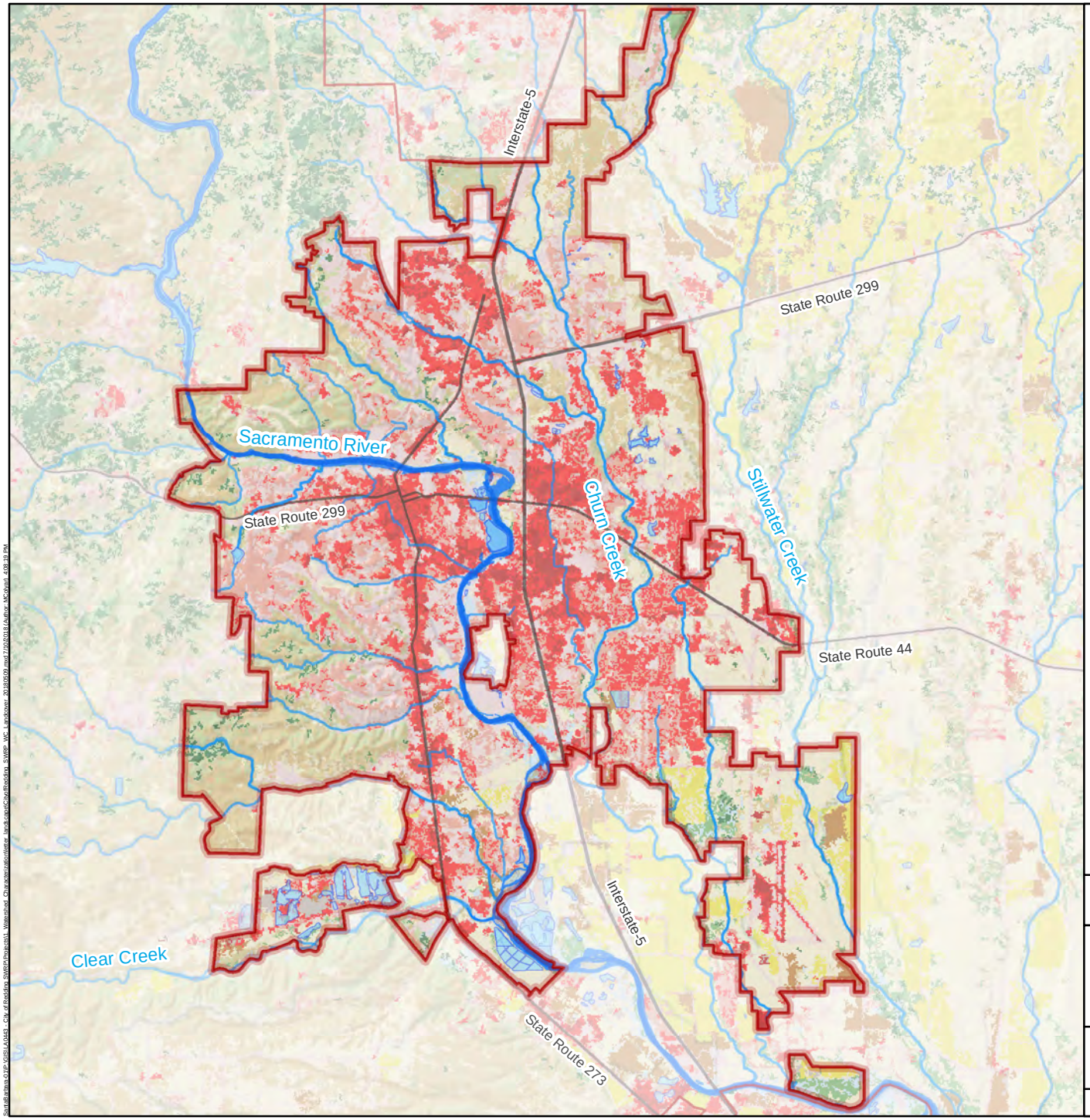
Prior to development, storm event peak flows were moderated by infiltration, evaporation, and transpiration, such that overland runoff did not commonly occur during small to medium storm events. Instead, the majority of precipitation was infiltrated and conveyed by shallow subsurface flow and groundwater or stored within vegetation or surface depressions. Development of an area increases impervious cover through roadways, parking lots, buildings, and other impervious surfaces. With development, natural drainage systems were replaced with pipe or ditch/channel system. Additionally, the clearing of native vegetation for development reduces the interception storage available for precipitation, and site grading eliminates natural depressions for precipitation storage. Post-development surface runoff can peak in the drainages dramatically during storm events, since not as much of the precipitation is able to infiltrate through soils. Even areas such as parks have reduced infiltration capacity because topsoil was removed and compacted, which retards infiltration capacity. With less infiltration, shallow subsurface flow and groundwater flow was also reduced and therefore, less groundwater is available to maintain streamflow during the dry summer months and increased surface runoff and stream erosions result in more “flashy” streamflows and higher flooding risks.

[14] City of Redding 2000-2020 General Plan, Natural Resources Element, pages 1 through 15.

[15] A Roadmap to Watershed Management, pages 51-55 and 85-89.

Development also contributes to degraded water quality because of the various urban activities that contribute higher levels of pollutants than the natural watershed condition. Runoff from watersheds carry contaminants associated with mining, urban development, industrialization, agriculture, and atmospheric deposition to local receiving water bodies. As described above, development increases surface runoff during storm events, increasing pollutant loads transported to receiving waters. Non-urban uses such as agriculture also contribute higher stormwater pollutant loads than the natural watershed, due to the use of fertilizers and/or pesticides. Mining, especially of copper, gold, and mercury, exposes and mobilizes previously buried material and degrades water quality by increasing concentrations of mercury, acidity, and sediment load. Even after mining activity ceases, precipitation and surface runoff continue to leach pollutants from the disturbed areas and can degrade both surface and groundwater. Additionally, development reduces the presence of natural pollutant remediation processes that are present in natural habitats. Figure 8 and Figure 9 indicate the urbanized and agricultural areas that are potentially pollutant generating.

In addition to land use changes altering flow patterns, the construction of Shasta Dam as part of the Bureau of Reclamation Central Valley project has changed the seasonal flows within the Sacramento River. The dam stores water during the typical high flow winter period and releases the water later in the year to support beneficial uses in the area. Damming a river alters the nutrient, pollutant, and temperature dynamics downstream of the dam. Nevertheless, overall post-development changes in hydrologic processes are mostly attributed to the loss of natural land cover, an increase in impervious surfaces, and channelization of natural drainage courses. The areas identified with “developed” land covers, as shown in Figure 8, are most likely to exhibit these aforementioned changes in watershed processes. Areas of the watershed that are classified as forest, shrub/scrub, herbaceous, or other natural land cover type, are likely maintaining natural watershed processes (or conditions close to the natural conditions).



Legend

- SWRP Planning Area
- Streams
- Sacramento River
- Waterbody
- City
- Major Road

Land Cover

- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Dwarf Scrub
- Shrub/Scrub
- Pasture/Hay
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands

N

0 2 4 Miles

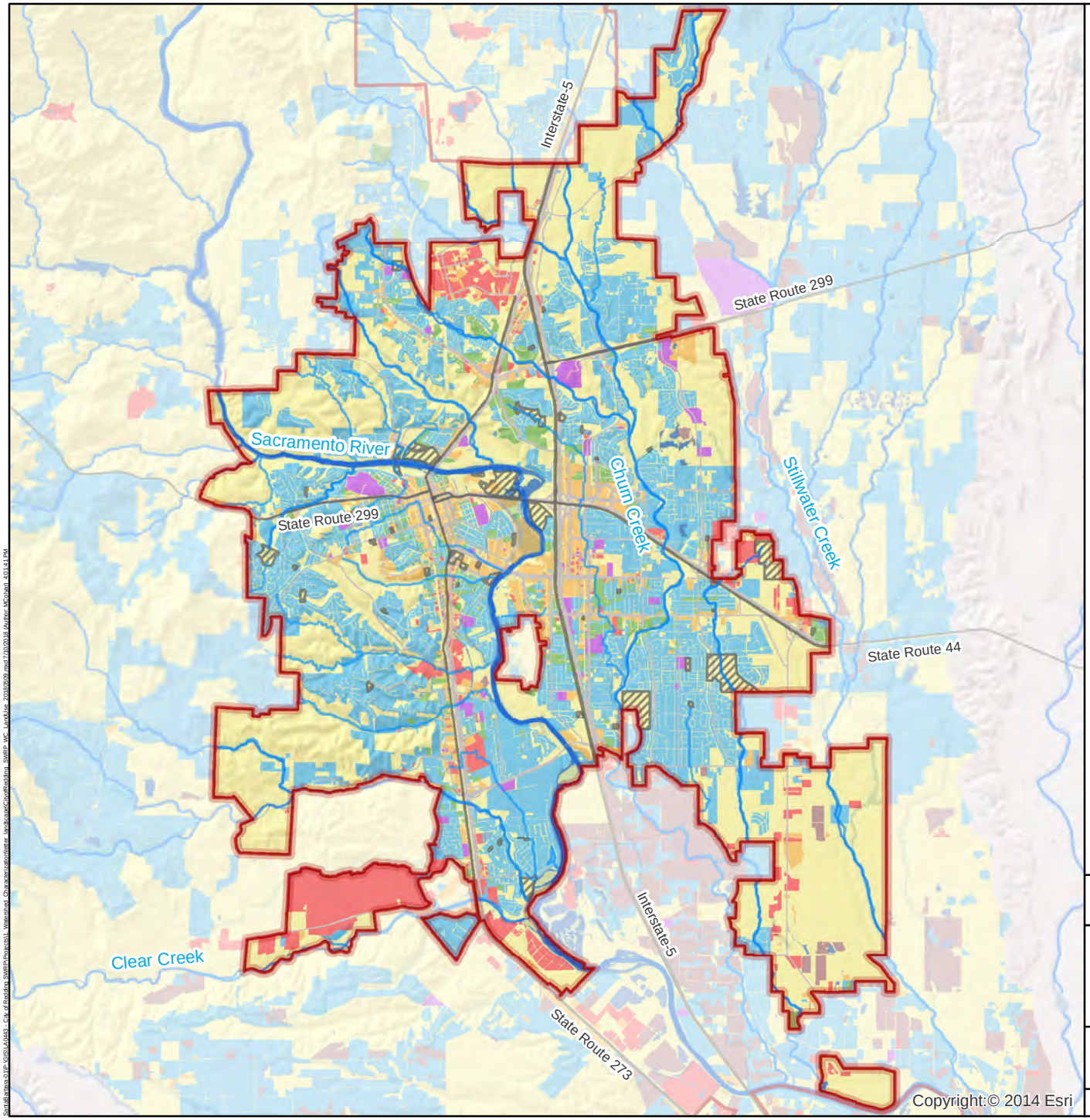
Land Cover (NLCD, 2011)

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | July 2018

Figure 8



Legend

- SWRP Planning Area
- Streams
- Sacramento River
- Waterbody
- City
- Park
- Major Road

Land Use

- Agriculture
- Commercial
- Industrial
- Education
- Open Space
- Single-Family Residential
- Multi-Family Residential
- Transportation
- Water

N

0 2 4 Miles

Land Use

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | July 2018

Figure 9

3.2.1 Water Quality Priorities

As described in Section 3.2, mining, agriculture, and urban development within the watersheds have contributed to degraded water quality because of the various activities that contribute higher stormwater pollutant loads than the natural watershed condition. The Phase II MS4 permit identifies common urban pollutant sources and pollutants, while various existing reports (as described in Section 3.1) identify pollutant generating activities specific to the SWRP planning area watersheds. The water quality priorities of the watersheds have been further identified through various ongoing monitoring programs conducted by the City and other stakeholders. This section fulfills requirements in Section VI.A of the SWRP Guidelines.

The Phase II MS4 Permit states the following:

> *Finding 2. As human population increases, urban development creates new pollution sources and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the municipal separate storm sewer system (MS4). As a result, the runoff leaving the developed urban area is greater in pollutant load than the pre-development runoff from the same area. Also, when natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, walkways and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving developed urban area is significantly greater in runoff volume, velocity, peak flow rate, and duration than pre-development runoff from the same area. The increased volume, velocity, rate, and duration of runoff greatly accelerate the erosion of downstream natural channels. In addition, the greater the impervious cover the greater the significance of the degradation.*
>
> *Finding 3. Pollutants of concern found in urban runoff include sediments, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons (PAHs), trash, pesticides and herbicides.*
>
> *Finding 4. Trash and litter are a pervasive problem in California. Controlling trash is a priority, because trash adversely affects our use of California's waterways. Trash impacts aquatic life in streams, rivers, and the ocean as well as terrestrial species in adjacent riparian and shore areas. Trash, particularly plastics, persists for years. It concentrates organic toxins, entangles and ensnares wildlife, and disrupts feeding when animals mistake plastic for food and ingest it. Additionally, trash creates aesthetic impacts, impairing our ability to enjoy our waterways.*

As required by Water Code Section 10562(d)(7), Table 3 lists the potential pollutant generating activities identified for each of the watersheds.

Table 4. Pollutant Generating Activities

Watershed	Pollutant Generating Activities[a]
Churn Creek-Sacramento River	Mining, Urban Runoff, Agricultural Activities
Clear Creek	Mining
Stillwater Creek	Urban Runoff, Agricultural Activities

[a] Sources identified in the PEAIP, TMDL staff reports, City of Redding Storm Water Quality Improvement Plan, A Roadmap to Watershed Management, and Final California 2014 and 2016 Integrated Report (303(d) List/305(b) Report)

Monitoring water quality at groundwater, receiving water, and MS4 outfall locations provides information regarding water quality issues in the SWRP planning area. Relevant ongoing monitoring programs conducted in the City include the following:

- Groundwater monitoring: The Shasta County Water Agency (SCWA) developed a groundwater basin plan (GWBP) for the Redding Groundwater Basin, which was adopted in 1998 and last updated in May 2007 (SCWA, 2007)[16]. The GWBP includes a monitoring program that collects data from 48 wells located throughout the basin. Water level data are collected semi-annually for some and quarterly for other wells. Groundwater and surface water supply data are also collected, compiled and assessed in biannual reports. Water level data are used to develop hydrographs and contours of groundwater surface elevations.

  A regional groundwater level monitoring program is also conducted by USGS at three wells in Shasta County. Groundwater elevation records are stored in digital form and well locations are in a Geographic Information System (GIS) database[17].

  California's Groundwater Bulletin 118 (2004) reports the active groundwater monitoring programs in the Redding Groundwater Basin listed in Table 4 and summarizes the groundwater quality in each. The Enterprise subbasin has high levels of total dissolved solids and chlorides in the lower formations (Tehama and Tuscan), while sodium and boron are found in the upper formation (Chico). Iron and manganese are also elevated at localized spots in the subbasin. The Anderson subbasin also has localized areas of high iron, manganese, and nitrate concentrations. The Millville subbasin has sodium and boron in the upper formation (Chico) and iron and manganese are also elevated at localized spots in the subbasin.

[16] A description of the monitoring program is included on pages 13-18.

[17] Available at www.groundwaterwatch.usgs.gov

Table 5. California's Groundwater Bulletin 118 (2004) groundwater monitoring

Subbasin	Agency	Number of Wells Monitored (a subset of these are likely located within the City)	
		Groundwater Levels	Water Quality
Anderson[1]	Department of Water Resources	11	6
	Department of Health Services		69
Enterprise[2]	Department of Water Resources	6	5
	Department of Health Services		9
Millville[3]	Department of Water Resources	17	3
	Department of Health Services		43

[1]https://www.water.ca.gov/LegacyFiles/pubs/groundwater/bulletin_118/basindescriptions/5-6.03.pdf
[2]https://www.water.ca.gov/LegacyFiles/pubs/groundwater/bulletin_118/basindescriptions/5-6.04.pdf
[3]https://www.water.ca.gov/LegacyFiles/pubs/groundwater/bulletin_118/basindescriptions/5-6.05.pdf

- Sacramento River Monitoring: There are numerous monitoring programs throughout the Sacramento River Basin. Some are citizen-led efforts while others are watershed-specific monitoring programs. The majority of locations sampled by these programs are well downstream of the City, however, several overlap with the SWRP planning area. The Irrigated Lands Regulatory Program (ILRP) monitoring occurs throughout the basin to assess impacts from agricultural runoff by testing for pesticides, metals, nutrients, toxicity, pathogens, and general chemistry and physical parameters. The monitoring results are submitted to the Central Valley Regional Water Quality Control Board in an annual report. The Sacramento Watershed Coordinated Monitoring Program (SWCMP) is conducted by the Department of Water Resources (DWR) and Central Valley Regional Water Quality Control Board at locations throughout the river basin, with several sites in or near the City of Redding. Parameters monitored and reported in the DWR's Water Data Library include temperature, dissolved oxygen, nutrients, metals, and bacteria, among other physical, chemical, and biological parameters. Some locations are also monitored for macroinvertebrate populations and toxicity. Metal concentrations in the Sacramento River are highest during winter months likely due to high concentrations of metals in stormwater runoff from urban areas and large rain events causing Keswick Dam to release more water, which also has higher metal concentrations likely due to upstream mining operations.

Based on monitoring that has been conducted within the SWRP planning area, some waterbodies have been identified on the 2016 California Clean Water Act Section 303(d) list of water quality impaired segments. Two of the watersheds within the SWRP planning area contain waterbodies that are 303(d) listed (5 receiving waters) and one watershed has TMDLs (1 receiving water). TMDLs are numerical calculations of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, including an allocation of that amount to the pollutant's sources. TMDL WLAs and WQO standards are established to protect all related beneficial uses. The Sacramento River is subject to the diazinon and chlorpyrifos basin plan

amendment[18] and TMDLs[19] for cadmium, copper and zinc (although the City is not designated as a responsible party). TMDLs for other pollutants are expected to be completed soon based on Table 5.

The impaired waterbodies are shown in Figure 10, and Table 5 summarizes the waterbodies that are 303(d) listed. These 303(d) listings and other common urban pollutants will inform the water quality priorities for each watershed that will be considered in the development of the SWRP. TMDLs would also be used to inform water quality priorities as they are established. The GWBP[20] describes the specific groundwater quality issues associated with each groundwater basin by watershed.

Table 6. 303(d) and TMDL Pollutants by Watershed and Pollutant Category

Watershed	Water Body	Pollutant	Expected TMDL Completion*	TMDL Effective Date
Churn Creek-Sacramento River	Spring Creek, Lower (Iron Mountain Mine to Keswick Reservoir)	Acid Mine Drainage	2027	not completed
		Cadmium	2027	not completed
		Copper	2027	not completed
		Zinc	2027	not completed
	Keswick Reservoir (portion downstream from Spring Creek)	Cadmium	2019	not completed
		Copper	2020	not completed
		Zinc	2020	not completed
	Sacramento River (Keswick Dam to Cottonwood Creek)	Unknown Toxicity	2019	not completed
		Cadmium	N/A	2002
		Copper	N/A	2002
		Zinc	N/A	2002
Clear Creek	Whiskeytown Lake	Mercury	2027	not completed
	Whiskeytown Lake (areas near Oak Bottom, Brandy Creek Campgrounds and Whiskeytown)	Mercury	2027	not completed
	Clear Creek (below Whiskeytown Lake, Shasta County)	Mercury	2027	not completed
Stillwater Creek	none			

*Pollutants and expected TMDL completion dates from 2014/2016 Integrated Report
Note: highlighted waterbodies are within the SWRP planning area, while un-highlighted waterbodies are upstream and outside of the SWRP planning area, but within the same watershed.

Furthermore, several areas within the City are designated as critical habitats by the US Fish and Wildlife Service, meaning that the area is occupied by a threatened or endangered species and has

[18] Sacramento and Feather Rivers Diazinon and Chlorpyrifos Basin Plan Amendment, 2007

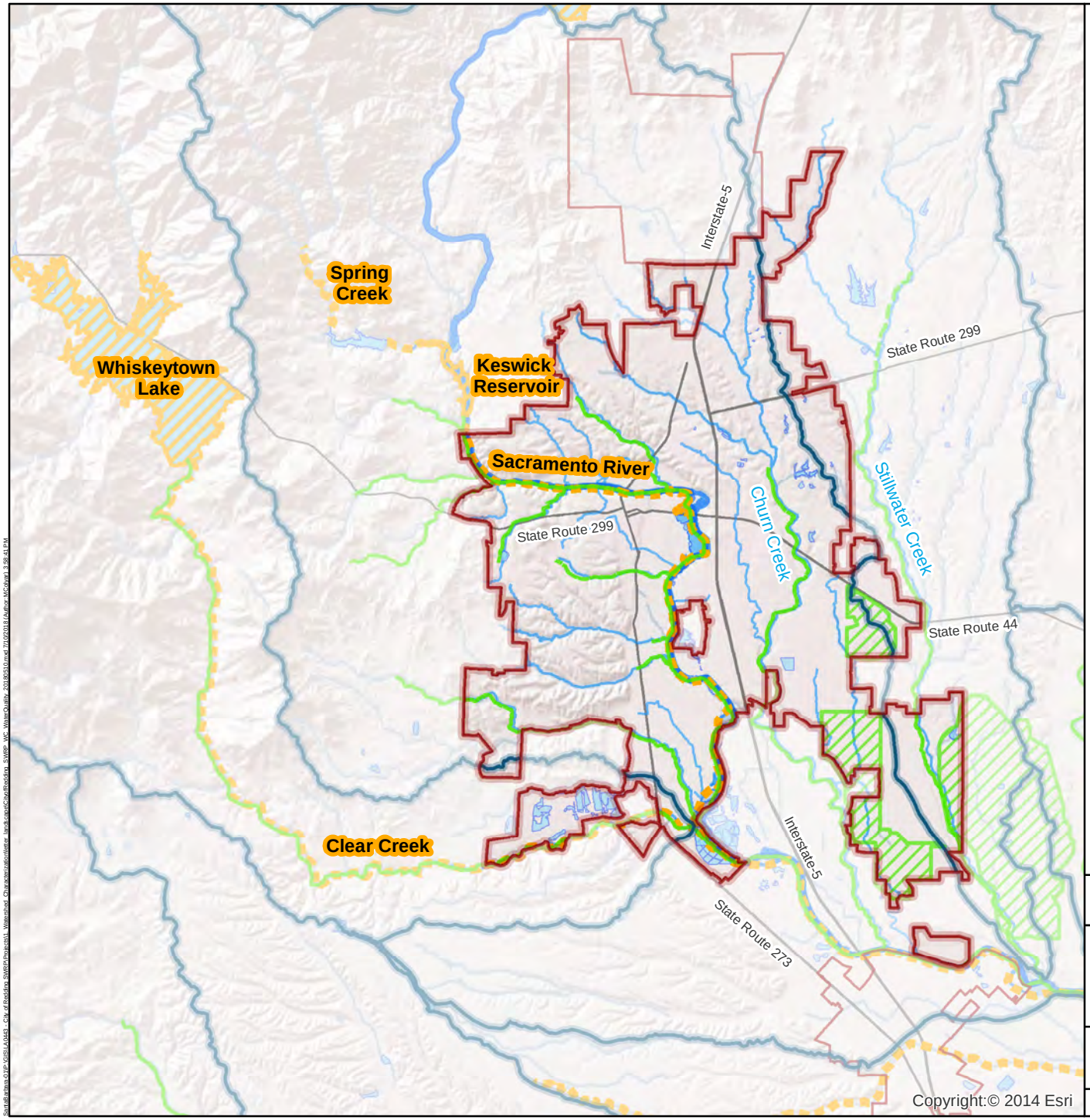
[19] Upper Sacramento River TMDL for Cadmium, Copper & Zinc, 2002

[20] Physiography and Geology section

features essential to the conservation of that species. Western parts of the City are home to critical habitat for slender Orcutt grass, vernal pool fairy shrimp, and vernal pool tadpole shrimp. Many of the streams in the City are critical habitat for steelhead and chinook salmon. These areas are shown in Figure 10 and summarized in Table 6 below.

Table 7. Critical Salmonid Stream Habitats

Watershed	Water Body	Species
Churn Creek-Sacramento River	Sulphur Creek	Steelhead
	Rock Creek	Steelhead
	Middle Creek	Steelhead
	Salt Creek	Steelhead
	Jenny Creek	Steelhead
	Churn Creek	Steelhead, Chinook Salmon
	Olney Creek	Steelhead, Chinook Salmon
	Sacramento River	Steelhead, Chinook Salmon
	Canyon Hollow	Steelhead
	Oregon Gulch	Steelhead
Clear Creek	Clear Creek	Steelhead, Chinook Salmon
Stillwater Creek	Stillwater Creek	Steelhead



Legend

- SWRP Planning Area
- Streams
- Sacramento River
- Waterbody
- Watershed (USGS: HUC-10)
- City
- Critical Stream Habitat
- Critical Habitat
- 303(d) Listed Stream
- 303(d) Listed Waterbody
- Major Road

N

303(d) Listed Water Bodies

Spring Creek
(Iron Mountain Mine to Keswick Reservoir)
TMDL needed: Acid Mine Drainage, Cadmium, Copper, Zinc

Keswick Reservoir
(portion downstream from Spring Creek)
TMDL needed: Cadmium, Copper, Zinc

Sacramento River
(Keswick Dam to Cottonwood Creek)
TMDL established: Cadmium, Copper, Zinc
TMDL needed: Unknown Toxicity

Whiskeytown Lake
(including near Whiskeytown)
TMDL needed: Mercury

Clear Creek
(below Whiskeytown Lake, Shasta County)
TMDL needed: Mercury

0 2.75 5.5 Miles

Water Quality Priorities

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | July 2018

Figure 10

3.3 Water Quality Compliance

The SWRP identifies strategies to address water quality compliance requirements, fulfilling the relevant water code requirements (see Sidebar). There are several permits or documents that the City is required to comply with, including the Phase II MS4 Permit, Statewide Trash Amendments, and TMDLs. The SWRP will assist in compliance with these various documents, as described herein.

Relevant California Water Code Requirements

- Section 10562(b)(5) requires that the SWRP is consistent with, and assists in, compliance with TMDL implementation plans and applicable National Pollutant Discharge Elimination System (NPDES) Permits.
- Section 10562(b)(6) requires that the SWRP identifies applicable permits and describe how the SWRP meets all applicable waste discharge permit requirements.

The City is required to comply with the Phase II MS4 Permit. The following provisions of the Phase II MS4 Permit are informed and may be assisted by the identification and prioritizations of projects conducted for this SWRP:

- Provision B, which prohibits "discharges of stormwater from the MS4 to waters of the U.S. in a manner causing or threatening to cause a condition of pollution or nuisance",
- Provision C, which requires the permittees to implement controls to reduce the discharge of pollutants from their MS4s to the Maximum Extent Practicable (MEP),
- Provision D, which states that "discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule, or in the applicable Regional Board Basin Plan.", and
- Provision E.14.a, Program Effectiveness Assessment and Improvement, which requires the development of a PEAIP and quantitative effectiveness assessment. The model used to quantify the effectiveness of the SWRP conceptual projects is also being used for assessing the effectiveness of the PEAIP. The conceptual projects were developed, and their conceptual design parameters were used in the model to determine the average annual baseline stormwater runoff volume and pollutant loads (based on applicable priority pollutants) to the BMP and the runoff volume and load reductions resulting from the BMP.

Traditional approaches to stormwater management do not fully address water quality impacts from stormwater discharges or necessarily provide multiple benefits such as water supply augmentation and ecological enhancement of the local watersheds. The SWRP utilizes a watershed-based approach to stormwater management that will identify multi-benefit projects that can yield water quality benefits by reducing the volume of runoff delivered to receiving waters, thus reducing the pollutants discharged from urban and/or agricultural areas while augmenting needed water supplies. In areas where stormwater infiltration is not feasible (e.g., high groundwater, low

infiltration rates, steep slopes, landslide or liquefaction risk zones), projects may use natural treatment systems to reduce pollutant concentrations in runoff. Watershed-based approaches to stormwater management also provide non-measurable social and community benefits that traditional management approaches do not provide, such as new or enhanced recreational and public use areas. Through this watershed-based approach, the SWRP will assist the City in demonstrating compliance with the Phase II MS4 Permit.

The SWRP quantifies the water quality benefits of the top selected projects in terms of volume reduction and reductions in 12 pollutants using the Load, Prioritization, and Reduction (LPR) Model (Geosyntec Consultants, 2017). The projects are then assigned water quality scores based on the estimated pollutant reductions, with pollutants that are 303(d) listed or have applicable TMDLs weighted such that higher reductions in these priority pollutants produces a higher overall water quality score. This process allows projects to be evaluated based on their potential ability to improve water quality for watershed specific water quality issues.

As such, the SWRP estimates water quality benefits to the City achievable through project implementation and will support other water quality improvement efforts including Phase II Permit compliance demonstration, compliance with TMDL Waste Load Allocations (WLAs), and helping restore beneficial uses of 303(d) listed waterbodies.

In addition, depending on the types of projects identified, SWRP projects may also support implementation of the Statewide Trash Amendments[21]. The State Water Resources Control Board has indicated that the following types of BMPs will be considered full capture systems (identified as Multi-Benefit Treatment Systems):

- bioretention,
- capture and use,
- detention basin,
- infiltration trench,
- infiltration basin, and
- media filter.

Table 7 summarizes how the SWRP will assist in compliance of the Phase II MS4 Permit, in addition to 303(d) listed water body-pollutant combinations.

[21] State of California's Trash Amendments to the Water Quality Control Plan for Ocean Waters of California and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Water Board, 2015a).

Table 8. Applicable Surface Water Quality Regulations

Applicable CWA Regulation	Watershed	Regulated Pollutant	Description of how the SWRP will assist in compliance[a]
NPDES	All Watersheds with NPDES regulated facilities	Multiple pollutants	Identifies potential projects that would remove or treat stormwater runoff resulting in lower pollutant loads to receiving waters (aids in the goal of compliance with NPDES permits). There are 130 NPDES regulated facilities in the City of Redding[1] including: • 27 401 Certifications, • 1 forestry, • 2 land disposals, • 6 NPDES, • 5 sanitary sewer overflow/spill (SSO), • 69 stormwater, and • 20 Waste Discharge Requirements (WDRs).
Phase II MS4 General Permit	All Watersheds with MS4 discharges	Multiple pollutants	Implement and enhance measures to control 303(d) listed pollutants and pollutants of concern identified by Redding in the PEAIP and contribute towards achieving future TMDL WLAs
Water Quality Control Plan	All Watersheds with MS4 discharges	Trash	Identifies potential projects that would capture and remove trash from stormwater runoff
TMDLs	Churn Creek-Sacramento River	Cadmium, Copper, Zinc	Identifies potential projects that would remove (infiltrate or directly use) or treat stormwater runoff resulting in lower pollutant loads to receiving waters (aids in the goal of compliance with TMDL WLAs and Water Quality Objectives)
303(d) listings (impaired waters)	Churn Creek-Sacramento River	Unknown Toxicity	
	Clear Creek	Mercury	

[1] The Regulated Facility Report was generated on CIWQS on 5/10/2018. Regional Boards are in the process of entering backlogged data. As a result, data may be incomplete.

4 IDENTIFICATION AND PRIORITIZATION OF PROJECTS

The main purpose of the SWRP is to identify and prioritize potential projects within the SWRP planning area that capture and use stormwater and other discharges. These potential projects must meet one or more of the criteria established for project selection included in the Water Code[22,23] and the SWRP Guidelines. These criteria include projects that:

- augment local water supply (Water Code 10562(d)(1)),
- provide source control of pollution from both stormwater and dry weather runoff, onsite and local infiltration, and use of stormwater and dry weather runoff (Water Code 10562(d)(2)),
- reestablish natural water drainage treatment/infiltration systems or mimic natural system functions to the maximum extent feasible (Water Code 10562(d)(3)),
- develop, restore, or enhance habitat and open space through runoff management including wetlands, riverside habitats, parkways, and parks (Water Code 10562(d)(4)), and
- use existing publicly owned lands (Water Code 10562(d)(5) and 10562(b)(8)).

A variety of stormwater and dry weather runoff capture project types are suitable for fulfilling the criteria listed above, while aligning with the SWRP primary goals, including infiltration, direct use, treatment, and restoration. These project types are typically categorized based on the scale of implementation, as either distributed BMPs or regional BMPs. Distributed BMPs are designed to treat runoff from smaller drainage areas (less than 10 acres) and are normally installed to collect runoff close to the source from a limited number of parcels. Regional BMPs are designed to treat runoff from a large drainage area (greater than 10 acres) and are expected to include multiple parcels and various land uses.

Distributed BMPs, such as curb cuts, swales, rain gardens, deep mulch, green streets, and rain barrels, are effective methods for treating relatively small quantities of runoff volumes locally and play an important role in a stormwater management. Such BMPs are often initiated at a grass-root level, are community-driven, and are important for increasing public awareness and involvement in addition to water quality improvements. However, to meet the criteria outlined in the Water Code and SWRP Guidelines in the most cost-effective way with the public funding involved, the identification and prioritization of the SWRP projects generally focuses on large-scale regional

[22] Additionally, the Water Code requirements (10727.4.(e),(f),(h),(i),(k)) discuss additional elements of a GSP that were considered during this SWRP development

[23] For new and redevelopment projects, post-construction requirements are contained in the City's Post-Construction Standards Plan (City of Redding, 2016a). The Post-Construction Standards Plan identifies design criteria and best management practices to prevent storm water and dry weather runoff pollution and increase effective storm water and dry weather runoff management for new and upgraded infrastructure and residential, commercial, industrial, and public development in compliance with Water Code 10562(d)(6). Therefore, these projects are not addressed within this SWRP.

BMPs such as infiltration basins, direct use, and treatment systems. These regional BMP types are scaled larger for their treatment areas and score the highest for meeting multiple objectives of augmented water supply, reducing pollutant loadings, mitigating flood risks, etc. The exception is the identification and prioritization of green street projects, which although they are categorized as distributed BMPs, provide the City the opportunity of incorporating the designs into planned or future road improvement projects as they are available.

Project identification was conducted in two ways during the SWRP development. The first approach began by identifying publicly owned parcels[24] within the SWRP planning area that were suitable for BMP implementation, followed by ranking of these identified projects based on feasibility and ability to achieve the greatest benefits, as summarized in Section 4.1 and described in detail in Appendix E. The second approach consisted of soliciting input from the TAC and stakeholders to leverage their local knowledge to identify potential project locations. The current lists of identified and ranked potential projects are included as attachments to Appendix E and will be updated as additional evaluations of potential projects are conducted. Additionally, the identified and ranked projects are included in a Microsoft Excel file and two GIS shapefiles[25] for the easy review and the inclusion of new projects.

To prioritize potential projects according to the multiple benefits they provide (e.g., water quality, flood management, water supply, environmental, and other community benefits), the SWRP includes an approach to:

- conceptually design potential projects (Section 4.2, described in detail in Appendix F),
- model and quantify each project's multiple benefits (Section 4.3, described in detail in Appendix F), and
- prioritize projects based on their potential to be implemented and maintained, and the benefit score of measurable factors (e.g., pounds of pollutants removed, volume water supplied) (Section 4.4, described in detail in Appendix F).

This process, from identification of projects to prioritization of conceptually designed projects, is outlined in Figure 11.

The current projects that have been conceptually designed, modeled, and prioritized are described in detail in Appendix G and compiled in the Redding SWRP Project Prioritization Tool (Prioritization Tool) (Section 5.5). Appendix G is intended to function as a living document, in which the conceptual design details of projects and the quantified potential benefits are updated as they become available.

[24] Privately owned parcels with willing land owners are also suitable, so parcels owned by the McConnell Foundation were also included for consideration.

[25] Available for download at the City Stormwater Management website: www.cityofredding.org/departments/public-works/environmental-management/storm-water-management

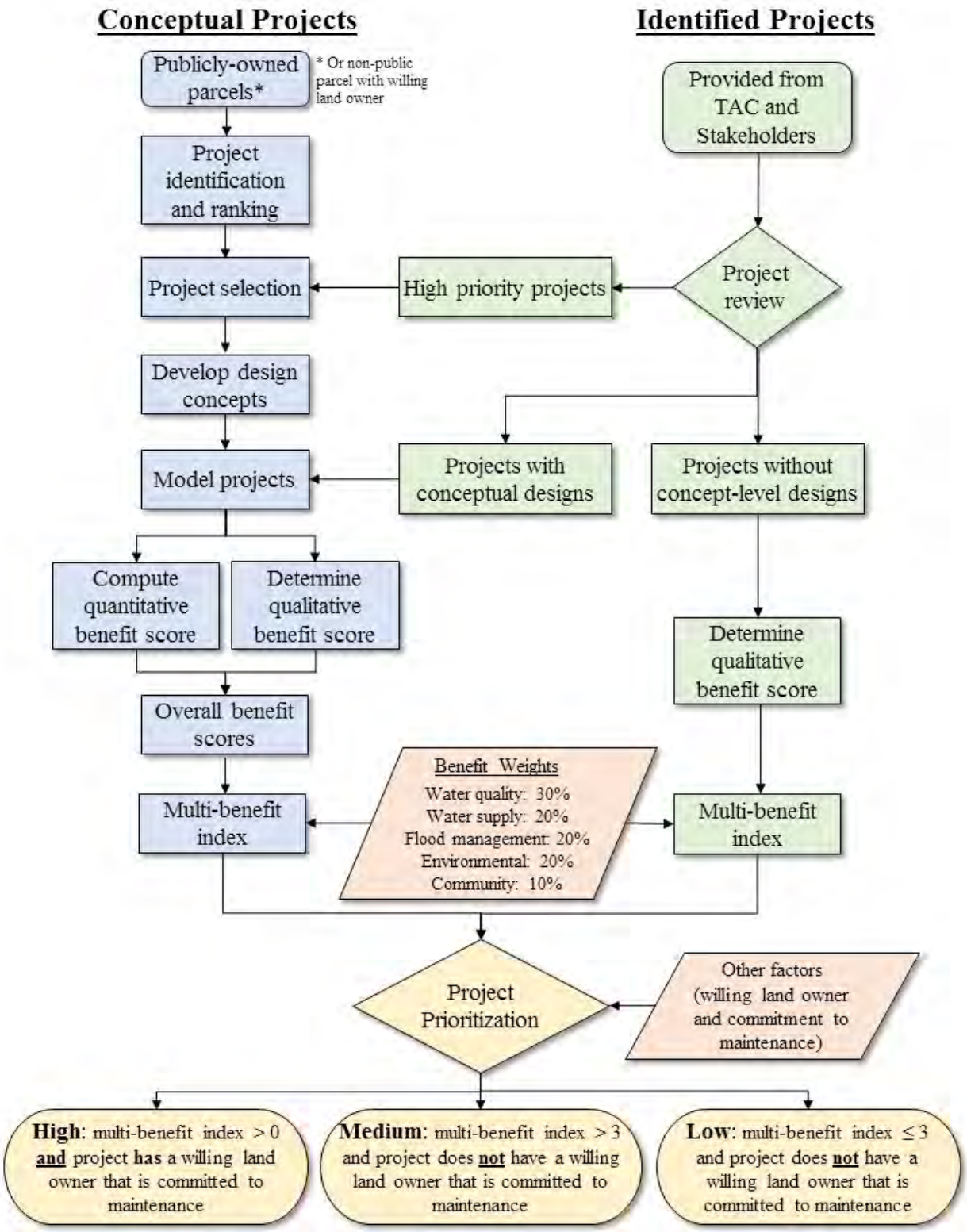


Figure 11. Identification and Prioritization of Projects Flowchart

4.1 Project Identification and Ranking

Identification and ranking of potential parcels for conceptual project implementation was performed as a three-step process involving: 1) project identification, 2) project condition evaluation (Phase I. GIS-based ranking), and 3) the drainage area and general feasibility evaluation (Phase II. Desktop Ranking) (see Figure 12 and Appendix E for a detailed explanation). BMP types considered for SWRP project implementation include green streets, direct use storage tanks, and natural treatment systems which may be either infiltration-based or treatment-based BMPs.

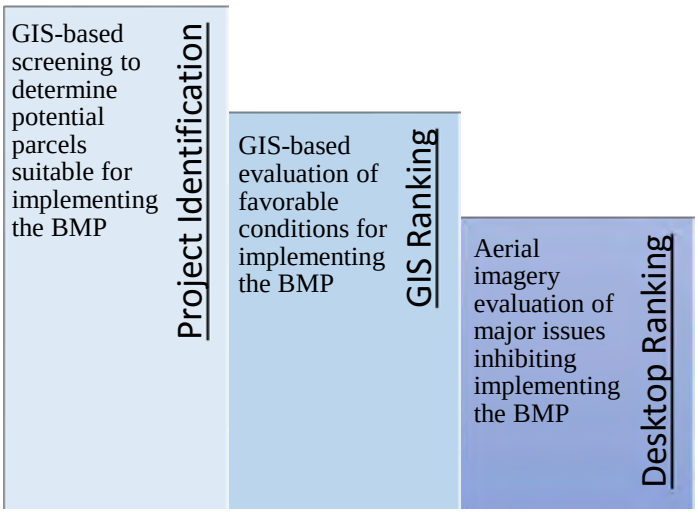


Figure 12. Three step project identification and ranking process

4.1.1 GIS-Based Parcel Screening and Initial Feasibility Screening

A GIS-based screening process was first executed on parcels within the SWRP planning area to determine potential parcels suitable for BMP implementation. As part of this screening process, suitable parcels for BMP implementation were defined as large, undeveloped, publicly-owned parcels (or non-public parcels with willing land owners[26]) located adjacent to storm drains or channels, downgradient of large urban areas, and free of certain constraints associated with implementation of BMPs. Areas exhibiting these constraints (e.g., areas with slopes greater than 10% or areas occupied buildings) were removed from consideration, since these constraints, which were based on BMP siting guidance from the Ventura County Technical Guidance Manual (Geosyntec Consultants and Larry Walker Associates, 2011), could inhibit or severely limit the feasibility of implementing certain BMPs.

While many of the implementation constraints are consistent across BMP type, some are BMP-specific. Therefore, parcels were subject to three different series of BMP-specific screening processes that were related to the three BMP types investigated (i.e., parcels were evaluated using a different set of constraints when determining if natural treatment systems were suitable as compared with direct use BMPs). Listed below are the thirteen BMP screening criteria metrics from which subsets were applied for the BMP-specific screening processes. Appendix E contains

[26] For projects proposed on privately owned land, if they are to move forward with planning and design, the City will coordinate with the landowners to secure agreements to allow for BMP construction and operation/maintenance.

details regarding the overall project identification process and the constraints that were applied for each BMP type.

- Lakes/reservoirs: eliminated areas within 300 ft of lakes and reservoirs
- Vernal Pools: eliminated areas designated as vernal pool
- Water wells: eliminated areas within 100 ft of production wells
- Contaminated groundwater: eliminated areas with contaminated groundwater or soil by removing areas within 100 ft of active cleanup sites registered on GeoTracker
- Environmentally sensitive areas: eliminated areas designated as critical habitats
- Floodplain: eliminated areas within 100-yr floodplain
- Slope: eliminated areas with an average slope of greater than 10%
- Buildings and structures: eliminated areas within 10 ft of footprint
- Groundwater liquefaction: eliminated areas designated "high severity" for groundwater liquefaction
- Size: eliminated continuous areas less than 0.25 acres (or less than 150 ft long for green streets)
- Road type: eliminated roads classified as highways or freeways (green streets only)
- Storm drains and channels: eliminated usable areas that were located more than 500 ft from a water source[27]
- Near a potential use parcel: eliminated usable areas that were located more than 500 ft from a potential use parcel (applicable to direct use only)

Priority was given to infiltration-based BMPs for their relatively greater cost-effective water quality and water supply benefits. For areas where infiltration-based BMPs were not feasible, direct use or natural treatment-based BMPs were also considered. Table 8 shows the number of potential BMP projects determined through the project identification process, by BMP type.

Table 9. Summary of Project Screening Results

Number of SWRP Potential Projects Identified			
Natural Treatment System	**Green Street**	**Direct Use**	**Total Projects**
1,125	3,926	638	5,689

[27] It should be noted, for all project types, that if a storm drain or channel has ever been classified as a blue line channel, the project may be subject to different permitting requirements that may result in additional costs and implementation time.

4.1.2 Project condition evaluation (Phase I. GIS-based Ranking)

After the identification of potentially feasible projects (based on automated GIS constraints screening), potential projects were compared to one another and ranked to best allocate future resources to projects that are realistic and effective. Spatial GIS files, some of which were utilized in the project identification process, were used in the Phase I ranking process to prioritize areas with more favorable conditions for BMP implementation. Numerical scores from 0 to 3 were assigned to represent level of favorability related to the given parameters where applicable, which are listed below.

- Imperviousness
- Slope
- Ownership (i.e., public or private)
- On-site septic system
- Soil infiltration (hydrologic soil group)
- Distance from planned subdivision
- Distance from storm drain source
- Size of storm drain source
- Street Type
- Size/Length of Usable Area

Scores representing favorability for the parameters listed above were then weighted based on priority to determine an overall weighted Phase I ranking score for each potential project (see Attachment E-1).

4.1.3 Drainage area delineation and desktop feasibility evaluation (Phase II. Desktop Ranking)

Phase II of the ranking process involved a manual desktop-level analysis of projects by stormwater BMP-knowledgeable practitioners, with the main objective to examine each parcel using aerial imagery in GIS software to identify any major issues that could inhibit BMP implementation and benefit opportunities. The City and stakeholders also identified feasible projects based on local knowledge, which had been eliminated from consideration or had not been identified during the initial project identification and ranking. Only the top ranked Phase I projects and City or stakeholder identified projects were examined for Phase II ranking (see Attachment E-2), however any potential project location may be evaluated using the Phase II methodology and added to the ranking list in the included Phase II Ranking Microsoft Excel file.

Similar to the Phase I ranking, the following parameters were examined for each project and assigned a ranking score from 0 to 3 based on favorability:

- Approximate size of drainage area and percentage of the drainage area that is urban

- LPR Model Catchment Prioritization Index (CPI)[28]
- Trash priority land use in drainage area
- Project benefits economically disadvantaged area[29]
- BMP implementability[30]

Each Phase II metric was also weighted based on priority to determine the overall Phase II ranking scores. The projects with the highest Phase II ranking scores were deemed to be the most favorable projects for BMP implementation.

Additional details related to project identification and ranking are included in Appendix E. The list of all identified potential BMP implementation projects and their Phase I ranking score, and where applicable, the Phase II ranking conducted for top ranked projects, are included in Appendix E and in the Phase II Ranking Microsoft Excel file and two KMZ[31].

4.2 Conceptual Project Design

The conceptual design process is two-step approach which begins by determining the drainage area to the proposed project and then selecting the appropriate design attributes based on general project design guidance. The conceptual project drainage area is delineated using waterbody and storm drain spatial files and elevation data from Google Earth and a digital elevation model (DEM). The stormwater quality design volume (SQDV) is then determined for the project using the Urban Runoff Quality Management approach, as outlined in the CASQA BMP Handbook (CASQA, 2003). This method, which estimates the maximized stormwater quality captured volume based on translating rainfall to runoff using regression equations, approximately corresponds to the 85th percentile runoff event.

The conceptual project is sized to provide storage capacity for the SQDV or maximize[32] the usable area of the parcel in order to capture and infiltrate, treat, or reuse the largest amount of stormwater

[28] A multi-pollutant score that reflects the relative magnitude of stormwater pollutant loads in the catchment area (weighted based on pollutant priorities).

[29] Based on U.S. Department of Housing and Urban Development (HUD) and U.S. Economic Development Administration (EDA) qualified census tracts and block groups

[30] Issues examined for BMP implementability include large trees/vegetation in usable area, high amount of impervious surface (i.e., parking lots or large structures), presence of powerlines/utilities, difficult or nonexistent path for transporting water from the source to the parcel, and configuration of usable area.

[31] Available for download at the City Stormwater Management website: www.cityofredding.org/departments/public-works/environmental-management/storm-water-management

[32] It should be noted that maximizing the usable area on the parcel is not always adequate for providing storage capacity for the entire SQDV. The usable area is maximized if there was not adequate space to provide storage for the SQDV or if there is adequate space for the SQDV and it was cost effective to expand the footprint and provide storage capacity larger than the SQDV (i.e., there were no site limitations, even minor constraints such as moderate vegetation/trees, moderate slopes, paved areas, or other existing site uses). This is explained further in Appendix F.

and dry weather runoff (based on visual assessment of site specific constraints and existing infrastructure). General design parameters for each project type (and the process for determining them), include depths, storage capacity, side slopes, etc., are based on guidance from the Ventura County Technical Guidance Manual, City-provided green street design documents, and site-specific conditions[33]. The process for determining conceptual project drainage areas, the SQDV, and design parameters for each project type is outlined in detail in Appendix F.

The City, TAC, and stakeholders screened the list of potential projects for BMP implementation based on local knowledge of potential obstacles, and selected projects for the development of BMP design concepts. Appendix G describes project concept development (following the approach above) for the current SWRP conceptual projects[34] and includes a map showing the locations of each project and drainage area relative to water quality priorities and the City's storm drain network. Additionally, detailed cut sheets for some of the conceptual projects[35], which contain a description of the project, design parameters, an example schematic, map, and modeling results (to be discussed), are included in Appendix B.

4.3 Quantitative Analysis of Project Benefits

The SWRP Guidelines provide guidance (Section VI.C.2) on appropriate quantitative methods for project identification and prioritization, and the following models were evaluated for potential use in modeling projects for the SWRP: the LPR Model, the Structural BMP Prioritization and Analysis Tool (SBPAT), the EPA Storm Water Management Model (SWMM), and the Stormwater Tool to Estimate Load Reduction. These models were evaluated based on availability of required input data, cost-effectiveness, ease of use, functionality and accuracy relative to the SWRP Guidelines, and ability for the City to consistently evaluate new projects after completion of the SWRP.

Appendix F presents an overview of the four evaluated models, in addition to a list of all SWRP modeling requirements and whether each of the four models meets the given requirements. Based on the assessment of the four modeling approaches, the LPR Model was selected as the most suitable and cost-effective option for use in the SWRP to meet the modeling requirements of the SWRP Guidelines. Additional details on the modeling methodology evaluation is included in Appendix F.

The LPR Model is used to quantify water quality, water supply, and flood management benefits associated with each conceptual project. The basic modeling approach is as follows (and is

[33] The site is investigated, using aerial imagery, for constraints that would limit the feasibility of BMP implementation, such as heavy vegetation/trees, high slopes, utilities, buildings, existing uses such as sports fields, etc.

[34] Appendix G is designed to be updated to include the design details as projects are added to the SWRP.

[35] A cut-sheet was not created for the Downtown Mall Alley green street project, since a conceptual design had previously been created. Therefore, the previously developed conceptual design sheets are included in Appendix B.

described in detail in Appendix F and the LPR Model Technical Report [Geosyntec Consultants, 2017]):

1. determine drainage area for the proposed project (also used for conceptual design);
2. compile spatial data in GIS to determine necessary modeling inputs for the project drainage area, including land use and size of the drainage area;
3. combine runoff coefficients (determined by drainage area characteristics) with historical meteorological data to estimate average annual stormwater runoff volumes[36] generated in the project drainage area (using the Rational Method);
4. combine land use-specific baseline runoff volumes with land use pollutant-specific event mean concentrations (EMCs) to calculate average annual baseline pollutant loads;
5. use conceptual design parameters for the project with nomographs describing the relationship between expected performance, size (relative to influent runoff volume), and drawdown time of BMP in order to determine the percent of the total average annual runoff volume draining to the project that the project is capable of treating/managing (percent capture);
6. use the percent capture values and expected performance of structural BMPs, based on data from the International Stormwater BMP Database (http://www.bmpdatabase.org/), to determine the quantity of runoff volume and pollutant load captured (and infiltrated or treated) by the project during an average annual year, resulting in an estimation of the average annual pollutant load reduced, water supply augmentation volume, and runoff volume controlled by the project.

The modeling assumptions and complete results for the anticipated reductions in pollutant loads, water supply augmentation volume, and runoff volume controlled by the current SWRP conceptual projects are presented in Appendix G.

4.4 Multiple Benefits Prioritization

As required by California Water Code Section 10562(e) and the SWRP Guidelines (Section VI.C), the SWRP must use "measurable factors to identify, quantify and prioritize potential stormwater and dry weather runoff capture projects." Projects are prioritized based on their potential to be implemented and maintained (i.e., with a committed landowner and operation and maintenance capabilities) and their potential to achieve multiple benefits in the five benefit categories identified by the SWRP Guidelines. This approach for multiple benefit quantification and prioritization was developed to fulfill requirements in the Water Code and SWRP Guidelines, and the methodology will serve as a useful tool for evaluating multiple benefits of projects. The purpose of the prioritization is not to rank the projects with respect to each other, but to simply identify those

[36] Dry weather water quality benefits may also be expected but are not estimated here.

projects that will achieve multiple benefits and are likely to be constructed and maintained, which would therefore qualify them for funding.

Benefit categories include water quality, water supply, flood management, environmental, and community benefits. The SWRP Guidelines identify main benefits in each benefit category and additional benefits to inform project selection and design, as shown in Table 9. Projects implemented in accordance with the SWRP are required to address at least two main benefits and as many additional benefits as feasible for each project. Projects that achieve multiple benefits support a watershed-based approach to treating stormwater and dry weather runoff as a resource rather than an environmental nuisance or flood hazard.

Table 10. Stormwater Management Benefits (Table 4 in the SWRP Guidelines)

Benefit Category	Main Benefit	Additional Benefit
Water Quality	• Increased infiltration and/or treatment of runoff	• Nonpoint source pollution control • Reestablished natural water drainage and treatment
Water Supply	• Water supply reliability • Conjunctive use	• Water conservation
Flood Management	• Decreased flood risk by reducing runoff rate and/or volume	• Reduced sanitary sewer overflows
Environmental	• Environmental and habitat protection • Increased urban green space	• Reduced energy use, greenhouse gas emissions, or provides a carbon sink • Reestablishment of natural hydrograph • Water temperature improvements
Community	• Employment opportunities provided • Public education	• Enhance and/or create recreational and public use areas

The approach for assessing multiple benefits consists of two parts: scoring of multiple benefits to determine a multi-benefit index for each project; and prioritization of all projects based on the multi-benefit index and other factors.

The approach for scoring a multi-benefit index for projects in the SWRP differs slightly for those projects with conceptual designs and/or a preliminary benefit quantification (i.e., conceptual projects) and other identified projects that have not been developed into concept-level designs and modeled (i.e., non-modeled projects). For conceptual projects, available design and stormwater treatment modeling results are used to determine quantitative metrics for the benefit categories outlined in the SWRP, and these are combined with qualitative assessments of each project's benefits to determine a multi-benefit index. For non-modeled projects, a modified multiple benefit approach is used that is based solely on qualitative assessments of each project's ability to achieve multi-benefits, as the details needed to quantify all benefits have not yet been developed.

For both types of projects, each benefit category is assigned a weight, according to its relative importance to the City, in order to determine an overall multi-benefit index. This approach is based

in concept on the original Los Angeles Countywide BMP Prioritization Methodology (www.LABMPmethod.org) and has been applied in multiple watershed management plans and SWRPs statewide. The detailed methodology for the multi-benefit index scoring is included in Appendix F.

After multi-benefit indices are determined, projects are prioritized (Water Code 10562(b)(2) and SWRP Guidelines Section VI.D) based on their multi-benefit indices and other factors related to feasibility of implementation and commitment to maintenance as shown below:

- **High**: multi-benefit index greater than zero and the project has a willing land owner that is also committed to performing necessary maintenance
- **Medium**: multi-benefit index greater than three, but the project does not have (or it is undetermined) a willing land owner also committed to maintenance
- **Low**: multi-benefit index less than or equal to three and the project does not have (or it is undetermined) a willing land owner also committed to maintenance

All results relating to evaluation of multiple benefits and prioritization of current conceptual projects are presented in Appendix G, including qualitative and quantitative scores for each benefit category, overall benefit category scores (combining qualitative and quantitative scores), benefit weights, multi-benefit indices, and prioritization designations, both for conceptual projects and non-modeled projects (as applicable).

5 IMPLEMENTATION STRATEGY AND SCHEDULE

To encourage the long-term implementation and overall success of the SWRP, a prescriptive yet flexible implementation strategy is needed. This section discusses strategies for implementation of the SWRP, including:

- specific actions for implementing the SWRP
- identification of available and potential resources and funding,
- a schedule for major implementation activities,
- a plan for ongoing TAC and community participation,
- an adaptive management framework that utilizes a decision support tool, and
- tracking and evaluation of performance measures.

The strategies described herein fulfill the requirements in Section VI.E in the SWRP Guidelines which covers regulations under Water Code (See Sidebar).

Relevant California Water Code Requirements

- Section 10562(d)(8) requires that the SWRP identifies projects, programs, and decision support tools to ensure the effective implementation of the SWRP,
- Section 10562(b)(7) requires that the SWRP is submitted, upon development, to the applicable IRWM group for incorporation into the IRWM plan.

5.1 Specific Actions for Implementation

The SWRP is structured as a living document and implemented as an ongoing, adaptive program. The City will be responsible for maintaining and updating the SWRP as needed, in coordination with updates to the IRWMP, and at intervals that are aligned with stormwater regulatory requirements, grant program solicitations, and community interests. When changes to the SWRP are necessary, the City will officially propose those changes to the Northern Sacramento Valley IRWM Group and provide a revise final SWRP and a draft showing the changes for record keeping purposes. No agency will be able to modify the SWRP without the City's approval.

To ensure an effective implementation of the SWRP the City will implement the following specific actions as funding is available and the need arises:

- Perform desktop ranking of potential project locations when new projects are recommended (see Appendix E)
- Conceptually design, quantify the multiple benefits, and prioritize new stormwater projects selected for inclusion in the SWRP (see Appendix F)
- Regularly review and revise the status (e.g, potential project, conceptual project, feasible project, implemented project, etc.) of projects listed in the Prioritization Tool (see Section 5.5 below)

An initial step in project implementation will be the securing of necessarily permits which may include encroachment permits, building permits, grading permits, construction stormwater permits, and additional environmental permits as required by applicable regulators (e.g., California Department of Fish and Wildlife (CDFW), Army Corps of Engineers (ACOE), Regional Water Quality Control Board, etc.). Coordination with key regulators, including CDFW and ACOE, will be initiated at the outset of project implementations to determine what constraints are applicable and what associated design considerations are needed. A period of six to twelve months is assume for the approval of environmental permits based on the project type and location.

Furthermore, as SWRP projects are implemented and information is gathered over time, the SWRP should be modified to reflect the most current understanding of the watershed and present a sound approach to addressing changing conditions. Future changes to the SWRP may include:

- Revising multi-benefit scores based on changing water quality priorities in the relevant watersheds according to new TMDLs or 303(d) listings.
- Updating the metrics-based, quantitative analysis of potential project benefits based on new BMP performance data, new local water quality monitoring data, water quality priorities, or modifications to the project designs.

5.2 Resources for Implementation

The SWRP will be submitted to the Northern Sacramento Valley IRWM Group[37] for incorporation into the IRWMP. Administration and implementation of the SWRP will be provide by the City, including activities such as inclusion of additional projects, engagement with stakeholders, and general plan updates as needed. For implementation of specific projects identified in the SWRP (design and construction), the City, in addition to any agency (or agencies) partnering in development of the project, will coordinate resources and funding necessary for the successful administration, implementation, and maintenance of the project. This includes activities such as project scoping, developing grant proposals, acquiring funding, and implementation of the projects, which are under the responsibility of the City. Funding possibilities for project implementation may combine a variety of sources including but not limited to City capital improvement plan funds, general funds, and local, state, federal, or private grant and bond funds (e.g., Proposition 1 Stormwater Grant Program and IRWM Grant Program). Financing for project implementation will be developed in the future as project designs are developed and availability

[37] The Northern Sacramento Valley IRWM Group involves multiple agencies, stakeholders, tribes, individuals and groups to address water-related issues and offer solutions which can provide multiple benefits to the region. Since April 2014, a board of directors and technical advisory committee have led the implementation of the IRWMP. The board of directors meet on the first Monday of the months of March, June, September and December and consists of three appointments made by each of the six Boards of Supervisors in Butte, Colusa, Glenn, Shasta, Sutter and Tehama Counties, for a total of eighteen members. The TAC meets on the third Wednesday of each month (or as needed) and consists of a staff contact for each County and a landowner representative. Additional details about the IRWM Group can be found at http://nsvwaterplan.org/

of funding sources are assessed. Preliminary project costs developed[38] for three of the five conceptual projects (the sewer ponds, Mary Lake, and Pine-Market Alley) are included in Table 11.

Table 11. Estimate Conceptual Project Costs

Conceptual Project	Planning, Permitting, and Design	Construction	Total
Former City Sewer Ponds	$160,000	$840,000	$1,000,000
Mary Lake Pond	$360,000	$4,630,000	$4,990,000
Markey-Pine Alley	$52,000	$386,000	$438,000

5.3 Implementation Schedule

Table 10 shows the schedule for activities and milestones relating to the SWGP and a proposed schedule for activities specific to the SWRP. The proposed schedule includes incorporation of the SWRP into the existing IRWMP. A preliminary project schedule, which can serve as a template schedule for all the conceptual projects, is shown in Figure 13 for the former City sewer ponds project. As discussed in the previous section, the timing and implementation of projects will be dependent upon securing funding sources and other project considerations.

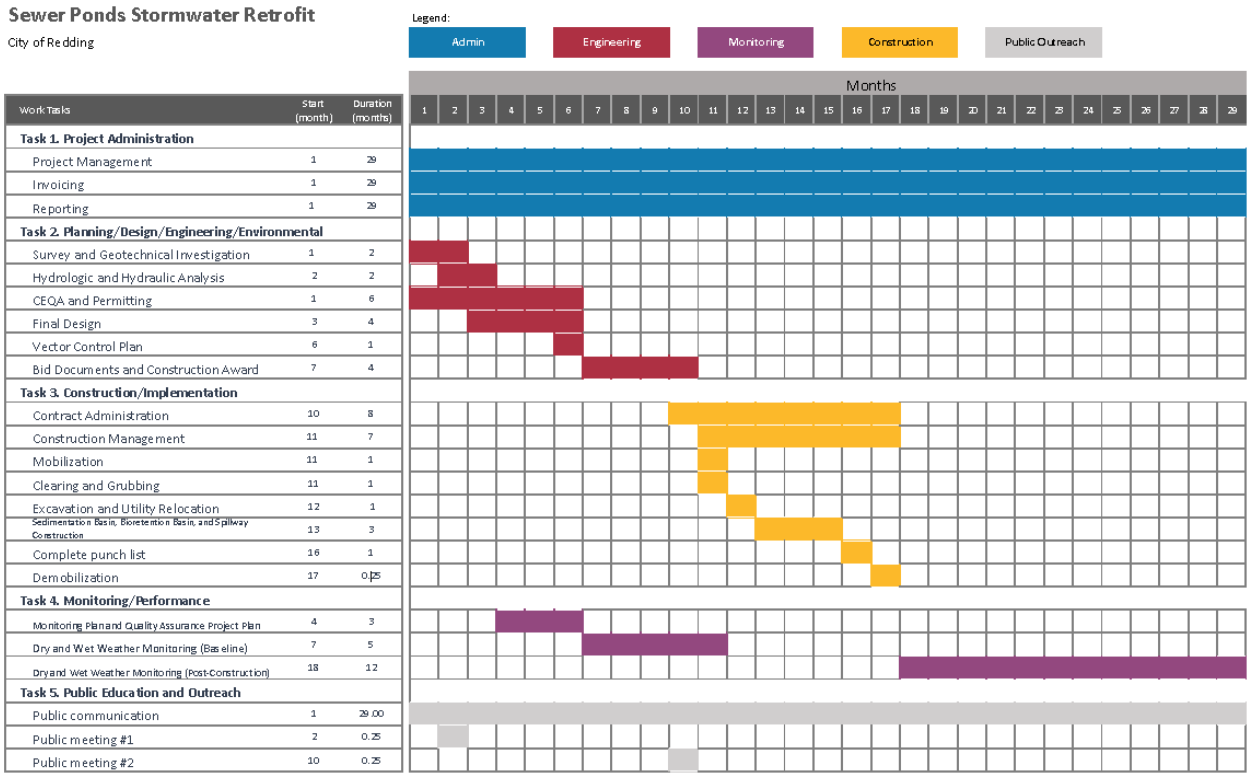


Figure 13. Preliminary project schedule for the former City sewer ponds project

[38] Preliminary projects costs are based on recent 2018 regional stormwater improvement projects, professional experience and judgment, and construction cost indexes (BNi cost books, R. S. Means)

Table 12. SWRP Schedule

Milestone	Date
State SWGP Activities	
Water Quality, Supply, and Infrastructure Improvement Act (Proposition 1) approved	November 4, 2014
Prop 1 SWGP final planning grant funding list (Round 1)	May 2016
Prop 1 SWGP implementation grant solicitation period closes (Round 1)	July 8, 2016
Prop 1 SWGP final implementation grant funding list (Round 1)	October 2016
Prop 1 SWGP implementation grant solicitation application period (Round 2)	2019
Redding Stormwater Program Activities	
Final Draft of the SWRP	October 2018
Approval of SWRP by the City Council	Fall 2018
Submit SWRP for incorporation into the IRWMP	Fall 2018
Submittal of the SWRP to the State Water Resources Control Board	July 31, 2018
Prop 1 Implementation Grant Applications	2019
Incorporate additional eligible multi-benefit stormwater projects into the SWRP from future TMDL Wasteload Allocation Attainment Plan and other efforts	Ongoing
Investigate additional funding options	
Evaluation of SWRP performance measures	
Pursuit of other funding options	Project-specific and TBD based on funding availability and other implementation constraints
Planning for projects	
Permitting for projects	
Design of projects	
Construction of projects	

5.4 Ongoing Collaboration

The following programs have been identified to assist the City in effective implementation of strategies and projects identified in the SWRP:

- **TAC E-mail group:** Updates related to the SWRP will be sent to the TAC by e-mail as needed. Emails will also be sent out to remind all parties of upcoming deliverables (e.g., implementation funding deadlines) and to encourage ongoing collaboration regarding project identification and planning.
- **TAC Meetings:** Meetings with the TAC will be held, as needed, to discuss more significant items relating to the SWRP implementation or modification.

Community outreach will continue during the SWRP administration and project implementation, in order to encourage community members to identify and propose additional projects for inclusion in the SRWP and to be involved in the projects that affect them. While each project will have slightly different milestones, the following actions will be taken throughout the City regarding the SWRP administration:

- Stakeholders will receive email notifications of significant updates to the SWRP.

- Information will be distributed on the City website (www.cityofredding.org/departments/public-works/environmental-management/storm-water-management). The website will provide information on significant updates and milestones and will be easily accessible to the public.

The City will carry out project implementation in accordance with local regulations and public process requirements, allowing the community the opportunity to engage and contribute to the project through the project life, including during planning, permitting, design, and construction phases. Examples of other community outreach strategies that may be used include the following:

- Engagement with and presentations to interested stakeholder groups and other community groups.
- Public outreach related to contracting processes for project design, construction, and grant applications/acceptance (if applicable), and as required by the California Environmental Quality Act (CEQA).
- Outreach within project construction area and its vicinity prior to initiation of project construction activities.
- Post-construction outreach including ribbon cutting ceremonies, educational signage, project presentations and demonstrations at schools, for community groups and for other interested groups and organizations.

SWRP projects will provide an opportunity to showcase the many benefits of green infrastructure, particularly regarding stormwater capture, reduced local flooding, urban greening, and other features and functionality that will serve the community. With proper educational tools such as interpretive signage, the public can also gain a better understanding of how the project provides opportunities to capture, treat, and conserve water. As a result, constructed projects will provide a mechanism for community participation and education that could help garner support for additional projects implemented over time.

5.5 Adaptive Management Tools

In order to allow the City and other local stakeholders to add new projects to the SWRP, the Prioritization Tool was created. This intuitive adaptive decision support tool allows the City to:

- collect and store key project information and quantified benefits for new projects with all projects currently included in the SWRP; and
- prioritize new projects relative to all projects currently included in the SWRP.

The Prioritization Tool, a Microsoft Excel file, can be downloaded from the City's website (www.cityofredding.org/departments/public-works/environmental-management/storm-water-management), along with directions for entering new projects and submitting the populated tool to City. The Prioritization Tool contains an interface tab that project proponents will use to enter their project information, such as the project name, project type, brief description, project location

and responsible jurisdiction, and quantified benefits. After the user submits their project's information, the project data is stored within the Prioritization Tool.

The Prioritization Tool stores information for record keeping purposes and also automatically calculates the quantitative and qualitative benefit scores, overall benefit scores for each benefit category, and the multi-benefit indices, as described in Section 4.4, based on the input data provided. New projects are automatically prioritized into the appropriate "high", "medium", or "low" designation based on the calculated multi-benefit index and other information provided (i.e., if there is a willing land owner committed to performing maintenance). Based on the methodology used to calculate the benefit scores in the SWRP (outlined in Section 4.4), it is possible that scores and the multi-benefit index for all projects will change based on a newly entered project. However, the Prioritization Tool automatically updates for all entered projects as needed. The Prioritization Tool also stores the status of each project and can easily be modified as the project moves from an idea to implemented.

5.6 Implementation Performance Measures

The modeling performed for each project concept, using the LPR Model, determines the expected outcomes or benefits of each proposed project. These outcomes include water quality and water supply augmentation benefits, in addition to the other benefit categories of flood management, community, and environmental benefits. For example, the SWRP estimates expected outcomes for each proposed project related to the volume of water supply that may be provided or the load of a pollutant that may be prevented from reaching the receiving water.

Relevant ongoing monitoring programs conducted in the SWRP area are outlined in Section 3.2.1. The significant monitoring efforts currently being conducted are intended to assess the quality of groundwater used for water supply purposes, surface receiving water quality, and the impacts of MS4 discharges on receiving waters. Ongoing monitoring results will be analyzed as needed to evaluate whether the water quality effects of completed SWRP project can be observed in the receiving waters. If needed, future SWRP implementation may be adjusted based on BMP performance data collected, such that project types with monitoring data showing more effective performance are prioritized. The need for additional project-specific performance evaluation monitoring will be determined during the design phase. Grant funded projects may be expected to implement performance monitoring.

In accordance with recommendations in the SWRP Guidelines (section VI.C.3), the City will continue the current procedures for monitoring data collection and management (as described above). The procedures for the management of additional project-specific performance monitoring data (e.g., planning for how data may be accessed by stakeholders and the public, how existing water quality monitoring will be assessed and maintained, the frequency at which data will be updated, and how data gaps will be identified and addressed) will be specific to each project. GIS data files related to the SWRP, which may be used for updating or adding new projects to the SWRP in the future, will also continue to be managed in the City's geodatabase.

6 REFERENCES

CASQA, 2003. *California Stormwater BMP Handbook.* January 2003.

CH2MHILL, 1975. *Redding Region Water Supply Alternatives.* August 1975.

CH2MHILL, 1996. *Draft Enterprise Area Groundwater Study*. December 1996.

CH2MHILL, 2003. *Redding Basin Water Resources Management Plan Phase 2C Report*. Prepared for Redding Area Water Council. August 2003.

CH2MHILL, 2006. *Anderson-Cottonwood Irrigation District Groundwater Management Plan.* Prepared for Anderson-Cottonwood Irrigation District. April 2006.

CH2MHILL, 2007. *Redding Basin Water Resources Management Plan Environmental Impact Report.* January 2007.

City of Redding, 1993. *City-Wide Master Storm Drain Study Final Report.* October 1993.

City of Redding, 2000. *2000-2020 General Plan.* October 2000.

City of Redding, 2003. *Storm Water Quality Improvement Plan.* August 2003.

City of Redding, 2016a. *Post-Construction Standards Plan.* May 2016.

City of Redding, 2016b. *City of Redding 2015 Urban Water Management Plan.* June 2016.

Geosyntec Consultants and Larry Walker Associates (LWA), 2011. *Ventura County Technical Guidance Manual for Stormwater Quality Control Measures.* Prepared for Ventura Countywide Stormwater Quality Management Program. July 2011.

Geosyntec Consultants, 2017. *Pollutant Load, Prioritization, and Reduction (LPR) Model Technical Report.* June 2017.

Northern California Water Association (NCWA), 2006. *Sacramento Valley Integrated Regional Water Management Plan*. December 2006.

Provost & Pritchard Consulting Group, 2016. *2015 Urban Water Management Plan Update.* Prepared for Bella Vista Water District. December 2016.

Quality Assurance Project Plan for Urban Storm Water Monitoring Plan 2015-2018 for the NPDES Phase II Small MS4 General Permit Sections E.13.c 303(d) Monitoring and E.14.a Program Effectiveness Assessment and Improvement Plan. October 2015.

Sacramento River Hydrologic Region Redding Groundwater Basin - Anderson Subbasin. *CA Groundwater Bulletin 118.* February 2004.

Sacramento River Hydrologic Region Redding Groundwater Basin - Enterprise Subbasin. *CA Groundwater Bulletin 118.* February 2004.

Sacramento River Hydrologic Region Redding Groundwater Basin - Millville Subbasin. *CA Groundwater Bulletin 118.* February 2004.

Sacramento River Watershed Program, 2010. *A Roadmap to Watershed Management.* October 2010.

Shasta County General Plan. September 2004.

Shasta County Water Agency (SCWA), 2007. *Groundwater Management Plan for the Redding Groundwater Basin.* November 1998 (Updated May 2007).

State Water Resources Control Board (State Water Board), 2013. *National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS00004. Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) (General Permit).* Water Quality Order No. 2013-0001-DWQ. February 2013.

State Water Resources Control Board (State Water Board), 2015a. *Amendment to the Water Quality Control Plan for the Ocean Waters of California to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California.* 2015.

State Water Resources Control Board (State Water Board), 2015b. Storm Water Resource Plan Guidelines. December 15, 2015.

West Yost Associates, 2014. *Northern Sacramento Valley Integrated Regional Water Management Plan*. March 2014.

WGR SOUTHWEST, INC, 2015. *City of Redding Program Effectiveness Assessment and Improvement Plan (PEAIP).* June 2015.

Prepared for

City of Redding

Stormwater Resource Plan

Appendix A – Checklist and Self-Certification

Redding, CA

Prepared by

Geosyntec consultants

engineers | scientists | innovators

924 Anacapa Street, Suite 4A
Santa Barbara, CA 93101

Geosyntec Project #: LA0443

March 2019

Storm Water Resource Plan Checklist

and Self-Certification

The following should be completed and submitted to the State Water Resources Control Board Division of Financial Assistance in support of a storm water resource plan /functionally equivalent plan. The documents submitted, including this checklist, will be used to determine State Water Board concurrence with the Storm Water Resource Plan Guidelines and statutory water code requirements.

When combining multiple documents to form a functionally equivalent Storm Water Resource Plan, submit a cover letter explaining the approach used to arrive at the functionally equivalent document. The cover letter should explain how the documents work together to address the Storm Water Resource Plan Guidelines.

STORM WATER RESOURCE PLAN GENERAL CONTACT INFORMATION	
Contact Info: **Name** **Phone Number** **Email**	Mieke Sheffield (530) 225-4889 msheffield@ci.redding.ca.us
Date Submitted to State Water Resource Control Board:	
Regional Water Quality Control Board:	Central Valley
Title of attached documents (expand list as needed):	**1. City of Redding Stormwater Resource Plan** **2.** **3.**

STORM WATER RESOURCE PLAN INFORMATION	
Storm Water Resource Plan Title:	City of Redding Stormwater Resource Plan
Date Plan Completed/Adopted:	October 2018
Public Agency Preparer:	City of Redding
IRWM Submission:	
Plan Description:	The City of Redding Stormwater Resource Plan is a planning framework developed in accordance with the California SWRP Guidelines for the City of Redding to identify and prioritize stormwater and dry weather runoff capture projects that provide multiple benefits, including to water quality, water supply, flood management, environment, and community.

Checklist Instructions:

For **each element** listed below, review the applicable section in the Storm Water Resource Plan Guidelines and enter ALL of the following information**.** Be sure to **p**rovide a clear and thorough justification if a recommended element (non shaded) is not addressed by the Storm Water Resource Plan.

A. Mark the box if the Storm Water Resource Plan meets the provision

B. In the provided space labeled **References**, enter:
   1. Title of document(s) that contain the information (or the number of the document listed in the General Information table above);
   2. The chapter/section, **and page number(s)** where the information is located within the document(s);
   3. The entity(ies) that prepared the document(s) if different from plan preparer;
   4. The date the document(s) was prepared, and subsequent updates; and
   5. Where each document can be accessed[1] (website address or attached).

STORM WATER RESOURCE PLAN CHECKLIST AND SELF-CERTIFICATION		
Mandatory Required Elements per California Water Code are Shaded and Text is **Bold**		
Y/N	**Plan Element**	**Water Code Section**
WATERSHED IDENTIFICATION (GUIDELINES SECTION VI.A)		
Y	**1. Plan identifies watershed and subwatershed(s) for storm water resource planning.**	**10565(c) 10562(b)(1) 10565(c)**
References: City of Redding Stormwater Resource Plan section 3.2 (pgs. 12), Figure 4 (pg. 14), and Figure 5 (pg. 15)		
Y	2. Plan is developed on a watershed basis, using boundaries as delineated by USGS, CalWater, USGS Hydrologic Unit designations, or an applicable integrated regional water management group, and includes a description and boundary map of each watershed and sub-watershed applicable to the Plan.	
References: City of Redding Stormwater Resource Plan section 3.2 (pgs. 12), Figure 4 (pg. 14), and Figure 5 (pg. 15)		

[1] All documents referenced must include a website address. If a document is not accessible to the public electronically, the document must be attached in the form of an electronic file (e.g. pdf or Word 2013) on a compact disk or other electronic transmittal tool.

WATERSHED IDENTIFICATION (GUIDELINES SECTION VI.A)	
Y	3. Plan includes an explanation of why the watershed(s) and sub-watershed(s) are appropriate for storm water management with a multiple-benefit watershed approach;
References: City of Redding Stormwater Resource Plan section 3.2 (pgs. 12)	
Y	4. Plan describes the internal boundaries within the watershed (boundaries of municipalities; service areas of individual water, wastewater, and land use agencies, including those not involved in the Plan; groundwater basin boundaries, etc.; preferably provided in a geographic information system shape file);
References: City of Redding Stormwater Resource Plan section 3.2 (pgs. 15) and Figure 6 (pg. 16)	
Y	5. Plan describes the water quality priorities within the watershed based on, at a minimum, applicable TMDLs and consideration of water body-pollutant combinations listed on the State's Clean Water Act Section 303(d) list of water quality limited segments (a.k.a impaired waters list);
References: City of Redding Stormwater Resource Plan section 3.2.1 (pgs. 21-25), Table 6 (pg. 24), Table 7 (pg. 25), and Figure 10 (pg. 26)	
Y	6. Plan describes the general quality and identification of surface and ground water resources within the watershed (preferably provided in a geographic information system shape file);
References: City of Redding Stormwater Resource Plan section 3.2 (pgs. 15) and Figure 6 (pg. 16)	
Y	7. Plan describes the local entity or entities that provide potable water supplies and the estimated volume of potable water provided by the water suppliers;
References: City of Redding Stormwater Resource Plan section 3.2 (pgs. 15), Table 3 (pg. 15), and Figure 6 (pg. 16)	
Y	8. Plan includes map(s) showing location of native habitats, creeks, lakes, rivers, parks, and other natural or open space within the sub-watershed boundaries; and
References: City of Redding Stormwater Resource Plan section 3.2 (pgs. 17-18), Table 7 (pg. 25), Figure 8 (pg. 19), Figure 9 (pg. 20), and Figure 10 (pg. 26)	
Y	9. Plan identifies (quantitative, if possible) the natural watershed processes that occur within the sub-watershed and a description of how those natural watershed processes have been disrupted within the sub-watershed (e.g., high levels of imperviousness convert the watershed processes of infiltration and interflow to surface runoff increasing runoff volumes; development commonly covers natural surfaces and often introduces non-native vegetation, preventing the natural supply of sediment from reaching receiving waters).
References: City of Redding Stormwater Resource Plan section 3.2 (pgs. 17-18), Table 7 (pg. 25), Figure 8 (pg. 19), and Figure 9 (pg. 20)	

WATER QUALITY COMPLIANCE
(GUIDELINES SECTION V)

Y	**10. Plan identifies activities that generate or contribute to the pollution of storm water or dry weather runoff, or that impair the effective beneficial use of storm water or dry weather runoff.**	**10562(d)(7)**

References:
City of Redding Stormwater Resource Plan section 3.2.1 (pgs. 21-22), and Table 4 (pg. 22)

Y	**11. Plan describes how it is consistent with and assists in, compliance with total maximum daily load implementation plans and applicable national pollutant discharge elimination system permits.**	**10562(b)(5)**

References:
City of Redding Stormwater Resource Plan section 3.3 (pgs. 27-29) and Table 8 (pg. 29)

Y	**12. Plan identifies applicable permits and describes how it meets all applicable waste discharge permit requirements.**	**10562(b)(6)**

References:
City of Redding Stormwater Resource Plan section 3.3 (pgs. 27-29) and Table 8 (pg. 29)

ORGANIZATION, COORDINATION, COLLABORATION
(GUIDELINES SECTION VI.B)

Y	**13. Local agencies and nongovernmental organizations were consulted in Plan development.**	**10565(a)**

References:
City of Redding Stormwater Resource Plan section 2 (pgs. 6-9), Table 1 (pg. 7), and Appendix C

Y	**14. Community participation was provided for in Plan development.**	**10562(b)(4)**

References:
City of Redding Stormwater Resource Plan section 2 (pgs. 6-9) and Appendix C

Y	15. Plan includes description of the existing integrated regional water management group(s) implementing an integrated regional water management plan.	

References:
City of Redding Stormwater Resource Plan section 5.1 (pg. 41)

ORGANIZATION, COORDINATION, COLLABORATION
(GUIDELINES SECTION VI.B)

Y	16. Plan includes identification of and coordination with agencies and organizations (including, but not limited to public agencies, nonprofit organizations, and privately owned water utilities) that need to participate and implement their own authorities and mandates in order to address the storm water and dry weather runoff management objectives of the Plan for the targeted watershed.
References: City of Redding Stormwater Resource Plan section 2 (pgs. 6-9), Table 1 (pg. 7), and Appendix C	
Y	17. Plan includes identification of nonprofit organizations working on storm water and dry weather resource planning or management in the watershed.
References: City of Redding Stormwater Resource Plan Appendix C (Table C-1 on page C-2)	
Y	18. Plan includes identification and discussion of public engagement efforts and community participation in Plan development.
References: City of Redding Stormwater Resource Plan section 2 (pgs. 6-9) and Appendix C	
Y	19. Plan includes identification of required decisions that must be made by local, state or federal regulatory agencies for Plan implementation and coordinated watershed-based or regional monitoring and visualization
References: City of Redding Stormwater Resource Plan section 2.1 (pages 6-8), section 5.1 & 2 (pages 41-42), and section 5.5 (pages 44-45)	
Y	20. Plan describes planning and coordination of existing local governmental agencies, including where necessary new or altered governance structures to support collaboration among two or more lead local agencies responsible for plan implementation.
References: City of Redding Stormwater Resource Plan section 2 (pgs. 6-9)	
Y	21. Plan describes the relationship of the Plan to other existing planning documents, ordinances, and programs established by local agencies.
References: City of Redding Stormwater Resource Plan section 3.1 (pgs. 10-11), Table 2 (pg. 11), Appendix D, Section 3.3 (pgs. 27-29), Table 8 (pg. 29), section 4 (pg. 30)	
Y	22. (If applicable)Plan explains why individual agency participation in various isolated efforts is appropriate.
References: City of Redding Stormwater Resource Plan section 1.2 (pg. 2)	

QUANTITATIVE METHODS
(GUIDELINES SECTION VI.C)

Y	23. **For all analyses:** Plan includes an integrated metrics-based analysis to demonstrate that the Plan's proposed storm water and dry weather capture projects and programs will satisfy the Plan's identified water management objectives and multiple benefits.
References: City of Redding Stormwater Resource Plan section 4.3 (pgs. 37-38), section 4.4 (pgs. 38-40), Appendix F, and Appendix G	
Y	24. **For water quality project analysis (section VI.C.2.a)** Plan includes an analysis of how each project and program complies with or is consistent with an applicable NPDES permit. The analysis should simulate the proposed watershed-based outcomes using modeling, calculations, pollutant mass balances, water volume balances, and/or other methods of analysis. Describes how each project or program will contribute to the preservation, restoration, or enhancement of watershed processes (as described in Guidelines section VI.C.2.a)
References: City of Redding Stormwater Resource Plan section 3.3 (pgs. 27-29), Table 8 (pg. 29), section 4.3 (pgs. 37-38), section 4.4 (pgs. 38-40), Appendix B, Appendix F, and Appendix G	
Y	25. **For storm water capture and use project analysis (section VI.C.2.b):** Plan includes an analysis of how collectively the projects and programs in the watershed will capture and use the proposed amount of storm water and dry weather runoff.
References: City of Redding Stormwater Resource Plan section 4.2 (pgs. 36-37), section 4.3 (pgs. 37-38), Appendix B, Appendix F, and Appendix G	
Y	26. **For water supply and flood management project analysis (section VI.C.2.c):** Plan includes an analysis of how each project and program will maximize and/or augment water supply.
References: City of Redding Stormwater Resource Plan section 4.2 (pgs. 36-37), section 4.3 (pgs. 37-38), Appendix B, Appendix F, and Appendix G	
Y	27. **For environmental and community benefit analysis (section VI.C.2.d):** Plan includes a narrative of how each project and program will benefit the environment and/or community, with some type of quantitative measurement.
References: City of Redding Stormwater Resource Plan section 4.2 (pgs. 36-37), section 4.3 (pgs. 37-38), Appendix B, Appendix F, and Appendix G	
Y	28. **Data management (section VI.C.3):** Plan describes data collection and management, including: a) mechanisms by which data will be managed and stored; b) how data will be accessed by stakeholders and the public; c) how existing water quality and water quality monitoring will be assessed; d) frequency at which data will be updated; and e) how data gaps will be identified.
References: City of Redding Stormwater Resource Plan section 5.6 (pg. 46)	

IDENTIFICATION AND PRIORITIZATION OF PROJECTS
(GUIDELINES SECTION VI.D)

Y	**29. Plan identifies opportunities to augment local water supply through groundwater recharge or storage for beneficial use of storm water and dry weather runoff.**	**10562(d)(1)**

References:
City of Redding Stormwater Resource Plan section 4 (pgs. 30-32), section 4.1 (pgs. 33-36), Appendix E, Appendix F

Y	**30. Plan identifies opportunities for source control for both pollution and dry weather runoff volume, onsite and local infiltration, and use of storm water and dry weather runoff.**	**10562(d)(2)**

References:
City of Redding Stormwater Resource Plan section 4 (pgs. 30-32), section 4.1 (pgs. 33-36), Appendix E, Appendix F

Y	**31. Plan identifies projects that reestablish natural water drainage treatment and infiltration systems, or mimic natural system functions to the maximum extent feasible.**	**10562(d)(3)**

References:
City of Redding Stormwater Resource Plan section 4 (pgs. 30-32), section 4.1 (pgs. 33-36), Appendix E, Appendix F

Y	**32. Plan identifies opportunities to develop, restore, or enhance habitat and open space through storm water and dry weather runoff management, including wetlands, riverside habitats, parkways, and parks.**	**10562(d)(4)**

References:
City of Redding Stormwater Resource Plan section 4 (pgs. 30-32), section 4.1 (pgs. 33-36), Appendix E, Appendix F

Y	**33. Plan identifies opportunities to use existing publicly owned lands and easements, including, but not limited to, parks, public open space, community gardens, farm and agricultural preserves, school sites, and government office buildings and complexes, to capture, clean, store, and use storm water and dry weather runoff either onsite or offsite.**	**10562(d)(5), 10562(b)(8)**

References:
City of Redding Stormwater Resource Plan section 4 (pgs. 30-32), section 4.1 (pgs. 33-36), Appendix E, Appendix F

IDENTIFICATION AND PRIORITIZATION OF PROJECTS
(GUIDELINES SECTION VI.D)

Y	**34. For new development and redevelopments (if applicable): Plan identifies design criteria and best management practices to prevent storm water and dry weather runoff pollution and increase effective storm water and dry weather runoff management for new and upgraded infrastructure and residential, commercial, industrial, and public development.**	**10562(d)(6)**

References:
City of Redding Stormwater Resource Plan section 4 (pgs. 30)
City of Redding Post-Construction Standards Plan
https://www.cityofredding.org/departments/public-works/environmental-management/storm-water-management/post-construction-standards

Y	**35. Plan uses appropriate quantitative methods for prioritization of projects. (This should be accomplished by using a metrics-based and integrated evaluation and analysis of multiple benefits to maximize water supply, water quality, flood management, environmental, and other community benefits within the watershed.)**	**10562(b)(2)**

References:
City of Redding Stormwater Resource Plan section 4 (pgs. 30-40), Appendix E, Appendix F, and Appendix G

Y	36. *Overall:* Plan prioritizes projects and programs using a metric-driven approach and a geospatial analysis of multiple benefits to maximize water supply, water quality, flood management, environmental, and community benefits within the watershed.

References:
City of Redding Stormwater Resource Plan section 4 (pgs. 30-40), Appendix E, Appendix F, and Appendix G

Y	37. *Multiple benefits:* Each project in accordance with the Plan contributes to at least two or more **Main Benefits** and the maximum number of **Additional Benefits** as listed in Table 4 of the Guidelines. (Benefits are not counted twice if they apply to more than one category.)

References:
City of Redding Stormwater Resource Plan section 4.3 (pgs. 37-38), section 4.4 (pgs. 38-40), Appendix B, Appendix F, and Appendix G

IMPLEMENTATION STRATEGY AND SCHEDULE
(GUIDELINES SECTION VI.E)

Y	38. Plan identifies resources for Plan implementation, including: 1) projection of additional funding needs and sources for administration and implementation needs; and 2) schedule for arranging and securing Plan implementation financing.	
References: City of Redding Stormwater Resource Plan section 5.2 & 5.3 (pgs. 42-43), Figure 13 (pg. 43), and Table 12 (pg. 44)		
Y	**39. Plan projects and programs are identified to ensure the effective implementation of the storm water resource plan pursuant to this part and achieve multiple benefits.**	**10562(d)(8)**
References: City of Redding Stormwater Resource Plan Appendix E identifies potential project opportunities and Appendix G demonstrates the multiple benefits achieved.		
Y	**40. The Plan identifies the development of appropriate decision support tools and the data necessary to use the decision support tools.**	**10562(d)(8)**
References: City of Redding Stormwater Resource Plan section 5.5 (pgs. 44-45) and Appendix E		
Y	41. Plan describes implementation strategy, including: a) Timeline for submitting Plan into existing plans, as applicable; b) Specific actions by which Plan will be implemented; c) All entities responsible for project implementation; d) Description of community participation strategy; e) Procedures to track status of each project; f) Timelines for all active or planned projects; g) Procedures for ongoing review, updates, and adaptive management of the Plan; and h) A strategy and timeline for obtaining necessary federal, state, and local permits.	
References: City of Redding Stormwater Resource Plan: a.) Section 5.3 (pg. 43) & Table 12 (pg. 44) b.) Section 5.1 (pgs. 41-42) c.) Section 5.2 (pg 42) d.) Section 5.4 (pgs. 44-45) e.) Section 5.5 (pgs. 45-46) f.) Section 5.3 (pg. 43), Figure 13 (pg. 43), & Table 12 (pg. 44) g.) Section 5.1 (pgs 41-42) h.) Section 5.1 (pg. 42)		
Y	**42. Applicable IRWM plan:** **The Plan will be submitted, upon development, to the applicable integrated regional water management (IRWM) group for incorporation into the IRWM plan.**	**10562(b)(7)**
References: City of Redding Stormwater Resource Plan section 5.2 (pgs. 42)		

IMPLEMENTATION STRATEGY AND SCHEDULE
(GUIDELINES SECTION VI.E)

Y	43. Plan describes how implementation performance measures will be tracked.

References:
City of Redding Stormwater Resource Plan section 5.6 (pg. 46)

EDUCATION, OUTREACH, PUBLIC PARTICIPATION
(GUIDELINES SECTION VI.F)

44. Outreach and Scoping: 10562(b)(4)
Community participation is provided for in Plan implementation.

References:
City of Redding Stormwater Resource Plan section 2.2 (pgs. 8-9), section 5.4 (pgs. 44-45), and Appendix C

45. Plan describes public education and public participation opportunities to engage the public when considering major technical and policy issues related to the development and implementation.

References:
City of Redding Stormwater Resource Plan section 2.2 (pgs. 8-9), section 5.4 (pgs. 44-45), and Appendix C

Y	46. Plan describes mechanisms, processes, and milestones that have been or will be used to facilitate public participation and communication during development and implementation of the Plan.

References:
City of Redding Stormwater Resource Plan section 2.2 (pgs. 8-9), section 5.4 (pgs. 44-45), and Appendix C

Y	47. Plan describes mechanisms to engage communities in project design and implementation.

References:
City of Redding Stormwater Resource Plan section 2.2 (pgs. 8-9), section 5.4 (pgs. 44-45), and Appendix C

Y	48. Plan identifies specific audiences including local ratepayers, developers, locally regulated commercial and industrial stakeholders, nonprofit organizations, and the general public.

References:
City of Redding Stormwater Resource Plan Appendix C (Table C-1, pg. C-1)

EDUCATION, OUTREACH, PUBLIC PARTICIPATION (GUIDELINES SECTION VI.F)	
Y	49. Plan describes strategies to engage disadvantaged and climate vulnerable communities within the Plan boundaries and ongoing tracking of their involvement in the planning process.
References: City of Redding Stormwater Resource Plan section 2.2 (pgs. 8-9) and Appendix C	
Y	50. Plan describes efforts to identify and address environmental injustice needs and issues within the watershed.
References: City of Redding Stormwater Resource Plan section 2.2 (pgs. 8-9), Appendix C and Appendix E section 3.2 (pg. E-9)	
Y	51. Plan includes a schedule for initial public engagement and education.
References: City of Redding Stormwater Resource Plan Appendix C (Outreach Plan pg. 4)	

DECLARATION AND SIGNATURE

I declare under penalty of perjury that all information provided is true and correct to the best of my knowledge and belief.

Authorized Signature	Title	Date
	Director of Public Works	5/3/19
Authorized Signature	Title	Date

Public Agency

Prepared for

City of Redding

Stormwater Resource Plan

Appendix B - Summary of Conceptual Projects

Redding, CA

Prepared by

Geosyntec consultants

engineers | scientists | innovators

924 Anacapa Street, Suite 4A
Santa Barbara, CA 93101

Geosyntec Project #: LA0443

March 2019

TABLE OF CONTENTS

Summary of Conceptual Project Benefits and Prioritization…….. B-ii

Former Sewer Ponds Natural Treatment System Project Concept…….……...…. B-1

Linden Ditch Infiltration System Project Concept…….. B-3

Mary Lake Restoration Project Concept……...……..… B-5

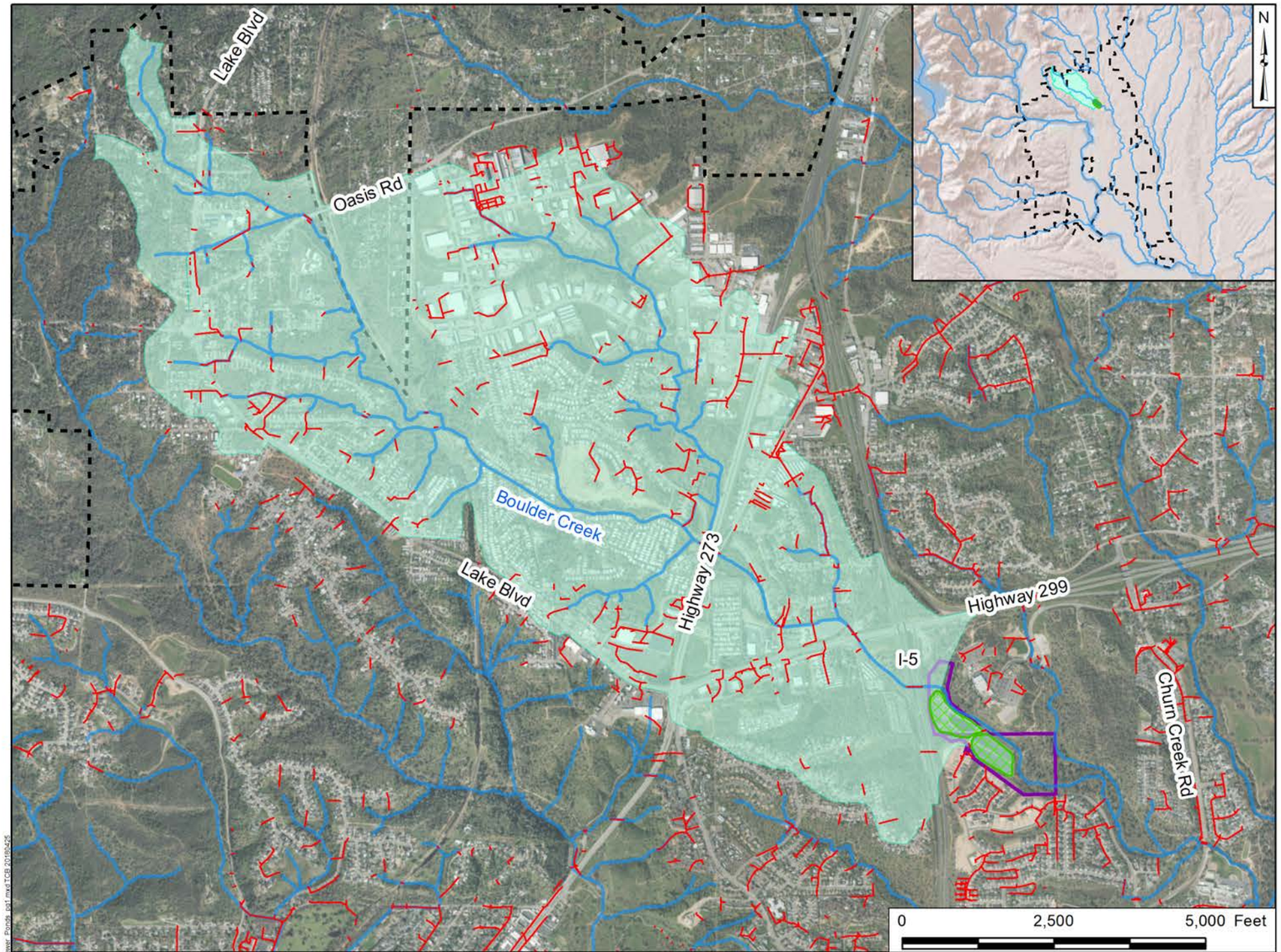
Market-Pine Alley Green Street Project Concept……..…….. B-7

Downtown Mall Alley Green Street Project Concept..…….. B-9

Table B-1. Summary of Conceptual Project Benefits and Prioritization

Project Location	Project Type	Project Footprint (acres)	Water Quality - Pollutant Load Reductions				Water Supply	Flood Management	Multi-Benefit Index (0-5)	Prioritization (low, medium, or high)
			TSS (lb/yr)	NO3 (lb/yr)	Diss Cu (lb/yr)	Fecal Coliform (10^{12} MPN/yr)	Groundwater Recharge Volume (acre-ft/yr)	Runoff Volume Controlled (cu ft/yr)		
Former City Sewer Ponds	Natural Treatment System	13	280,000	2,100	29	120	260	920	4.6	High
Linden Ditch	Infiltration System	1.7	77,000	440	2.9	9.4	110	170	3.7	High
Mary Lake Pond	Lake Restoration	3.6	80,000	440	2.9	25	62[1]	190	3.6	High
Markey-Pine Alley	Green street	0.16	1,300	9.0	0.30	0.28	2.1	5.6	0.61	High
Downtown Mall Alley	Green street	0.50	2,600	15	0.22	0.34	3.4	7.7	0.62	High
SWRP Planning Area Total Benefits		**19**	**440,000**	**3,000**	**35**	**160**	**440**	**1,300**	**N/A**	**N/A**

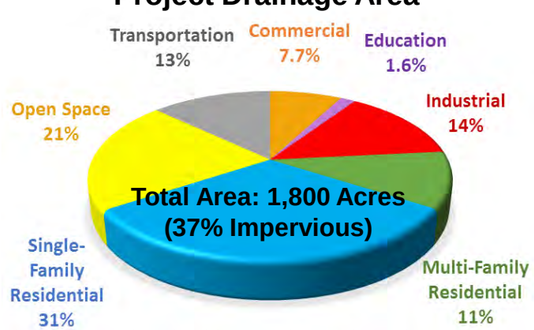
[1] The water supply benefit represents the both the volume of groundwater recharged (54 acre-ft) and the quantity of water provided by the storage tank (4.0 acre-ft) and enhanced upper natural treatment system (approximately 4.0 acre-ft considering evaporation) that will offset potable water to maintain lake levels during the summer.



Legend

- Waterbody
- Storm Drain
- Project Drainage Area
- Project Footprint
- Parcel Boundary
- City

Project Drainage Area



Project Overview

Parcel Ownership	City of Redding
APN	116180006000, 117070028000
Soil Type	Hydrologic Soil Group C
Watershed	Churn Creek-Sacramento River
Receiving Water	Boulder Creek
Groundwater Basin	Enterprise

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Project Description

This project plans to revitalize existing infrastructure to allow for water quality treatment, groundwater recharge, and flood management through a series of natural treatment systems, possibly including: infiltration basins, treatment wetlands, bioretention basins, etc. The abandoned sewer ponds are located adjacent to Boulder Creek, which is a salmonid stream and receives significant runoff from areas considered high priority for trash and pollution control. Water will be diverted from Boulder Creek just after it crosses under the I-5 freeway and flow through the treatment system before flowing back into Boulder Creek. The upper basin will be expanded and include a pretreatment area while the lower basin will retain its current footprint. Vegetation, walking paths, and interpretive signage will be incorporated.

Potential Site Constraints:

The basin area should be inspected prior to finalizing the project design to confirm no protected species are present. Also necessary ecological instream flows within Boulder Creek along the project location should be confirmed to assist with the design of the project. Numerous permits/agency coordination may be need to implement the project (RWQCB, CDFW, Army Corps, County Flood Control, Caltrans, etc). A site survey should be conducted to confirm local elevations, infiltration rate, and groundwater elevations.

Example Natural Treatment System in Construction

Former Sewer Ponds
Natural Treatment System
Project Concept

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | April 2018

Figure **1**

Legend

- Waterbody
- Storm Drain
- Flow Diversion
- BMP Footprint
- Parcel Boundary
- Direction of Flow

Project Design Information

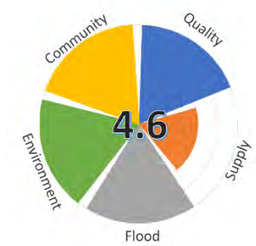
BMP Type	Natural Treatment System
Total Project Footprint	13 acres (includes 3.3 acres pretreatment)
Depth	3-9 ft (includes 1 ft freeboard)
Storage Volume	41 ac-ft
Assumed Infiltration Rate	0.32 in/hr
Stormwater Source	Boulder Creek

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

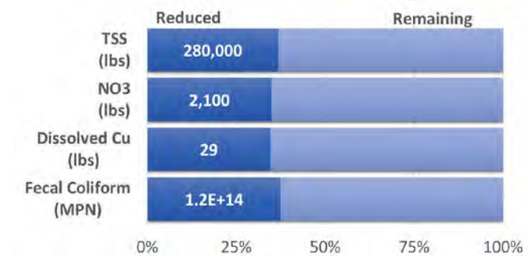
Project Benefits

All benefits are expressed as an average annual estimate based on historical modeling.

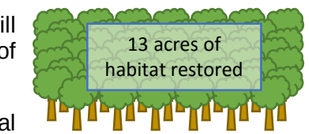
Overall Multi-Benefit Score
Highest possible score is a 5



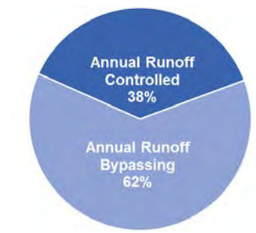
Water Quality:
Pollutant load reductions from drainage area



Environmental Enhancements: Restored vegetation will include native species increasing habitat for animals of interest.



Flood Management: 920 acre-feet (38%) of the annual runoff volume and 89% of the volume generated from an 85th percentile 24-hr storm will be captured and slowly released back into Boulder Creek, likely reducing the frequency and intensity of flood events downstream.



Community Enhancements: This project is located along the proposed Boulder Creek Trail. Signage to educate the public about the project's multiple benefits, and native vegetation and landscaping will improve the aesthetics of the parcel while providing recreational opportunities.

Water Supply: 260 acre-feet will be recharged annually, which is equivalent to the supply for 640 households.

Volume Capture Analysis

	85th Percentile, 24-hr Storm	Average Annual
Precipitation (in)	0.91	37.5
Runoff Volume (ac-ft)	59	2,400
Percent of Runoff Volume Captured (%)	**89**	**38**
Total Volume Captured (ac-ft)	**53**	**920**

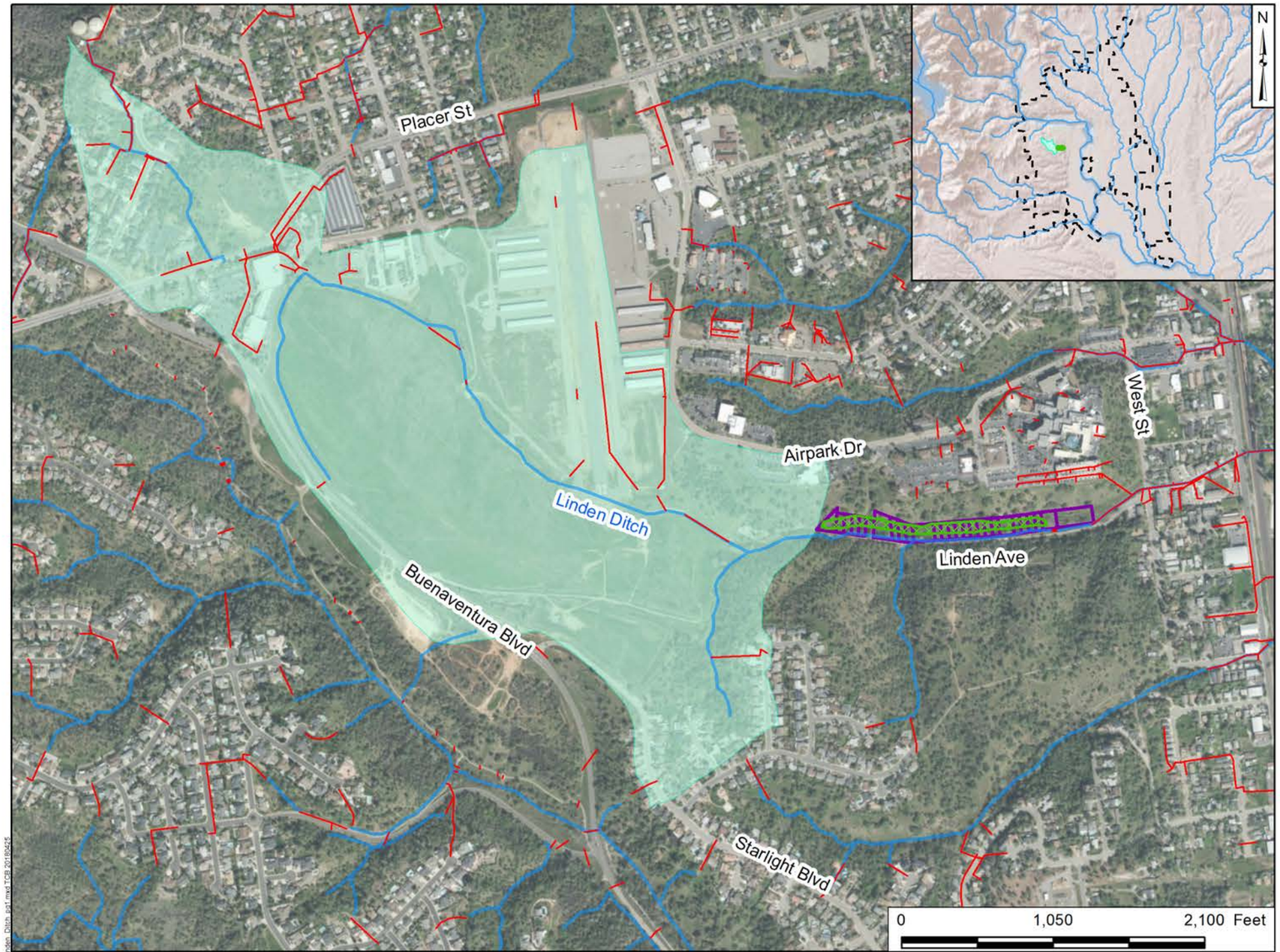
Former Sewer Ponds
Natural Treatment System
Project Concept

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | April 2018

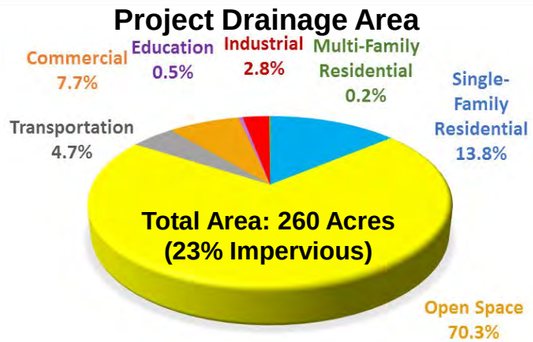
Figure **2**



Legend

- Waterbody
- Storm Drain
- Project Drainage Area
- Project Footprint
- Parcel Boundary
- City

Project Drainage Area



Project Overview

Parcel Ownership	City of Redding
APN	26 city owned parcels
Soil Type	Hydrologic Soil Group A
Watershed	Churn Creek-Sacramento River
Receiving Water	Linden Ditch
Groundwater Basin	Anderson

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Project Description

This project plans to improve water quality, reduce flows in Linden Ditch, and recharge groundwater by building an offline infiltration system adjacent to the current flow path. Water will be diverted from Linden Ditch approximately where it meets Linden Avenue and directed into the elongated infiltration basin before flowing back into Linden Ditch upstream of West Street. The basin will be located exclusively on city owned parcels and include a pretreatment area. Vegetation, walking paths, and interpretive signage will be incorporated.

Potential Site Constraints:

Vegetation and animals in the basin area should be assessed by a qualified biologist prior to finalizing the project design to confirm no protected species are present. Additional permitting may be required for vegetation removal and constructing a diversion from the creek (RWQCB, CDFW, Army Corps, County Flood Control, etc). A site survey should be conducted to confirm local elevations and infiltration rate.

Location of Proposed Infiltration System

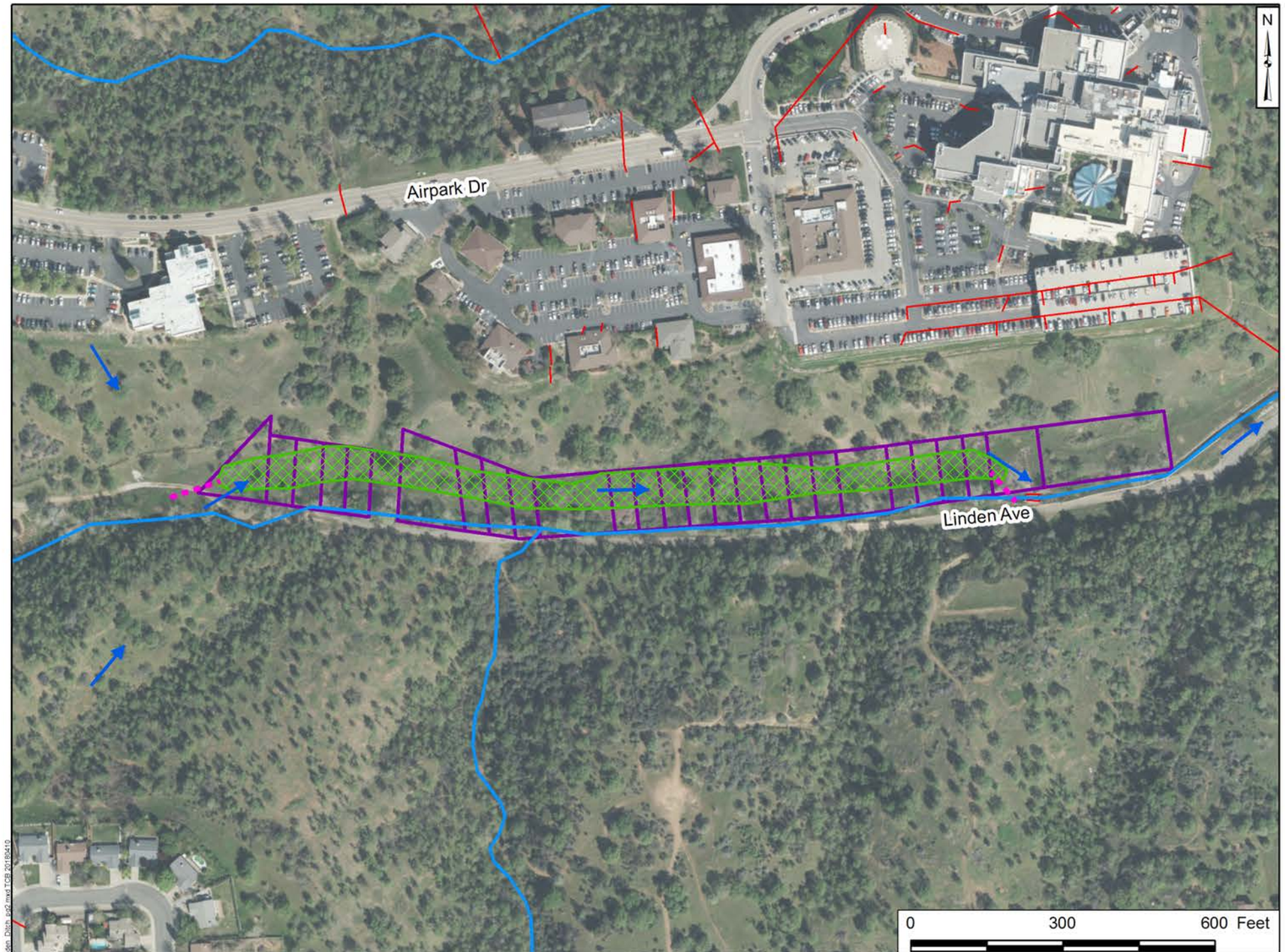
Linden Ditch
Infiltration System Project Concept

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | April 2018

Figure **3**



Legend

- Waterbody
- BMP Footprint
- Storm Drain
- Parcel Boundary
- Flow Diversion
- Direction of Flow

Project Design Information

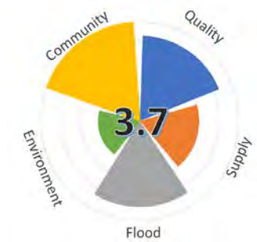
BMP Type	Infiltration System
Total Project Footprint	1.7 acres (includes 0.43 acre pretreatment)
Depth	7 ft (including 1 ft freeboard)
Storage Volume	7.6 ac-ft
Assumed Infiltration Rate	1.5 in/hr
Stormwater Source	Linden Ditch

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Project Benefits

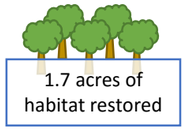
All benefits are expressed as an average annual estimate based on historical long-term modeling.

Overall Multi-Benefit Score
Highest possible score is a 5

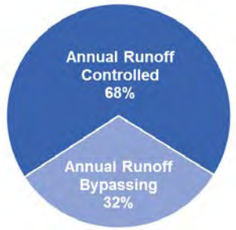


Water Quality:
Pollutant load reductions from drainage area

Environmental Enhancements: Infiltrated water will enhance the greenspace and promote nearby vegetation, increasing the habitat value. Existing invasive species will be removed.



Flood Management: 170 acre-feet (68%) of the average annual runoff volume will be removed from flowing through the concrete channelized portion of Linden Ditch which runs through the city. All of the volume generated from an 85th percentile 24-hr storm will be captured and infiltrated.



Community Enhancements: Signage to educate the public about the project's multiple benefits, and native vegetation and landscaping will improve the aesthetics of the parcel.

Water Supply: 110 acre-feet will be recharged annually, which is equivalent to the supply for 270 households.

Volume Capture Analysis

	85th Percentile, 24-hr Storm	Long-Term Average Annual
Precipitation (in)	0.91	37.5
Runoff Volume (ac-ft)	5.9	250
Percent of Runoff Volume Captured (%)	**100**	**68**
Total Volume Captured (ac-ft)	**5.9**	**170**

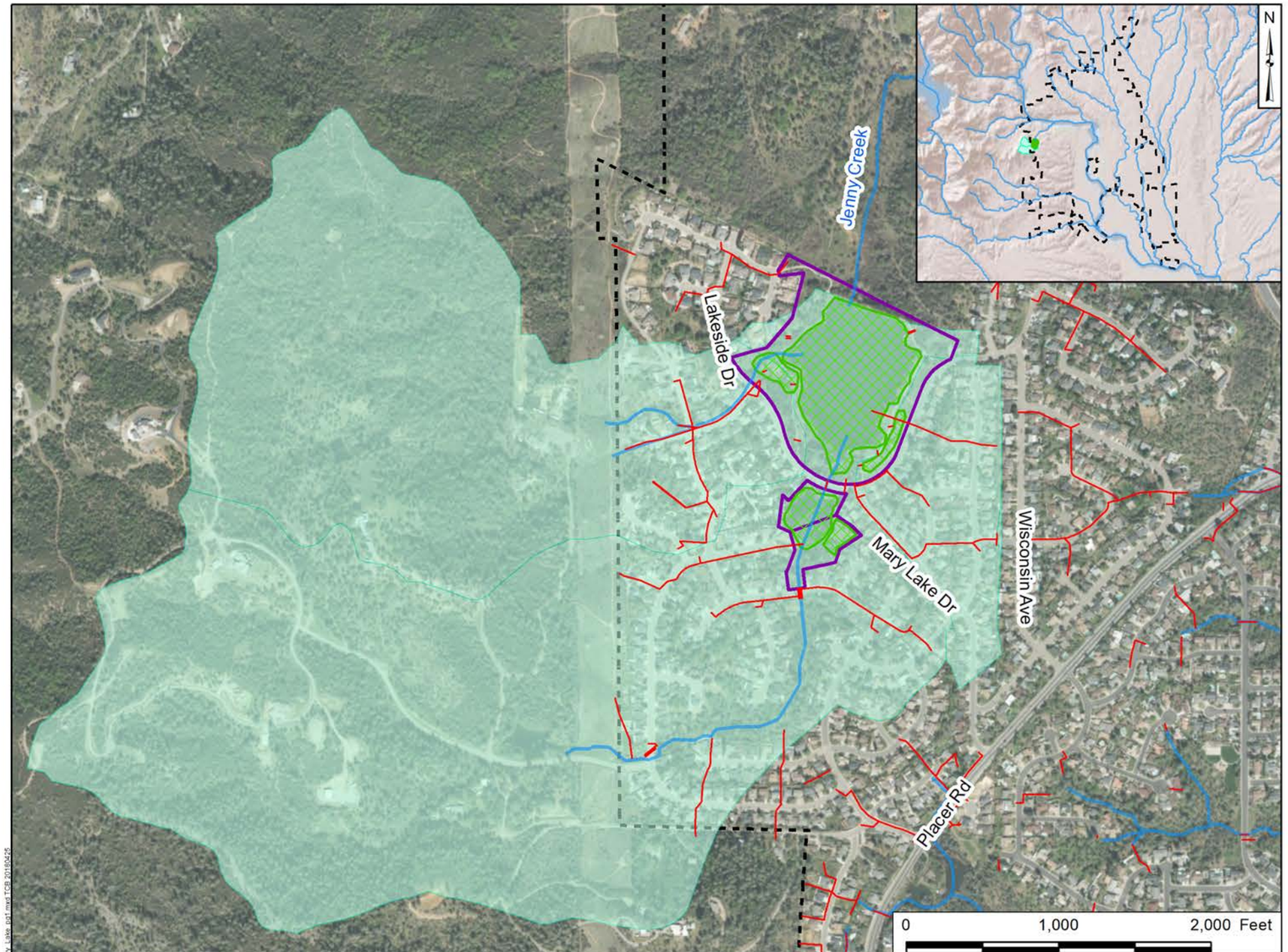
Linden Ditch
Infiltration System Project Concept

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | April 2018

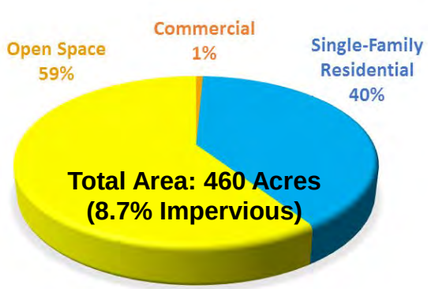
Figure **4**



Legend

- Waterbody
- Storm Drain
- Project Drainage Area
- Project Footprint
- Parcel Boundary
- City

Project Drainage Area



Project Overview

Parcel Ownership	City of Redding
APN	204350040000, 204560040000, 204330030000
Soil Type	Hydrologic Soil Group C
Watershed	Churn Creek-Sacramento River
Receiving Water	Jenny Creek
Groundwater Basin	Outside of Anderson

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Project Description

This project plans to improve water quality in Mary lake by enhancing the existing wet detention basin above Mary Lake to allow for increased water quality treatment and storage capacity. The enhancements may include reconfiguration of the flow path, increased berm height at the downstream end, sediment removal, and native habitat restoration. Flow into Mary Lake will be controlled by adding an adjustable weir or orifice at the low point of the upper basin. A storage tank is also proposed adjacent to the upper basin to capture peak flows from winter storms for release during the dry months to maintain lake levels and reduce eutrophication. Natural treatment systems will be constructed at the western and eastern sides of Mary Lake to treat additional runoff from the surrounding community. Dredging of Mary Lake will support increased capacity and removal of legacy nutrient-rich sediments.

Potential Site Constraints:

Vegetation and animals in the basin area should be assessed by a qualified biologist prior to finalizing the project design to confirm whether protected species are present. A site survey should be conducted to confirm local elevations. Additionally, numerous permits may be needed to implement this project (RWQCB, CDFW, Army Corps, County Flood Control, etc).

Location of Existing Wet Detention Basin

Mary Lake
Lake Restoration Project Concept

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | April 2018

Figure **5**

Legend

- Waterbody
- Storm Drain
- Flow Diversion
- Parcel Boundary
- Direction of Flow
- Lake Restoration
- Natural Treatment System
- Storage Tank

Project Design Information

BMP Type	Wet Basin Natural Treatment Systems	Storage Tank
Total Project Footprint	3.6 acres (includes 0.19 acre pretreatment)	0.50 acres
Depth (inc. 1 ft freeboard)	3-5.4 ft	9 ft
Storage Volume	16 ac-ft	4.0 ac-ft
Assumed Infiltration Rate	0.32 in/hr	N/A
Stormwater Source	36 and 24 inch storm drains owned by City	Wet Basin

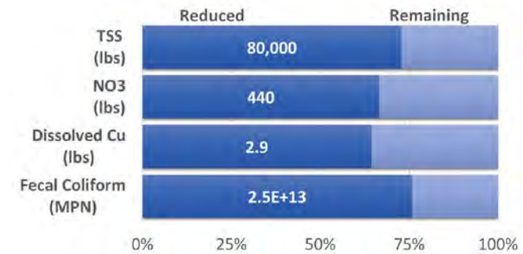
Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Project Benefits

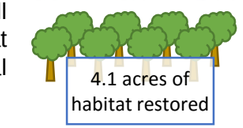
All benefits are expressed as an average annual estimate based on historical modeling.

Overall Multi-Benefit Score
Highest possible score is a 5

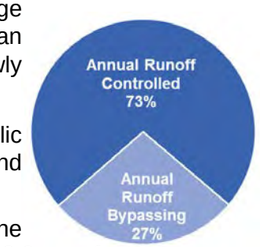
Water Quality:
Pollutant load reductions from drainage area



Environmental Enhancements: Restored vegetation will replace invasive species with native species increasing habitat for animals of interest. Additional water supplied and removal of legacy nutrients will help reduce eutrophication.



Flood Management: 190 acre-feet (73%) of the average annual runoff volume and all of the volume generated from an 85th percentile 24-hr storm will be captured and slowly released into Mary Lake before entering Jenny Creek.



Community Enhancements: Signage to educate the public about the project's multiple benefits, and native vegetation and landscaping will improve the aesthetics of the parcel.

Water Supply: The storage tank and the adjustable weir in the upper wet detention basin are designed to capture and store 8.0 acre-feet for supplying Lake Mary during the summer months, offsetting potable water currently used for this purpose. Additionally, approximately 54 acre-feet will be recharged annually, which may help maintain lake levels through interflow.

Volume Capture Analysis

	85th Percentile, 24-hr Storm	Long-Term Average Annual
Precipitation (in)	0.91	37.5
Runoff Volume (ac-ft)	6.4	265
Percent of Runoff Volume Captured (%)	**100**	**73**
Total Volume Captured (ac-ft)	**6.4**	**190**

Mary Lake
Lake Restoration Project Concept

City of Redding
Stormwater Resource Plan

Geosyntec consultants

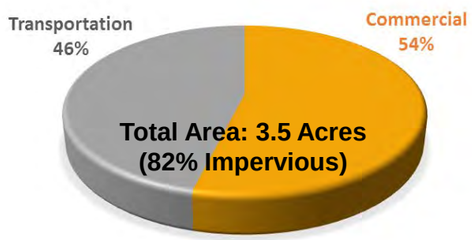
Santa Barbara | April 2018

Figure **6**

Legend

- Waterbody
- Storm Drain
- Project Drainage Area
- Project Footprint
- Parcel Boundary
- City

Project Drainage Area



Project Overview

Parcel Ownership	City of Redding
APN	N/A
Soil Type	Hydrologic Soil Group C
Watershed	Churn Creek-Sacramento River
Receiving Water	Sacramento River
Groundwater Basin	Anderson

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Project Description

This project plans to turn the alley between Market and Pine Street in downtown Redding into a green pedestrian corridor by replacing the existing surface with permeable pavement and rain gardens with an underdrain system. The stormwater will be collected from the busy area near Eureka Way via the existing storm drains and surface runoff. Permeable pavement and rain gardens will reduce the amount of ponding in the alley and provide water quality treatment by allowing the stormwater runoff to percolate into the underdrain system. Community enhancements may also include murals, design of pavers/ground treatments, wayfinding, etc.

Potential Site Constraints:

Business owners on either side of the alley should be coordinated with during planning and construction stages since they alley provides access to some parking areas. Percolation testing should be conducted to confirm assumed infiltration rates and a site survey to confirm elevations and evaluate subsurface utilities that may need to be relocated.

Location of Proposed Green Street

Market-Pine Alley
Green Street Project Concept

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | April 2018

Figure 7

Legend

- Waterbody
- Storm Drain
- Flow Diversion
- BMP Footprint
- Parcel Boundary
- Direction of Flow

Project Design Information

BMP Type	Green Street
Total Project Footprint	0.16 acres (includes 0.041 acre pretreatment)
Depth	2.3 ft
Storage Volume	0.14 ac-ft
Assumed Infiltration Rate	0.32 in/hr
Stormwater Source	Surface Runoff

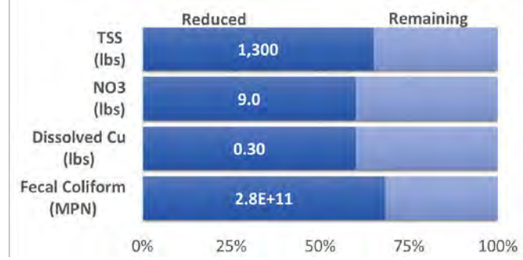
Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Project Benefits

All benefits are expressed as an average annual estimate based on historical modeling.

Overall Multi-Benefit Score
Highest possible score is a 5

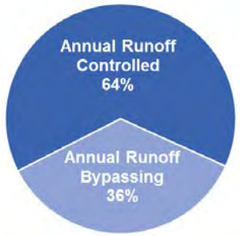
Water Quality:
Pollutant load reductions from drainage area



Environmental Enhancements: The urban greening will create opportunities for the planting of native vegetation and habitat for pollinators and other species of interest.

0.03 acres of habitat created

Flood Management: 5.6 acre-feet (64%) of the average annual runoff volume will be removed annually from the stormdrain system. About half of the volume generated from an 85th percentile 24-hr storm will be captured and infiltrated.



Community Enhancements: Signage to educate the public about the project's multiple benefits, and native vegetation and landscaping will improve the aesthetics of the alley.

Water Supply: 2.1 acre-feet will be recharged annually, which is equivalent to the supply for 5 households.

Volume Capture Analysis

	85th Percentile, 24-hr Storm	Long-Term Average Annual
Precipitation (in)	0.91	37.5
Runoff Volume (ac-ft)	0.21	8.7
Percent of Runoff Volume Captured (%)	**48**	**64**
Total Volume Captured (ac-ft)	**0.10**	**5.6**

Market-Pine Alley
Green Street Project Concept

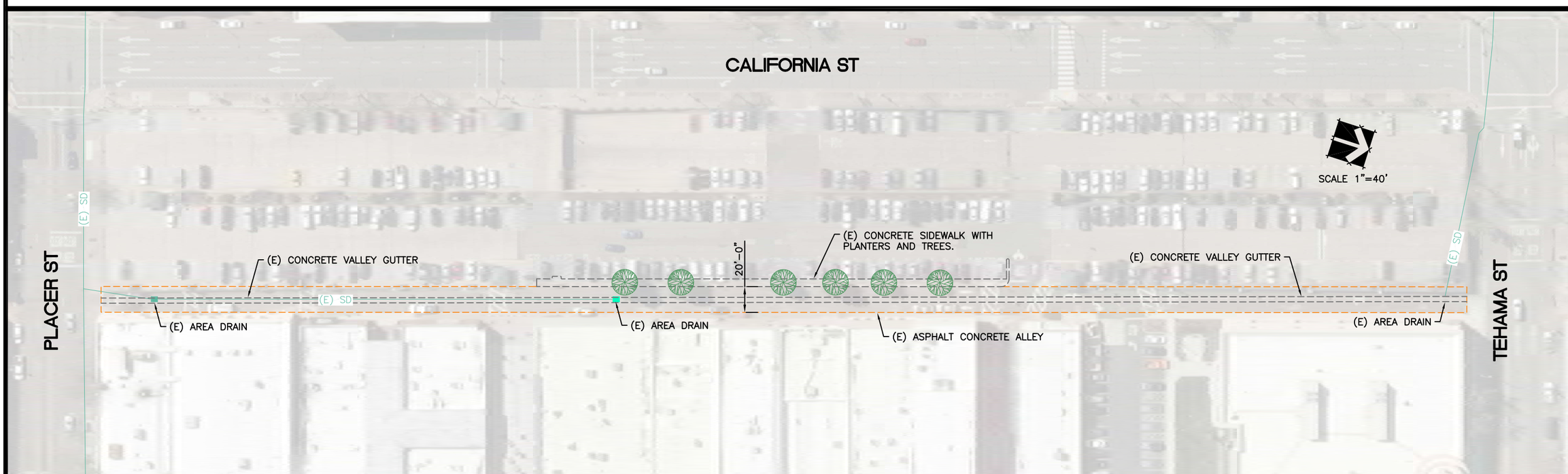
City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | April 2018

Figure **8**

EXISTING ALLEY



EXISTING ALLEY - PLAN

REDUCED PLANS

ORIGINAL SCALE IN INCHES 0 1 2

DESIGNED BY C. VANDIVER

DRAWN BY D. MARUNDEE

CITY OF REDDING RECORD DRAWING

DATE

DESIGNED BY:

PROJECT ENGINEER

DATE

CITY OF REDDING

PUBLIC WORKS DEPARTMENT

Prop 84 Storm Water Grant Program – California Street Alley LID Demonstration Project

JOB NO. 5112

BID SCH NO. XXXX

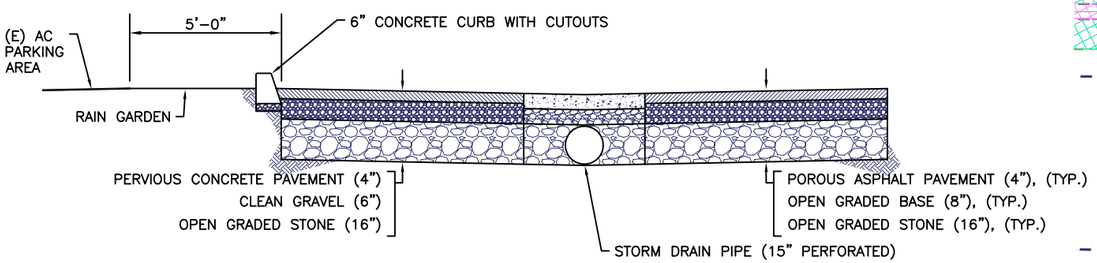
EXISTING ALLEY

B-9

ORIGINAL SCALE: NONE

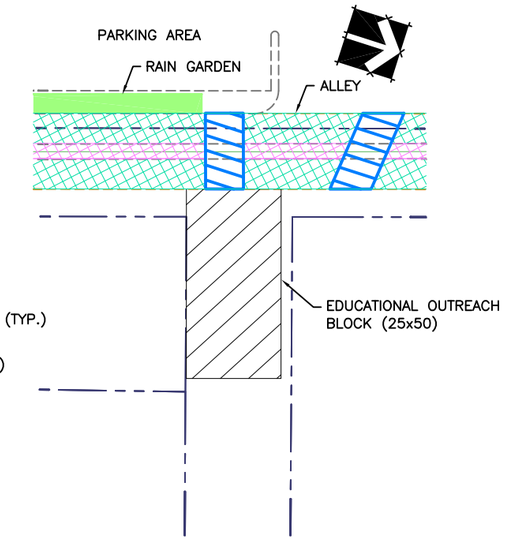
DATE: OCT 2013

SHEET 1 OF 2

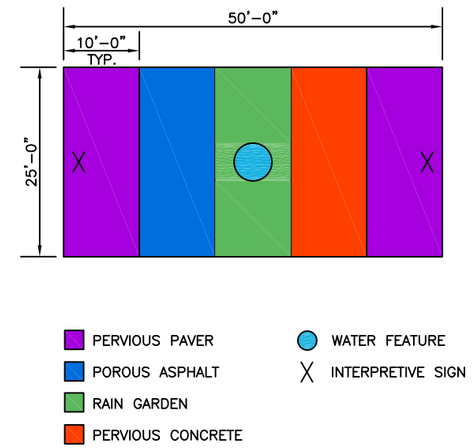


SECTION A-A

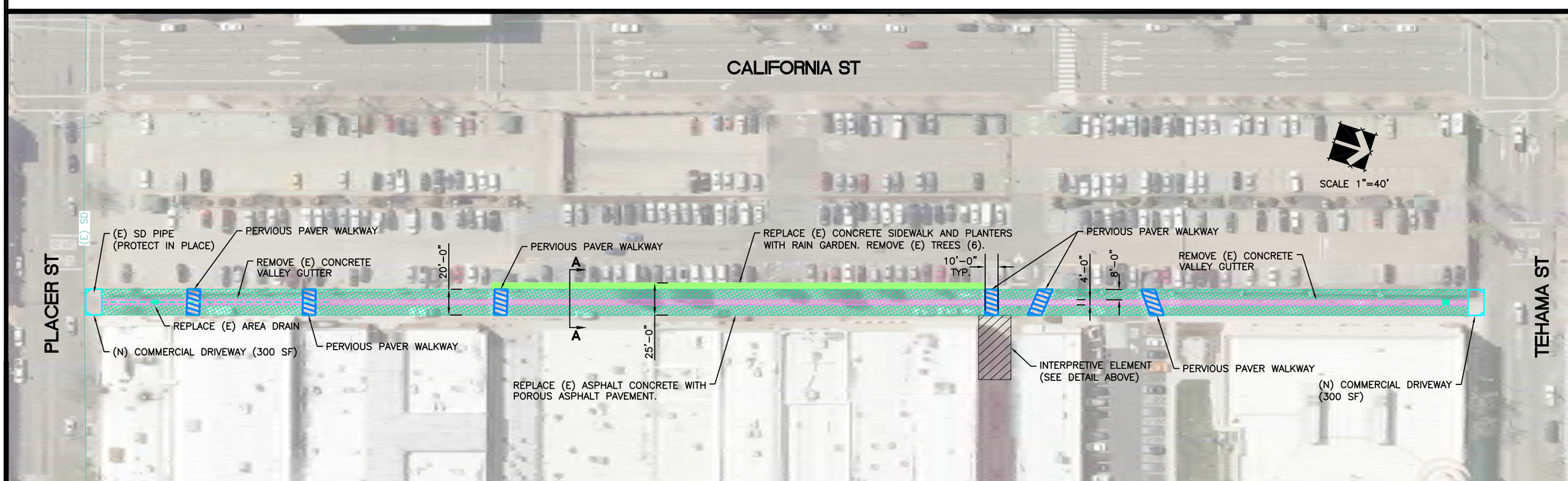
SCALE 1"=2.5'



INTERPRETIVE ELEMENT LOCATION MAP



INTERPRETIVE ELEMENT DETAIL



PROPOSED ALLEY

PERVIOUS PAVER WALKWAY
POROUS ASPHALT PAVEMENT
PERVIOUS CONCRETE PAVEMENT
RAIN GARDEN
STORM DRAIN PIPE (15" PERFORATED)

REDUCED PLANS

ORIGINAL SCALE IN INCHES 0 1 2

DESIGNED BY C. VANDIVER
DRAWN BY D. MARUNDEE
CITY OF REDDING RECORD DRAWING
DATE

REGISTERED PROFESSIONAL ENGINEER C. L. MARTIER No. 67912 Exp. 6-30-13 CIVIL STATE OF CALIFORNIA

DESIGNED BY:
PROJECT ENGINEER
DATE

CITY OF REDDING
PUBLIC WORKS DEPARTMENT

Prop 84 Storm Water Grant Program – California Street Alley LID Demonstration Project
JOB NO. 5112
BID SCH NO. XXXX
PROPOSED ALLEY

B-10

DATE: OCT 2013
SHEET 2 OF 2

DRAINAGE AREA

ROOFTOP AREA	78,807 SF	
ALLEY AREA	21,207 SF	
PARKING STRUCTURE AREA	70,894 SF	
TOTAL DRAINAGE AREA	170,908 SF	(3.92 ACRES)

PROJECT AREA

CATCHMENT AREA

DIRECTION OF STORM WATER FLOW

REDUCED PLANS

ORIGINAL SCALE IN INCHES 0 1 2

DESIGNED BY C. VANDIVER

DRAWN BY D. MARUNDEE

CITY OF REDDING RECORD DRAWING

DATE

PROFESSIONAL ENGINEER CHARLES L. VANDIVER No. 67812 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

DESIGNED BY:

PROJECT ENGINEER

DATE

CITY OF REDDING

PUBLIC WORKS DEPARTMENT

Prop 84 Storm Water Grant Program – California Street Alley LID Demonstration Project

JOB NO. 5112

BID SCH NO. XXXX

DRAINAGE AREA

B-11

DATE: FEB 2014

SHEET 3 OF 3

Prepared for

City of Redding

Stormwater Resource Plan

Appendix C – Stakeholder Involvement

Redding, CA

Prepared by

Geosyntec consultants

engineers | scientists | innovators

924 Anacapa Street, Suite 4A
Santa Barbara, CA 93101

Geosyntec Project #: LA0443

October 2018

TABLE OF CONTENTS

SECTION 1 . Identification of Stakeholders C-2

SECTION 2 . Stakeholder Involvement Records C-3

SECTION 3 . Outreach Plan C-10

SECTION 4 . Stakeholder Presentations C-11

SECTION 1. IDENTIFICATION OF STAKEHOLDERS

Table C-1 shows the list of SWRP stakeholders and their contact information. This stakeholder list will be expanded as additional stakeholders become involved in the process.

Table C-1. SWRP Stakeholders (Updated May 1, 2018)

Type	Affiliation	Contact Name	Contact Information
City/County	City of Anderson		
	City of Shasta Lake	Mark Juarez	mjuarez@cityofshastalake.org
	County of Shasta Health and Human Services Agency	Amy Pendergast	apendergust@co.shasta.ca.us
	County of Shasta Public Works	Charleen Beard	cbeard@co.shasta.ca.us
Special Districts	Western Shasta Resource Conservation District	Chesla Anderson	chesla@westernshastarcd.org
	Shasta Mosquito and Vector Control District	Peter Bonkrude	pbonkrude@shastamosquito.org
Other Public Agencies	Caltrans	Wes Faubel	wesley.faubel@dot.ca.gov
		Miguel Villicana	Miguel.villicana@dot.ca.gov
	CVRWQCB	Dani Berchtold	Dannas.Berchtold@waterboards.ca.gov
	Shasta College	Susan Wyche	swyche@ShastaCollege.edu
		John Yu	zyu@shastacollege.edu
Non-Governmental Organizations	Shasta Environmental Alliance*	David Ledger	dledger@sbcglobal.net
	Sierra Club	John Livingston	livingstonjohn@att.net
	Audubon	Janet Wall	lawmillville@frontiernet.net
	Shasta MRCD		
	Shasta Living Streets*	Anne Thomas	athomas@shastalivingstreets.org
Private Citizen		Gary Cadd	gdcadd@charter.net
	Sharrah Dunlap Sawyer, Inc.	Kristen Reagan	kreagan@sdsengineering.com
* nonprofit organizations working on stormwater and dry weather resource planning or management in the watersheds			

SECTION 2. STAKEHOLDER INVOLVEMENT RECORDS

This section contains relevant records relating to stakeholder involvement in the SWRP. Figure C-1 through Figure C-3 contain advertisements for the three stakeholder meetings. Figure C-4 through Figure C-6 show the sign-in sheets for the three stakeholder meetings.

CERTIFICATE OF PUBLICATION
RECORD SEARCHLIGHT

REDDING CITY PUBLIC WORKS
STEPHANIE MCCOLLUM
777 CYPRESS AVE

REDDING CA 96001

REFERENCE: 550000 2018
1877463

State of California
County of Shasta

I hereby certify that the Record Searchlight is a newspaper of general circulation within the provisions of the Government Code of the State of California, printed and published in the city of Redding, County of Shasta, State of California; I am the principal clerk of the printer of said newspaper; that the notice of which the annexed clipping is a true printed copy was published in said newspaper on the following dates, to wit;

FILED ON:01/08/18

PUBLISHED ON:
01/07/2018, 01/09/2018

A Public Meeting for the City of Redding's Storm Water Resource Plan is set for January 11, 2018, 4:30pm to 6:30pm in the Community Room, 777 Cypress Ave, Redding.

A watershed-based (or sub-watershed based) Storm Water Resource Plan (SWRP) is required as a condition of receiving funding of storm water and dry weather runoff capture projects funded partially or entirely with state funds. The SWRP provides a watershed-based approach to storm water management, seeking to replicate natural hydrology and watershed processes. These watershed-based approaches yield multiple water quality benefits by reducing the volume of runoff delivered to receiving waters, thus reducing the pollutants discharged. Watershed-based approaches to storm water management also yield non-measurable social and community benefits that traditional projects do not provide.

The City of Redding will hold this meeting to receive public input on the preparation of a SWRP. Public input from this meeting will inform the development of the SWRP, and help identify potential projects to augment water supply; protect storm water quality; and provide flood management, environmental, and/or community benefits. For information about this meeting and how to provide public comment, contact Mieke Sheffield at msheffield@cityofredding.org or (530)225-4889.

January 7, and 9, 2018 1877463

I certify under penalty of perjury that the foregoing is true and correct, at Redding, California on the above date.

RECORD SEARCHLIGHT
1101 Twin View Blvd, Redding, CA 96003

Figure C-1. SWRP Stakeholder Meeting on January 11 - Advertisement

CERTIFICATE OF PUBLICATION
RECORD SEARCHLIGHT

REDDING CITY OF
PURCHASING DEPARTMENT REDDING CITY OF
777 CYPRESS AVE

REDDING CA 96001

REFERENCE: 553832 2018
1897098

State of California
County of Shasta

I hereby certify that the Record Searchlight is a newspaper of general circulation within the provisions of the Government Code of the State of California, printed and published in the city of Redding, County of Shasta, State of California; th. I am the principal clerk of the printer of said newspaper; that the notice of which the annexed clipping is a true printed copy was published in said newspaper on the following dates, to wit;

FILED ON:02/21/18

PUBLISHED ON:
02/21/2018, 02/25/2018, 02/27/2018

The second Public Meeting for the City of Redding's Storm Water Resource Plan is set for March 1, 2018, 4:30pm to 6:30pm in the Community Room, 777 Cypress Ave, Redding.

A watershed-based (or sub-watershed based) Storm Water Resource Plan (SWRP) is required as a condition of receiving funding of storm water and dry weather runoff capture projects funded partially or entirely with state funds. The SWRP provides a watershed-based approach to storm water management, seeking to replicate natural hydrology and watershed processes. These watershed-based approaches yield multiple water quality benefits by reducing the volume of runoff delivered to receiving waters, thus reducing the pollutants discharged. Watershed-based approaches to storm water management also yield non-measurable social and community benefits that traditional projects do not provide.

The City of Redding will hold this meeting to receive public input on draft conceptual projects and benefit prioritization (water supply, storm water quality, flood management, environmental benefits, community benefits). For information about this meeting and how to provide public comment, contact Mieke Sheffield at msheffield@cityofredding.org or (530)225-4889.

February 21, 25, 27, 2018 1897098

RECEIVED
MAR 01 2018
PURCHASING

I certify under penalty of perjury that the foregoing is true and correct, at Redding, California on the above date.

JB

RECORD SEARCHLIGHT
1101 Twin View Blvd, Redding, CA 96003

Figure C-2. SWRP Stakeholder Meeting on March 1 – Advertisement

Record Searchlight

PART OF THE USA TODAY NETWORK

PROOF OF PUBLICATION

A Public Meeting for the City of Redding's Storm Water Resource Plan is set for June 6, 2018, 4:30pm to 6:30pm in the Community Room, 777 Cypress Ave, Redding.

A watershed-based (or sub-watershed based) Storm Water Resource Plan (SWRP) is required as a condition of receiving funding of storm water and dry weather runoff capture projects funded partially or entirely with state funds. The SWRP provides a watershed-based approach to storm water management, seeking to replicate natural hydrology and watershed processes. These watershed-based approaches yield multiple water quality benefits by reducing the volume of runoff delivered to receiving waters, thus reducing the pollutants discharged. Watershed-based approaches to storm water management also yield non-measurable social and community benefits that traditional projects do not provide.

The City of Redding will hold this meeting to receive public input on the draft SWRP. For information about this meeting and how to provide public comment, contact Mieke Sheffield at msheffield@cityofredding.org or (530)225-4889.
Pub: May 30/June 6, 2018 #2015478

REDDING CITY OF
PURCHASING DEPARTMENT REDDING CITY OF
777 CYPRESS AVE
REDDING, CA 96001

STATE OF WISCONSIN, COUNTY OF BROWN

I hereby certify that the Record Searchlight is a newspaper of general circulation within the provisions of the Government Code of the State of California, printed and published in the city of Redding, County of Shasta, State of California; that I am the principal clerk of the printer of said newspaper; that the notice of which the annexed clipping is a true printed copy was published in said newspaper on the following dates, to wit;

May 30, 2018
June 6, 2018

such newspaper was regularly distributed to its subscribers during all of said period.

Erin Oettinger
Legal Clerk

RECEIVED
JUN 18 2018
PURCHASING

Subscribed and sworn to before on June 6, 2018:

Vicky Felty
Notary, State of WI, County of Brown

9-19-21
My commission expires

VICKY FELTY
NOTARY
PUBLIC
STATE OF WISCONSIN

Ad#: 2015478
P.O.:
# of Affidavits: 0

Figure C-3. SWRP Stakeholder Meeting on June 6 - Advertisement

SWRP Stakeholder Meeting 011118

Name	Affiliation	Email	Phone Number
Les Faulkner	CALTRANS	wfaulkner@dot.ca.gov	530-225-3412
David Ledyard	Shasta Environmental Alliance	dledyard@sbcglobal.net	530-355-8542
Susan Wyche	Shasta College	swyche@shastacollege.edu	242-7566
Tom Livingston	Sierra Club	livingstonjohn@att.net	530-356-8847
Charleen Beard	Shasta County	cbeard@co.shasta.ca.us	245-6806
Peter Bonkrude	Shasta MVCD	pbonkrude@shastamosquitos	530-365-3768
Amy Rendergast	Shasta HHSA	arendergast@co.shasta.ca.us	229-8243
Janet Wall	Audubon	iawn.llville@frontiernet.net	547-1189
Chris Anderson	NSRCD	chris@westernshasharcd.org	530-776-8322
Amber Kelley	COR		530-225-4044
Anne Thomas	Shasta Living Streets		

Figure C-4. Sign-in Sheet for Stakeholder Kickoff Meeting on 1/11/2018

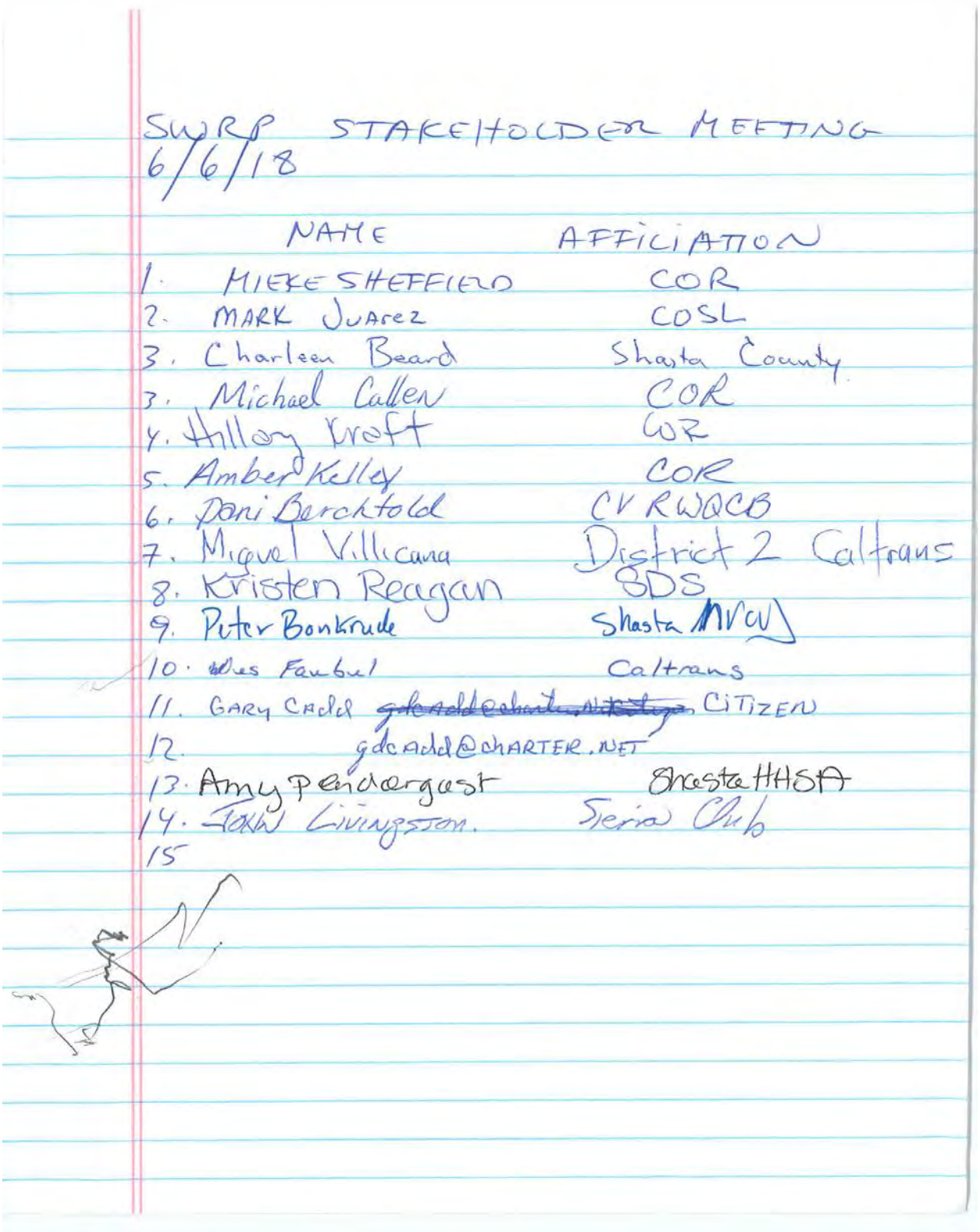
SWRC Stakeholder Meeting

March 1, 2018

#2

NAME	AFFILIATION
David Ledyard	Shasta Environmental Alliance Shasta Chapter, CNPS
Wes Faubel	Caltrans #225-3412
Charlene Beard	Shasta County - DPW
Susan Wyche	Shasta College
John Yu	Shasta College
John Livingston	Sierra Club
Amber Kelley	COR

Figure C-5. Sign-in Sheet for Second Stakeholder Meeting on 3/1/2018



SWRP STAKEHOLDER MEETING
6/6/18

	NAME	AFFILIATION
1.	MIEKE SHEFFIELD	COR
2.	MARK JUAREZ	COSL
3.	Charleen Beard	Shasta County
3.	Michael Callen	COR
4.	Hillary Kroft	UR
5.	Amber Kelley	COR
6.	Doni Berchtold	CV RWQCB
7.	Miguel Villicana	District 2 Caltrans
8.	Kristen Reagan	SDS
9.	Peter Bonkrude	Shasta MVCW
10.	Wes Faubel	Caltrans
11.	GARY CADDA ~~gdcadd@charter.net~~	CITIZEN
12.	gdcadd@CHARTER.NET	
13.	Amy Pendergast	Shasta HHSA
14.	John Livingston.	Sierra Club
15		

Figure C-6. Sign-in Sheet for Third Stakeholder Meeting on 6/6/2018

SECTION 3. OUTREACH PLAN

Prepared for

Outreach, Education, and Engagement Plan for the Redding Stormwater Resource Plan

Redding, CA

Prepared by

Geosyntec consultants

engineers | scientists | innovators

924 Anacapa Street, Suite 4A
Santa Barbara, CA 93101

Geosyntec Project Number: LA0443

November 2017

TABLE OF CONTENTS

Table of Contents 1
Appendices 1
1 Introduction 1
2 Benefits To Stakeholders 1
3 Engagement In Technical And Policy Issues 1
4 Facilitating Public Participation 2
4.1 Key Assumptions of the Outreach Plan 2
4.2 Stakeholder Identification and Inclusion 2
5 Engaging Communities In Project Design And Implementation 2
5.1 First Stakeholder Meeting 2
5.1.1 Agenda for the First Stakeholder Meeting 3
5.2 Second Stakeholder Meeting 3
5.2.1 Agenda for the Second Stakeholder Meeting 3
5.3 Third Stakeholder Meeting 3
5.3.1 Agenda for third Stakeholder Meeting 3
6 Disadvantaged And Climate Vulnerable Communities 4
6.1 Runoff-Related Environmental Injustice Issues 4
7 Schedule For Initial Public Engagement And Education 4
8 How To Get Involved 5

APPENDICES

Appendix A – Initial Stakeholders (as of November 28, 2017)

1 INTRODUCTION

This Stakeholder Outreach, Education, and Engagement Plan (Outreach Plan) fulfills the purpose of providing an outline of the public engagement and education opportunities associated with the development of the Redding Stormwater Resource Plan (SWRP) through a Proposition 1 State Water Resources Control Board Grant. A Stakeholder is an individual, group, coalition, agency, or other entity that is involved in, affected by, or has an interest in the implementation of the SWRP. This Outreach Plan establishes strategies for effective engagement meeting or exceeding the requirements for consultation of local agencies and nongovernmental organization (NGO) (Water Code Section 10565[a]) and community participation (Water Code Section 10562 [b][4]) in SWRP development and implementation.

2 BENEFITS TO STAKEHOLDERS

The SWRP will be designed to improve stormwater resource management across the City of Redding (City) in order to help water infrastructure systems adapt to climate change, provide priorities for infrastructure construction, and increase regional water self-reliance. This improved management will be accomplished through the identification, benefit quantification, and prioritization of the following types of projects within the SWRP study area: green infrastructure, rainwater and stormwater capture projects, and stormwater treatment facilities. All projects selected will result in a water supply, water quality, flood control, community, and/or environmental benefits to the City, therefore benefitting Stakeholders in reducing demand on stressed water supply, reducing pollutants of concern in water bodies, and/or restoring ecosystems. Stakeholders will be involved during the plan preparation, plan implementation, and project completion.

3 ENGAGEMENT IN TECHNICAL AND POLICY ISSUES

The City will work with a Technical Advisory Committee (TAC) (currently being assembled) to provide education and participation opportunities to engage the public when considering major technical and policy issues related to the development and implementation of the SWRP. Stakeholders provide valuable input into the planning process and inform potential project opportunities. In specific, the roles and responsibilities of the interested Stakeholders are:

1. Provide input into development of the SWRP
2. Attend public meetings
3. Recommend potential locations for project development
4. Provide local knowledge and input regarding conceptual project designs
5. Comment on Draft Sections of the SWRP
6. Provide letters of support for the SWRP and projects

4 FACILITATING PUBLIC PARTICIPATION

The City will conduct broad public education and engagement for the SWRP. Effective public involvement requires establishing trust, developing relationships, and cultivating communication channels between all participating parties. Every meeting is an opportunity to increase transparency and inclusivity as well as build partnership, and in that spirit, the Stakeholder list is always open to new Stakeholders. The Outreach Plan will utilize a variety of communication systems to disseminate information about the SWRP, in part relying on groups that have dedicated memberships and similar concerns and issues as those addressed in the SWRP. Public involvement will be sustained throughout the development of the SWRP with the intention of forming alliances that further the goals and sustainability of the SWRP and projects.

4.1 Key Assumptions of the Outreach Plan

Communication and outreach are two pillars upon which a successful, technically competent and inclusive Integrated SWRP rest. The SWRP development will be based on the following key assumptions.

1. The SWRP process is an open and transparent process and engages all entities in the dialogue on stormwater resource management throughout the City.
2. The SWRP must conform to CA State Water Resource Control Board Storm Water Resource Plan Guidelines.
3. The Public and Interested Stakeholders will review and comment at key times in the SWRP development and implementation.

4.2 Stakeholder Identification and Inclusion

Several key Stakeholders have presented an interest in participating in the SWRP process that represent a variety of interests including local ratepayers, developers, locally regulated commercial and industrial businesses, nongovernmental organizations, nonprofit organizations and the general public. Appendix A provides a list of initial Stakeholder that will be updated as other groups or individuals participate in the SWRP process.

5 ENGAGING COMMUNITIES IN PROJECT DESIGN AND IMPLEMENTATION

Public meetings are an established and effective mechanism to engage communities in planning efforts and projects. The following targeted Stakeholder meetings are designed to engage members of affected communities in project design and implementation.

5.1 First Stakeholder Meeting

During the first Stakeholder meeting, the City in coordination with Geosyntec will present parcel screening, prioritization, and conceptual projects. Stakeholders will be asked for input on proposed project sites, perspectives on benefit priorities, and to identify other potential locations for project

consideration. Stakeholders will also be consulted to incorporate local knowledge of potential implementation conflicts and take Stakeholder specific multiple benefit priorities into account when developing and ranking projects. Prior to this meeting, draft materials will be posted to the internet and distributed through available e-mail lists to provide opportunity for review before the meeting.

5.1.1 Agenda for the First Stakeholder Meeting

1. Project overview
2. Present draft parcel screening and prioritization
3. Request input on additional potential locations/projects for consideration

5.2 Second Stakeholder Meeting

During the second Stakeholder meeting the draft conceptual projects and multiple benefits will be presented. The stakeholders present during this meeting will provide comments and feedback, which may include restructuring the weighting of multiple benefits, re-prioritizing projects based on local benefits, and/or inclusion of necessary components to encourage implementation feasibility and long-term maintenance. The Stakeholders will also be consulted to discuss land ownership and acquisition, operation and maintenance responsibilities, and the community education and outreach required for each project. Prior to this meeting, draft materials will be posted to the internet and distributed through available e-mail lists to provide opportunity for review before the meeting.

5.2.1 Agenda for the Second Stakeholder Meeting

1. Present draft conceptual projects and benefit prioritization
2. Request input on additional potential locations/projects for consideration

5.3 Third Stakeholder Meeting

During the third Stakeholder meeting, the final project descriptions, benefits, and prioritization results will be presented. Prior to this meeting, a draft public SWRP will be posted to the internet and distributed through available e-mail lists to provide opportunity for review before the meeting. This step will help cultivate and develop partnerships required for SWRP implementation and long-term maintenance.

5.3.1 Agenda for third Stakeholder Meeting

1. Public draft SWRP

6 DISADVANTAGED AND CLIMATE VULNERABLE COMMUNITIES

The City of Redding has several economically disadvantaged communities (DAC) and economically distressed areas (EDA) based on the 2014 American Community Survey median household income by census block group. Disadvantaged areas have a median household income of less than 80% of the state's median household income, while severely disadvantaged areas have less than 60%. This corresponds to a median income below $49,191 in disadvantaged areas and below $36,893 in severely disadvantaged areas. Approximately 49 percent of the area (and 72 percent of the population) within the City is disadvantaged and 25 percent (or 36 percent of the population) is considered severely disadvantaged, with the severely disadvantaged area included as a subset of the disadvantaged area. For reference, the MHI the City of Redding is $43,773. Currently available information indicates that there are no climate vulnerable communities within the City of Redding. However, if Stakeholders demonstrate that they live in a climate vulnerable community, then special attention will be made regarding the inclusion of their area in the SWRP.

6.1 Runoff-Related Environmental Injustice Issues

The first step in effective outreach is to identify DACs that have an interest and stake in the planning outcome. This is accomplished by developing and maintaining a comprehensive listing of disadvantaged community representatives, and as applicable, community organizations, environmental stewardships organizations, and advocacy groups as part of the overall project stakeholder list. The City will build on the existing list of environmental and community stakeholders and identify additional stakeholders for inclusion on the list. With participation from DAC community representatives at the public workshops, there will be opportunities to identify and address specific runoff-related environmental injustice issues.

7 SCHEDULE FOR INITIAL PUBLIC ENGAGEMENT AND EDUCATION

Ongoing communication with the public will be conducted through emails and publicly posted meeting announcements and draft deliverables on the City website. Below is a summary of key milestones for public engagement and education in the initial SWRP development phase of the project.

8 HOW TO GET INVOLVED

Outreach and stakeholder identification will be conducted through focused phone calls, emails, and public notices. Public notice will be provided via fliers, posters, newspapers and newsletters, social media, and/or websites. All outreach will be documented with sign-in sheets, meeting photographs, website and flyer examples, and meeting notes.

Individuals interested in participating in the SWRP process should contact Mieke Sheffield. Ms. Sheffield can be reached via:

email: msheffield@ci.redding.ca.us

address: 777 Cypress Avenue, Redding, CA 96001

telephone: (530) 225-4889

All comments shall be submitted to Mieke Sheffield according to the schedule above.

Appendix A – Initial Stakeholders

Updated November 28, 2018

Several key Stakeholders have presented an interest in participating in the SWRP process that represent a variety of interests including local ratepayers, developers, locally regulated commercial and industrial businesses, nongovernmental organizations, nonprofit organizations and the general public. The below list of participating Stakeholders serves as an initial list that will be updated with any other groups or individuals that present an interest in participating in the SWRP process.

Type	Affiliation
City/County	City of Anderson
	City of Shasta Lake
	County of Shasta Health and Human Services Agency
	County of Shasta Public Works
Special Districts	Western Shasta Resource Conservation District
	Shasta Mosquito and Vector Control District
Other Public Agencies	Caltrans
	Shasta College
Non- Governmental Organizations	Shasta Environmental Alliance*
	Sierra Club
	Audubon
	Shasta MRCD
	Shasta Living Streets*
* nonprofit organizations working on stormwater and dry weather resource planning or management in the watersheds	

SECTION 4. STAKEHOLDER PRESENTATIONS

Geosyntec consultants

City of Redding Stormwater Resource Plan

Stakeholder Kickoff Meeting

January 11, 2018

Discussion Topics

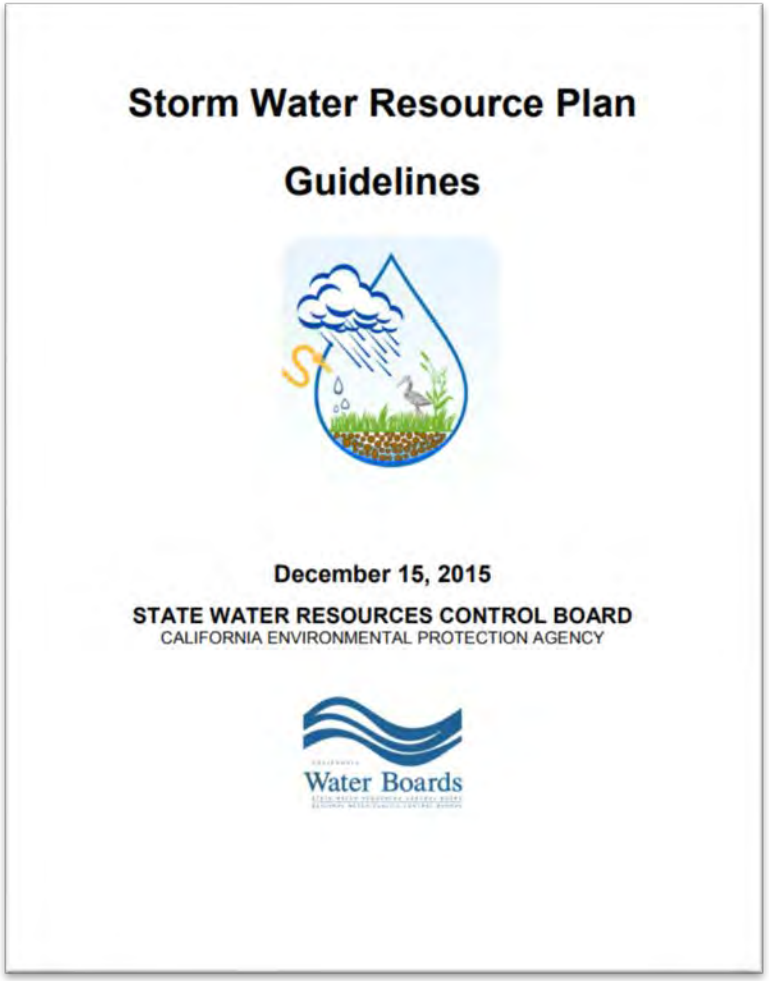
- Stormwater Resource Plan (SWRP) project goals
- SWRP project collaboration
- Identification and Prioritization of Projects
- Wrap up

Stormwater Resource Plan
Project Goals

Geosyntec consultants

SWRP Background

- Senate Bill (SB) 985, the Stormwater Resources Planning Act
  - requires development of a Storm Water Resource Plan to receive grant funds
- The Water Quality, Supply, and Infrastructure Improvement Act (Proposition 1)
  - provides $200 million for matching grants


Storm Water Resource Plan

Guidelines

December 15, 2015

STATE WATER RESOURCES CONTROL BOARD
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

Water Boards

SWRP Requirements

- Identify watershed and subwatersheds
- Identify pollutant sources
- Consistent with other plans and permits
- Prioritize project based on multiple benefits
- Community participation
- Submit to Integrated Regional Water Management (IRWM) Group

Table 3. Benefit Metrics

Benefit	Example	Metric Unit(s)
Water Quality *while contributing to compliance with applicable permit and/or TMDL requirements*	Increased filtration and/or treatment of runoff Nonpoint source pollution control Reestablished natural water drainage and treatment	**Pollutant Load Reduction** pounds (lbs)/day kilograms (kg)/day milligram/Liter microgram /Liter most probable number of bacteria or indicator organisms (mpn)/mL **Volume Treated** million gallons per day (mgd) acre-feet per year (afy)
Water Supply *through groundwater management and/or runoff capture and use.*[11]	Water supply reliability Water conservation Conjunctive use	**Volume Captured** *in terms of augmentation/replacement of water supply, or reduced dependence on imported water* million gallons per day (mgd) acre-feet per year (afy) **Cost** dollars per volume per year (of augmented water supply)
Flood Management	Decreased flood risk by reducing runoff rate and/or volume Reduced sanitary sewer overflows	**Rate, Volume, and/or Size** cubic feet per second (cfs) acre-feet (af) cubic feet (cf) acres or linear feet
Environmental	Environmental and habitat protection and improvement, including: - wetland enhancement/creation; - riparian enhancement; and/or - instream flow improvement	**Size and/or Rate** acres cubic feet per second (cfs) carbon sequestration (megagrams of carbon per area)
Environmental ***(continued)***	Increased urban green space Reduced energy use, greenhouse gas emissions, or provides a carbon sink Reestablishment of the natural hydrograph Water temperature improvements	**Other**[12] area units of landscape and buffer measure of improved hydrology number of biotic structure number of physical structures reduced temperature (degrees)
Community	Enhanced and/or created recreational and public use areas Community involvement Employment opportunities provided	**Size** size of population served number of people number of jobs acres

Primary Goals and Mission

Develop a forward-thinking SWRP that includes:

- Prioritizing water quality concerns
- Community education
- Identification of projects that bring value and benefit to the community
- Collaborative development
- Local project support
- Opportunities for future grant funding

The End Product

Prepared for

REDDING CALIFORNIA

Draft - Stormwater Resource Plan

Redding, CA

Prepared by

Geosyntec consultants

924 Anacapa Street, Suite 4A
Santa Barbara, CA 93101

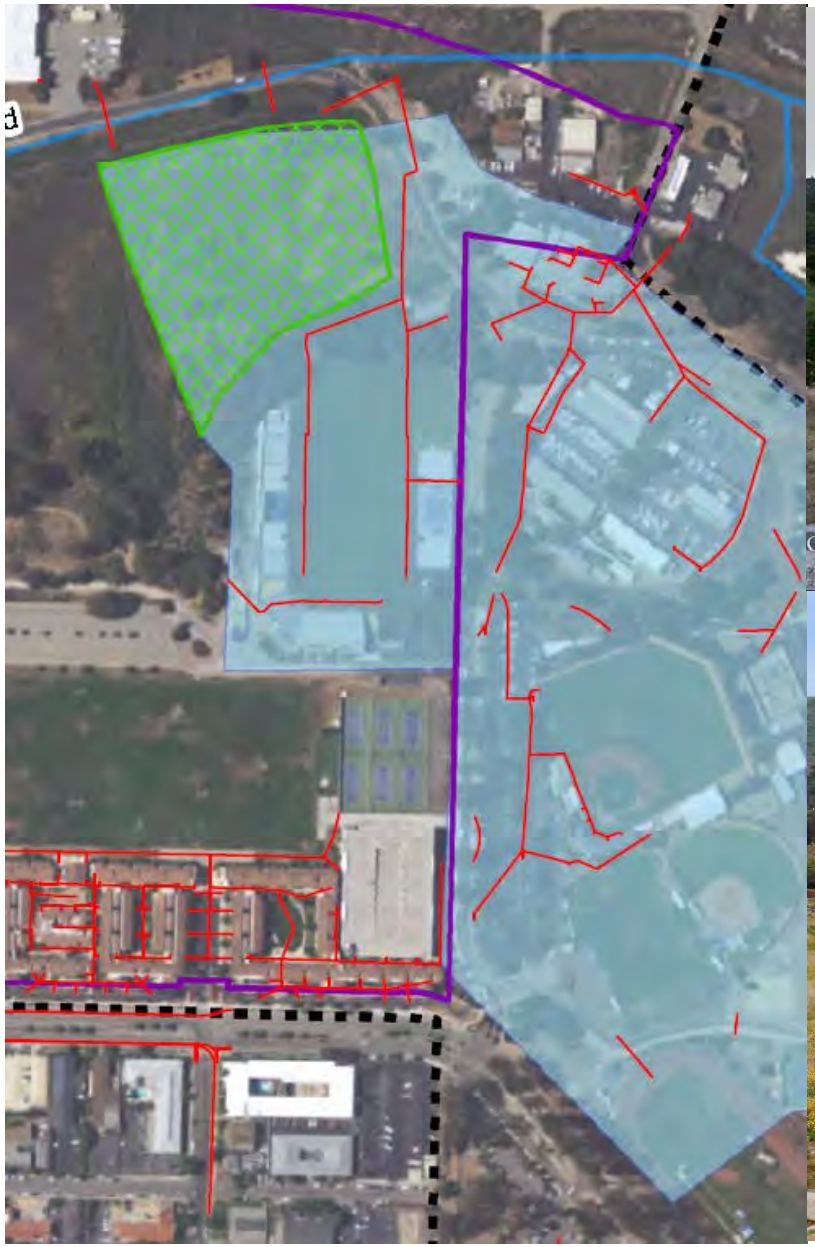
Geosyntec Project Number: LA0443

June 2018

- SWRP meeting all Water Code requirements and SWRP guideline recommendations
- Living plan that you can update in the future
- Carefully screened and prioritized parcels
- Project concepts ranked by multi-benefits

Example Project – Natural Treatment System

Example Project – Natural Treatment System

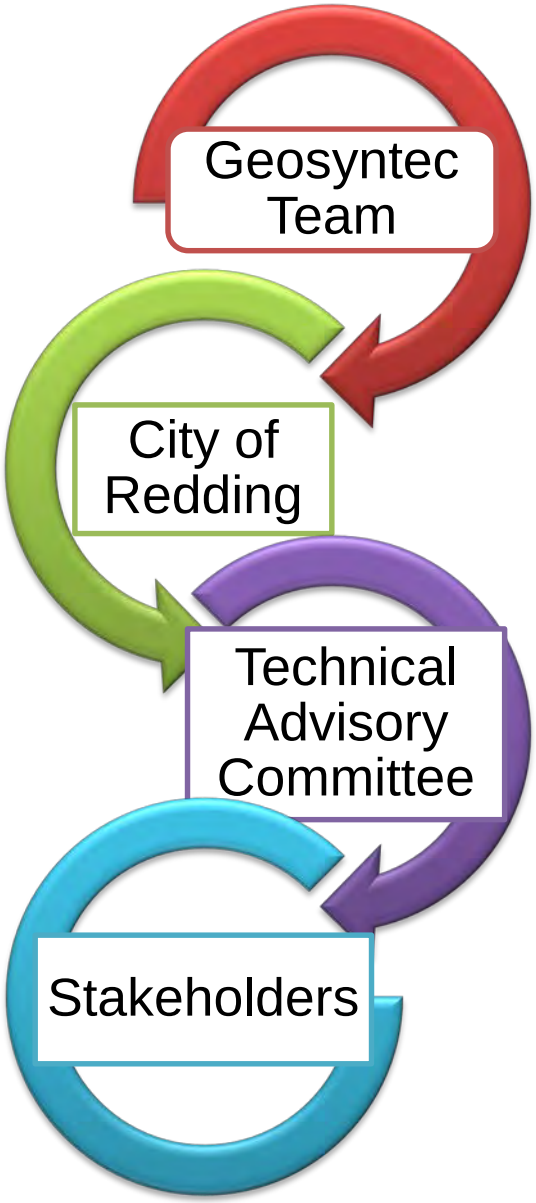


Example Projects – Creek Restoration

Stormwater Resource Plan Project Collaboration

Geosyntec consultants

Project Collaboration



- Develop SWRP
- Identify, design, model, & prioritize projects based on SWRP Guidelines and local priorities

- Manage SWRP development & State Grant Agreement
- Coordinate collaboration of stakeholders, TAC, and consultants

- Oversee & review SWRP development
- Direct project design & modeling priorities
- Engage with local stakeholders

- Provide local insight & feedback during SWRP development
- Recommend potential projects
- Comment on the public draft SWRP

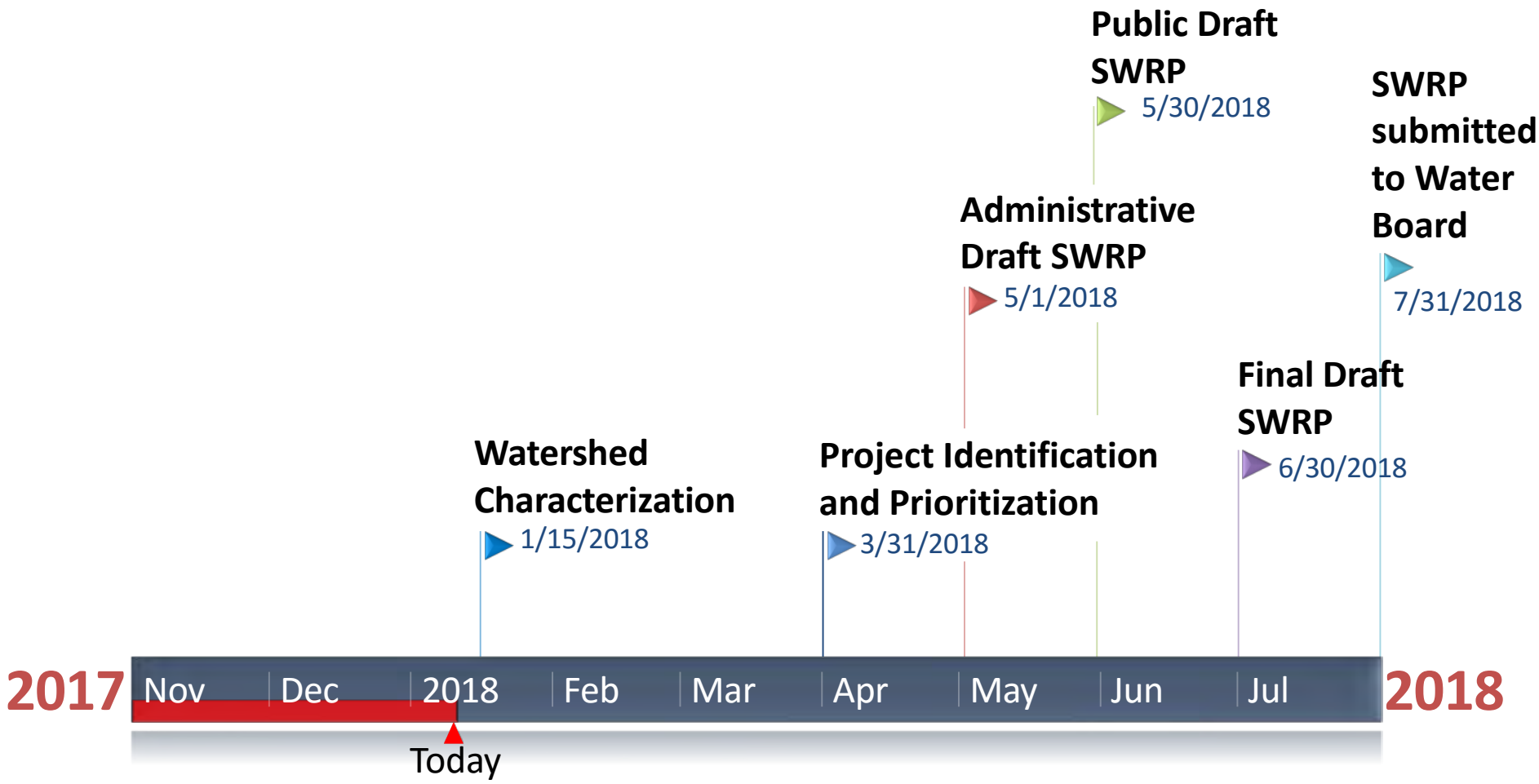
TAC Members

Affiliation	Primary Contact
Water Utility	Josh Watkins
Storm Drain Utility	Marty Wayne
Parks & Recreation	Joe Forseth-Deshais
Streets Department	Randy Campbell
Water Conservation	Jaclyn Kong
Planning	Paul Hellman
Storm Water Management	Jon Oldham

Stakeholder Meetings

- 1st Stakeholder Meeting – Week of 1/9/18
  - Project overview
  - Present draft parcel screening and prioritization
  - Request other potential locations/projects for consideration
- 2nd Stakeholder Meeting – March 2018
  - Present draft conceptual projects and benefit prioritization
  - Request other potential projects for inclusion
- 3rd Stakeholder Meeting – June 2018
  - Present public draft SWRP

Project Milestones



Identification and Prioritization of Projects

Geosyntec consultants

Project Types – Natural Treatment Systems

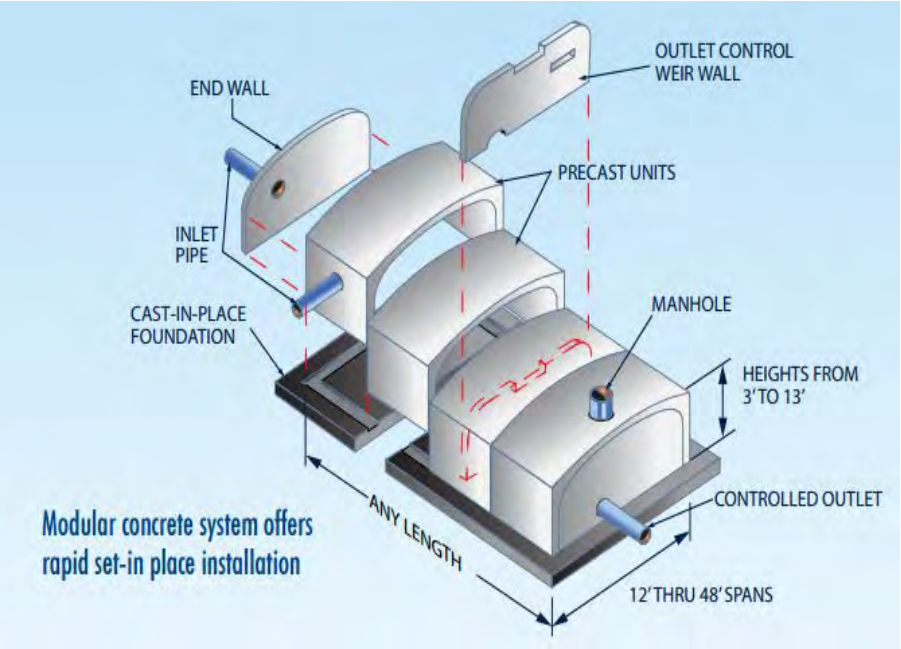
- Benefits
  - Cost effective
  - Pollutant removal
  - Recharge groundwater
  - Aesthetic improvements
- Constraints
  - Poor infiltrative soils
  - Significant space requirements

Project Types – Green Streets

- Benefits
  - High pollutant concentration removal
  - Community greening
  - Combined with planned street improvements
- Constraints
  - Space limited
  - Expensive to install

Project Types – Direct Use

- Benefits
  - Off-set potable water demand
  - Pollutant removal
  - Minimal footprint and installation constraints
- Constraints
  - Expensive to install, operate, and maintain
  - Need ongoing demand for water captured



Project Identification and Prioritization Approach

Screen and Prioritize Parcels

- 35,663 total parcels in the city
- 434 feasible parcels
- 3,927 feasible green streets
- 25 recommended parcels

Parcel Screening Results

Stakeholder Identified Projects

General Project Details

ID	Project Name	Proposed By	Public/ Private Parcel	Specific Location (Coor.)	Watershed	Project Description (Type)	Multiple Benefits (None, Med, High)					Notes
							Water Quality	Water Supply	Flood Management	Environmental	Community	

Conceptual Project Designs

Catchment	Acres of Land Use in BMP treatment area	Average Annual Percent Capture	Infiltration rate (in/hr)	Discharge rate (cfs)	BMP Depth (ft)	BMP storage capacity (cu ft)

Project Identification and Prioritization Approach

Screen and Prioritize Parcels

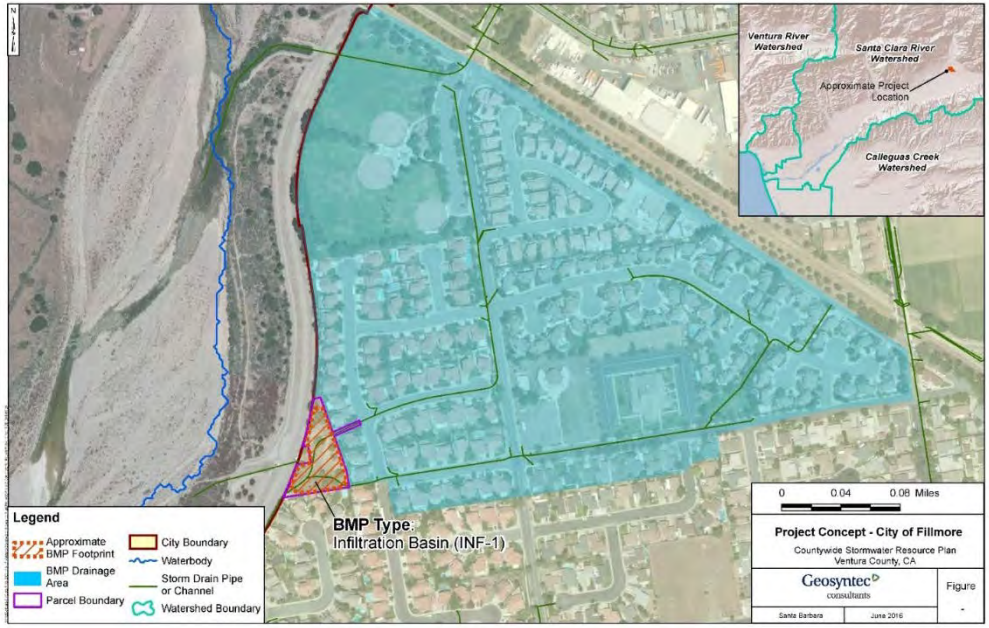
- 35,663 total parcels in the city
- 434 feasible parcels
- 3,927 feasible green streets
- 25 recommended parcels

Identify Potential Projects

- 4 conceptual designs
- Projects designed by TAC/Stakeholders

Conceptual Project Development

- For up to 4 projects
  - Identify ownership, project area, and pretreatment area
  - Delineate upstream drainage area
  - Determine conceptual design parameters (e.g., side slopes, depth, storage volume)



Project Identification and Prioritization Approach

Screen and Prioritize Parcels

- 35,663 total parcels in the city
- 434 feasible parcels
- 3,927 feasible green streets
- 25 recommended parcels

Identify Potential Projects

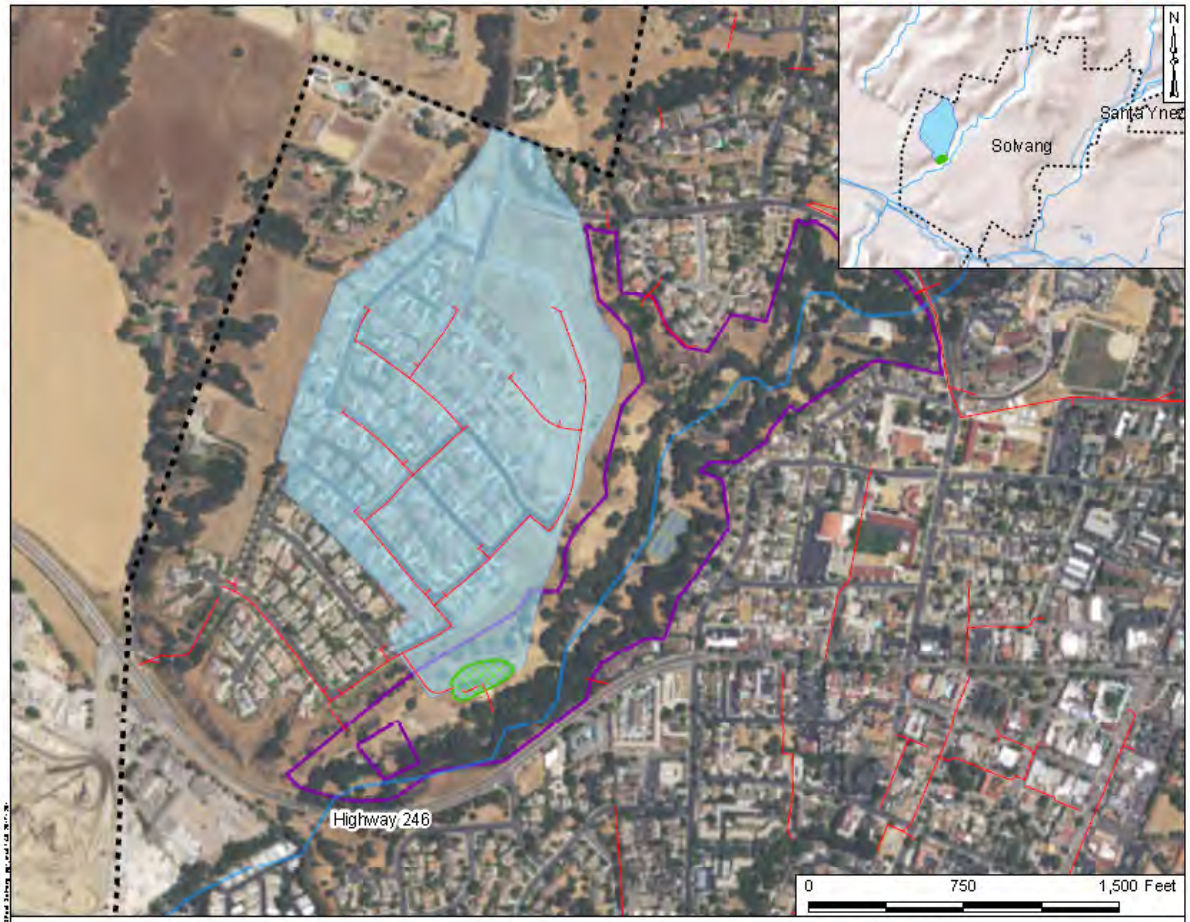
- 4 conceptual designs
- Projects designed by TAC/Stakeholders

Quantify Multiple Benefits

- Pollutant Reductions
- Groundwater Recharge
- Runoff Volume Remove
- Habitat Created

Conceptual Project Development – Template Sheet 1

DRAFT FOR DISCUSSION ONLY. DO NOT DISTRIBUTE.



Project Description

This project plans to revitalize existing stormwater infrastructure to allow for water quality treatment and recharge of groundwater. An existing detention basin is located at the southern end of Hans Christian Andersen Park located adjacent to the Skytt Mesa housing development. The proposed site receives stormwater from a 60-inch storm drain which collects runoff from a primarily residential, 64 acre drainage area. The existing detention basin will be deepened and expanded into an infiltration basin designed to store 140,000 cu-ft. The existing detention basin is owned and operated by the City of Solvang, and there is currently a Lighting and Landscape Maintenance Division (LLMD) in place for the residential neighborhood that includes maintenance of the basin.

Potential Site Constraints:

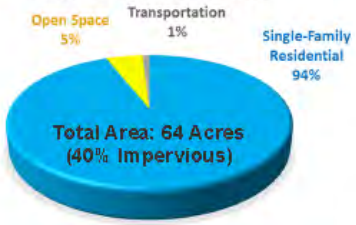
Vegetation in the basin area should be inspected prior to finalizing the project design to confirm no oak or other protected species are present.

Example Infiltration Basin (proposed concept)

Legend

- Waterbody
- Storm Drain
- BMP Drainage Area
- BMP Footprint
- Parcel Boundary
- City/County Unincorporated

Project Drainage Area



Project Overview

Parcel Ownership	City of Solvang
APN	137-670-001
Soil Type	Hydrologic Soil Group A
Watershed	Santa Ynez
Groundwater Basin	Santa Ynez River Valley
Jurisdiction(s)	City of Solvang

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Infiltration Basin Project Concept
Hans Christian Andersen Park
City of Solvang

Santa Barbara County-wide
Integrated Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | December 2017

Figure **7a**

Conceptual Project Development – Template Sheet 2

DRAFT FOR DISCUSSION ONLY. DO NOT DISTRIBUTE.

Legend

- Waterbody
- Storm Drain
- Flow Diversion
- BMP Footprint
- Parcel Boundary
- Direction of Flow

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Project Design Information

BMP Type	Infiltration Basin
Total Project Footprint	1.1 acres (includes 12,000 sq ft pretreatment)
Depth	5.0 ft (includes 1 ft freeboard)
Storage Volume	3.2 ac-ft
Assumed Infiltration Rate	1.0 in/hr
Stormwater Source	60 inch RCP storm drain owned by City of Solvang

Project Benefits

All benefits are expressed as an average annual estimate based on historical modeling.

Water Quality:

Drainage Area Pollutant Reductions	
TSS (lbs)	9,700
NO3 (lbs)	61
Dissolved Cu (lbs)	0.74
Fecal Coliform (MPN)	5.4

State impaired water list identified these pollutants as elevated in the receiving waters.

Water Supply:

Recharged Groundwater Volume
19 acre-feet

Equivalent Households Supplied

Flood Management: 29 acre-feet (74%) of runoff will be removed annually from the stormdrain system. All of the runoff generated from an 85th percentile 24-hr storm will be captured and infiltrated.

Environmental Enhancements: Infiltrated water will enhance the park greenspace and promote vegetation, increasing the habitat value.

Community Enhancements: Signage to educate public about the projects multiple benefits; and native vegetation and landscaping will improve the aesthetics of the parcel.

Design Criteria

	85th Percentile, 24-hr Storm	Long-Term Average Annual
Precipitation (in)	1.18	16.8
Runoff Volume (ac-ft)	2.7	39
Percent of Runoff Volume Captured (%)	**>100**	**74**
Total Volume Captured (ac-ft)	**2.7**	**29**

Infiltration Basin Project Concept
Hans Christian Andersen Park
City of Solvang

Santa Barbara County-wide
Integrated Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | December 2017

Figure 7b

Project Identification and Prioritization Approach

Screen and Prioritize Parcels

- 35,663 total parcels in the city
- 434 feasible parcels
- 3,927 feasible green streets
- 25 recommended parcels

Identify Potential Projects

- 4 conceptual designs
- Projects designed by TAC/Stakeholders

Quantify Multiple Benefits

- Pollutant Reductions
- Groundwater Recharge
- Runoff Volume Remove
- Habitat Created

Prioritize Projects

- Multiple Benefits
- Willing Land Owner
- Commitment to Maintenance

Wrap up

Geosyntec consultants

Primary Goals and Mission

Develop a forward-thinking SWRP that includes:

- Prioritizing water quality concerns
- Community education
- Identification of projects that bring value and benefit to the community
- Collaborative development
- Local project support
- Opportunities for future grant funding

Stakeholder Roles and Responsibilities

- Attend Stakeholder meetings
- Provide input into development of the SWRP and projects
- Recommend potential projects
- Comment on the public draft SWRP
- Provide letters of support for the conceptual projects

Stakeholder Actions Needed

- Provide projects for desktop evaluation (1/18)
- Next Stakeholder meeting (March 2018)

Group Discussion

Mieke Sheffield
City of Redding
Storm Water Management Program Coordinator
msheffield@ci.redding.ca.us

Avery Blackwell
Geosyntec Project Manager
ablackwell@geosyntec.com

Geosyntec consultants

City of Redding Stormwater Resource Plan

Stakeholder Meeting #2

March 1, 2018

Discussion Topics

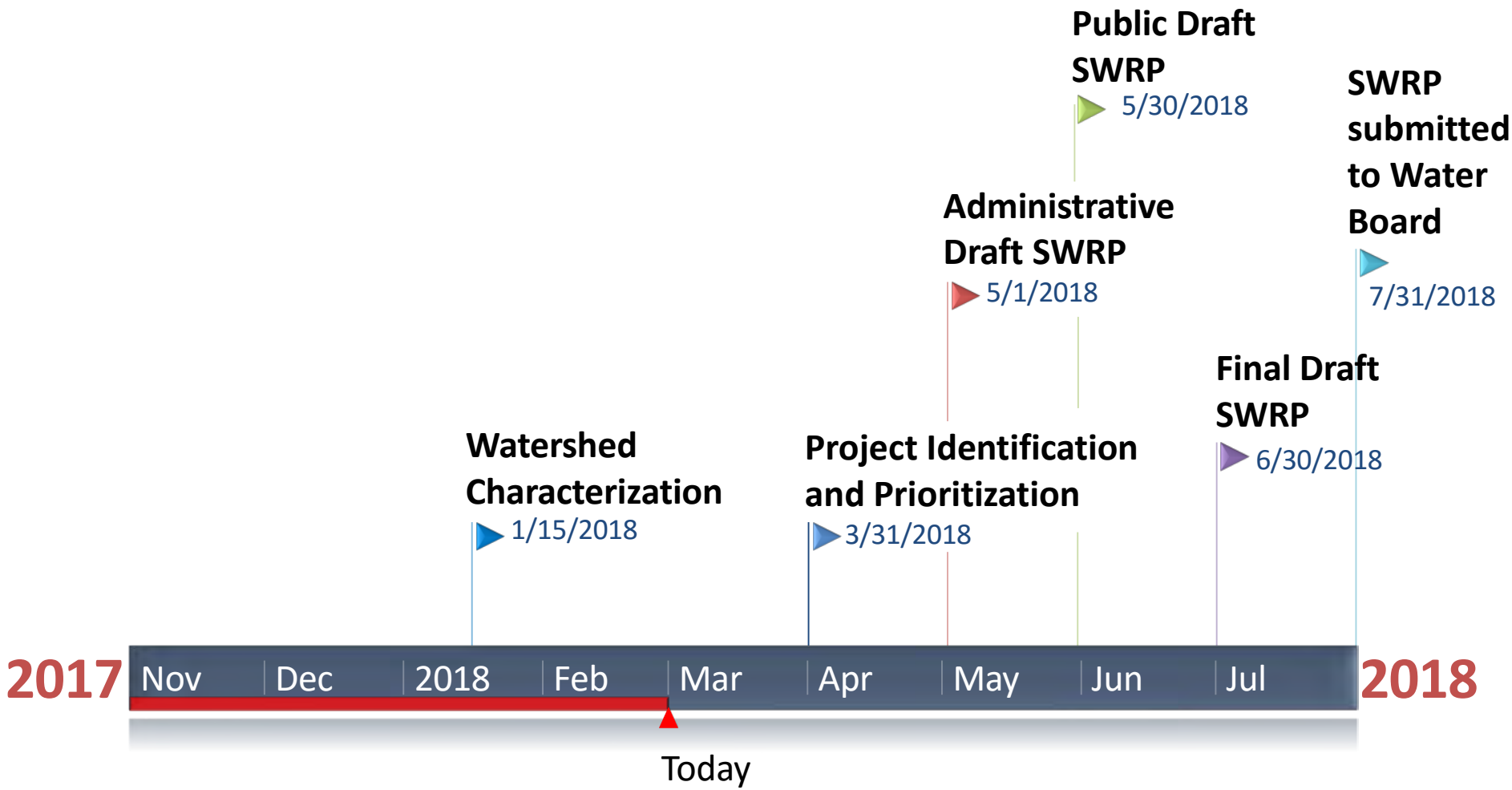
- Stakeholder Involvement
- Project Identification and Prioritization
- Wrap up

Primary Goals and Mission

Develop a forward-thinking Stormwater Resource Plan (SWRP) that includes:

- Prioritizing water quality concerns
- Community education
- Identification of projects that bring value and benefit to the community
- Collaborative development
- Local project support
- Opportunities for future grant funding

Project Milestones

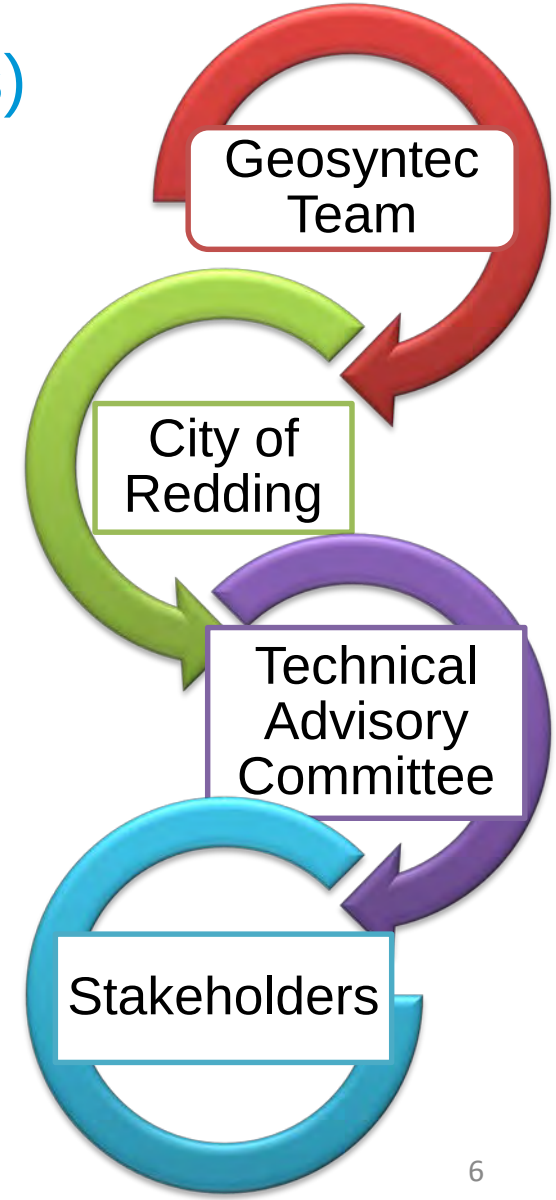


Stakeholder Involvement

Geosyntec consultants

1st Stakeholder Meeting Highlights

- Well Attended (over 10 participants)
  - Diverse group of stakeholders
- Good Discussion (over an hour)
  - General discussion of the plan
  - Lots of general project ideas
  - Green streets
- Lots of post meeting project ideas
  - 14 projects



Stakeholder List

Public Entities

- County of Shasta
  - Health and Human Services Agency
  - Public Works
- Shasta Mosquito and Vector Control District
- City of Anderson
- City of Shasta Lake
- Caltrans
- Shasta College

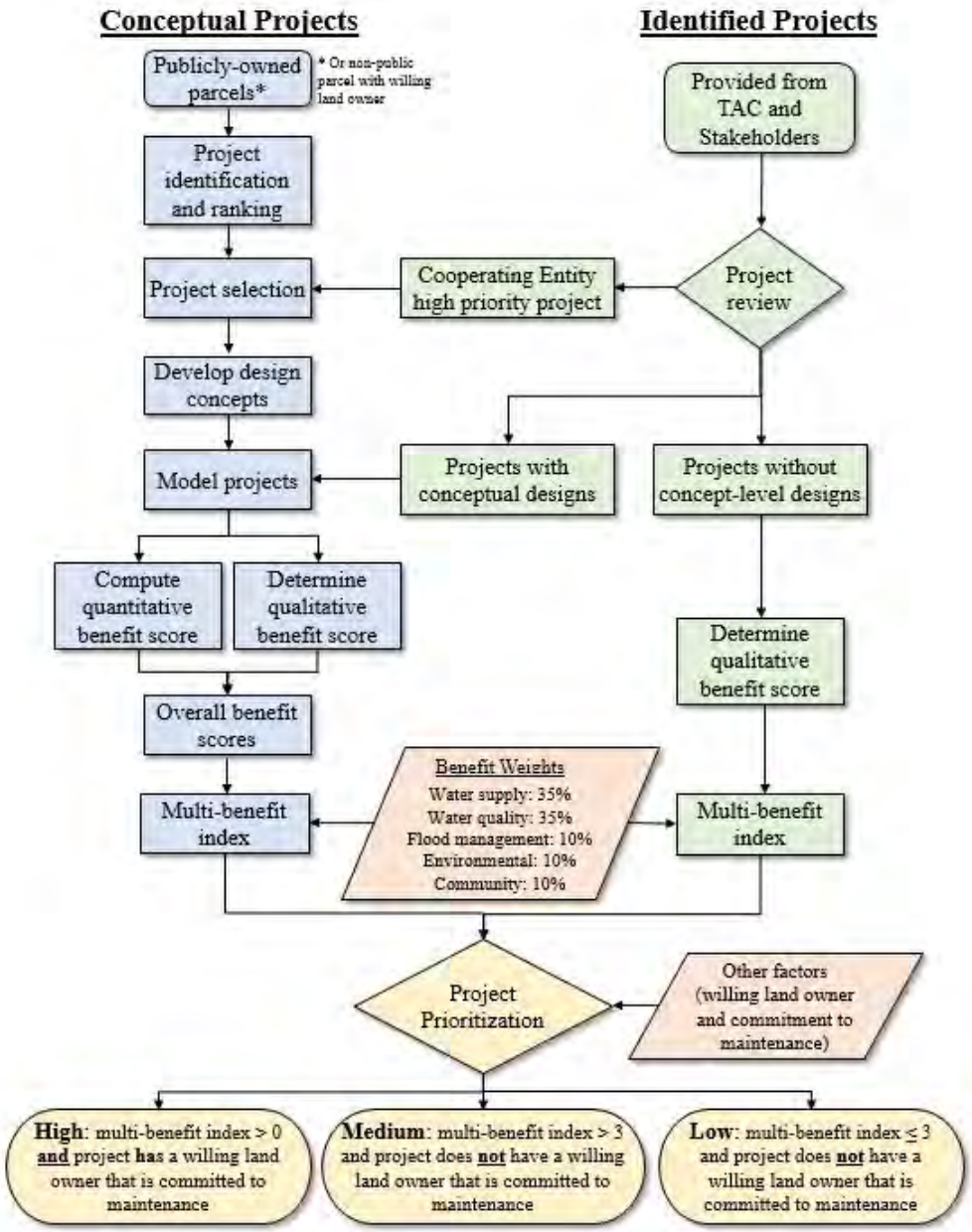
Non Governmental Organizations

- Western Shasta Resource Conservation District
- Shasta Environmental Alliance
- Sierra Club
- Audubon
- Shasta MRCD
- Shasta Living Streets

Project Identification and Prioritization

Geosyntec consultants

Project Identification and Prioritization Approach



Project Screening Criteria

Screening Criteria	Infeasible Constraint	Natural Treatment System	Direct Use	Green Streets
Parcels	Privately Owned*	X		X
Right of way	highways/freeways			X
Slope	>10%	X	X	X
Environmentally sensitive areas	ESAs	X	X	X
100-year floodplain boundary	within floodplain	X	X	X
Vernal Pools	within pools	X	X	X
Lakes	within 300 ft	X	X	X
Water wells	within 100 ft of production wells	X	X	X
soil or groundwater contamination	within 100 ft of a contaminated site	X		X
Remaining Usable Areas	< 0.25 acre or <150 ft	X	X	X
Storm Drains/channels	farther than 500 ft	X	X	
Near potential use parcel	farther than 500 ft		X	

*Except agriculture, religious facilities, golf courses, mortuaries, cemeteries, mausoleums, and parking lots

Project Screening Results

- 35,663 parcels in the city
- Feasible project
  - Natural Treatment Systems: 434
  - Direct Use: 365
  - Green Streets: 3,927

Project Ranking – GIS Analysis

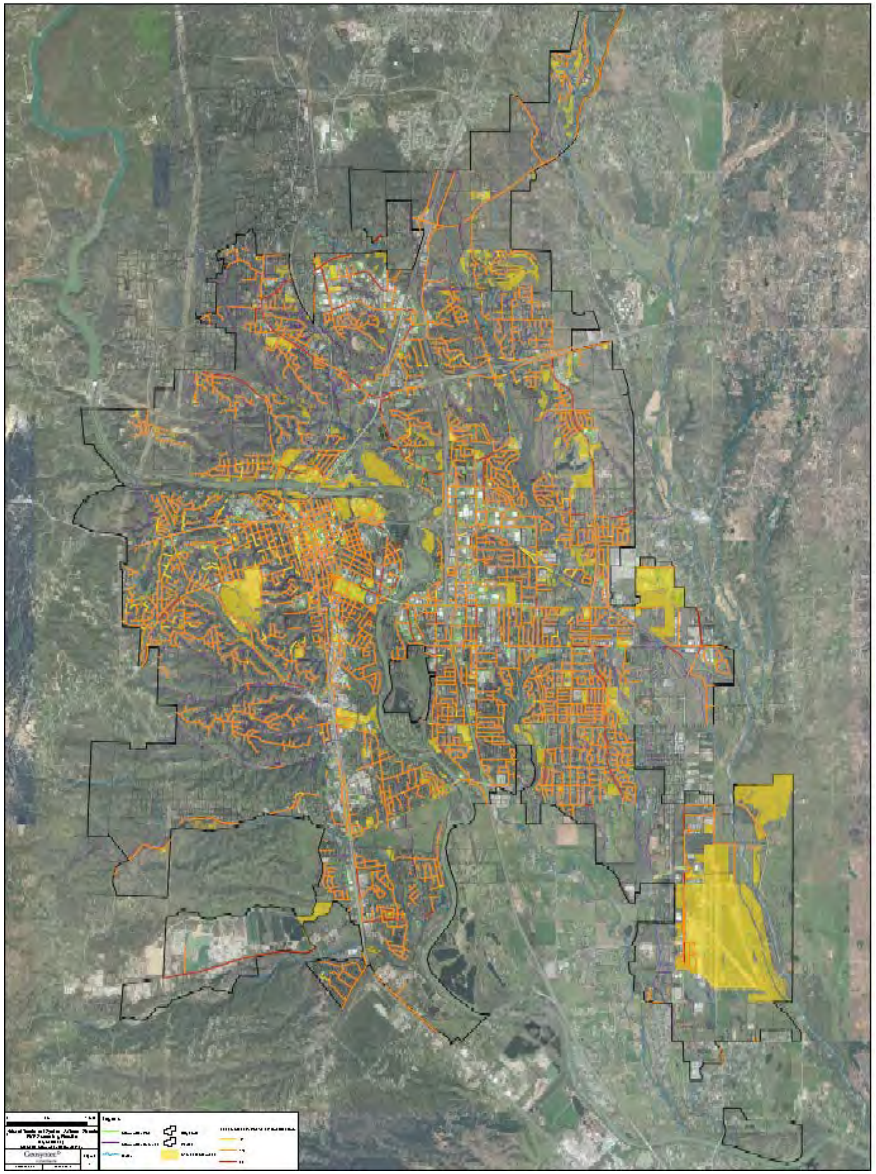
Metric	Metric Points			
	0	1	2	3
Imperviousness of useable area (%)	>75	50-75	25-50	<25
Slope in useable area	8-10%	4-8%	2-4%	0-2%
Ownership	Private		Other Public	City of Redding
Distance from source	300-500 ft	200-300 ft	100-200 ft	<100 ft
Onsite Septic Systems	Yes			No
Distance from planned subdivision (miles)	>1	0.25-1	<0.25	Touching
Size of storm drain	<18 inch or unknown	18-32 inch	32-42 inch	>42 inch
Size of useable area (acres or feet)	<.5 (< 1 block)	.5-1 (1 -2 blocks)	1-2	>2 (>2 blocks)
Soil Infiltration	D or unknown	C	B	A
Street Type	Local		Collector	Arterial

Project Ranking– GIS Analysis

Metric	Metric Weight		
	Natural Treatment System	Direct Use	Green Streets
Imperviousness of useable area (%)	5%	10%	
Slope in useable area	5%	10%	10%
Ownership	20%	20%	20%
Distance from source	10%	10%	
Onsite Septic Systems	10%		
Distance from planned subdivision (miles)	10%	20%	20%
Size of storm drain	10%	20%	
Size of useable area (acres or feet)	10%	10%	10%
Soil Infiltration	20%		20%
Street Type			20%
Total	100%	100%	100%

Project Review

- Google Earth kmz files
- A filterable spreadsheet of GIS prioritized parcels



Project Ranking – Desktop Evaluation

Prioritization Category for Usable Area	Category Definition		Metric Point	Metric Weight
Approx Drainage Area Size and % Urban	Extra-large (>5,000 acres)		3	30%
	Large (1,000 – 5,000 acres)	>50% Urban	3	
		10-50% Urban	2	
		<10% Urban	1	
	Medium (50 – 1,000 acres)	>75% Urban	3	
		25-75% Urban	2	
		<25% Urban	1	
	Small (<50 acres)	>75% Urban	2	
		25-75% Urban	1	
		<25% Urban	0	
	Extra-small (< 10 acres of Urban)		Fatal Flaw	
LPR Model Catchment Prioritization Score	5		3	10%
	4		2	
	3		2	
	2		1	
	1		0	
	0		0	
Trash Priority Land Use in Drainage Area	>50%		3	10%
	25-50%		2	
	0-25%		1	
	0		0	
Percent of Drainage Area within DAC/EDA	100% HUD		3	20%
	50-100% in HUD or 100% EDA		2	
	50-100% EDA		1	
	<50% in HUD or EDA		0	
BMP Implementability	Additional Benefits		3	30%
	No issues		2	
	Some issues		1	
	Fatal flaw		Fatal Flaw	

- Conducted for:
  - Top ranked GIS projects
  - Projects provided by the City, TAC, and Stakeholders
- 77 projects evaluated:
  - 18 NTS
  - 5 Direct Use
  - 14 Stream Restoration
  - 39 Green Streets

Project Ranked – Desktop Evaluation

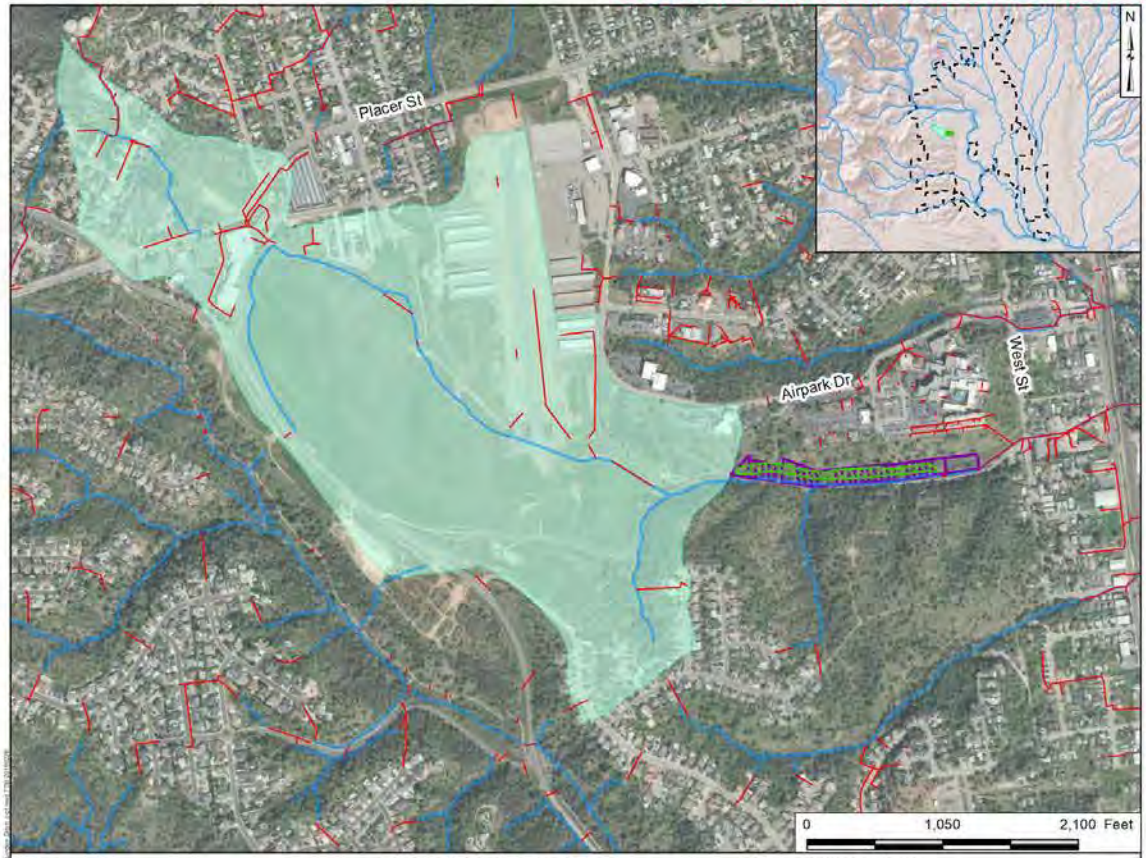
	A	B	C	N	O	P	Q	R	S	T	U
1				Prioritization Score							
2	Project Type	Treatment and Infiltration	Project ID	Drainage Area Size and % Urban	LPR Model CPI	Trash Priority Land Use	Project Benefits EDA	Implementability	Weighted Phase II Score	Weighted Phase I Score	Average Phase I and II Score
3	Direct Use		DU-1	3	2	3	3	2	2.6	2.7	2.7
4	NTS	Treatment	SHHSA-Trail	3	2	2	2	3	2.6	2.8	2.7
5	NTS	Treatment	Redding-Sewer-Ponds	3	2	2	2	3	2.6	2.1	2.3
6	NTS	Treatment	Redding-Sewer-Ponds	3	2	2	2	3	2.6	1.9	2.2
7	Stream Restoration	Treatment	Redding-Callaboose-Creek	3	2	2	3	2	2.5	2.1	2.3
8	Stream Restoration	Treatment	Redding-Callaboose-Creek	3	2	2	3	2	2.5	2.0	2.3
9	Stream Restoration	Treatment	Redding-Callaboose-Creek	3	2	2	3	2	2.5	1.8	2.1
10	NTS	Treatment	Redding-Mall	2	3	3	3	2	2.5		2.5
11	NTS	Treatment	Redding-Mall	2	3	3	3	2	2.5	2.1	2.3
12	NTS	Treatment	Redding-Mall	2	3	3	3	2	2.5	1.6	2.0
13	NTS	Treatment	Redding-Trash-2	3	2	3	2	1	2.1		2.1
14	NTS	Treatment	Redding-Trash-1	3	2	3	2	1	2.1		2.1
15	Direct Use		DU-5	2	2	2	3	1	2.0	2.6	2.3
16	NTS	Treatment	Redding-Caldwell-Park	2	2	1	2	2	1.9	2.6	2.2
17	NTS	Treatment	Redding-Enterprise-Park	3	2	1	1	2	1.9		1.9
18	Stream Restoration	Infiltration	Redding-Henderson	3	0	3	2	1	1.9		1.9
19	Direct Use		DU-4	2	1	1	2	2	1.8	2.7	2.3
20	NTS	Treatment	NTS-1	1	1	2	2	2	1.7	2.6	2.1
21	NTS	Infiltration	NTS-5	2	2	1	1	2	1.7	2.6	2.1
22	NTS	Treatment	Redding-Allens-Golf	2	2	1	1	2	1.7	1.6	1.6
23	Direct Use		DU-3	2	2	1	2	1	1.6	2.7	2.2
24	Lake Restoration		Redding-Mary-Lake	3	2	0	0	2	1.6		1.6

Conceptual Project Selection

Project Location	Project Type	Parcel	Short Description
Linden Ditch	Infiltration System	26 parcels owned by the City	Offline infiltration system adjacent to the current creek to improve water quality, reduce flows, and recharge groundwater.
Mary Lake Pond	Wet Basin (with extended detention), Storage Tank, and Lake Dredging	204350040000, 204560040000, 204330030000	Enhanced wet basin with additional storage, a new storage tank to provide water supply during summer months, dredging of the main lake.
Old City Sewer Ponds	Wet Basin (with extended detention)	116180006000, 117070028000	Utilize existing abandoned sewer ponds to treat, detain, and infiltrate flows from Boulder Creek and enhance environmental functions and values of the creek corridor.
Pine Alley	Porous Pavement and rain garden	Market-Pine Alley at Eureka Way	Convert the alley between Market and Pine Street in downtown Redding into a green pedestrian corridor by replacing the existing surface with permeable pavement and rain gardens

Linden Ditch

DRAFT FOR DISCUSSION ONLY. DO NOT DISTRIBUTE.



Project Description

This project plans to improve water quality, reduce flows in Linden Ditch, and recharge groundwater by building an offline infiltration system adjacent to the current flow path. Water will be diverted from Linden Ditch approximately where it meets Linden Avenue and directed into the elongated infiltration basin before flowing back into Linden Ditch upstream of West Street. The basin will be located exclusively on city owned parcels and include a pretreatment area. Vegetation, walking paths, and interpretive signage will be incorporated.

Potential Site Constraints:
Vegetation and animals in the basin area should be inspected prior to finalizing the project design to confirm no protected species are present. Additional permitting may be required for vegetation removal. A site survey should be conducted to confirm elevations and infiltration rate in the project site.

Location of Proposed Infiltration System

Legend

- Waterbody
- Storm Drain
- Project Drainage Area
- Project Footprint
- Parcel Boundary
- City

Project Drainage Area

Project Overview

Parcel Ownership	City of Redding
APN	26 city owned parcels
Soil Type	Hydrologic Soil Group A
Watershed	Churn Creek-Sacramento River
Receiving Water	Linden Ditch
Groundwater Basin	Anderson

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Linden Ditch
Infiltration System Project Concept

City of Redding
Stormwater Resource Plan

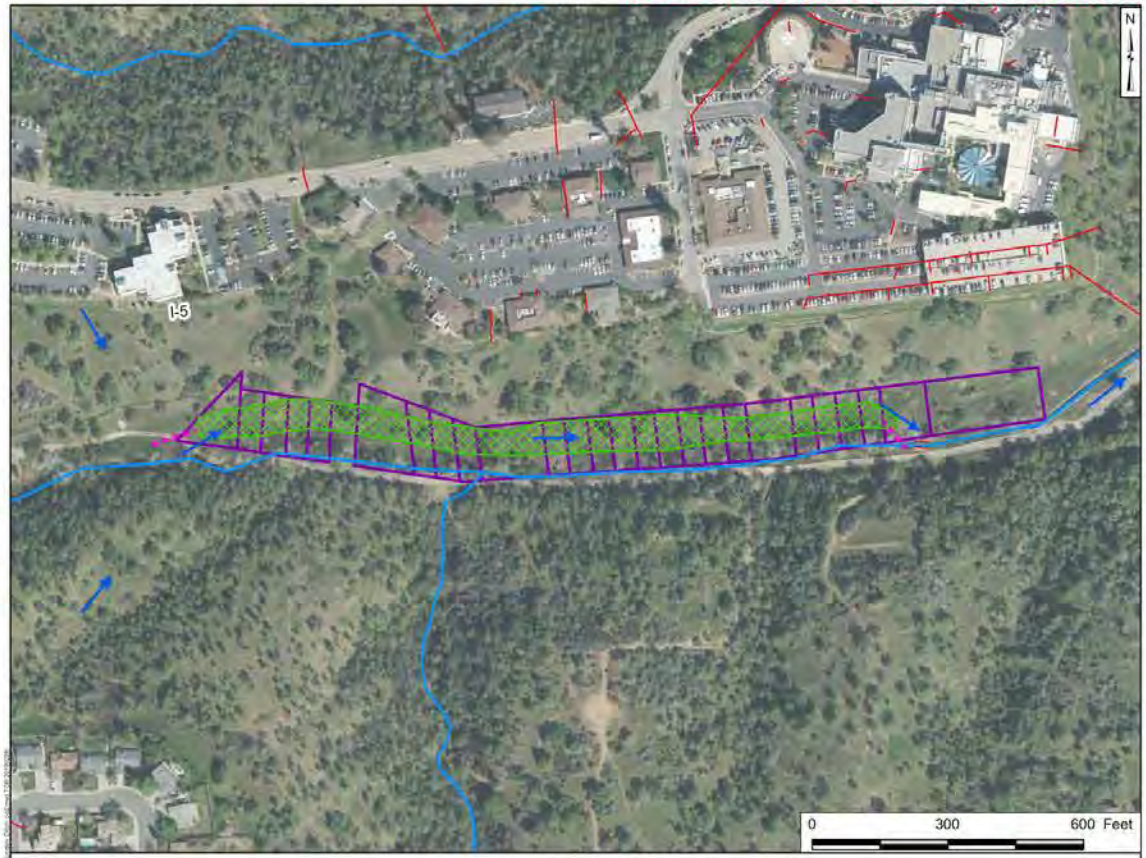
Geosyntec consultants

Santa Barbara | February 2018

Figure 7

Linden Ditch

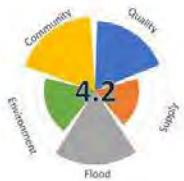
DRAFT FOR DISCUSSION ONLY. DO NOT DISTRIBUTE.



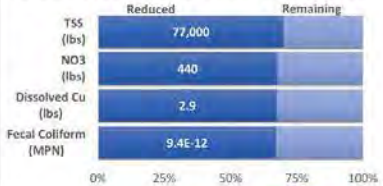
Project Benefits

All benefits are expressed as an average annual estimate based on historical long-term modeling.

Overall Multi-Benefit Score
Highest possible score is a 5

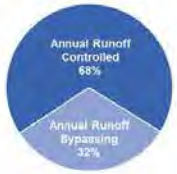


Water Quality:
Pollutant Load Reductions from Drainage Area



Environmental Enhancements: Infiltrated water will enhance the greenspace and promote vegetation, increasing the habitat value.

Flood Management: 170 acre-feet (68%) of the average annual runoff will be removed annually from flowing through the concrete channelized portion of Linden Ditch which runs through the city. All of the runoff generated from an 85th percentile 24-hr storm will be captured and infiltrated.



Community Enhancements: Signage to educate public about the project's multiple benefits; and native vegetation and landscaping will improve the aesthetics of the parcel.

Water Supply: Assuming 65% of the infiltrated water reaches groundwater, 110 acre-feet will be recharged annually, which is equivalent to the supply for 270 households.

Volume Capture Analysis

	85th Percentile, 24-hr Storm	Long-Term Average Annual
Precipitation (in)	0.91	37.5
Runoff Volume (ac-ft)	5.9	250
Percent of Runoff Volume Captured (%)	**>100**	**68**
Total Volume Captured (ac-ft)	**5.9**	**170**

Legend

- Waterbody
- Storm Drain
- Flow Diversion
- BMP Footprint
- Parcel Boundary
- Direction of Flow

Project Design Information

BMP Type	Infiltration System
Total Project Footprint	1.7 acres (includes 0.43 acre pretreatment)
Depth	7 ft (including 1 ft freeboard)
Storage Volume	7.6 ac-ft
Assumed Infiltration Rate	1.5 in/hr
Stormwater Source	Linden Ditch

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Linden Ditch
Infiltration System Project Concept

City of Redding
Stormwater Resource Plan

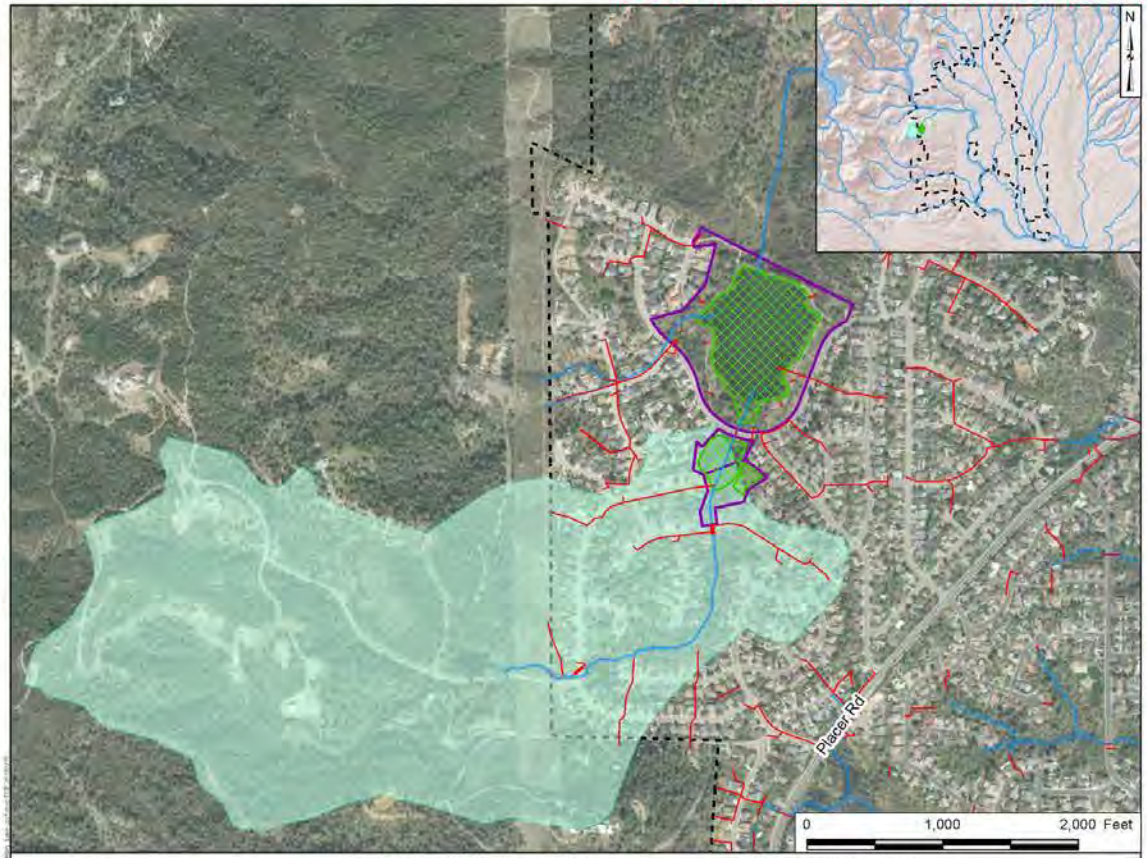
Geosyntec consultants

Santa Barbara | February 2018

Figure 8

Mary Lake

DRAFT FOR DISCUSSION ONLY. DO NOT DISTRIBUTE.



Project Description

This project plans to improve water quality in Mary lake by revitalizing the existing wet detention basin above Mary Lake to allow for increased water quality treatment and storage capacity. The revitalization may include reconfiguration of the flow path, increased berm height at the downstream end, sediment removal, and native habitat restoration. Flow into Mary Lake will be controlled by adding an adjustable weir or closable orifice at the low point of the upper basin. A storage tank is also proposed to be built adjacent to the upper basin. This will enable peak flows from winter storms to be captured for release during the dry months to maintain lakes and reduce eutrophication. Dredging of Mary Lake will also support increased capacity and removal of legacy nutrients.

Potential Site Constraints:

Vegetation and animals in the basin area should be inspected prior to finalizing the project design to confirm no protected species are present. A site survey should be conducted to confirm elevations of the project site. Additionally, numerous permits will need to be acquired to implement this project (RWQCB, CDFW, Army Corps, County, etc.).

Location of Proposed Wet Detention Basin

Legend

- Waterbody
- Storm Drain
- Project Drainage Area
- Project Footprint
- Parcel Boundary
- City

Project Drainage Area

Project Overview

Parcel Ownership	City of Redding
APN	204350040000, 204560040000, 204330030000
Soil Type	Hydrologic Soil Group C
Watershed	Churn Creek-Sacramento River
Receiving Water	Jenny Creek
Groundwater Basin	Outside of Anderson

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Mary Lake
Lake Restoration Project Concept

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | February 2018

Figure 5

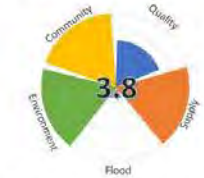
Mary Lake

DRAFT FOR DISCUSSION ONLY. DO NOT DISTRIBUTE.

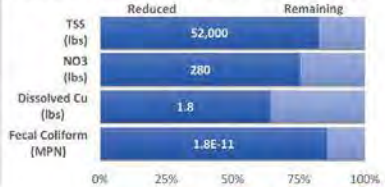
Project Benefits

All benefits are expressed as an average annual estimate based on historical modeling.

Overall Multi-Benefit Score
Highest possible score is a 5



Water Quality:
Pollutant Load Reductions from Drainage Area



Environmental Enhancements: Captured water will enhance the greenspace and promote vegetation, increasing the habitat value by reducing pollutants and releasing water as needed into Mary Lake to maintain beneficial water levels.

Flood Management: 130 acre-feet (86%) of the average annual runoff will be delayed annually from flowing through Mary Lake and into Jenny Creek. All of the runoff generated from an 85th percentile 24-hr storm will be captured and slowly released.

Community Enhancements: Signage to educate public about the project's multiple benefits; and native vegetation and landscaping will improve the aesthetics of the parcel.

Water Supply: The storage tank and the adjustable weir in the upper lake are designed to capture and store 9.1 acre-feet for supplying Lake Mary during the summer months. This reduces the volume of potable water used for this purpose.

Volume Capture Analysis

	85th Percentile, 24-hr Storm	Long-Term Average Annual
Precipitation (in)	0.91	37.5
Runoff Volume (ac-ft)	3.7	150
Percent of Runoff Volume Captured (%)	**>100**	**86**
Total Volume Captured (ac-ft)	**3.7**	**130**

Legend

- Waterbody
- Storm Drain
- Flow Diversion
- Parcel Boundary
- Direction of Flow
- Lake Restoration
- Natural Treatment System
- Storage Tank

Project Design Information

BMP Type	Wet Basin	Storage Tank
Total Project Footprint	2.1 acres (includes 0.69 acre pretreatment)	0.50 acres
Depth (inc. 1 ft freeboard)	3-5.5 ft	9 ft
Storage Volume	12 ac-ft	4.0 ac-ft
Assumed Infiltration Rate	negligible	N/A
Stormwater Source	36 and 24 inch storm drains owned by City	Wet Basin

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Mary Lake
Lake Restoration Project Concept

City of Redding
Stormwater Resource Plan

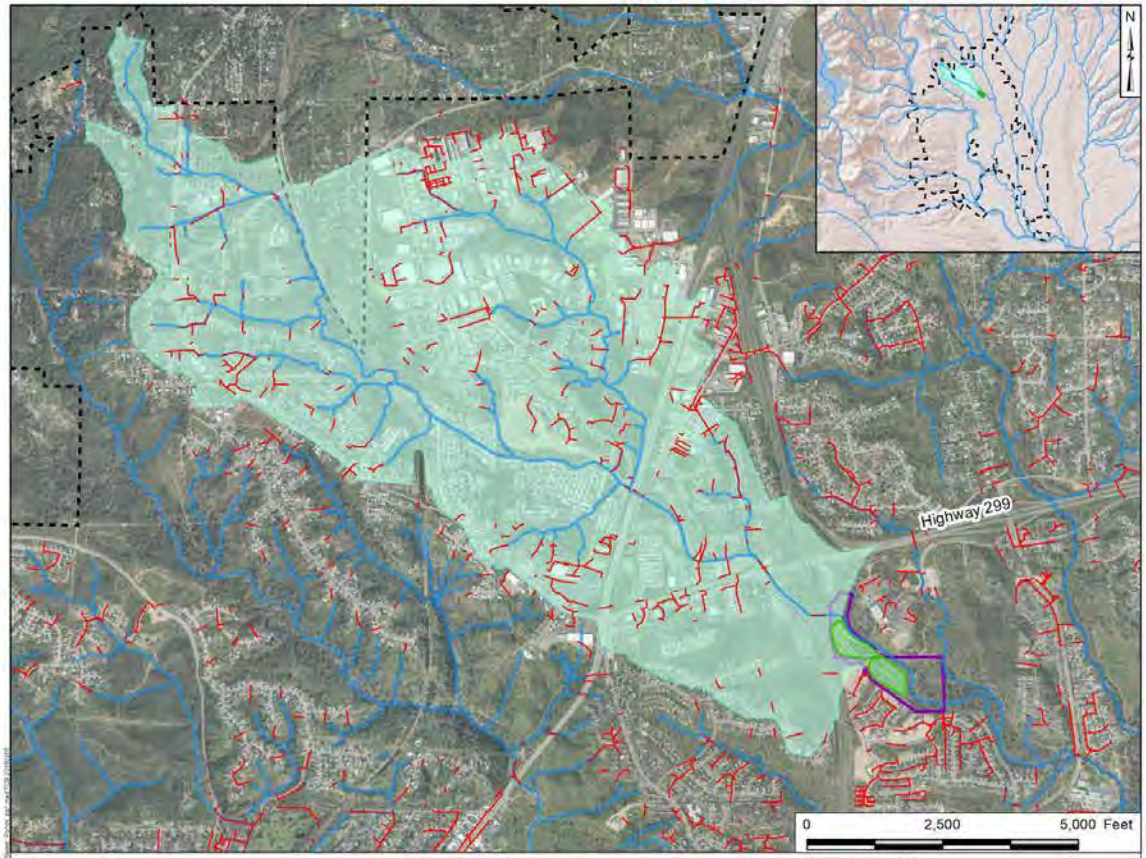
Geosyntec consultants

Santa Barbara | February 2018

Figure 6

Former Sewer Ponds

DRAFT FOR DISCUSSION ONLY. DO NOT DISTRIBUTE.



Project Description

This project plans to revitalize existing infrastructure to allow for water quality treatment through a series of wet basins with extended detention. The abandoned sewer ponds are located adjacent to Boulder Creek, which is a salmonid stream and receives significant runoff from areas considered high priority for trash and pollution control. Water will be diverted from Boulder Creek just after it crosses under the I-5 freeway and flow through the wet basins before flowing back into Boulder Creek. The upper basin will be expanded and include a pretreatment area while the lower basin will retain its current footprint. Vegetation, walking paths, and interpretive signage will be incorporated.

Potential Site Constraints:

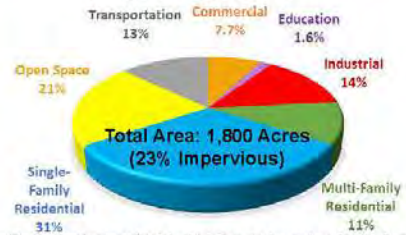
The basin area should be inspected prior to finalizing the project design to confirm no protected species are present. Also necessary ecological instream flows within Boulder Creek along the project location should be confirmed to assist with the design of the project. Numerous permits will need to be acquired to implement this project (RWQCB, CDFW, Army Corps, County, etc.)

Example Wet Basins in Construction

Legend

- Waterbody
- Storm Drain
- Project Drainage Area
- Project Footprint
- Parcel Boundary
- City

Project Drainage Area



Project Overview

Parcel Ownership	City of Redding
APN	116180006000, 117070028000
Soil Type	Hydrologic Soil Group C
Watershed	Churn Creek-Sacramento River
Receiving Water	Boulder Creek
Groundwater Basin	Enterprise

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Former Sewer Ponds
Wet Basin (with extended detention)
Project Concept
City of Redding
Stormwater Resource Plan

Geosyntec consultants

Figure 1

Santa Barbara | February 2018

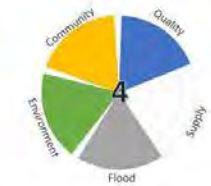
Former Sewer Ponds

DRAFT FOR DISCUSSION ONLY. DO NOT DISTRIBUTE.

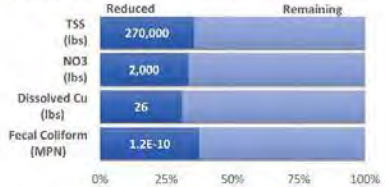
Project Benefits

All benefits are expressed as an average annual estimate based on historical modeling.

Overall Multi-Benefit Score
Highest possible score is a 5

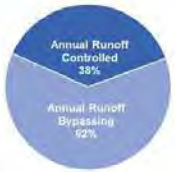


Water Quality:
Pollutant Load Reductions from Drainage Area



Environmental Enhancements: Captured water will enhance the park greenspace and promote vegetation, increasing the habitat value.

Flood Management: 920 acre-feet (38%) of the average annual runoff will be delayed from flowing down Boulder Creek. 77% of the runoff generated from an 85th percentile 24-hr storm will be captured and slowly released back into Boulder Creek.



Community Enhancements: Signage to educate public about the project's multiple benefits; and native vegetation and landscaping will improve the aesthetics of the parcel.

Water Supply: There are no water supply benefits, because infiltration is assumed to be negligible.

Volume Capture Analysis

	85th Percentile, 24-hr Storm	Long-Term Average Annual
Precipitation (in)	0.91	37.5
Runoff Volume (ac-ft)	59	2,400
Percent of Runoff Volume Captured (%)	**77**	**38**
Total Volume Captured (ac-ft)	**46**	**920**

Legend

- Waterbody
- Storm Drain
- Flow Diversion
- BMP Footprint
- Parcel Boundary
- Direction of Flow

Project Design Information

BMP Type	Wet basins with extended detention
Total Project Footprint	13 acres (includes 3.3 acres pretreatment)
Depth	3-9 ft (includes 1 ft freeboard)
Storage Volume	41 ac-ft
Assumed Infiltration Rate	negligible
Stormwater Source	Boulder Creek

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Former Sewer Ponds
Wet Basin (with extended detention)
Project Concept

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Figure 2

Santa Barbara | February 2018

Market-Pine Alley

DRAFT FOR DISCUSSION ONLY. DO NOT DISTRIBUTE.

Project Description

This project plans to turn the alley between Market and Pine Street in downtown Redding into a green pedestrian corridor by replacing the existing surface with permeable pavement and rain gardens with an underdrain system. The stormwater will be collected from the busy area near Eureka Way via the existing storm drains and surface runoff. Permeable pavement and rain gardens will reduce the amount of ponding in the alley and provide water quality treatment by allowing the stormwater runoff to percolate into the underdrain system.

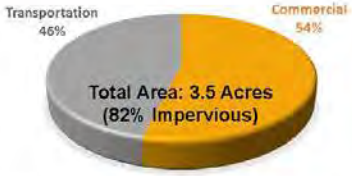
Potential Site Constraints:
Business owners on either side of the alley should be coordinated with during planning and construction stages since they alley provides access to some parking areas. Percolation testing should be conducted to confirm assumed infiltration rates. Additionally subsurface utilities may need to be relocated.

Location of Proposed Green Street

Legend

- Waterbody
- Storm Drain
- Project Drainage Area
- Project Footprint
- Parcel Boundary
- City

Project Drainage Area



Project Overview

Parcel Ownership	City of Redding
APN	N/A
Soil Type	Hydrologic Soil Group C
Watershed	Churn Creek-Sacramento River
Receiving Water	Sacramento River
Groundwater Basin	Anderson

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Market-Pine Alley
Green Street Project Concept

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | February 2018

Figure 3

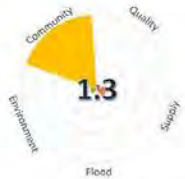
Market-Pine Alley

DRAFT FOR DISCUSSION ONLY. DO NOT DISTRIBUTE.

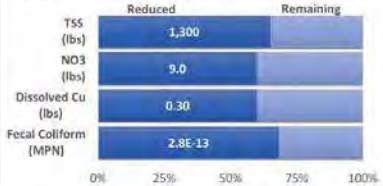
Project Benefits

All benefits are expressed as an average annual estimate based on historical modeling.

Overall Multi-Benefit Score
Highest possible score is a 5



Water Quality:
Pollutant Load Reductions from Drainage Area



Environmental Enhancements: Captured water will enhance the greenspace and promote vegetation, increasing the habitat value.

0.03 acres of habitat created

Flood Management: 5.6 acre-feet (57%) of the average annual runoff will be removed annually from the stormdrain system. About half of the runoff generated from an 85th percentile 24-hr storm will be captured and infiltrated.

Community Enhancements: Signage to educate public about the project's multiple benefits; and native vegetation and landscaping will improve the aesthetics of the alley.

Water Supply: Assuming 65% of the infiltrated water reaches groundwater, 2.1 acre-feet will be recharged annually, which is equivalent to the supply for 5.1 households.

Volume Capture Analysis

	85th Percentile, 24-hr Storm	Long-Term Average Annual
Precipitation (in)	0.91	37.5
Runoff Volume (ac-ft)	0.21	8.7
Percent of Runoff Volume Captured (%)	**48**	**57**
Total Volume Captured (ac-ft)	**0.10**	**5.6**

Legend

- Waterbody
- Storm Drain
- Flow Diversion
- BMP Footprint
- Parcel Boundary
- Direction of Flow

Project Design Information

BMP Type	Green Street
Total Project Footprint	0.16 acres (includes 0.041 acre pretreatment)
Depth	2.3 ft
Storage Volume	0.14 ac-ft
Assumed Infiltration Rate	0.32 in/hr
Stormwater Source	Surface Runoff

Note: Proposed project is conceptual and subject to change based on future feasibility assessment, funding availability, and/or other information.

Market-Pine Alley
Green Street Project Concept

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | February 2018

Figure 4

Quantified Benefits

Project Location	Project Type	Project Footprint (acres)	Annual Pollutant Load Reductions*					Water Supply (acre-ft/yr)**	Runoff Volume Controlled (cu ft/yr)
			TSS (lb/yr)	Diss P (lb/yr)	NO3 (lb/yr)	Diss Cu (lb/yr)	Fecal Coliform (10^{12} MPN/yr)		
Downtown Mall	Porous pavement and rain garden	0.46	2,600	5.1	15	0.22	0.34	3.4	340,000
Mary Lake Pond	Wet Basin (with extended detention)	2.6	52,000	72	280	1.8	18	9.1	5,700,000
Old City Sewer Ponds	Wet Basin (with extended detention)	13	270,000	610	2,000	26	120	0	40,000,000
Linden Ditch	Infiltration System	1.7	77,000	87	440	2.9	9.4	110	7,300,000
Pine Alley	Porous pavement and rain garden	0.16	1,300	5.9	9	0.3	0.28	2.1	240,000

*Only a selection of key pollutants are shown. 12 pollutants were modeled and all the load reductions will be included in the SWRP.
** Water supply benefits are for project planning only and are not to be used for forecasting water supply.

Draft discussion only, please do not distribute.

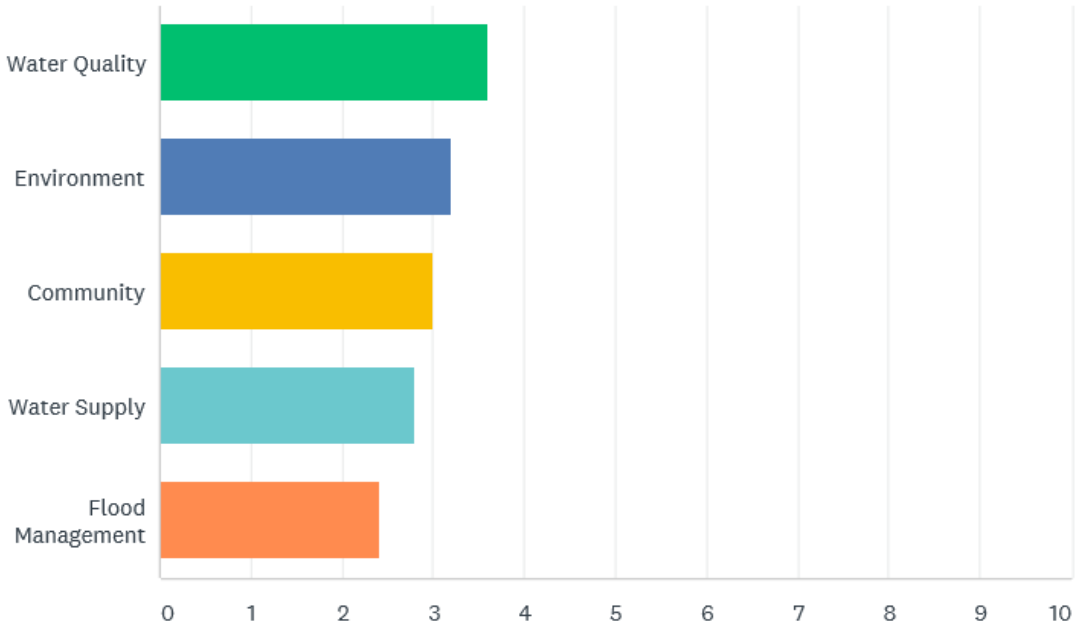
Multi-Benefit Prioritization

Benefit Category	Quantitative Benefit	Qualitative Benefit Weighting	Multi-Benefit Weight
Water Quality	Multi-pollutant load reduction	1 = Non-urban non-listed pollutant 2 = Urban non-listed pollutant 4 = 303(d) listed 5 = TMDL listed	30%
Water Supply	Potential water supply volume	0 = No infiltration or planned use 1 = Provides infiltration in a confined aquifer not used for water supply 2 = Improved water efficiency through drought tolerant vegetation and/or removal of high water need vegetation 3 = Provides groundwater recharge in an unconfined aquifer that is not used for water supply 4 = Provides infiltration in a confined aquifer used for water supply 5 = Provides infiltration in a unconfined aquifer used for water supply	20%
Flood Management	Runoff volume controlled	0 = No flooding problem known to occur locally 1 = Minor alleviation of a local flooding problem 3 = Minor flooding problem known to occur locally 5 = Significant flooding problem known to occur locally	20%
Environment	Environmental Enhancement Area	0 = No environmental benefit 1 = One additional environmental benefits and no main benefits 3 = Medium environmental benefit 5 = High environmental benefit	20%
Community		0 = No community benefit 1 = One additional community benefits and no main benefits 3 = Medium community benefit 5 = High community benefit	10%

Priorities for Benefits

The final four projects will be prioritized using five weighted categories. Please assist the Technical Advisory Committee in weighting these categories by telling us which project benefits are most important to you. Please assign a rank to each of the five categories. *A number "1" indicates this project benefit is a higher priority. *A number "5" indicates this project benefit is a lower priority.

Answered: 5 Skipped: 0



Qualitative Benefit Weights

Project Location	Project Type	Qualitative Benefit Weights				
		Water Quality*	Water Supply	Flood Management	Environmental	Community
Downtown Mall	Porous pavement and rain garden	1.4	3	1	5	5
Mary Lake Pond	Wet Basin (with extended detention)	1.4	5	1	5	5
Old City Sewer Ponds	Wet Basin (with extended detention)	1.4	3	5	5	5
Linden Ditch	Infiltration System	1.4	3	5	5	5
Pine Alley	Porous pavement and rain garden	1.4	3	1	5	5

*The values shown here represent the average qualitative score of all pollutants.

Shading from light blue to dark blue indicates low to high values

Draft discussion only, please do not distribute.

Multiple Benefit Scores

Project Location	Project Type	Overall Benefit Scores					Multi-Benefit Index
		Water Quality	Water Supply	Flood Management	Environmental	Community	
Linden Ditch	Infiltration System	4.7	3	5	3.4	5	4.2
Old City Sewer Ponds	Wet Basin (with extended detention)	5	0	5	5	5	4.0
Mary Lake Pond	Wet Basin (with extended detention)	3.2	5	0.78	5	5	3.8
Downtown Mall	Porous pavement and rain garden	0.29	1.1	0.047	0.91	5	1.5
Pine Alley	Porous pavement and rain garden	0.30	0.69	0.033	0.32	5	1.3

Shading from light blue to dark blue indicates low to high values

Draft discussion only, please do not distribute.

Prioritization –
Cooperating Entity Projects with Quantified Benefits

Project Location	Project Type	Multi-Benefit Index	Prioritization (low, medium, or high)
Linden Ditch	Infiltration System	4.2	High
Old City Sewer Ponds	Wet Basin (with extended detention)	4.0	High
Mary Lake Pond	Wet Basin (with extended detention)	3.8	High
Downtown Mall	Porous pavement and rain garden	1.5	High
Pine Alley	Porous pavement and rain garden	1.3	High

- High: Multi-benefit index > 0 and project has a willing land owner that is committed to maintenance
- Medium: Multi-benefit index > 3 and project does not have a willing or public land owner or that is committed to maintenance
- Low: Multi-benefit index ≤ 3 and project does not have a willing or public land owner that is committed to maintenance

Draft discussion only, please do not distribute.

Qualitative Benefits

Benefit Category	None	Low	Medium	High
Water Quality	No pollutant removal	Low removal in discharge	Medium removal in discharge	Full removal of captured/diverted flow
Water Supply	No infiltration or planned use	Improved water efficiency through drought tolerant vegetation and/or removal of high water need vegetation	Some recharge of groundwater or direct use	Significant recharge of groundwater or direct use
Flood Management	No alleviation of a local flooding problem	Minor alleviation of a local flooding problem	Medium alleviation of a local flooding problem	Significant alleviation of a local flooding problem
Environmental	No environmental benefit	One (or more) additional environmental benefits and no main benefits	One main environmental benefit	Two (or more) main environmental benefits
Community	No community benefit	One (or more) additional community benefits and no main benefits	One main community benefit	Two (or more) main community benefits

Prioritization –
Projects with Qualified Benefits

Proposed by	Project Name	Project Type	Watershed	Qualitative Benefit Score (0, 1, 3, or 5)					Multi-Benefit Index	Priority
				Water Quality	Water Supply	Flood Management	Environmental	Community		
J. Oldham	Allens Golf Course Project	Wet Basin (with extended detention)	Olney Cr	5	1	5	5	5	4.2	High
J. Oldham	Callaboose Cr at Oregon St	Bioswale	Calaboose	5	1	3	3	5	3.4	High
J. Oldham	Caldwell Park	Bioretention without underdrain	Sacramento River	5	1	1	3	5	3	High
J. Oldham	Enterprise Park	Wet Basin (without extended detention)	Churn Cr	5	1	5	5	5	4.2	High
J. Oldham	Canyon Hollow Cr Enhancement	Detention Basin	Canyon Hollow Cr	5	1	5	5	3	3.8	High
J. Oldham	Olney Cr Levee Enhancement	Detention Basin	Olney Cr	5	0	5	5	3	3.6	Medium
Shasta Living Str.	Green Street 1	Media Filter		3	0	3	3	5	2.8	High
Shasta Living Str.	Green Street 2	Media Filter		3	0	3	3	5	2.8	High
Shasta Living Str.	Green Street 3	Media Filter		3	0	3	3	5	2.8	High
Marty Wayne	Trash-2		Little Churn Creek	5	0	0	0	0	1	Low
Marty Wayne	Trash-1		Little Churn Creek	5	0	0	0	0	1	Low
Amber Kelley	Henderson Ditch	treatment and/or infiltration		5	3	3	5	5	4.2	Medium
Amber Kelley	Hollow Lane	treatment and/or infiltration	Churn Cr	5	3	3	5	5	4.2	Medium
Amy Pendergast	Redding-Mall			5	3	3	5	5	4.2	Medium
Amy Pendergast	SHHSA-Trail			5	3	3	5	5	4.2	Medium
Amy Pendergast	SHHSA-Shasta			5	3	3	5	5	4.2	Medium
Amy Pendergast	SHHSA-Collyer			5	3	3	5	5	4.2	Medium
David Ledger	Oregon Gulch Restoration		Oregon Gulch	3	3	3	5	5	3.8	Medium

Wrap up

Geosyntec consultants

Primary Goals and Mission

Develop a forward-thinking SWRP that includes:

- Prioritizing water quality concerns
- Community education
- Identification of projects that bring value and benefit to the community
- Collaborative development
- Local project support
- Opportunities for future grant funding

TAC Actions Needed

- Comment on presentation and design concepts (3/12)
- Continue to provide additional projects for inclusion
- Stakeholder meeting (week of June 4)

Group Discussion

Avery Blackwell

Project Manager

805-979-9125

ablackwell@geosyntec.com

Geosyntec consultants

City of Redding Stormwater Resource Plan

Stakeholder – Meeting #3

June 6, 2018

Discussion Topics

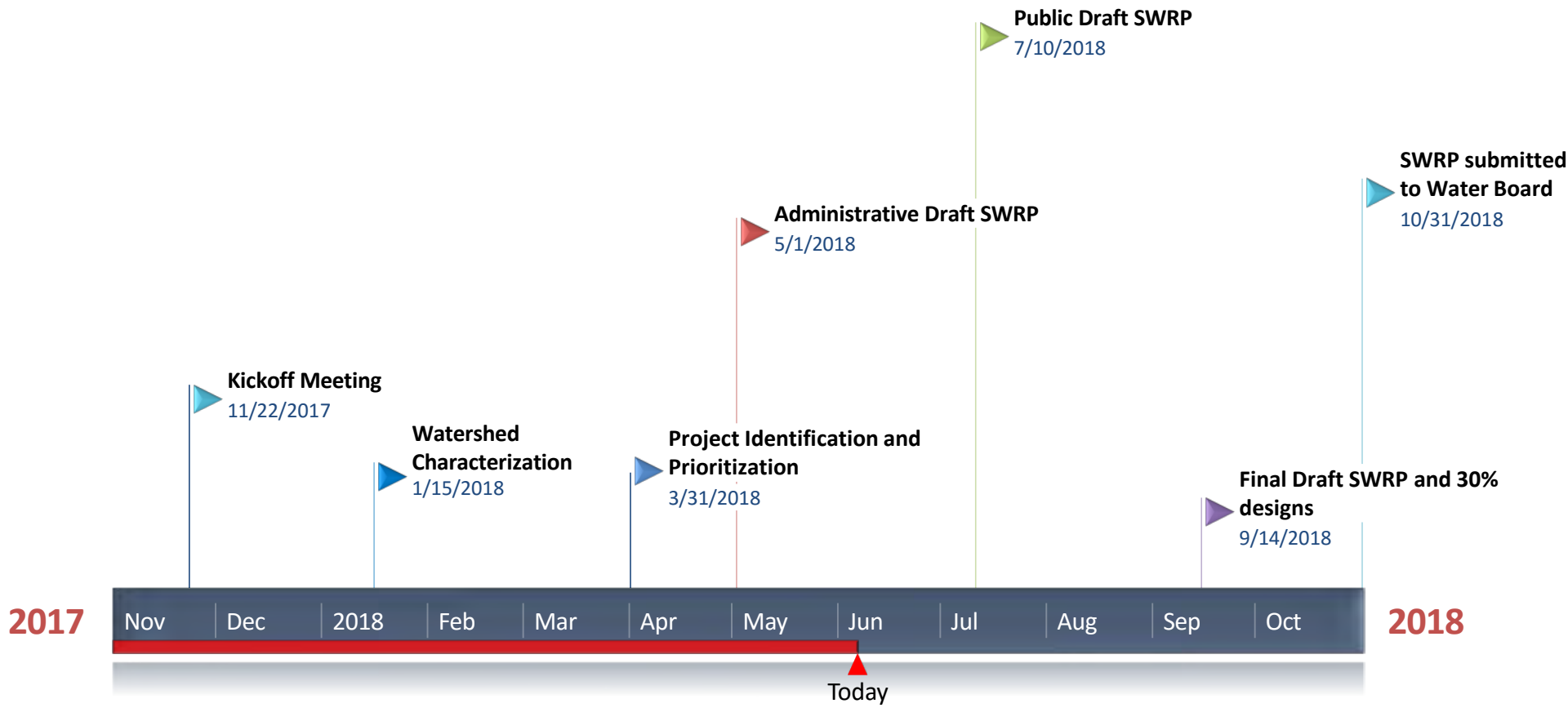
- Overview of Public Draft SWRP
- 30% Design Status
- Wrap up

Primary Goals and Mission

Develop a forward-thinking Stormwater Resource Plan (SWRP) that includes:

- Prioritizing water quality concerns
- Community education
- Identification of projects that bring value and benefit to the community
- Collaborative development
- Local project support
- Opportunities for future grant funding

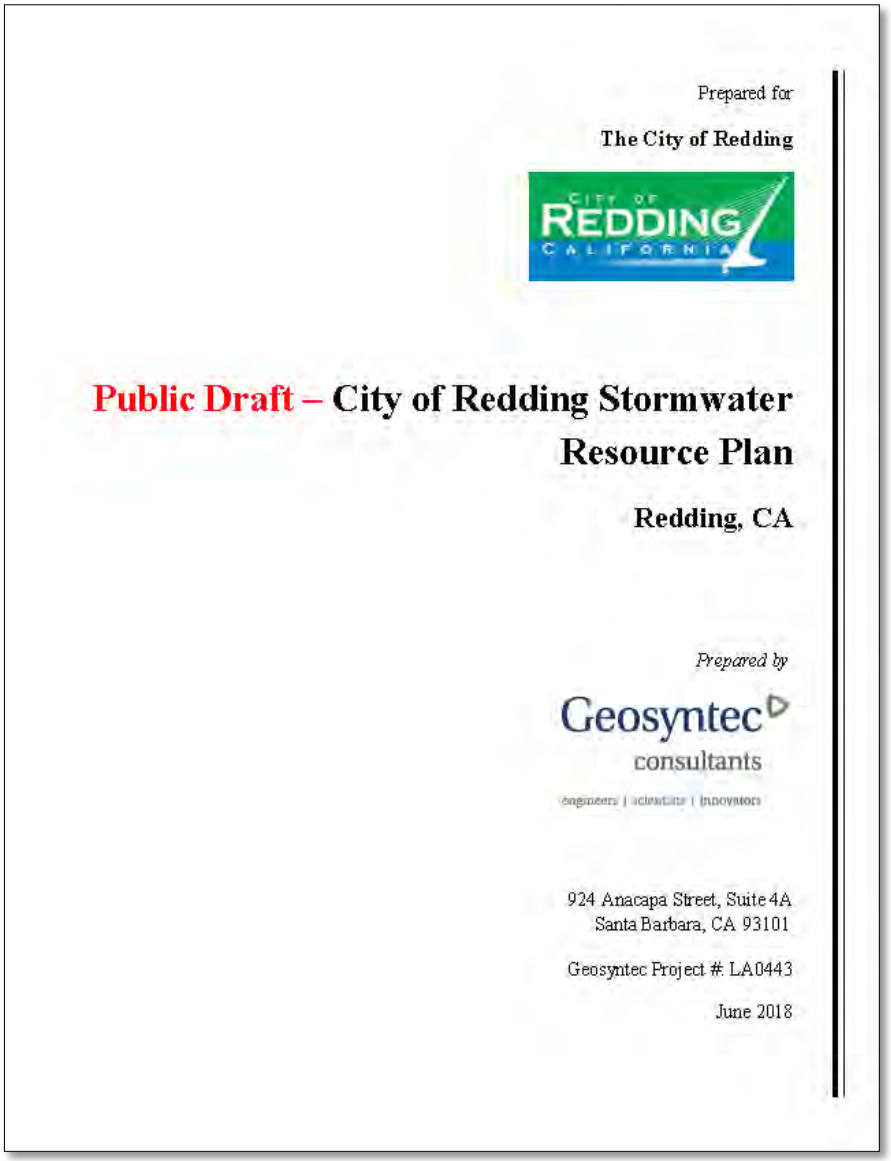
Project Milestones



Overview of Public Draft SWRP

Geosyntec consultants

Overview of SWRP



Prepared for

The City of Redding

Public Draft – City of Redding Stormwater Resource Plan

Redding, CA

Prepared by

Geosyntec consultants

engineers | scientists | innovators

924 Anacapa Street, Suite 4A
Santa Barbara, CA 93101

Geosyntec Project # LA0443

June 2018

- Executive Summary
- Introduction
- Organization, Coordination, and Collaboration
- Background
- Identification and Prioritization of Projects
- Implementation Strategy and Schedule
- References

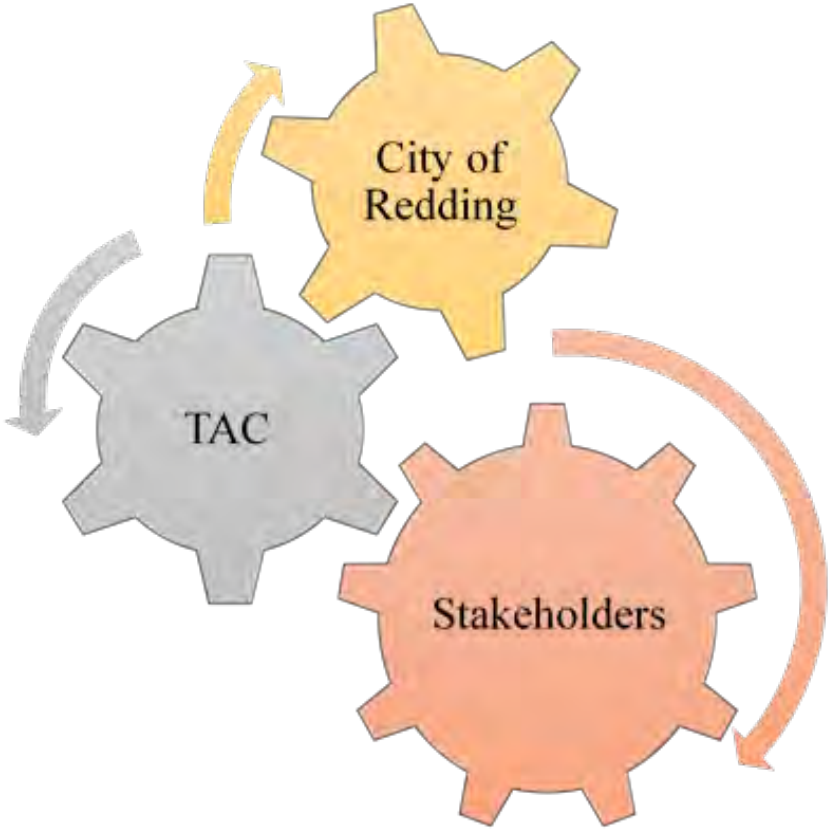
Introduction

- Purpose
- SWRP Overview
- Appendix A – Completed SWRP Checklist and Self-Certification Form
- Appendix B – Summary of Conceptual Projects

Figure 2. Boulder Creek Elementary Flooded (KRCR News February 2017)

Organization, Coordination, and Collaboration

- Organization of the SWRP Developers
- Stakeholder Identification, Engagement, and Participation
- Appendix C – Stakeholder Involvement



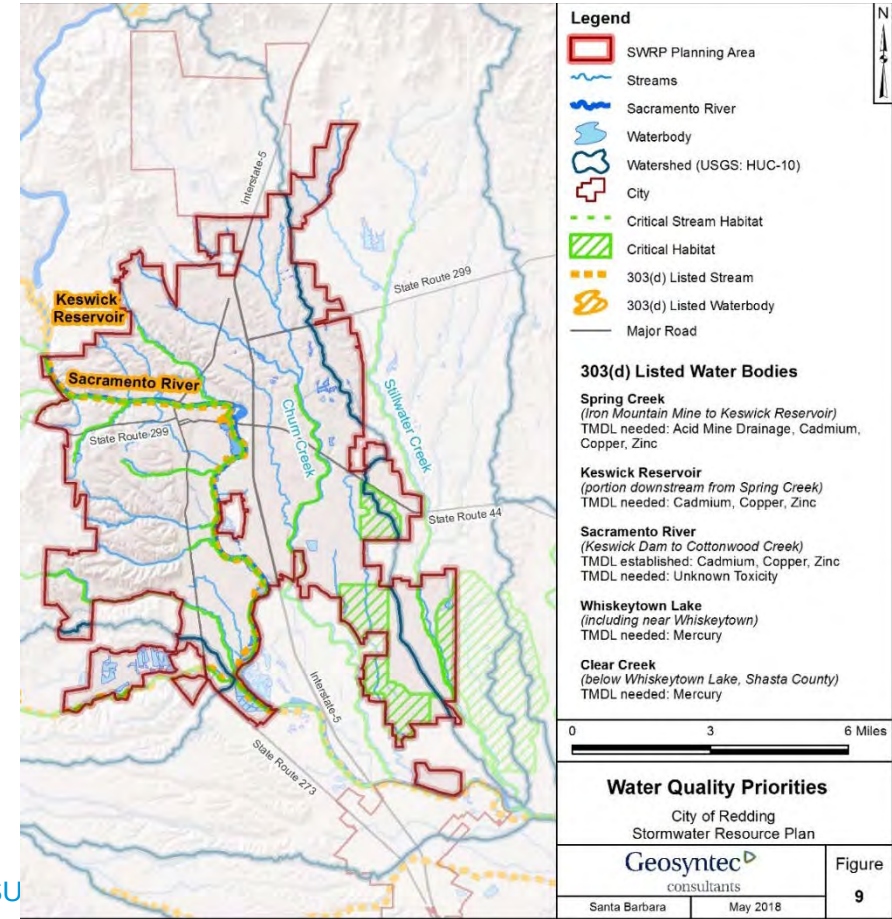
Stakeholder List

Type	Affiliation
City/County	City of Anderson
	City of Shasta Lake
	County of Shasta Health and Human Services Agency
	County of Shasta Public Works
Special Districts	Western Shasta Resource Conservation District
	Shasta Mosquito and Vector Control District
Other Public Agencies	Caltrans
	Shasta College
Non- Governmental Organizations	Shasta Environmental Alliance*
	Sierra Club
	Audubon
	Shasta MRCD
	Shasta Living Streets*

* nonprofit organizations working on stormwater and dry weather resource planning or management in the watersheds

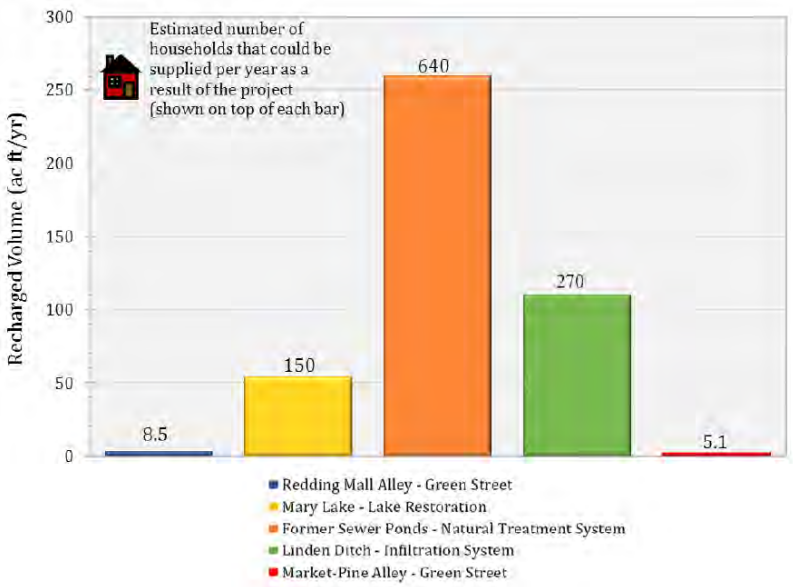
Background

- Existing Relevant Reports and Data
  - Appendix D – Summary of Relevant Reports and Data
- Watershed Characterization
- Water Quality Priorities
  - Critical habitat
  - 303(d) listings
- Water Quality Compliance
  - MS4 Permit, Trash Provision, TMDLs, and 303(d) listing



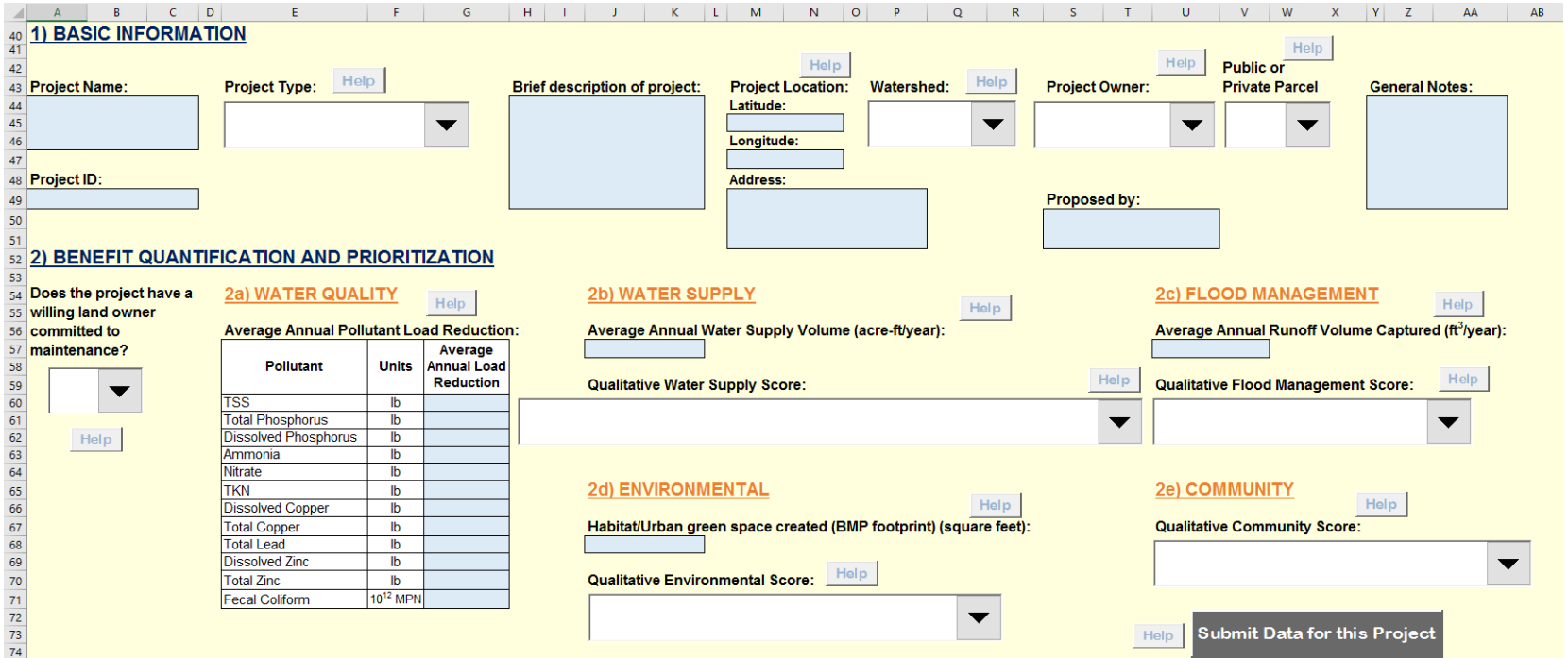
Identification and Prioritization of Projects

- Project Identification and Ranking
  - Appendix E – Project Identification and Ranking Technical Report
  - Two KMZ files and a Excel file
- Conceptual Project Design
- Quantitative Analysis of Project Benefits
- Multiple Benefits Prioritization
  - Appendix F – Technical Approach
  - Appendix H – Initial Results



Implementation Strategy and Schedule

- Resources for Implementation
- Implementation Schedule
- Ongoing Collaboration
- Adaptive Management Framework
- Implementation Performance Measures



1) BASIC INFORMATION

Project Name:

Project Type: Help

Brief description of project:

Project Location: Help
Latitude:
Longitude:
Address:

Watershed: Help

Project Owner: Help

Public or Private Parcel Help

General Notes:

Project ID:

Proposed by:

2) BENEFIT QUANTIFICATION AND PRIORITIZATION

Does the project have a willing land owner committed to maintenance?

Help

2a) WATER QUALITY Help

Average Annual Pollutant Load Reduction:

Pollutant	Units	Average Annual Load Reduction
TSS	lb	
Total Phosphorus	lb	
Dissolved Phosphorus	lb	
Ammonia	lb	
Nitrate	lb	
TKN	lb	
Dissolved Copper	lb	
Total Copper	lb	
Total Lead	lb	
Dissolved Zinc	lb	
Total Zinc	lb	
Fecal Coliform	10^{12} MPN	

2b) WATER SUPPLY Help

Average Annual Water Supply Volume (acre-ft/year):

Qualitative Water Supply Score: Help

2c) FLOOD MANAGEMENT Help

Average Annual Runoff Volume Captured (ft^3/year):

Qualitative Flood Management Score: Help

2d) ENVIRONMENTAL Help

Habitat/Urban green space created (BMP footprint) (square feet):

Qualitative Environmental Score: Help

2e) COMMUNITY Help

Qualitative Community Score:

Help Submit Data for this Project

Ongoing Coordination

- Among TAC (as needed)
  - SWRP E-mail updates
  - Meetings to discuss significant items
- With Community
  - During project design and construction
  - Email notice of significant updates to the plan
  - Information distributed on City website
    - www.cityofredding.org/departments/public-works/environmental-management/storm-water-management

Monitoring and Data Management

- Ongoing monitoring will continue
  - Basin wide Groundwater monitoring
  - Sacramento River monitoring
  - Any other monitoring programs?
- Ongoing monitoring results analyzed as needed for project specific performance evaluation
- Project specific monitoring to be determined during design phase
- GIS data management: new SWRP geodatabases now contain all relevant geospatial data

Field Feasibility and 30% Designs

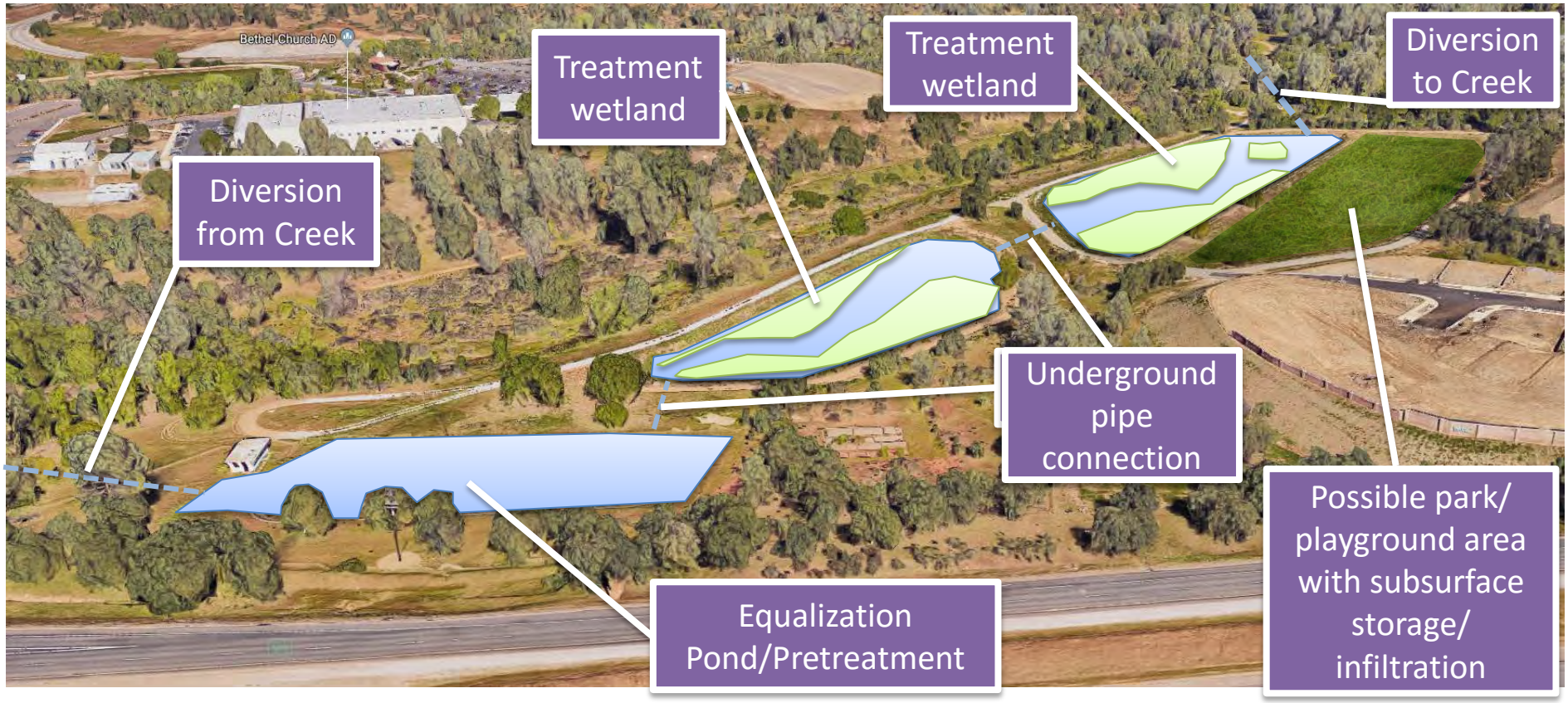
Geosyntec consultants

Sewer Ponds – Field Investigations

Sewer Ponds – Field Feasibility

- Many boreholes initiated and abandoned due to gravely/compact soil
- Shallow water present, likely hydraulically connected to the creek
- Infiltration favorable

Design Layout



Sewer Ponds – Design Questions

- Are measured or observed dry weather flowrates available for the creek?
- Beyond the bike path, are there other planned or desired uses to support nearby community?
- Photos available during or immediately after a rain storm?

South Los Angeles Wetlands (Example)

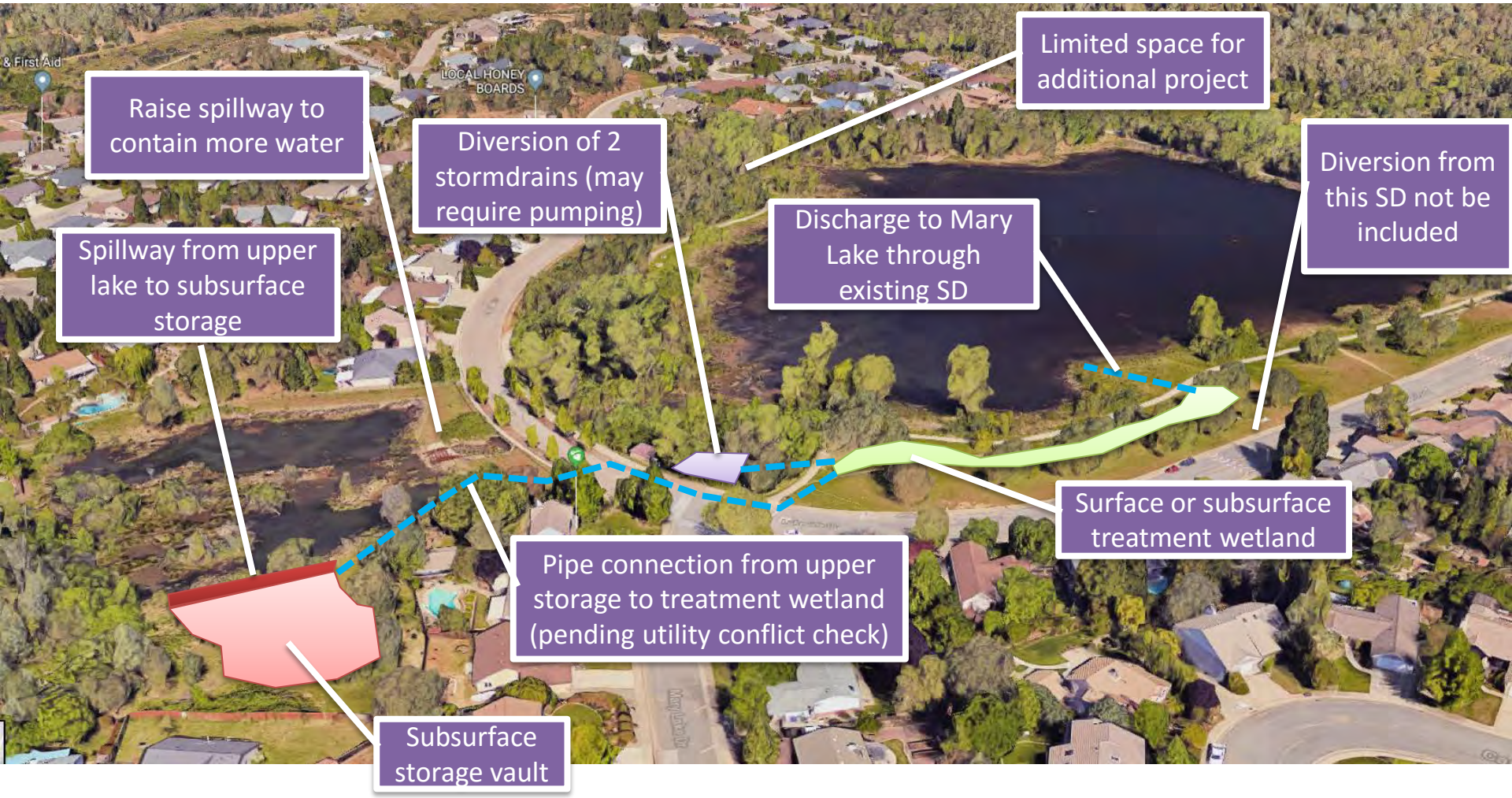
Potential Connection Bike Network

Mary Lake – Field Investigation

Mary Lake – Field Feasibility

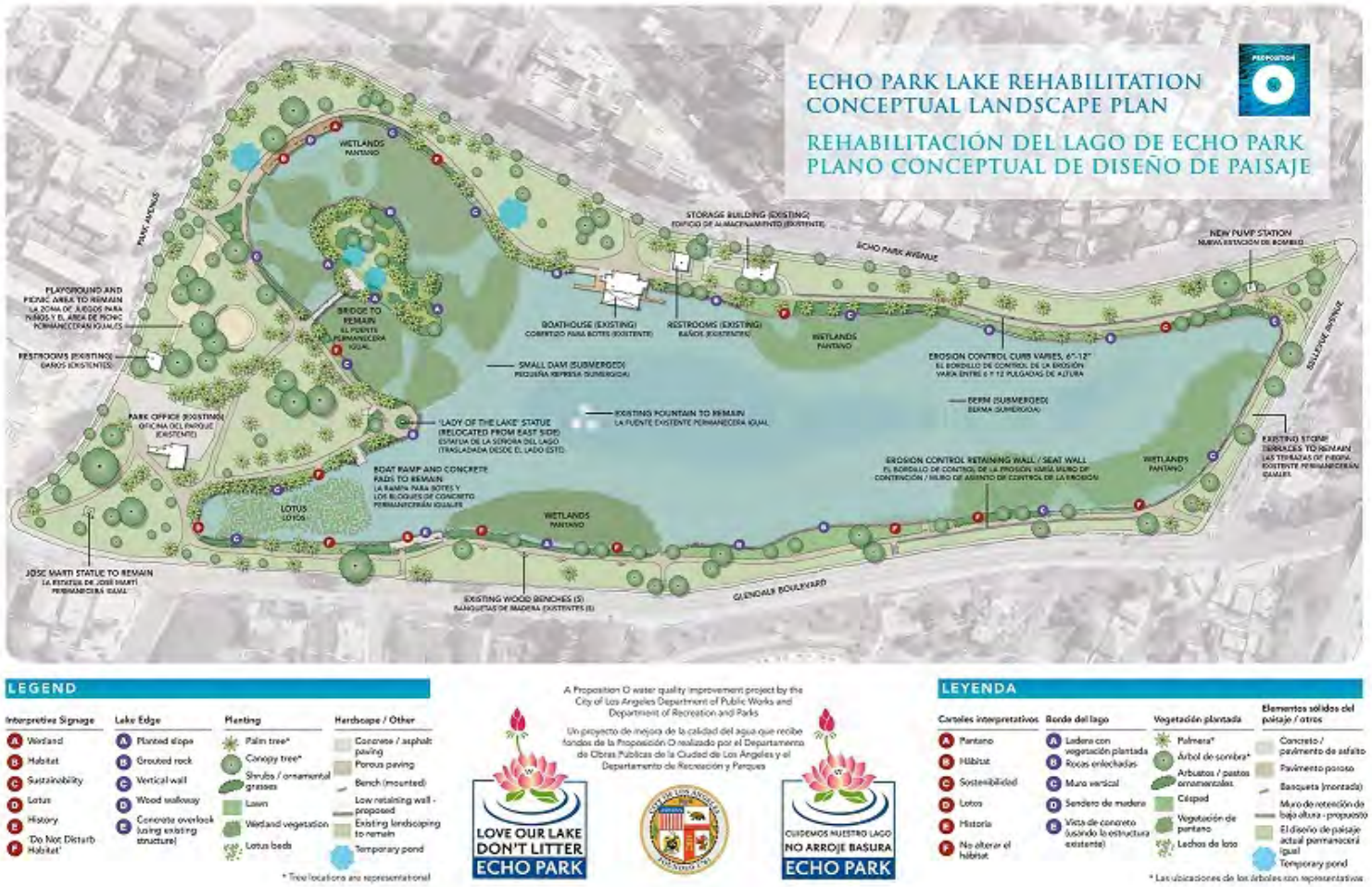
- Soil testing results suggest shallow water present, likely directly connected to Mary Lake
- Infiltration not recommended as BMP feature

Mary Lake - Design Layout



Mary Lake – Design Questions

- Are measured or observed dry weather flowrates available from the stormdrains that discharge to the lake?
- Are there planned or desired uses around the lake to support nearby community?



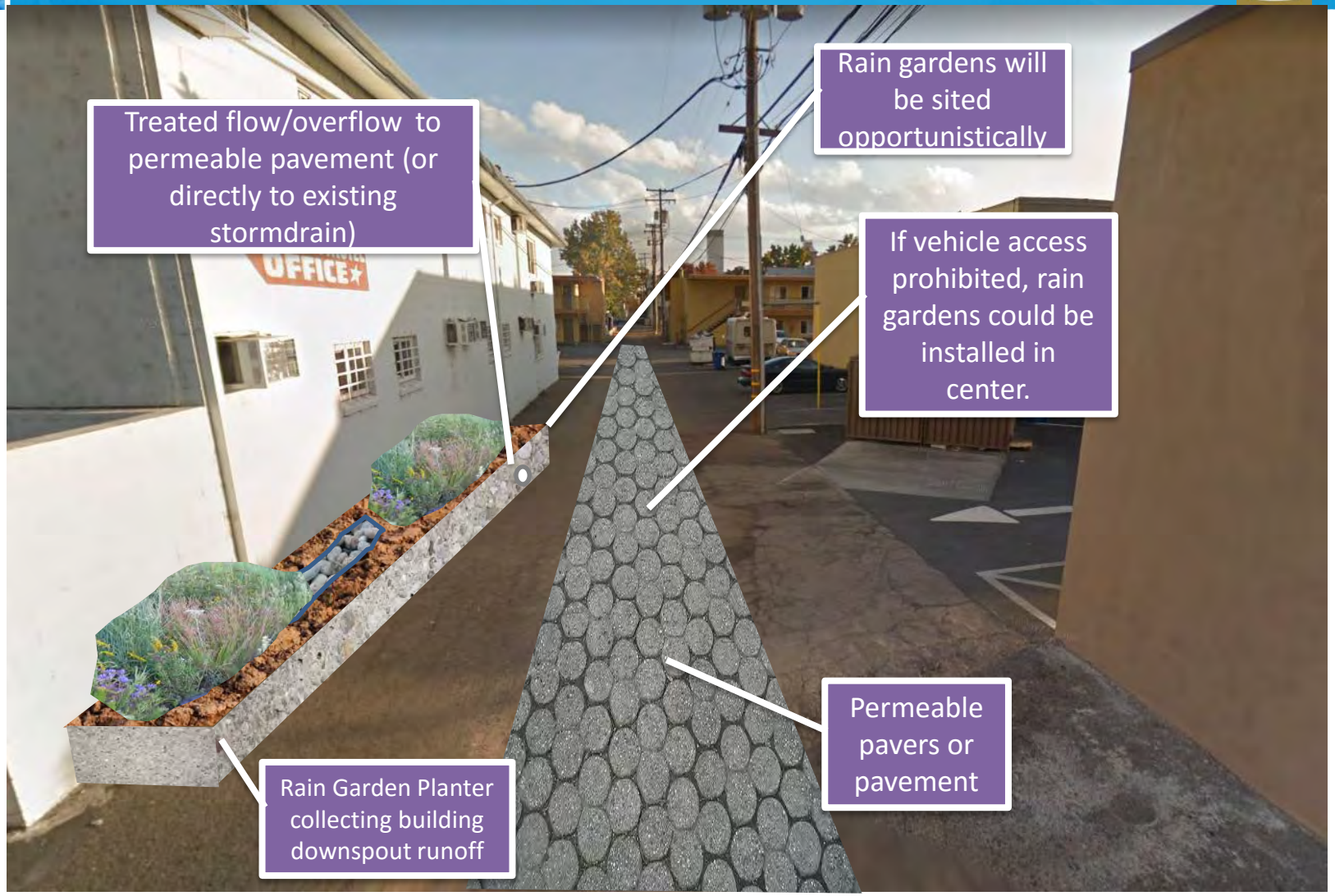
Echo Park Lake Rehabilitation (Example)

Market-Pine Alley – Field Investigation

Market-Pine Alley – Field Feasibility

- Sandy soils at surface
- Silty-clayey soil below sandy soils
- Encountered hard surface (possibly concrete/rock) 5’ 5” below surface
- Water not encountered
- Hydraulic conductivity ~1 in/hr
- Infiltration may feasible

Market-Pine Alley - Design Layout



Market-Pine Alley – Design Questions

- Other specific features of interest

Trust for Public Land Green Alley in Los Angeles (Example)

Wrap up

Geosyntec consultants

TAC Actions Needed

- Comments on preliminary designs (6/8)
- Public Draft SWRP ready for review (7/10)
- Comments on Public Draft SWRP (7/24)

Group Discussion

Avery Blackwell

Project Manager

805-979-9125

ablackwell@geosyntec.com

Prepared for

City of Redding

Stormwater Resource Plan

Appendix D - Summary of Relevant Reports & Data

Redding, CA

Prepared by

Geosyntec consultants

engineers | scientists | innovators

924 Anacapa Street, Suite 4A
Santa Barbara, CA 93101

Geosyntec Project #: LA0443

October 2018

TABLE OF CONTENTS

SECTION 1 . Annotated List of Existing Reports.....D-1

References D-6

SECTION 1. ANNOTATED LIST OF EXISTING REPORTS

Table D-1 contains a description of each report and identifies specific relevant information and data sets.

Table D-1. Existing Reports

		Surface Water/Hydrology						Groundwater/Geology						Agency Details				Other			
Name of Report	**Description**	Precipitation and Evapotranspiration	Watershed/Drainage Systems	Stormwater Capture Facilities	Surface Water Quality	Water Quality Limits/Designations	Other Surface Hydrology	Groundwater Level	Groundwater Quality	Groundwater Basins	Wells	Other Groundwater/Aquifer Characteristics	Soil Types/Geology	Population	Jurisdictions	Water Infrastructure	Proposed BMPs	Water Supply	Flood Management	Environmental	Community
Final California 2014 and 2016 Integrated Report (303(d) List/305(b) Report), 2017, State Water Resources Control Board	Attachments (303(d) lists) and supporting documents provide information on impaired waterbodies and potential sources of pollution.				x	x														x	
City of Redding Program Effectiveness Assessment and Improvement Plan (PEAIP), 2015, WGR SOUTHWEST, INC.	The City of Redding Program Effectiveness Assessment and Improvement Plan describes the framework for implementing and assessing stormwater BMPs. Section 2.1 identifies pollutants of concern and describes their sources - these include pesticides, nutrients, mercury, pathogens, toxics, invasive species, and trash. The majority of the report is dedicated to outlining how BMPs will be assessed.		x		x														x		x
Urban Water Management Plan, 2015, City of Redding	The Urban Water Management Plan describes the City of Redding service area climate, population, and water demands. Projects future water supply demands and deliveries. Summarizes current water sources and their quality and future supply options.													x	x	x		x			
Northern Sacramento Valley Integrated Regional Water Management Plan, 2014, West Yost Associates	The Northern Sacramento Valley Integrated Regional Water Management Plan (IRWMP) covers a variety of topics. Chapter 1 includes a description of the watersheds, water infrastructure (dams and canals), land use, climate, surface and groundwater resources, areas of biological significance, municipalities, water supply and demands, water quality, and objectives of the IRWMP. Chapter 2 describes in detail the goals of the IRWMP and ranking criteria for proposed projects. Benefits for projects include water supply reliability, flood protection and planning, water quality protection and enhancement, watershed protection and management, IRWM sustainability, and public education and information dissemination. Chapter 5 describes how potential projects were developed and prioritized. The main considerations include the project review process, evaluating impacts and benefits, project integration, local water planning, and local land use planning.				x		x	X	x	x					x	x		x	x	x	x
Water Quality Control Plan for the Sacramento and San Joaquin River Basins, 1998 (amended 2014), Central Valley Regional Water Quality Control Board	The Basin Plan identifies beneficial uses for surface waters and groundwater basins, identifies associated water quality objectives for these users and waterbodies, and includes amendments such as TMDLs.		x		x	x	x		x	x										x	
A Roadmap to Watershed Management, 2010, Sacramento River Watershed Program	The report contains information about the Sacramento River Basin, detailed descriptions of watersheds including land use, surface water quality concerns, hydrology, and climate. Existing monitoring programs are briefly discussed.	x	x	x	x		x													x	

		Surface Water/Hydrology						Groundwater/Geology						Agency Details				Other			
Name of Report	Description	Precipitation and Evapotranspiration	Watershed/Drainage Systems	Stormwater Capture Facilities	Surface Water Quality	Water Quality Limits/Designations	Other Surface Hydrology	Groundwater Level	Groundwater Quality	Groundwater Basins	Wells	Other Groundwater/Aquifer Characteristics	Soil Types/Geology	Population	Jurisdictions	Water Infrastructure	Proposed BMPs	Water Supply	Flood Management	Environmental	Community
Groundwater Management Plan for the Redding Groundwater Basin, 2007 update, Shasta County Water Agency	The Groundwater Management Plan for the Redding Groundwater Basin describes the local climate, geology, historic groundwater levels and pump rates, groundwater monitoring and water quality, and users. Delivery demands by land use and water purveyors are summarized in Table 3. The purpose of this plan is to ensure groundwater supply and quality, and to develop a management program.							x	x	x	x		x	x		x		x			
Redding Basin Water Resources Management Plan Environmental Impact Report, 2007, CH2M HILL	The Redding Basin Water Resources Management Plan Environmental Impact Report discusses several alternatives to improve water supply and reliability in the Redding area and their physical and social effects. The principal alternatives include surface water transfers, groundwater development, or a mix of the two. Both the current (2005) and future (2030) level of development and anticipated water demands are considered. The report includes background information on the study area history; land use; and the current condition of and potential impacts to biological, cultural, groundwater, surface water, power, and other resources.							x	x					x		x		x		x	x
Sacramento and Feather Rivers Diazinon and Chlorpyrifos Basin Plan Amendment, 2007, Central Valley Regional Water Quality Control Board	The Basin Plan identifies beneficial uses for surface waters and groundwater basins, identifies associated water quality objectives for these users and waterbodies, and includes amendments such as TMDLs.		x		x	x														x	
Sacramento Valley Integrated Regional Water Management Plan, 2006, Northern California Water Association, CH2M HILL, GEI Consultants	The Sacramento Valley Integrated Regional Water Management Plan covers water supplies, groundwater management, flood management, stormwater capture, water quality, land use, watershed planning, conservation plans, and more at the regional and county level.				x		x	x	x	x					x	x		x	x	x	x
Sacramento River Hydrologic Region Redding Groundwater Basin - CA Groundwater Bulletin 118, 2004	The Anderson, Enterprise, and Millville subbasins are described in the CA Groundwater Bulletin 118. Details include annual precipitation, geology, recharge areas, groundwater level trends, and groundwater supply and quality.	x						x	x	x			x					x			
Shasta County General Plan, 2004	The Shasta County General Plan discusses a wide range of topics with some relevant to stormwater management planning. Section 5.1 discusses seismic and geologic hazards, Section 5.2 outlines flood protection measures, and Section 5.3 covers dam failure inundation. Section 6.6 describes water resources including demands and supplies throughout the county and suggested actions to ensure adequate future supply. Section 6.7 outlines threatened, endangered, and special status animals and plants and their habitats within the county and strategies to address key issues to ensure their protection.		x				x				x			x	x	x			x	x	x

		Surface Water/Hydrology						Groundwater/Geology						Agency Details				Other			
Name of Report	Description	Precipitation and Evapotranspiration	Watershed/Drainage Systems	Stormwater Capture Facilities	Surface Water Quality	Water Quality Limits/Designations	Other Surface Hydrology	Groundwater Level	Groundwater Quality	Groundwater Basins	Wells	Other Groundwater/Aquifer Characteristics	Soil Types/Geology	Population	Jurisdictions	Water Infrastructure	Proposed BMPs	Water Supply	Flood Management	Environmental	Community
Storm Water Quality Improvement Plan, 2003, City of Redding	The Storm Water Quality Improvement Plan outlines water quality improvement priorities and actions needed to meet the Clean Water Act. Climate, population, land use, stormwater infrastructure, and general surface features are described. State of California, school districts, Shasta County, and Union Pacific Railroad are identified as potential partners to help with pollution reduction. Section 4 describes the Sacramento River as the receiving water in the Redding area and includes a discussion of beneficial uses, local streams, and drainage basins within the city.		x	x	x	x	x												x		
Upper Sacramento River TMDL for Cadmium, Copper & Zinc, 2002, Sacramento River TMDL Unit	The TMDL Report identifies strategies to comply with TMDL waste load allocations (WLAs). The Report identifies management and clean up efforts at former mining sites to meet TMDL requirements for cadmium, copper, and zinc.		x		x	x														x	
City of Redding 2000-2020 General Plan	The City of Redding General Plan covers a wide range of topics, but the Natural Resources and Health and Safety Elements are of relevance to stormwater management. The Natural Resource Element describes the municipal water source, issues affecting water quality and supply, and identifies stormwater management and groundwater recharge opportunities in creek and river floodplains. Biological habitats, open space, and mineral, energy, and agricultural resources are discussed as well. The Health and Safety Element discusses and maps hazards stemming from seismic, geologic, flood, dam inundation, fire, crime, and other related sources. Expansive soils and subsidence are not considered to be significant threats.		x				x				x		x	x	x				x	x	x
Draft Enterprise Area Groundwater Study, 1996, CH2M HILL	The Enterprise Area Groundwater Study was conducted to evaluate three options for expanding groundwater production. The geology and hydrogeology of the area are described briefly before the modeling and alternatives are discussed in depth.						x	x	x	x	x		x			x		x			
City-Wide Master Storm Drain Study Final Report, 1993, City of Redding	The City-Wide Master Storm Drain Study describes a plan for managing stormwater runoff within the city with consideration of future development and expansion. The hydrologic design criteria used to evaluate and plan include land use, effective impervious, Manning's n, depth-duration-frequency precipitation, peak flow, and design storm values applicable to Redding. Various drainage improvement options were considered and preliminary details and cost estimates are provided. This study expanded the areas considered to be within the 100-yr flood zone. The City of Redding Hydrology Manual is included as Appendix C.	x	x				x									x	x		x		x

		Surface Water/Hydrology						Groundwater/Geology						Agency Details				Other			
Name of Report	**Description**	Precipitation and Evapotranspiration	Watershed/Drainage Systems	Stormwater Capture Facilities	Surface Water Quality	Water Quality Limits/Designations	Other Surface Hydrology	Groundwater Level	Groundwater Quality	Groundwater Basins	Wells	Other Groundwater/Aquifer Characteristics	Soil Types/Geology	Population	Jurisdictions	Water Infrastructure	Proposed BMPs	Water Supply	Flood Management	Environmental	Community
Redding Region Water Supply Alternatives, 1975, CH2M HILL	The Redding Region Water Supply Alternatives report describes the results of the study of 39 alternatives to increase water supply in the Redding area. The existing water supply, treatment, storage, and evaluation of each participating water purveyor is provided. Pages 4-4 through 4-6 provide a summary of, and Appendix B discusses in depth, the condition and supply of groundwater, the geology of the basin, and well systems in place. States that recharge occurs at the edges of the groundwater basin and near some streams.							x			x	x	x	x	x	x		x			

REFERENCES

Document	Prepared By
Final California 2014 and 2016 Integrated Report (303(d) List/305(b) Report) (2017)	State Water Resources Control Board
City of Redding Program Effectiveness Assessment and Improvement Plan (PEAIP) (2015)	WGR SOUTHWEST, INC.
Urban Water Management Plan (2015)	City of Redding
Northern Sacramento Valley Integrated Regional Water Management Plan (2014)	West Yost Associates
Water Quality Control Plan for the Sacramento and San Joaquin River Basins (1998 (amended 2014))	Central Valley Regional Water Quality Control Board
A Roadmap to Watershed Management (2010)	Sacramento River Watershed Program
Groundwater Management Plan for the Redding Groundwater Basin (2007 update)	Shasta County Water Agency
Redding Basin Water Resources Management Plan Environmental Impact Report (2007)	CH2M HILL
Sacramento and Feather Rivers Diazinon and Chlorpyrifos Basin Plan Amendment (2007)	Central Valley Regional Water Quality Control Board
Sacramento Valley Integrated Regional Water Management Plan (2006)	Northern California Water Association, CH2M HILL, GEI Consultants
Sacramento River Hydrologic Region Redding Groundwater Basin - CA Groundwater Bulletin 118 (2004)	California Department of Water Resources
Shasta County General Plan (2004)	County of Shasta
Storm Water Quality Improvement Plan (2003)	City of Redding
Upper Sacramento River TMDL for Cadmium, Copper & Zinc (2002)	Sacramento River TMDL Unit
City of Redding 2000-2020 General Plan ()	City of Redding
Draft Enterprise Area Groundwater Study (1996)	CH2M HILL
City-Wide Master Storm Drain Study Final Report (1993)	City of Redding
Redding Region Water Supply Alternatives (1975)	CH2M HILL

Prepared for

City of Redding

Stormwater Resource Plan

Appendix E – Project Identification and Ranking

Redding, CA

Prepared by

Geosyntec consultants

engineers | scientists | innovators

924 Anacapa Street, Suite 4A
Santa Barbara, CA 93101

Geosyntec Project #: LA0443

March 2019

TABLE OF CONTENTS

SECTION 1 . Introduction E-1

SECTION 2 . Project Identification E-2

2.1 Project Identification Criteria E-2
2.1.1 Land Use E-2
2.1.2 Geophysical and Environmental Constraints E-3
2.2 Project Identification Summary E-5
SECTION 3 . Project Ranking E-6

3.1 Phase I: Project Condition Evaluation E-6
3.2 Phase II: Drainage Area and General Feasibility Evaluation E-9
3.3 Final SWRP Project Ranks E-12
SECTION 4 . Conclusion E-13

SECTION 5 . References E-14

LIST OF TABLES

Table E-1. Geophysical and Environmental Constraints Use to Identify Projects E-4

Table E-2. GIS File Data Sources E-5

Table E-3. Identified SWRP projects by type E-5

Table E-4. Phase I Project Condition Scoring E-7

Table E-5. Data Sources for Phase I Project Condition GIS Files E-8

Table E-6. Phase I Project Condition Weighting E-8

Table E-7. Phase II Project Metric Scoring and Weights E-11

LIST OF FIGURES

Figure E-1. Example Project Identification for Infiltration-based BMPs E-1

Figure E-2. Redding SWRP Projects KMZ file E-12

ATTACHMENTS

Attachment E-1. Lists of identified and Phase I ranked projects by SWRP project type

Attachment E-2. Lists of Phase II project rankings by SWRP project type

SECTION 1. INTRODUCTION

As part of the City of Redding Stormwater Resource Plan (SWRP), parcels within the City of Redding (the City) were evaluated for structural stormwater BMP implementation opportunities. Structural BMPs considered for SWRP project implementation include green streets, direct use storage tanks, and natural treatment systems which may be either infiltration-based or treatment-based BMPs. This appendix describes the methods used to identify and rank those parcels within the City most suitable for SWRP project implementation.

Identification of parcels most suitable for project implementation is a two-step process involving: 1) project identification, and 2) project ranking. For the first step, parcels within the City are screened in Geographic Information Systems (GIS) to identify parcels, or portions thereof, which meet land use requirements and are free of geographic constraints limiting implementation (outlined in Figure E-1). After these potential project implementation areas (called SRWP projects) are identified, they are compared to one another and ranked to highlight those projects that are most feasibly implemented and have the greatest potential benefits. Details related to the project identification and project ranking processes are discussed in Sections 2 and 3, respectively.

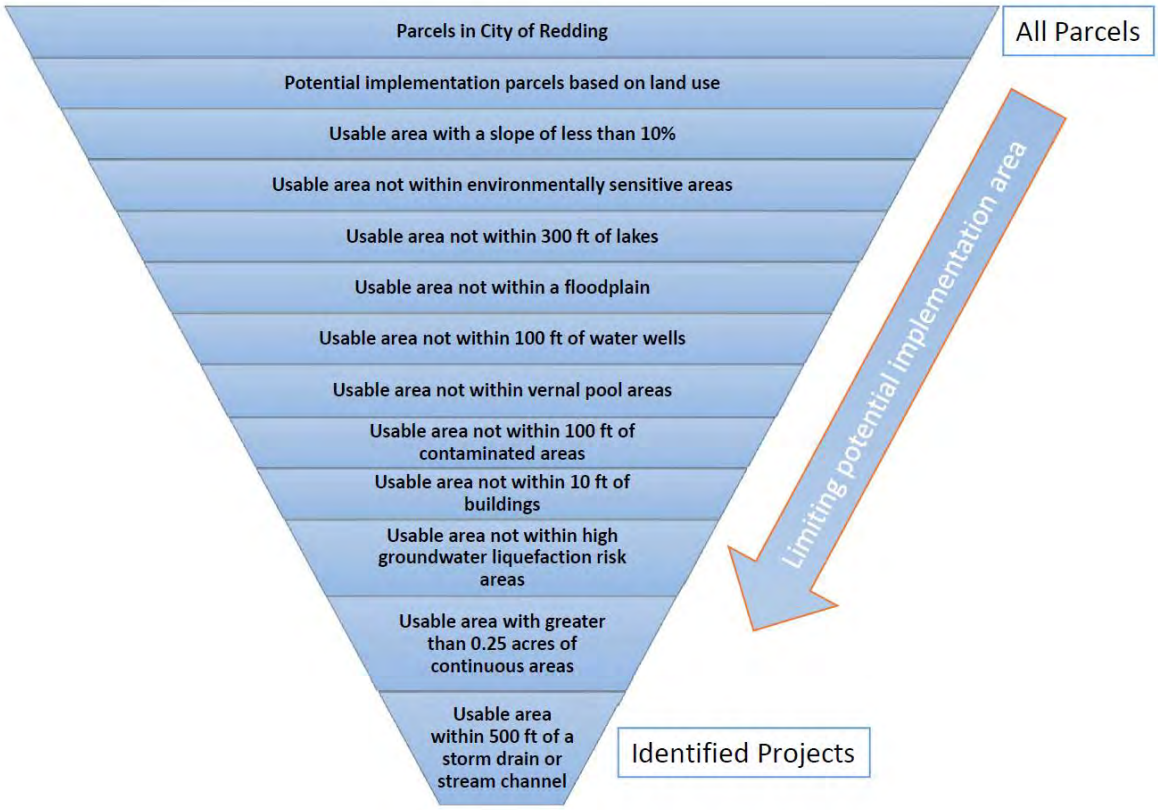


Figure E-1. Example Project Identification for Infiltration-based BMPs

SECTION 2. PROJECT IDENTIFICATION

For the first step, parcels throughout the City were evaluated in the GIS environment to identify potential project implementation areas. To do this, the City parcels shapefile was overlain first by a land use shapefile, to screen out those parcels with land uses not conducive to large-scale structural BMP implementation (e.g., residential, commercial). Then, remaining parcels were overlain by various shapefiles representative of geophysical/environmental constraints, such as slope and environmentally sensitive areas, to screen out parcels or portions thereof where BMP implementation is not feasible (e.g. areas of high slope). Those portions of parcels which did not meet land use requirements or were overlain by geographic constraints precluding implementation were then removed from consideration, leaving only "usable areas" for further consideration. A SWRP project is defined as any parcel containing "usable area" of at least 0.25 acres in size.

Implementation feasibility evaluations are BMP-specific (Geosyntec Consultants and LWA, 2011). Projects were therefore subject to three BMP-specific identification processes to evaluate the feasibility of implementing each of the three SWRP project types identified for City of Redding (natural treatment systems, green streets, and direct use storage tanks BMPs). The criteria metrics are generally the same, but the subset of criteria applied is BMP-specific. The general criteria and metrics used to define various constraints are described in Section 2.1 and the BMP-specific identification processes (the subset of metrics applied to each SWRP project type) are discussed in Section 2.2.

2.1 Project Identification Criteria

2.1.1 Land Use

Potential implementation and use (parcels which might be able to utilize water stored in direct use BMPs) parcels were identified based on designated land use.

Parcels with the following land uses were maintained as potential project implementation areas:

- Agricultural parcels[1]
- Open Space[2]
- Recreation[3]

[1] Based on parcels that overlap agricultural land use designations in the 2005 Shasta County land survey by the California Department of Water Resources (CA DWR).

[2] Based on parcels that overlap the following land use designations in the 2005 Shasta County, CA DWR land survey: native vegetation, riparian vegetation, barren and wasteland; and those designated as open space in the City parcel file received from the City on 12/19/2017.

[3] Based on the following land use designations in the City parcel file: golf courses and parks.

- Rights of way[4]
- Schools[5]
- Vacant or undeveloped[6]

Parcels with the following land uses were also identified as potential use areas. Proximity to direct use BMP implementation sites is considered later in the identification process (see Section 2.1.2).

- Golf courses
- Parks
- Schools

2.1.2 Geophysical and Environmental Constraints

Following the land use analysis, remaining parcels were overlain by the shapefiles representative of various geophysical and environmental constraints. As noted above, the metrics used to evaluate BMP implementation feasibility are generally the same across SWRP project types, but the subset of constraints applied is BMP-specific. Table E-1 shows the entire list of geophysical and environmental constraints considered, the metrics used to measure them, and the BMP-specific SWRP project type to which each constraint applies. The sources for the files used in the project identification are shown in Table E-2.

[4] Based on the public land use designation in the City parcel file.

[5] Based on City parcels containing point locations of elementary through college level schools. Point locations of schools downloaded from the County of Shasta GIS website on 12/6/2017.

[6] Based on parcels that overlap with urban vacant land use designation in the 2005 Shasta County, CA DWR land survey and designated as undeveloped land uses in the City parcel file.

Table E-1. Geophysical and Environmental Constraints Use to Identify Projects

Geophysical and Environmental Constraints	Eliminate Areas	Natural Treatment System	Green Street	Direct Use
Steep slopes	>10%	X	X	X
Environmentally sensitive areas	Areas designated as critical habitats	X	X	X
Impacts to lakes	Within 300 ft	X	X	X
Potential flooding	Within 100-year floodplain boundary	X	X	X
Impacts to production wells	Within 100 ft	X	X	X
Impacts to vernal pools	Areas designated as vernal pools	X	X	X
Soil or groundwater contamination	Within 100 ft	X	X	X
Soil liquefaction	Classified as high severity	X	X	X
Structures and buildings	Within 10 ft	X	X	X
Limited usable areas	< 0.25 acre or < 150 ft long	X	X	X
Proximity to storm drains/channels	Farther than 500 ft	X		X
Proximity to a potential use parcel	Farther than 500 ft			X
Major roads	Highways and freeways		X	

Table E-2. GIS File Data Sources

File	Source	Date Received or Downloaded
Lakes/reservoirs	United States Geological Survey (USGS) National Hydrography Dataset Plus (NHDPlus)	8/14/2017
	California Department of Fish and Wildlife (CDFW)	12/6/2017
Slope	Created from the topographic Digital Elevation Model (DEM) received from the City of Redding	12/19/2017
Contaminated soil and groundwater (all active cleanup sites)	GeoTracker Cleanup Sites https://geotracker.waterboards.ca.gov/	9/18/17
Environmentally sensitive areas	US Fish and Wildlife Service	12/6/2017
Floodplain (100 year)	FEMA flood zone and the Montgomery Watson flood study from City of Redding	12/19/2017
Vernal pools	California Department of Fish and Wildlife (CDFW)	12/6/2017
Buildings	City of Redding	12/6/2017
Roads	City of Redding	12/7/2017
Soil liquefaction	City of Redding	1/19/2018
Storm drains	City of Redding	12/19/2017
Streams	USGS National Hydrography Dataset Plus (NHDPlus)	8/14/2017
	City of Redding	12/19/2017

2.2 Project Identification Summary

The unique project identification process was executed for each of the three BMP types described by the criteria in Table E-1. The number of SWRP projects remaining after the identification process for each SWRP project type are shown in Table E-3.

Table E-3. Identified SWRP projects by type

Number of Potential SWRP Projects Identified			
Natural Treatment System	Green Street	Direct Use	Total Projects
1,125	3,926	638	5,689

SECTION 3. PROJECT RANKING

Potential projects remaining after the identification process (i.e., SWRP projects) were then ranked based on scores resulting from two additional phases of analysis. The first phase involved a GIS analysis where projects were assigned scores based on the degree to which various conditions (e.g., imperviousness, slope, etc.) make implementation feasible or infeasible. The second phase involved an individualized desktop analysis of the project and its drainage area, where projects were assigned scores based on both the relative size and impairment of their drainage areas (LPR] Model Catchment Prioritization Index [CPI], trash priorities) and a general assessment of BMP implementability. Scores resulting from these two phases of analysis were then combined for each potential project and ranked to identify those projects most suitable for SWRP implementation. Details related to the two phases of project ranking and the process by which scores are combined are discussed in the following sections.

3.1 Phase I: Project Condition Evaluation

For the Phase I evaluation, the SWRP projects were assigned scores based on the degree to which they met certain conditions to facilitate BMP implementation (e.g., ownership, distance to flow source, size of usable area). For comparison purposes, the range of results for each condition were adjusted to numeric scores ranging from 0 to 3. For all conditions, low implementation favorability was represented by a score of 0 and high implementation favorability was represented by a score of 3. The conditions used to evaluate the potential projects are summarized in Table E-4, however, the conditions evaluated are specific to each SWRP project type, so each SWRP project was not evaluated for all conditions. shown in Table E-4. The sources for all GIS data files used in the Phase I ranking process are shown in Table E-5.

Table E-4. Phase I Project Condition Scoring

Condition of Usable Area	Classification Definition		Condition Score
	Classification or Low Range (if applicable)	High Range (if applicable)	
Imperviousness (%)	0%	25%	3
	25%	50%	2
	50%	75%	1
	75%	100%	0
Slope (%)	0%	2%	3
	2%	4%	2
	4%	8%	1
	8%	10%	0
Parcel Ownership	City of Redding		3
	Public		2
	McConnell Foundation		2
	Private		1
Onsite Septic System	No Septic		3
	Septic		0
Soil Infiltration (hydrologic soil group)	A		3
	B		2
	C		1
	D		0
Distance from planned subdivision (miles)	Project within subdivision		3
	>0	0.25	2
	0.25	1	1
	1	no limit	0
Distance from Source (ft)	0	100	3
	100	200	2
	200	350	1
	350	500	0
Size of Storm Drain (inch)	42	no limit	3
	32	42	2
	18	32	1
	0	18	0
Street Type	Arterial		3
	Collector		2
	Local		0
Street Ownership	City of Redding		3
	Public		1
Size of Usable Area (acres)	2	no limit	3
	1	2	2
	0.5	1	1
	0	0.5	0
Length of Usable Street (ft)	600	no limit	3
	300	600	1
	0	300	0

Table E-5. Data Sources for Phase I Project Condition GIS Files

File	Source	Date Received or Downloaded
Imperviousness	National Land Cover Database Imperviousness (2011), Multi-Resolution Land Characteristics (MRLC) Consortium	9/14/2017
Slope	Created from the topographic Digital Elevation Model (DEM) received from the City of Redding	12/19/2017
Project Parcel Ownership	Determined based on the parcel file provided by the City of Redding	12/19/2017
Project Street Ownership	Determined based on the road centerline file downloaded from the City of Redding	12/7/2017
Onsite Septic System	City of Redding	12/19/2017
Soils (hydrologic soil groups)	U.S. Department of Agriculture (USDA) National Resources Conservation Service (NRCS) Web Soil Survey	8/16/2017
Distance from source, size of storm drain	City of Redding	12/19/2017

Scores for each project condition were then weighted based on the priority of each condition to implementation of the various SWRP project types. The weights used to adjust scores for each parcel for each SWRP project type are shown in Table E-6.

Table E-6. Phase I Project Condition Weighting

Condition for Usable Area	Project Condition Weight[a]		
	Natural Treatment System	Green Street	Direct Use
Imperviousness	5%		10%
Slope	5%	10%	10%
Parcel/Street Ownership	20%	20%	10%
Onsite Septic System	10%		
Soil Infiltration (hydrologic soil group)	20%	20%	
Distance from Planned Subdivision	10%	20%	20%
Distance from Source	10%		20%
Size of Storm Drain	10%		20%
Size of Usable Area or Length of Street	10%	10%	10%
Street Type		20%	

a. Condition weights left blank were not evaluated for the project type

Weighted scores for each applicable condition were then summed for each potential implementation area, resulting in the Phase I scores ranging from 0 to 3, for each SWRP project type, that allow for SWRP projects to be ranked. The Phase I scores for every identified SWRP project are included in Attachment E-1 by project type.

3.2 Phase II: Drainage Area and General Feasibility Evaluation

The main objectives of the Phase II evaluation were to assess the relative potential benefits from capturing and using (i.e., infiltrating, using as non-potable water supply, or treating and discharging) the runoff from the project drainage areas, and to identify any major barriers to BMP implementation not already addressed (e.g., major trees, utilities) for the top ranked projects from the Phase I evaluation and all the potential projects recommended by the City, the technical advisory committee (TAC), and the stakeholders. A total of 76 projects were evaluated during Phase II, including 18 NTS, 14 stream/lake restoration, 5 direct use, and 39 green street projects. An adaptive framework was established to easily[7] evaluate additional potential project locations using this Phase II methodology and include them on the ranked list at any point in the future.

Relative benefits for stormwater capture and use were assessed by looking at the results of previous studies including catchment prioritization scores, which provide information regarding the relative magnitude of stormwater pollutant loads in the drainage area from the City of Redding LPR Model (Geosyntec, 2017), as well as the percentage of trash priority land uses within each drainage area to comply with the California Trash Amendments (SWRCB, 2017). Additionally, to prioritize projects that address environmental injustice issues within the SWRP planning area, projects located within (or the drainage area is within) Housing and Urban Development (HUD) qualified census tracts or Economic Development Administration (EDA) qualified census tracts received greater benefit scores. General feasibility was assessed through an aerial imagery analysis to identify barriers to implementation such as trees, large amounts of impervious surfaces, utilities, access, and general configuration.

Similar to the Phase I evaluation, the range of values for each metric were scaled to numeric scores ranging from 0 to 3, where scores of 0 reflect lesser implementation feasibility/benefit and scores of 3 reflect greater implementation feasibility/benefit. The attributes evaluated and associated value scores for the drainage area and general feasibility evaluation are shown in Table E-7. No projects were identified as having a “fatal flaw” (i.e. drainage area less than 10 acres (unless explicitly requested); trees covering more than 90% of usable area; structures, utilities, or other permanent features covering usable area), so none were removed from consideration. As with the

[7] A format Microsoft Excel file has been included with the project files that includes: directions for evaluating the potential project locations, formulas for assigning weights and scores based on the desktop evaluation, and a filterable list of evaluation results and rankings. A KMZ file has also been included that shows all the spatial layers necessary for performing the desktop evaluation.

Phase I scores, the drainage area and general feasibility scores were weighted based on priority. A single weight factor was used for each attribute regardless of SWRP project type (Table E-7). Weighted scores for each attribute were then summed for each SWRP project, resulting in the Phase II scores ranging from 0 to 3 (for each SWRP project type) that allow SWRP projects to be ranked. The scores for all the SWRP projects evaluated in Phase II are included in Attachment E-2 by project type.

Table E-7. Phase II Project Metric Scoring and Weights

Metric for Usable Area	Category Definition		Metric Point	Metric Weight
Approximate Size of Drainage Area and % Urban Land Use	Extra-large (>5,000 acres)		3	25%
	Large (1,000 – 5,000 acres)	>50% Urban	3	
		10-50% Urban	2	
		<10% Urban	1	
	Medium (50 – 1,000 acres)	>75% Urban	3	
		25-75% Urban	2	
		<25% Urban	1	
	Small (<50 acres)	>75% Urban	2	
		25-75% Urban	1	
		<25% Urban	0	
	Extra-small (< 10 acres of Urban)		Fatal Flaw	
LPR Model Catchment Prioritization Score	5		3	10%
	4		2	
	3		2	
	2		1	
	1		0	
	0		0	
Trash Priority Land Use in Drainage Area	>50%		3	10%
	25-50%		2	
	0-25%		1	
	0%		0	
Project Benefits Economically Disadvantaged Area	100% in HUD[a]		3	25%
	50-100% in HUD or 100% EDA[b]		2	
	50-100% in EDA		1	
	<50% in HUD or EDA		0	
BMP Implementability[c]	Additional Benefits/No issues		3	30%
	Additional Benefits/Minor issues		2	
	No issues		2	
	Minor issues		1	
	Fatal flaw		Fatal flaw	

[a.] U.S. Department of Housing and Urban Development (HUD) qualified census tracts
[b.] U.S. Economic Development Administration (EDA) qualified census tracts
[c.] Issues examined for BMP implementability include large trees/vegetation in usable area, high amount of impervious surface (i.e., parking lots or large structures), presence of powerlines/utilities, difficult or nonexistent path for transporting water from the source to the parcel, and configuration of usable area.

3.3 Final SWRP Project Ranks

To combine scores resulting from the project conditions (Phase I) and drainage area and general feasibility (Phase II) evaluations, the scores from the two phases were averaged to determine an overall ranking score for each project ranging from 0 to 3. The overall scores for all the SWRP project evaluated in Phase II are included in Attachment E-2 by project type. Additionally, KMZ files were created for spatial viewing in Google Earth for each Phase I and Phase II project and color coded based on their ranking (example shown in Figure E-2).

Figure E-2. Redding SWRP Projects KMZ file

SECTION 4. CONCLUSION

The SWRP project identification and ranking process was conducted in conjunction with the City, TAC, and Stakeholders. The City, TAC, and stakeholders were consulted for input with respect to weighting regimes and were provided results for each phase of the analysis. At completion, the City, TAC, and stakeholders were provided and asked to review detailed results for all potential SWRP projects, which included comments relating to BMP implementability (for those subject to the drainage area and general feasibility evaluation). The final list of identified and ranked potential SWRP projects will act as a crucial initial foundation for the planning of future stormwater capture and use projects in the years to come. By using this adaptive methodology that allows for future evaluation and addition of potential projects locations, the City has created a framework to expand the comprehensiveness of the desktop evaluated and ranked potential project list.

SECTION 5. REFERENCES

Geosyntec Consultants and Larry Walker Associates (LWA), 2011. Ventura County Technical Guidance Manual for Stormwater Quality Control Measures. Prepared for Ventura Countywide Stormwater Quality Management Program. July 2011.

Geosyntec Consultants, 2017. *Pollutant Load, Prioritization, and Reduction (LPR) Model Technical Report*. June 2017.

State Water Resources Control Board (SWRCB), 2017. *Water Code Section 13383 Order to Submit Method to Comply With Statewide Trash Provisions; Requirements For Traditional Small Municipal Separate Storm Sewer System (MS4) Permittees.* June 2, 2017.

ATTACHMENT E-1.

LISTS OF IDENTIFIED AND PHASE I RANKED PROJECTS BY PROJECT TYPE

Table E-8
Identified Natural Treatment System Projects (Phase I Rank)

APN	Owner	Ranking Scores									
		Imperv-iousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Septic System	Soils	Size of Usable Area	Weighted Overall Score
101490011000	REDDING CITY OF	3	2	3	3	3	1	3	3	3	2.8
056610008000	REDDING CITY OF	3	3	3	3	3	3	3	1	3	2.6
112140007000	REDDING CITY OF	3	3	3	3	3	1	3	2	3	2.6
050500029000	REDDING CITY OF	2	2	3	3	3	2	3	3	1	2.6
104500036000	REDDING CITY OF	3	2	3	3	3	1	3	2	3	2.6
112140006000	REDDING CITY OF C/O ORRICK HERRING	3	2	3	3	3	1	3	2	3	2.6
048110046000	GREENHOOD TIM & CINDY ETAL	3	2	1	3	3	3	3	3	3	2.6
109090016000	REDDING CITY OF	3	2	3	2	2	1	3	3	3	2.6
112140001000	MCCONNELL FOUNDATION	3	2	2	3	3	1	3	3	3	2.6
115220003000	REDDING CITY OF	3	2	3	1	3	1	3	3	3	2.6
107160009000	REDDING CITY OF	3	2	3		3	1	3	2	3	2.5
049350005000	MCCONNELL FOUNDATION	3	3	2	2	2	2	3	3	3	2.5
054640001000	REDDING CITY OF	3	3	3	3	3	2	3	1	3	2.5
056130031000	REDDING CITY OF	3	3	3	2	3	3	3	1	3	2.5
068330013000	REDDING CITY OF	3	3	3	2	3	3	3	1	3	2.5
102410030000	CALIFORNIA STATE OF	1	3	2	3	3	1	3	3	3	2.5
102470022000	REDDING CITY OF	2	2	3	3	3	1	3	2	3	2.5
048110047000	R MERVIN & CO LLC C/O LAURIE A SHO	3	2	1	3	2	3	3	3	3	2.5
054090039000	REDDING CITY OF	3	2	3	3	3	2	3	1	3	2.5
054280005000	REDDING CITY OF	2	3	3	3	3	2	3	1	3	2.5
102470002000	REDDING CITY OF	3	2	3	1	3	1	3	3	2	2.5
102470011000	REDDING CITY OF	1	2	3	1	3	1	3	3	3	2.5
049180005000	YOUNG EDWARD H & JUDY J 2010 FAM	3	3	1	2	3	2	3	3	3	2.4
050330024000	STAR ESTATES LLC	3	3	1	2	3	2	3	3	3	2.4
054210084000	REDDING CITY OF	3	3	3	1	3	3	3	1	3	2.4
054210089000	REDDING CITY OF	3	3	3	1	3	3	3	1	3	2.4
054220011000	REDDING CITY OF	3	1	3	2	3	3	3	1	3	2.4
054220018000	REDDING CITY OF	3	3	3	3	2	2	3	1	3	2.4
054220023000	REDDING CITY OF	3	3	3	3	1	3	3	1	3	2.4
054270004000	REDDING CITY OF	3	3	3	1	3	3	3	1	3	2.4
107580022000	REDDING CITY OF	3	1	3	3	3	1	3	3	0	2.4
108370025000	KITE JOHN & WILMA TRUST 1996	3	3	1	3	3	1	3	3	3	2.4
109040043000	REDDING CITY OF	3	3	3	3	3	1	3	1	3	2.4
048140003000	SHASTA COUNTY OF	3	2	2		3	2	3	2	3	2.4
054080024000	REDDING CITY OF	3	2	3	3	2	2	3	1	3	2.4
102470012000	REDDING JOINT POWERS FINANCIN	1	2	2	2	3	1	3	3	3	2.4
102490013000	REDDING CITY OF	2	3	3	3	3	1	3	1	3	2.4
110150021000	REDDING CITY OF	3	2	3	3	3	1	3	1	3	2.4
112060049000	REDDING CITY OF	3	2	3	1	3	1	3	2	3	2.4
112270007000	REDDING CITY OF	3	2	3	0	3	1	3	3	2	2.4
112270013000	MCCONNELL FOUNDATION	3	2	2	3	3	1	3	2	3	2.4
067350038000	ENTERPRISE SCHOOL DISTRICT	2	3	2	3	3	3	3	1	3	2.4
102410020000	REDDING SCHOOL DISTRICT	2	3	2	1	3	1	3	3	3	2.4
050820040000	STOLZ REINHARD H II & WANELL	3	2	1	3	3	3	3	3	1	2.4
054200034000	REDDING CITY OF	3	3	3	1	3	2	3	1	3	2.3
054210045000	REDDING CITY OF	3	3	3	1	3	2	3	1	3	2.3
054210052000	REDDING CITY OF	3	3	3	0	3	3	3	1	3	2.3
054280006000	REDDING CITY OF	3	3	3	1	3	2	3	1	3	2.3
104860026000	REDDING CITY OF	3	3	3	2	3	1	3	1	3	2.3
110150002000	REDDING CITY OF	3	3	3	2	3	1	3	1	3	2.3
117070009000	REDDING CITY OF	3	1	3	3	3	1	3	1	3	2.3
050370041000	REDDING CITY OF	3	1	3	1	3	3	3	2	1	2.3
050600045000	REDDING CITY OF	3	1	3	0	3	2	3	3	1	2.3
104220033000	REDDING CITY OF	3	1	3	2	3	1	3	3	0	2.3
049420037000	SHASTA BAPTIST CHURCH	2	2	2	2	3	2	3	3	1	2.3
049180004000	HUMBOLDT FLAKEBOARD C/O SIERRA P	3	3	1	1	3	2	3	3	3	2.3
050280015000	REDDING ELEMENTARY SCHOOL DIS	3	3	1	3	3	2	3	2	3	2.3
067010005000	REDDING CHRISTIAN FELLOWSHIP	3	1	2	1	3	3	3	2	3	2.3
070220037000	P G & E	3	3	2	3	2	2	3	3	0	2.3
050280021000	REDDING ELEMENTARY SCHL DIST	3	3	2	3	3	2	3	1	3	2.3
054220024000	REDDING CITY OF	3	2	3		3	2	3	1	2	2.3
054260014000	REDDING CITY OF	3	2	3		0	2	3	2	3	2.3
049190015000	YOUNG EDWARD H & JUDY J 2010 FAM	3	2	1	2	3	2	3	3	2	2.3
050610039000	HANSON JASON JOHN & CONNIE	2	3	1	2	3	2	3	3	2	2.3
048110048000	R MERVIN & CO LLC C/O LAURIE A SHO	3	2	1	3	0	3	3	3	3	2.3
054200076000	DENTON CINDEE ETAL	3	2	1	1	3	2	3	3	3	2.3
054830001000	REDDING CITY OF	3	2	3	1	3	2	3	1	3	2.3
068290004000	REDDING CITY OF	3	2	3	0	3	3	3	1	3	2.3
070150030000	REDDING CITY OF	3	2	3	2	2	2	3	1	3	2.3
102490006000	CALIFORNIA STATE OF	1	2	2	3	3	1	3	2	3	2.3
103240046000	REDDING CITY OF	3	2	3	2	3	1	3	1	3	2.3
104040043000	REDDING CITY OF	3	2	3	2	3	1	3	1	3	2.3
068070016000	SHASTA UNION HIGH SCHOOL DIST	2	3	2	3	3	2	3	1	3	2.3
104200032000	REDDING CITY OF	3	1	3		2	1	3	3	0	2.2
108430023000	SIGNATURE NORTHWEST PARTNERSH	2	2	1		3	1	3	3	3	2.2
054570006000	REDDING CITY OF	3	3	3	1	3	2	3	1	2	2.2
112390005000	REDDING CITY OF	2	2	3	0	3	1	3	3	1	2.2
048500028000	COSTELLO MARY H	3	3	1	0	3	2	3	3	3	2.2
054210051000	REDDING CITY OF	3	3	3	0	3	2	3	1	3	2.2
054220016000	REDDING CITY OF	3	3	3	2	0	3	3	1	3	2.2
054220020000	REDDING CITY OF	3	3	3	2	3	2	3	0	3	2.2
070150029000	NEIGHBORHOOD CHURCH OF RDG CHR	3	3	2	2	3	2	3	1	3	2.2
077290043000	REDDING CITY OF	3	3	3	1	3	1	3	1	3	2.2
117070008000	REDDING CITY OF	3	3	3	3	3	1	3	0	3	2.2
108370002000	REDDING SCHOOL DISTRICT	3	3	2	3	3	1	3	1	3	2.2
112390002000	REDDING CITY OF	1	2	3	0	3	1	3	3	1	2.2
054210030000	REDDING CITY OF	3	2	3	0	3	2	3	1	3	2.2

Table E-8
Identified Natural Treatment System Projects (Phase I Rank)

APN	Owner	Ranking Scores									
		Imperv-iousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Septic System	Soils	Size of Usable Area	Weighted Overall Score
054280001000	UNITED STATES OF AMERICA	2	3	2	2	3	2	3	1	3	2.2
054280008000	REDDING CITY OF	3	2	3	0	3	2	3	1	3	2.2
054830003000	REDDING CITY OF	3	2	3	1	2	2	3	1	3	2.2
056010025000	REDDING CITY OF	2	3	3	3	3	2	0	1	3	2.2
067110052000	MCCONNELL FOUNDATION	3	2	2	2	3	2	3	1	3	2.2
068380040000	REDDING CITY OF	3	2	3	1	3	3	3	1	1	2.2
070220006000	P G & E	3	2	2	0	3	2	3	3	1	2.2
070220033000	P G & E	3	2	2	3	1	2	3	3	0	2.2
073020026000	OSTLING ERNEST E & FAITH A JOINT RE	3	2	1	3	3	3	3	1	3	2.2
073090061000	THOMASON COLBURN R & VALDENE	3	2	1	3	3	3	3	1	3	2.2
102490012000	REDDING JOINT POWERS FINANCIN G A	1	2	2	1	3	1	3	3	2	2.2
109040008000	REDDING CITY OF	3	2	3	1	3	1	3	1	3	2.2
109040062000	REDDING JT POWERS FINAN AUTH	2	3	2	3	3	1	3	1	3	2.2
112040003000	REDDING ROOFING SUPPLY INC	3	2	1	3	2	1	3	3	2	2.2
117390024000	REDDING CITY OF	3	2	3	0	3	0	3	3	1	2.2
204350040000	REDDING CITY OF	3	2	3	2	3	0	3	1	3	2.2
048140008000	DEPT OF CORRECTIONS & REHABIL	3	2	2	1	3	3	3	1	3	2.2
068200013000	GRACE BAPTIST CHURCH OF RDG	2	3	2	2	3	2	3	1	3	2.2
114100026000	GATEWAY UNIFIED SCHOOL DISTRI	2	3	2	3	3	1	3	1	3	2.2
116180023000	BETHEL REDDING PROPERTIES	3	2	2	3	3	1	3	1	3	2.2
048400003000	CALIFORNIA STATE OF	3	2	2	3	3	2	3	1	2	2.2
117150002000	REDDING CITY OF	3	3	3		3	1	3	0	3	2.1
104200026000	REDDING CITY OF	3	1	3		1	1	3	3	0	2.1
054220028000	REDDING CITY OF	3	3	3	1	1	2	3	1	3	2.1
077460022000	REDDING CITY OF	2	2	3	3	3	1	3	1	1	2.1
103750001000	REDDING CITY OF	3	1	3	1	3	1	3	1	3	2.1
103780027000	REDDING CITY OF	3	3	3	3	3	1	3	1	0	2.1
104500028000	REDDING CITY OF	2	2	3	0	3	1	3	3	0	2.1
109040009000	REDDING CITY OF	3	3	3	3	2	1	3	0	3	2.1
109040017000	REDDING CITY OF	3	3	3	3	2	1	3	0	3	2.1
109040047000	REDDING CITY OF	3	3	3	0	3	1	3	1	3	2.1
112390003000	REDDING CITY OF	2	2	3	0	3	1	3	3	0	2.1
112390006000	REDDING CITY OF	2	2	3	0	3	1	3	3	0	2.1
115460023000	REDDING CITY OF	3	3	3	2	3	1	3	1	1	2.1
117070028000	REDDING CITY OF	3	1	3	1	3	1	3	1	3	2.1
050450014000	REDDING CITY OF	3	3	3	0	0	2	3	3	1	2.1
050470001000	P G & E	1	3	2	0	3	2	3	3	1	2.1
054090029000	LEWIS THOMAS A ETAL	3	3	1	3	3	2	3	1	3	2.1
067380047000	REDDING CITY OF	3	1	3	3	3	2	3	1	0	2.1
068130043000	CORP PRES GRIDLEY CA STAKE/CH OF JI	1	3	2	1	3	3	3	1	3	2.1
068320069000	REDDING CITY OF	3	1	3	3	2	2	3	1	1	2.1
074250041000	REDDING CITY OF DEPT OF FINANCE	3	1	3	1	3	2	3	1	2	2.1
112090003000	THORESON KENNY A	3	1	1	3	3	1	3	3	1	2.1
204420040000	REDDING CITY OF	3	3	3	2	3	0	3	1	2	2.1
050440016000	SHILOH PARK LIMITED PARTNERSH	3	2	1		2	2	3	2	3	2.1
112390001000	REDDING CITY OF	1	2	3	0	3	1	3	2	2	2.1
050340007000	PRATHER JEFFREY J	3	2	1	0	2	2	3	3	3	2.1
050600044000	MEADOW WOOD ESTATES HOME OWN	3	2	1	2	3	2	3	3	0	2.1
050650026000	REDDING CITY OF	3	2	3	3	3	2	3	0	1	2.1
067010006000	DOWNS GLENN W & SHAWNA L	3	2	1	1	2	3	3	3	1	2.1
077560028000	REDDING CITY OF	3	2	3	1	3	1	3	1	2	2.1
101330018000	UNION PACIFIC RAILROAD COMPAN YP	1	2	2	3	3	1	3	1	3	2.1
101660046000	SCHC PROPERTY CORPORATION	1	2	2	0	3	1	3	3	2	2.1
101790034000	REDDING CITY OF	0	3	3	2	3	1	3	1	2	2.1
102040013000	REDDING CITY OF	3	2	3	2	3	1	3	0	3	2.1
103690022000	REDDING CITY OF	3	2	3	2	2	1	3	1	2	2.1
104730039000	REDDING CITY OF	3	2	3	2	3	1	3	1	1	2.1
107190024000	REDDING CITY OF	0	3	3	3	3	1	3	1	1	2.1
107500011000	BEEMAN FAMILY 2012 TRUST TAMMEN	3	2	1	3	3	1	0	3	3	2.1
108030082000	REDDING AREA BUS AUTHORITY	0	3	2	3	3	1	3	1	3	2.1
108280014000	REDDING CITY OF	3	2	3	1	3	1	3	2	0	2.1
114040004000	UNITED STATES OF AMERICA	3	2	2	2	3	1	3	1	3	2.1
116050022000	REDDING CITY OF	2	3	3	2	3	1	3	1	1	2.1
077180054000	REDDING CITY OF	3	2	3	2	3	1	3	0	3	2.1
048130018000	SHASTA COUNTY OF	2	3	2	1	3	2	3	1	3	2.1
054090038000	PACHECO UNION SCHOOL DIST	3	2	1	3	3	2	3	1	3	2.1
054200072000	CURTO FAMILY TRUST JOE L & L LAVON	3	2	1	3	3	2	3	1	3	2.1
054200074000	DENTON CINDEE ETAL	3	2	1	1	3	2	3	2	3	2.1
054220010000	REDDING CITY OF	3	2	3	2	2	2	3	1	1	2.1
054220012000	REDDING CITY OF	3	2	3	2	0	2	3	1	3	2.1
054220027000	STEVENSON STANLEY & SHARON RE	3	2	1	2	3	3	3	1	3	2.1
054830004000	REDDING CITY OF	3	2	3	1	0	3	3	1	3	2.1
067110042000	REDDING MEMORIAL PARK INC	3	2	2	1	3	2	3	1	3	2.1
070130001000	NEIGHBORHOOD CHURCH OF RDG CHR	2	3	2	1	3	2	3	1	3	2.1
073100072000	GOLD HILLS COUNTRY CLUB C/O COLBU	3	2	1	3	3	2	3	1	3	2.1
073310001000	REDDING CITY OF	3	2	3	0	2	2	3	1	3	2.1
074140011000	LEVENSON FAMILY REVOCABLE TRU ST	3	2	1	3	3	2	3	1	3	2.1
076240013000	SIMPSON COLLEGE	3	2	2	3	3	2	3	0	3	2.1
048200008000	REDDING ELEMENTARY SCHOOL DIST	2	3	2	1	3	2	3	1	3	2.1
068010011000	ENTERPRISE SCHOOL DIST	2	3	2	0	3	3	3	1	3	2.1
048240053000	REDDING CITY OF	2	3	3	0	2	2	3	1	3	2.1
054640013000	REDDING CITY OF	3	3	3	1	1	2	3	1	2	2.0
077540036000	REDDING CITY OF	1	3	3	3	3	1	3	1	0	2.0
101330019000	SHASTA COUNTY OF DEPT OF PUBLIC W	1	3	2	3	3	1	3	1	2	2.0
102070009000	SCHC PROPERTY CORPORATION	1	3	2	0	3	1	3	3	1	2.0
104550055000	REDDING CITY OF	3	1	3	1	3	1	3	1	2	2.0
104770061000	REDDING CITY OF	3	3	3	0	3	1	3	1	2	2.0

Table E-8
Identified Natural Treatment System Projects (Phase I Rank)

APN	Owner	Ranking Scores									
		Imperv-iousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Septic System	Soils	Size of Usable Area	Weighted Overall Score
104930038000	REDDING CITY OF	3	3	3	1	3	1	3	1	1	2.0
107400008000	DIGNITY HEALTH FIXED ASSET ACCOUN	2	2	1	2	3	1	3	3	1	2.0
112090001000	RECTOR WARDENS & VESTRYMEN OF	2	2	2	3	3	1	3	1	2	2.0
112140008000	MCCONNELL FOUNDATION	2	2	2	3	2	1	3	2	1	2.0
116460023000	REDDING CITY OF	2	2	3	1	3	1	3	1	2	2.0
117130033000	REDDING CITY OF	3	1	3	1	3	1	3	1	2	2.0
048140007000	SHASTA COUNTY OF	2	2	2	1	3	2	3	1	3	2.0
048200001000	REDDING ELEMENTARY SCHOOL DIST	3	3	2	0	3	2	3	1	3	2.0
048600008000	SOUTH REDDING INDUSTRIAL PARK	3	3	1	3	3	3	3	1	1	2.0
049340008000	MCCONNELL FOUNDATION	3	3	2	3	0	2	3	1	3	2.0
050270025000	REDDING BUSINESS TRUST ETAL	3	3	1	2	3	2	3	1	3	2.0
050330018000	MUSE RYAN & WHITNEY	3	3	1	1	3	2	3	3	0	2.0
050330019000	MUSE RYAN & WHITNEY	1	3	1	2	3	2	3	3	0	2.0
050330020000	MUSE RYAN & WHITNEY	1	3	1	2	3	2	3	3	0	2.0
054210017000	DENTON CINDEE ETAL	3	3	1		3	2	3	1	3	2.0
067170070000	SHASTA COMMUNITY HEALTH CENTE R	3	3	1	3	3	2	3	1	2	2.0
068200025000	GRACE BAPTIST CHURCH	3	3	2	0	3	2	3	1	3	2.0
068330009000	REDDING CITY OF	3	1	3	2	3	2	3	1	0	2.0
071270021000	OMNI FINANCIAL LLC	3	1	1	3	3	2	3	1	3	2.0
071330009000	CREATIVE LIVING	1	3	1	3	3	3	3	1	2	2.0
074140012000	LEVENSON FAMILY REVOCABLE TRU ST	3	1	1	2	3	3	3	1	3	2.0
074150043000	LEVENSON NORMAN TR ETAL C/O DON	3	3	1	3	3	3	3	0	3	2.0
074250022000	MD DEVELOPMENT	3	1	1	2	3	3	3	1	3	2.0
101510031000	CALIFORNIA STATE OF	0	2	2	3	3	1	3	1	3	2.0
104100032000	REDDING CITY OF	2	2	3	2	3	1	3	0	3	2.0
104420001000	REDDING CITY OF	3	1	3	2	3	1	3	0	3	2.0
108370021000	KITE JOHN & WILMA TRUST 1996	3	3	1	0	2	1	3	3	3	2.0
109040007000	REDDING CITY OF C/O W LEONARD WI	2	2	3	2	3	1	3	0	3	2.0
109080014000	REDDING CITY OF	2	2	3	1	0	1	3	3	1	2.0
109150027000	NORTH VALLEY BAPTIST CHURCH	2	2	2	2	3	1	3	1	3	2.0
114310019000	REDDING CITY OF	3	1	3	2	3	1	3	0	3	2.0
115170009000	REDDING CITY OF	3	1	3	2	3	1	3	1	1	2.0
116600006000	SIGNATURE NORTHWEST PARTNERSH	3	3	1	3	3	1	3	1	3	2.0
204360023000	REDDING CITY OF	3	1	3	2	3	0	3	1	2	2.0
067110057000	NO CALIF CONF ASSN/7TH DAY AD	2	2	2	1	3	2	3	1	3	2.0
101330002000	REDDING CITY OF	1	2	3	2	3	1	3	1	1	2.0
102490009000	REDDING CITY OF CITY CLERK	1	2	3	3	3	1	0	1	3	2.0
048600009000	SOUTH REDDING INDUSTRIAL PARK	3	2	1	3	3	3	3	1	1	2.0
050330021000	MUSE RYAN & WHITNEY	2	3	1	2	2	2	3	3	0	2.0
050460018000	LEE KAREN I	3	2	1	2	0	2	3	3	2	2.0
050640025000	MARVIN GARDENS PLND H/O ASSOC C/	3	2	1	0	3	2	3	3	1	2.0
050720034000	REDDING CITY OF	3	2	3	3	3	2	3	0	0	2.0
054160036000	MORGAN RICHARD E JR & SHANNA	3	2	1	2	3	2	3	1	3	2.0
054200089000	STEVENSON VINT WAYNE ETAL	3	2	1	2	3	2	3	1	3	2.0
067010009000	HANSEN REVOCABLE LIVING TRUST HA	3	2	1	0	3	3	3	3	0	2.0
067020010000	REDDING CHRISTIAN FELLOWSHIP	1	2	2	0	3	3	3	1	3	2.0
067040008000	FULLER NANCY LEE	3	2	1	1	3	3	3	1	3	2.0
068270037000	MICHALAK MICHAEL & BERTHA M T	3	2	1	2	3	2	3	1	3	2.0
070160044000	REDDING BUSINESS TRUST ETAL	3	2	1	2	3	2	3	1	3	2.0
070180023000	ANDERSON-COTTONWOOD IRIG DIST	3	2	2	0	2	2	3	3	0	2.0
070340024000	REDDING CITY OF	3	2	3	0	1	2	3	1	3	2.0
073090062000	THOMASON COLBURN R & VALDENE	3	2	1	2	3	2	3	1	3	2.0
073350030000	MEYER ADOLPH C JR & PATRICIA	3	2	1	2	3	2	3	1	3	2.0
074230031000	TUSCANY REDDING LLC	3	2	1	2	3	2	3	1	3	2.0
101790033000	REDDING CITY OF	1	2	3	1	3	1	3	1	2	2.0
103250027000	CALIFORNIA STATE OF	1	2	2	3	3	1	3	1	2	2.0
104900016000	OVERTON THELMA L FAMILY TRUST	3	2	1	3	3	1	3	1	3	2.0
107500020000	DIGNITY HEALTH ATTN CORPORATE RE/	0	3	1	2	3	1	3	3	1	2.0
108350063000	PC REDDING APARTMENTS LIMITED	3	2	1	3	3	1	3	1	3	2.0
109030027000	REDDING CITY OF	3	2	3	1	3	1	3	0	3	2.0
109070002000	REDDING CITY OF	3	2	3	1	1	1	3	1	3	2.0
113120012000	REDDING CITY OF	3	2	3	1	3	1	3	0	3	2.0
114150010000	UNITED STATES OF AMERICA	3	2	2	3	3	1	3	0	3	2.0
116030009000	HILLSIDE CHURCH OF THE ASSEMB	2	3	2	3	3	1	3	0	3	2.0
117070016000	REDDING CITY OF	3	2	3	1	3	1	3	0	3	2.0
067310031000	ENTERPRISE SCHOOL DISTRICT	3	2	2	0	2	3	3	1	3	2.0
070120031000	ENTERPRISE SCHOOL DISTRICT	2	3	2	0	3	2	3	1	3	2.0
103740027000	SHASTA UNION HIGH SCHOOL & JR	1	2	2	2	3	1	3	1	3	2.0
107070006000	ENTERPRISE SCHOOL DIST	2	3	2	3	3	1	3	0	3	2.0
050270019000	REDDING CITY OF	3	2	3	1	3	2	3	1	0	2.0
109070013000	DOWNS GLENN W & SHAWNA L	3	2	1	1	2	1	3	3	2	2.0
109080026000	ROTHER FAMILY REVOCABLE TRUST OF	3	2	1	1	3	1	3	2	3	2.0
102040015000	REDDING CITY OF	1	3	3	1	3	1	3	0	3	1.9
109040054000	REDDING CITY OF	3	3	3	0	3	1	3	0	3	1.9
110240051000	REDDING CITY OF	3	3	3	1	3	1	3	1	0	1.9
112100002000	REDDING CITY OF	3	3	3	0	1	1	3	1	3	1.9
112290046000	DENHAM RANDY JAY ETAL	1	3	1	2	3	1	3	3	0	1.9
112300005000	REDDING CITY OF	3	3	3	0	3	1	3	0	3	1.9
113190016000	REDDING CITY OF	3	3	3	0	1	1	3	1	3	1.9
113300037000	REDDING CITY OF	3	3	3	0	2	1	3	2	0	1.9
077010027000	COLUMBIA ELEM SCHOOL DIST	3	3	2	2	3	1	3	0	3	1.9
114150011000	SHASTA CO BOARD OF EDUCATION	2	2	2	3	3	1	3	0	3	1.9
048110032000	1991 RACKI RODNEY P REV FAM L IV TR	3	3	1	3	3	2	3	1	1	1.9
048180031000	URAN RICHARD & KAY 1999 TRUST RICI	3	3	1	1	3	2	3	1	3	1.9
048400005000	REDDING RANCHERIA	3	3	1	3	3	2	3	0	3	1.9
048600011000	SOUTH REDDING INDUSTRIAL PARK	3	3	1	3	3	2	3	1	1	1.9
048600012000	SOUTH REDDING INDUSTRIAL PARK	3	3	1	3	3	2	3	1	1	1.9

Table E-8
Identified Natural Treatment System Projects (Phase I Rank)

APN	Owner	Ranking Scores									
		Imperv-iousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Septic System	Soils	Size of Usable Area	Weighted Overall Score
049180003000	SIERRA PACIFIC INDUSTRIES	3	1	1	1	3	2	3	3	0	1.9
049220009000	FERRELL M C & GLENNA L	3	1	1	0	3	3	3	3	0	1.9
050310030000	PARYZ ERIKA & INGRID	3	3	1	1	1	2	3	3	1	1.9
054090037000	REDDING CITY OF	3	3	3	0	3	2	3	1	0	1.9
054440016000	AIRPORT RANCHO INDUSTRIAL PARK PF	3	3	1	3	0	3	3	1	3	1.9
054840002000	SHASTA VIEW MILL LLC C/O MOORES F	3	3	1	1	3	3	3	1	2	1.9
054840007000	SHASTA VIEW MILL LLC	3	3	1	1	3	2	3	1	3	1.9
056360019000	WILSON FAMILY TRUST FRANK L & MAI	3	3	1	0	3	3	3	1	3	1.9
067110041000	CUSHMAN 2002 TRUST ETAL C/O HAED	3	1	2	0	3	2	3	1	3	1.9
068080043000	WEBB BOYD FRANKLIN	3	3	1	0	3	3	3	1	3	1.9
070020005000	RIVERVIEW GOLF & COUNTRY CLUB	2	2	1	2	3	2	3	1	3	1.9
074220005000	BURK BRIAN & SANDRA ETAL	3	1	1	3	2	2	3	1	3	1.9
074220016000	C & L JEWELL ENTERPRISES INC C/O CH	3	1	1	2	3	2	3	1	3	1.9
074250023000	MD DEVELOPMENT	3	1	1	2	3	2	3	1	3	1.9
076120033000	SIMPSON COLLEGE	3	1	2	2	3	3	3	0	2	1.9
076120038000	MCCONNELL FOUNDATION	3	1	2	1	3	3	3	0	3	1.9
103280027000	SHASTA UNION HIGH SCHOOL & JR	2	2	2	1	3	1	3	1	3	1.9
103740014000	NO CALIF CONF ASSN/7TH DAY AD VEN	1	1	2	3	3	1	3	1	2	1.9
104730038000	REDDING CITY OF	3	1	3	2	3	1	3	1	0	1.9
108020027000	SHASTA CO OFFICE OF EDUCATION	0	2	2	3	3	1	3	1	2	1.9
108150006000	SABET 2012 TRUST FARZAD & MARIKIT	2	2	1	3	3	1	3	1	3	1.9
108430021000	SIGNATURE NORTHWEST PARTNERSH	3	3	1	1	3	1	3	3	0	1.9
112230005000	REDDING CITY OF	3	1	3	0	2	1	3	1	3	1.9
113270001000	REDDING CITY OF	3	1	3	0	2	1	3	1	3	1.9
117290002000	REDDING CITY OF	2	2	3	3	3	0	3	0	2	1.9
204450041000	REDDING CITY OF	3	3	3	2	3	0	3	1	0	1.9
208120008000	REDDING CITY OF	2	2	3	0	3	0	3	1	3	1.9
102090025000	REDDING ELEMENTARY SCHOOL DIST	3	3	2	0	3	1	3	1	3	1.9
103100025000	REDDING ELEM SCHOOL DISTRICT	2	2	2	1	3	1	3	1	3	1.9
105470011000	ROMAN CATHOLIC BISHOP OF SAC C/O	2	2	2	1	3	1	3	1	3	1.9
048110044000	SOUTH REDDING INDUSTRIAL PARK INC	3	3	1	2	3	2	3	1	2	1.9
068090043000	REDDING CHURCH OF RELIGIOUS SCIEN	2	2	2	1	3	2	3	1	2	1.9
073080003000	BAKER W JAXON ETAL	3	1	1	3	3	2	3	1	2	1.9
050680032000	ANDREASEN DANNY J SR TR ETAL	1	3	1		2	2	3	3	0	1.9
048420024000	HUI ALFONSO K & TAYLOR-HUI EL	3	2	1	0	2	2	3	3	1	1.9
049160017000	HUMBOLDT FLAKEBOARD C/O SIERRA F	3	2	1	0	2	2	3	2	3	1.9
068020041000	REDDING CITY OF	0	3	3	0	3	2	3	1	1	1.9
077010028000	REDDING CITY OF	3	2	3	0	3	1	3	0	3	1.9
101480037000	REDDING CITY OF	0	3	3	2	3	1	3	1	0	1.9
102020008000	CHAPEL OF THE FERNS INC	3	2	2	3	2	1	3	0	3	1.9
102020009000	CHAPEL OF THE FERNS INC PROPERTY T	3	2	2	3	2	1	3	0	3	1.9
102020015000	REDDING JOINT POWERS FIN AUTH	2	3	2	2	3	1	3	0	3	1.9
102090023000	MCCONNELL FOUNDATION	2	3	2	3	2	1	3	0	3	1.9
107410039000	LASKOWSKY RANDY	3	2	1	3	3	1	0	3	1	1.9
109040022000	REDDING JT POWERS FINAN AUTH	1	2	2	3	3	1	3	0	3	1.9
109040044000	REDDING JT POWERS FINAN AUTH	3	2	2	2	3	1	3	0	3	1.9
048320041000	POLLOCK PARKER & PHYLLIS 2005 REV	3	2	1	1	3	2	3	1	3	1.9
048320060000	FIVE SPEARS TRUST PIYUSH K & PROMI	2	3	2	0	3	2	3	1	2	1.9
048430014000	BAHR FAMILY REVOCABLE TRUST BAHR	3	2	1	0	1	2	3	3	2	1.9
048600001000	SOUTH REDDING INDUSTRIAL PARK	3	2	1	3	3	2	3	1	1	1.9
048600007000	SOUTH REDDING INDUSTRIAL PARK	3	2	1	3	2	3	3	1	1	1.9
048600010000	SOUTH REDDING INDUSTRIAL PARK	3	2	1	3	3	2	3	1	1	1.9
050490075000	BOWER JOSEPH LIVING TRUST JOSEPH	3	2	1	1	3	2	3	1	3	1.9
054790020000	REDDING PROPERTIES LP	3	2	1	2	3	2	3	1	2	1.9
067120040000	LORING CHERYL D TR	3	2	1	0	3	3	3	1	3	1.9
068210028000	LU TAI PENG PETER & HSING MEI	3	2	1	3	3	2	3	0	3	1.9
068280005000	REDDING CITY OF	3	2	3	1	0	3	3	1	1	1.9
068300011000	WILEYS SUPERMARKET	3	2	1	2	3	2	3	1	2	1.9
070170025000	ROTHER EUGENE H & DONNA L TR	3	2	1	1	3	2	3	1	3	1.9
070340025000	REDDING CITY OF ATTN: SUE THOMPS	3	2	3	0	1	2	3	1	2	1.9
073020024000	OSTLING ERNEST & FAITH TRSTES OSTL	3	2	1	1	3	3	3	1	2	1.9
073100085000	GOLD HILLS COUNTRY CLUB C/O COLBU	3	2	1	2	3	3	3	0	3	1.9
074120001000	CALIFORNIA STATE OF	1	2	2	1	3	2	3	1	2	1.9
074160014000	LEVENSON FAMILY REVOCABLE TRU ST	3	2	1	3	3	2	3	0	3	1.9
074170003000	RHOADS JOSEPH CHARLES	3	2	1	3	3	2	3	0	3	1.9
074170006000	WHITE SHIRLEY LEE SEP PROP RE V TRU	3	2	1	3	2	3	3	0	3	1.9
077280072000	MCCONNELL FOUNDATION	3	2	2	1	3	1	3	1	2	1.9
107410043000	FRANK CAMERON & CARMELO APRIL	3	2	1	1	3	1	3	3	0	1.9
108100019000	NELSON GERALD & SUSAN	3	2	1	2	3	1	3	1	3	1.9
110020047000	AGEE GERALD A	3	2	1	2	3	1	3	1	3	1.9
110020064000	YOUNG EDWARD H & JUDY J TR	3	2	1	2	3	1	3	1	3	1.9
110040056000	ENTERPRISE CHURCH OF CHRIST INC	2	3	2	0	3	1	3	1	3	1.9
111250036000	REDDING CITY OF	3	2	3	1	3	1	3	0	2	1.9
113120011000	REDDING CITY OF	3	2	3	1	3	1	3	0	2	1.9
113210006000	REDDING CITY OF	3	2	3	0	2	1	3	1	2	1.9
113300032000	REDDING CITY OF	3	2	3	0	0	1	3	3	0	1.9
116180006000	REDDING CITY OF	3	2	3	0	2	1	3	1	2	1.9
117270014000	ENTERPRISE ELEMENTARY SCHOOL DIST	2	3	2	1	3	0	3	1	3	1.9
204460083000	REDDING CITY OF	2	3	3	2	3	0	3	1	0	1.9
068380088000	BAKER W JAMES	3	2	1	0	3	3	3	1	3	1.9
110080072000	MOUNT CALVARY EVANGELICAL LUTHE	2	3	2	0	3	1	3	1	3	1.9
110150001000	ENTERPRISE ELEM SCHOOL DIST	2	3	2	2	1	1	3	1	3	1.9
109080013000	SUNDQUIST RICHARD ETAL	3	2	1	0	3	1	3	2	3	1.9
108430059000	GINNO FAMILY 1993 REV LIVING	2	1	1		3	1	3	3	0	1.8
114430002000	REDDING CITY OF	3	2	3		2	1	3	0	2	1.8
070280060000	LITHIA REAL ESTATE INC	3	2	1		3	2	3	1	2	1.8
116160003000	BAUER PROPERTIES LLC C/O GARY BAU	3	2	1		3	1	3	1	3	1.8

Table E-8
Identified Natural Treatment System Projects (Phase I Rank)

APN	Owner	Ranking Scores									
		Imperv-iousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Septic System	Soils	Size of Usable Area	Weighted Overall Score
048130004000	J W FISHER LOGGING CO	3	2	1		2	2	3	1	3	1.8
054200002000	CURTO FAMILY TRUST JOE L & L LAVON	3	2	1		2	2	3	1	3	1.8
048420020000	COGLE FAMILY 2007 TRUST KENNETH L	3	3	1	0	1	2	3	3	1	1.8
049210019000	CARDEN TROY J & CORINNA D	3	1	1	0	3	2	3	3	0	1.8
050300008000	TRENT WENDY ETAL	3	1	1	0	2	2	3	3	1	1.8
050640026000	MARVIN GARDENS C/O FREDERICK NEU	3	1	1	0	3	2	3	3	0	1.8
067490076000	CHURCH OF GOD ASSN OF NO CA	2	2	2	0	3	3	3	1	1	1.8
068730047000	REDDING CITY OF	3	3	3	1	3	2	3	0	0	1.8
074180008000	SEO YOUNG S & GIL-SOON	3	1	1	2	3	3	3	0	3	1.8
076090006000	MCCONNELL FOUNDATION	3	1	2	0	3	3	3	0	3	1.8
077010024000	MCCONNELL FOUNDATION	3	1	2	2	3	1	3	0	3	1.8
077290044000	SHASTA VIEW LAKE INC	3	3	1	3	3	1	3	0	3	1.8
101750043000	REDDING CITY OF	2	2	3	3	3	1	3	0	0	1.8
102010057000	SHASTA COMMUNITY HEALTH CENTE	0	2	2	0	3	1	3	3	0	1.8
102040014000	ALLIANCE OF REDDING MUSEUMS	2	2	2	2	3	1	3	0	3	1.8
102090030000	MCCONNELL FOUNDATION	2	2	2	3	3	1	3	0	2	1.8
102190043000	GIRARD JUNE FUND LLC	0	2	1	1	3	1	3	3	1	1.8
103430003000	REDDING CITY OF	3	3	3	0	3	1	3	1	0	1.8
104760033000	ROMAN CATHOLIC BISHOP OF SAC	3	1	2	0	3	1	3	1	3	1.8
104880005000	DIGNITY HEALTH ATTN CHIEF FINANCIA	2	2	2	2	3	1	3	1	1	1.8
104900011000	REDDING CITY OF	2	2	3	2	3	1	3	0	1	1.8
104900018000	PIERCE FAMILY TRUST ETAL MARGARET	3	3	1	3	3	1	3	1	1	1.8
107430054000	LORING CHERYL D TR	3	1	1	1	3	1	3	3	0	1.8
107430057000	DIGNITY HEALTH FIXED ASSET ACCOUN	0	2	1	2	3	1	3	3	0	1.8
109040010000	BROWN BENNY & CAROLYN J	3	3	1	3	3	1	3	0	3	1.8
110080070000	REDDING CITY OF	2	2	3	0	3	1	3	1	1	1.8
110160049000	THOMASON COLBURN R & VALDENE	3	1	1	2	3	1	3	1	3	1.8
110360008000	NAMIHAS B NICHOLAS	3	1	1	2	3	1	3	1	3	1.8
112230001000	MCCONNELL FOUNDATION	3	3	2	0	2	1	3	1	3	1.8
113010002000	MCCONNELL FOUNDATION	3	1	2	0	3	1	3	1	3	1.8
113190004000	REDDING CITY OF	3	3	3	0	0	1	3	1	3	1.8
114300001000	REDDING CITY OF	2	2	3	0	3	1	3	0	3	1.8
114430022000	PACIFIC BELL TELEPHONE CO ATTN: DA	1	3	2	2	3	1	3	0	3	1.8
115080017000	ALLEGRO LINDA S & LIVIE PAMEL	3	1	1	2	3	1	3	1	3	1.8
115170001000	REDDING REDEVELOPMENT AGENCY A	3	1	1	2	3	1	3	1	3	1.8
204020039000	REDDING CITY OF	3	1	3	1	3	0	3	1	1	1.8
117290023000	LITTLE COUNTRY CHURCH OF RDG	2	2	2	3	3	0	3	0	3	1.8
107100012000	TRINITY EVANGELICAL LUTHERAN CHUR	2	2	2	0	3	1	3	1	3	1.8
048110031000	REUTHER FAMILY 2004 TRUST EDWARD	3	3	1	2	3	2	3	1	1	1.8
048200007000	DEAN TRUDY L ETAL	3	3	1	1	2	2	3	1	3	1.8
048330013000	FIVE SPEARS TRUST PIYUSH K & PROMI	3	3	2	1	3	2	0	1	3	1.8
048520038000	REDDING CITY OF	3	1	3	0	3	2	3	0	2	1.8
050790055000	STILLWATER PROPERTIES	3	3	1	0	2	2	3	3	0	1.8
054440066000	AIRPORT RANCHO INDUSTRIAL PARK PF	3	3	1	0	3	2	3	1	3	1.8
054840001000	SHASTA VIEW MILL LLC	3	3	1	0	3	3	3	1	2	1.8
067110024000	UNITED STATES POSTAL SERVICE ATTN	1	3	2	2	3	2	3	0	2	1.8
068010003000	ENTERPRISE SCHOOL DISTRICT	2	2	2	0	3	2	3	1	2	1.8
068090028000	REDDING BANK OF COMMERCE	2	2	1	3	3	2	3	1	1	1.8
068300012000	WILEYS SUPERMARKET	3	1	1	2	2	3	3	1	2	1.8
070050071000	WALSH MICHAEL B & AMY M REV T RU	3	1	2	1	3	2	3	1	1	1.8
073090031000	MEYER ADOLPH C JR & PATRICIA	3	1	1	1	3	2	3	1	3	1.8
074230029000	TUSCANY VILLAS COMMUNITY ASSO	3	3	1	2	3	2	3	1	1	1.8
074240002000	NORCAL INVESTMENT PARTNERS LP	3	1	1	0	3	3	3	1	3	1.8
074410001000	BURK BRIAN E & SANDRA A	3	1	1	1	2	3	3	1	3	1.8
075220003000	MD DEVELOPMENT	3	1	1	1	3	2	3	1	3	1.8
077280074000	MCCONNELL FOUNDATION	3	3	2	0	3	1	3	1	2	1.8
101330014000	REDDING AREA BUS AUTHORITY	0	2	2	2	3	1	3	1	2	1.8
108150007000	SABET 2012 TRUST FARZAD & MARIKIT	2	2	1	3	3	1	3	1	2	1.8
109070053000	VILLAGES AT SHASTA VIEW GARDE NS A	3	3	1	1	3	1	3	1	3	1.8
109280056000	STATE COMPENSATION INSURANCE	1	3	1	3	3	1	3	1	2	1.8
109300041000	STATE COMPENSATION INSURANCE	3	3	1	1	3	1	3	1	3	1.8
113300035000	KNIGHTEN GARY & PATSY 1995 TR	3	3	1	0	2	1	3	2	3	1.8
114140005000	PINCIN JAMES W TR	3	1	1	3	3	1	3	1	2	1.8
117250003000	REDDING CITY OF	3	3	3	2	2	0	3	1	0	1.8
117260012000	ENTERPRISE ELEMENTARY SCHOOL DIST	3	3	2	2	2	0	3	1	2	1.8
117280015000	MCCONNELL FOUNDATION	3	1	2	1	3	0	3	1	3	1.8
306560037000	TIERRA OAKS GOLF CLUB INC	3	1	1	3	3	0	3	1	3	1.8
049290001000	REDDING SCHOOL DISTRICT	3	3	2	0	3	2	3	0	3	1.8
114040003000	RICKARD KAREN L 2000 FAMILY T	3	3	1	2	2	1	3	1	3	1.8
070270026000	SASSO PAUL	3	1	1		3	2	3	1	2	1.8
073340046000	REDDING CITY OF	2	1	3	2	1	3	3	0	1	1.8
101660027000	REDDING CITY OF	0	3	3	0	3	1	3	1	1	1.8
050270022000	KNIGHTEN GARY & PATSY 1995 TR UST	3	2	1	2	3	2	3	1	1	1.8
070220002000	ONGMAN ERIC H & SUSAN J	3	2	1	0	2	2	3	3	0	1.8
073230028000	REDDING CITY OF DEPT OF FINANCE	2	1	3	0	3	2	3	1	0	1.8
074010005000	OASIS LAND COMPANY LP	3	2	1	1	3	3	3	0	3	1.8
074260001000	OASIS LAND COMPANY LP	3	2	1	1	3	3	3	1	1	1.8
074260003000	OASIS LAND COMPANY LP	3	2	1	1	3	3	3	1	1	1.8
076240025000	SIMPSON COLLEGE	3	2	2	1	3	1	3	0	3	1.8
101780056000	CALIFORNIA STATE OF JUDICIAL	1	2	2	3	3	1	3	1	0	1.8
102170022000	CALIFORNIA BROADCASTING INC	1	2	2	3	3	1	3	0	2	1.8
102170025000	REDDING CITY OF	1	2	3	1	3	1	3	0	2	1.8
102190017000	SHASTA SECONDARY HOME SCHOOL	0	3	1	1	3	1	3	3	0	1.8
104670001000	REDDING CITY OF	2	1	3	1	3	1	3	1	0	1.8
104670002000	REDDING CITY OF	1	2	3	1	3	1	3	1	0	1.8
107010028000	NO CONG OF JEHOVAHS WITNESSES S	1	2	2	2	3	1	3	1	1	1.8
107230001000	UNITED STATES OF AMERICA	2	3	2	3	2	1	3	1	0	1.8

Table E-8
Identified Natural Treatment System Projects (Phase I Rank)

APN	Owner	Ranking Scores									
		Imperv-iousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Septic System	Soils	Size of Usable Area	Weighted Overall Score
107320001000	SAINT LUKES EPISCOPAL CHURCH OF RI	1	2	2	2	3	1	3	1	1	1.8
108360023000	GRIFFIN RON & DAYNA	2	3	1	3	3	1	3	1	1	1.8
108450017000	REDDING CITY OF	3	2	3	0	3	1	3	0	2	1.8
109320018000	T-K VENTURES LLC	3	2	1	3	3	1	3	0	3	1.8
113070039000	REDDING CITY OF	3	2	3	0	3	1	3	1	0	1.8
113190006000	REDDING CITY OF	3	2	3	0	2	1	3	1	1	1.8
113190015000	REDDING CITY OF	3	2	3	0	3	1	3	0	2	1.8
114110006000	GATEWAY UNIFIED SCHOOL DISTRI	3	2	2	3	3	1	3	0	1	1.8
114310012000	UNITED STATES OF AMERICA	1	2	2	2	3	1	3	0	3	1.8
116140014000	BLVD PROPERTIES	2	1	1	3	3	1	3	1	2	1.8
116370050000	SHASTA VINEYARD H O ASSOC C/O SCO	2	3	1	3	3	1	3	0	3	1.8
116380022000	SHASTA VINEYARD H O ASSOC	2	3	1	3	3	1	3	0	3	1.8
208160009000	MCCONNELL FOUNDATION	3	2	2	2	3	0	3	0	3	1.8
048320045000	FISHER FAMILY TRUST THOMAS P & RA	3	2	1	1	3	2	3	1	2	1.8
048600005000	SOUTH REDDING INDUSTRIAL PARK	3	2	1	3	2	2	3	1	1	1.8
048600006000	SOUTH REDDING INDUSTRIAL PARK	3	2	1	3	1	2	3	1	2	1.8
054200013000	DENTON CINDEE ETAL	3	2	1	2	1	2	3	1	3	1.8
054210018000	DENTON CINDEE ETAL	3	2	1	0	3	2	3	1	3	1.8
067080064000	REDDING MEMORIAL PARK INC	3	2	2	1	2	2	3	1	1	1.8
068210009000	HALL CHRISTOPHER E & BARBARA	3	2	1	3	1	2	3	1	2	1.8
068210010000	PELTIER JOHN R TR ETAL	3	2	1	3	1	2	3	1	2	1.8
070170023000	ROTHER EUGENE H & DONNA L TR	3	2	1	1	3	2	3	1	2	1.8
071300016000	CAMERON BARBARA TR	3	2	1	1	3	2	3	1	2	1.8
077490044000	COUGHLIN FRANK & KATHRYN TRUS T 2	3	2	1	1	3	1	3	1	3	1.8
077560032000	ASHRAF AHMAD & SHAHNAZ	3	2	1	2	3	1	3	1	2	1.8
103020031000	P G & E	1	2	2	0	3	1	3	1	3	1.8
104180083000	NAMIHAS NICK & CHERYL TR	3	2	1	3	2	1	3	2	0	1.8
109040059000	JOHNSTON-FRANKLIN INC C/O CA DEPT	3	2	1	1	3	1	3	1	3	1.8
110020066000	YOUNG EDWARD H & JUDY J TR	3	2	1	1	3	1	3	1	3	1.8
117570059000	J & S HIGHLAND PARK LLC ETAL	3	2	1	3	3	0	3	1	2	1.8
204560040000	REDDING CITY OF	3	2	3	1	3	0	3	1	0	1.8
048130005000	J W FISHER LOGGING CO	3	2	1		2	2	3	1	2	1.7
067160005000	HIGGINS LANCE CRAY ESTATE OF CLAU	2	3	1		3	2	3	1	1	1.7
110210001000	PACIFIC TELEPHONE & TELEGRAPH C/O	1	2	2		3	1	3	1	1	1.7
112300006000	REDDING CITY OF	3	3	3	0	3	1	3	0	1	1.7
048600003000	SOUTH REDDING INDUSTRIAL PARK	3	3	1	3	1	2	3	1	1	1.7
050270018000	REDDING CITY OF	2	2	3	1	3	2	0	1	1	1.7
056350025000	FAIRWAY OAKS C/O MCA MANAGEMEN	3	3	1	0	3	3	3	1	1	1.7
067020031000	REDDING CHRISTIAN FELLOWSHIP	3	1	1	1	3	3	3	1	1	1.7
068200023000	GRACE BAPTIST CHURCH REDDING	2	2	2	0	3	2	3	1	1	1.7
073090060000	GOLD HILLS COUNTRY CLUB C/O COLBU	3	1	1	0	3	2	3	1	3	1.7
074160016000	LEVENSON FAMILY REVOCABLE TRU ST	3	1	1	2	3	2	3	0	3	1.7
074210004000	KENT WALTER A & INGRID M REV TRUS	3	1	1	3	2	2	3	0	3	1.7
074240001000	BURK BRIAN E & SANDRA A	3	1	1	0	3	2	3	1	3	1.7
074260002000	OASIS LAND COMPANY LP	3	3	1	1	3	2	3	1	1	1.7
077020021000	MCCONNELL FOUNDATION	3	1	2	1	3	1	3	0	3	1.7
077500044000	REDDING CITY OF	3	1	3	0	3	1	3	0	2	1.7
101550002000	CALIFORNIA STATE OF	0	2	2	3	2	1	3	1	1	1.7
101790002000	REDDING CITY OF	1	3	3	0	3	1	3	1	0	1.7
103280024000	REDDING CITY OF	3	1	3	0	3	1	3	1	0	1.7
103280029000	SHASTA UNION HIGH SCHOOL & JR	2	2	2	1	3	1	3	1	1	1.7
103730002000	REDDING CITY OF	3	1	3	3	2	1	3	0	0	1.7
104020056000	REDDING CITY OF	3	1	3	0	2	1	3	1	1	1.7
104100031000	AVIATOR MEDICAL LLC	3	1	2	2	3	1	3	0	2	1.7
104710012000	REDDING CITY OF	3	1	3	1	1	1	3	1	1	1.7
107430055000	LORING CHERYL D TR	2	2	1	1	3	1	3	2	1	1.7
107460015000	LOWDEN REDDING PARTNERS LLC	3	1	1	3	3	1	3	1	1	1.7
108360031000	SCHNETZER DONALD D	1	3	1	3	3	1	3	1	1	1.7
109040014000	HUBER JAMES K & DEBORAH L TR	3	3	1	3	3	1	3	0	2	1.7
112240025000	SUNDIAL VILLAS LLC ETAL	3	1	1	2	2	1	3	1	3	1.7
112390012000	SMITH GLEN A & PATRICIA A FAMILY TR	2	2	1	3	3	1	3	1	1	1.7
114110026000	POWELL WILLIAM D	1	3	2	1	3	1	3	1	1	1.7
114140001000	REDDING CITY OF	2	2	3	0	3	1	3	0	2	1.7
114330043000	REDDING CITY OF	3	1	3	0	2	1	3	0	3	1.7
116140005000	BLVD PROPERTIES	2	2	1	3	3	1	3	1	1	1.7
116360009000	SIMPSON COLLEGE	3	1	2	1	3	1	3	0	3	1.7
117250010000	REDDING CITY OF	3	1	3	1	3	0	3	1	0	1.7
117290022000	INSIGNIA BUILDERS INC	3	3	1	3	3	0	3	0	3	1.7
306560033000	M & N RANCH LLC	3	1	1	3	2	0	3	1	3	1.7
306560035000	M & N RANCH LLC	3	1	1	2	3	0	3	1	3	1.7
048320014000	MATHIS FAM REVOC LIVING TRUST MA	3	3	1	1	2	2	3	1	2	1.7
049130037000	MUNK 1993 TRUST - TRUST B ETA LRON	3	3	1	0	3	2	3	1	2	1.7
054200041000	BAUGH DANNY W & MARY K ETAL	3	3	1	1	1	2	3	1	3	1.7
054210055000	BRUNELLO PETE	3	3	1	0	2	2	3	1	3	1.7
054840005000	WOODS STEVEN E & SANDRA F	3	3	1	0	3	2	3	1	2	1.7
068320058000	WESTBY DAVID ETAL	3	1	1	1	3	2	3	1	2	1.7
068320062000	JAMES WILLIAM G & NILA M TR	3	3	1	2	3	2	3	0	2	1.7
071150055000	REDDING CITY OF	3	1	3	1	1	2	3	1	0	1.7
071160063000	WONG JOSEPH K & ANNA W	3	1	1	3	3	2	3	1	0	1.7
074110010000	OASIS LAND COMPANY LP	3	1	1	1	3	2	3	1	2	1.7
077280028000	MCCONNELL FOUNDATION	2	2	2	2	1	1	3	1	2	1.7
112240010000	MCCONNELL FOUNDATION	3	1	2	2	1	1	3	1	2	1.7
115420058000	STANFORD HILLS COMMUNITY ASSN A	3	3	1	1	3	1	3	1	2	1.7
050440013000	SHILOH PARK LIMITED PARTNERSH	3	3	1		0	2	3	1	3	1.7
067030031000	TIPTON ANTHONY & DIANA REV TR	3	2	1	0	0	2	3	3	1	1.7
071430064000	KALIA 2013 TRUST RACHANA KALIA TR	1	2	1	1	3	3	3	1	1	1.7
101480028000	REDDING CITY OF	0	3	3	0	3	1	3	1	0	1.7

Table E-8
Identified Natural Treatment System Projects (Phase I Rank)

APN	Owner	Ranking Scores									
		Imperv-iousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Septic System	Soils	Size of Usable Area	Weighted Overall Score
102120015000	KUTRAS CHRISTOPHER G C/O MCCONN	3	2	2	1	3	1	0	2	1	1.7
102170011000	JOHANNESSEN FAMILY TRUST JOHANN	1	2	2	3	3	1	3	0	1	1.7
102190036000	CAMERON EDWIN F & EMMA V TR	1	2	1	1	2	1	3	3	0	1.7
112050040000	REDDING CITY OF	3	2	3	1	2	1	3	0	1	1.7
050010004000	ROBINSON FAMILY TRUST DTD 4/2 5/1	3	2	1	0	0	2	3	2	3	1.7
050660041000	REDDING CITY OF	3	2	3	0	3	2	3	0	0	1.7
050730028000	REDDING CITY OF	3	2	3	0	3	2	3	0	0	1.7
067160021000	THOMAS DONALD F TR ETAL	3	2	1	1	3	2	3	1	1	1.7
071260070000	BRUGALETTA JOSEPH & GRACE TRU ST	2	1	1	2	3	2	3	1	1	1.7
073020027000	OSTLING ERNEST E & FAITH A JOINT RE	3	2	1	3	1	2	3	1	1	1.7
073080040000	SCRIPPS NP OPERATING LLC	3	2	1	0	3	3	3	0	3	1.7
073100081000	THOMASON COLBURN R & VALDENE	3	2	1	0	3	3	3	0	3	1.7
074150001000	LEVENSON NORMAN TR ETAL C/O DON	3	2	1	3	3	3	3	0	0	1.7
074170007000	RHOADS JOSEPH CHARLES	3	2	1	0	3	3	3	0	3	1.7
074390023000	COUNTRY HOMES REDDING HOMEOW	3	2	1	2	3	2	3	0	2	1.7
076090001000	PACIFIC GAS & ELECTRIC CO	3	2	2	0	1	3	3	0	3	1.7
077010013000	MCCONNELL FOUNDATION	3	2	2	0	3	1	3	0	3	1.7
077020032000	MCCONNELL FOUNDATION	3	2	2	0	3	1	3	0	3	1.7
077450019000	MCCONNELL FOUNDATION	3	2	2	0	3	1	3	0	3	1.7
102230073000	REDDING CITY OF	2	3	3	1	3	1	3	0	0	1.7
103570028000	REDDING CITY OF	3	2	3	0	2	1	3	1	0	1.7
107160020000	REDDING CITY OF	3	2	3	0	1	1	3	0	3	1.7
109040024000	REDDING CITY OF	3	2	3	0	1	1	3	0	3	1.7
110160052000	THOMASON COLBURN R & VALDENE	3	2	1	2	3	1	3	0	3	1.7
110340041000	CHURCH IN REDDING THE	2	3	2	0	3	1	3	1	1	1.7
114120023000	DOHLE FRED J & KRIS ETAL	3	2	1	3	3	1	3	1	0	1.7
114300023000	UNITED STATES OF AMERICA C/O WEST	1	2	2	2	3	1	3	0	2	1.7
117200005000	THOMPSON STEFFNEY & RASMUSSEN	3	2	1	3	3	0	3	0	3	1.7
117470028000	SHASTA VINEYARD HOMEOWNERS	1	2	1	3	3	0	3	1	2	1.7
076240024000	SIMPSON UNIVERSITY	3	2	2	2	3	2	0	0	3	1.7
068300023000	PAYNE JAROBRI REV TRUST 2005 ROBE	3	2	1	0	3	2	3	1	2	1.7
074110007000	OASIS LAND COMPANY LP	3	2	1	0	3	2	3	1	2	1.7
103240015000	PILGRIM CONGREGATIONAL CHURCH	2	1	2	0	3	1	3	1	2	1.7
104680010000	CHRISTIAN CHURCH OF NO CAL-NV	2	1	2	0	3	1	3	1	2	1.7
105240002000	SHASTA CO BOARD OF EDUCATION	2	3	2	0	2	1	3	1	2	1.7
107190035000	MORROW WEBB B JR TR	1	2	1	2	3	1	3	1	2	1.7
107440005000	HICKS BRIAN W REVOCABLE TRUST BRI	3	2	1	0	3	1	3	1	3	1.7
109280057000	STATE COMPENSATION INSURANCE	3	2	1	1	3	1	3	1	2	1.7
110020061000	NORTH STATE GROCERY INC ATTN: MIC	3	2	1	0	3	1	3	1	3	1.7
110020065000	YOUNG EDWARD H & JUDY J TR	3	2	1	0	3	1	3	1	3	1.7
116320007000	HANKIN JOYCE A TR ETAL	3	2	1	1	3	1	3	1	2	1.7
113100021000	STANDIFER1999 REV LIVING TRUS TJAM	3	2	1		3	1	3	0	3	1.6
067160006000	MORTON DEBRA L TR	3	2	1		2	2	3	1	1	1.6
102040011000	ALLIANCE OF REDDING MUSEUMS	2	2	2	0	3	1	3	0	3	1.6
104510005000	P G & E	2	2	2	0	3	1	3	0	3	1.6
107200038000	STIRRING OF THE CHRISTIAN & M	0	2	1	3	3	1	3	1	1	1.6
107500019000	DIGNITY HEALTH ATTN CORPORATE RE	1	3	1	2	3	1	3	1	1	1.6
107530003000	CERAMI FAMILY TRUST 2014 JOE T & J	3	1	1	2	3	1	3	1	1	1.6
107540016000	BLUFFS HOMEOWNERS ASSN INC ASS	2	2	1	2	3	1	3	1	1	1.6
109130003000	BAYON FAM 1990 REV LIV TRUST	1	3	1	3	2	1	3	1	1	1.6
110090064000	SOLL CHARLOTTE	2	2	2	0	3	1	3	1	1	1.6
110150008000	REDDING CITY OF	3	3	3	0	3	1	3	0	0	1.6
112390007000	REDDING CITY OF	3	1	3	0	3	1	3	0	1	1.6
113200034000	REDDING CITY OF	3	3	3	0	1	1	3	1	0	1.6
114200001000	SHASTA CO BOARD OF EDUCATION	3	1	2	0	3	1	3	0	3	1.6
114310002000	WILLIAMS KAY A TRUST ETAL	3	1	1	2	3	1	3	0	3	1.6
114440009000	TOPS INDUSTRIES C/O DAN A RYAN	2	2	1	2	3	1	3	0	3	1.6
116460007000	MCCONNELL FOUNDATION	3	1	2	0	3	1	3	1	1	1.6
116460011000	MCCONNELL FOUNDATION	3	1	2	0	3	1	3	1	1	1.6
117170018000	MD DEVELOPMENT	3	1	1	2	3	1	3	0	3	1.6
077020034000	MCCONNELL FOUNDATION	2	2	2	0	3	1	3	0	3	1.6
048130016000	SHASTA COUNTY OF	1	3	2	0	3	2	0	1	3	1.6
048130017000	SHASTA COUNTY OF	1	3	2	0	1	2	3	1	2	1.6
048330011000	BENNETT FAMILY TRUST C/O MURIEL N	3	3	1	1	3	2	0	1	3	1.6
048450059000	HOUSTON JOHN	2	2	1	1	3	2	3	1	1	1.6
049130004000	RAMIREZ JESUS CUELLAR & ELISA	1	3	1	2	3	2	3	1	0	1.6
050010001000	REDDING RANCHERIA	3	3	2	0	1	2	3	0	3	1.6
050660034000	REDDING CITY OF	2	2	3	0	2	3	3	0	0	1.6
068170045000	KELSTROM DAVID O & LINDA J	2	2	2	2	3	2	3	0	0	1.6
068170069000	BOCKRATH HEATHER MAE	3	3	1	3	1	2	3	1	0	1.6
071280006000	BRUNELLI TRUST BRUNELLI DARRELL &	3	3	1	0	3	2	3	1	1	1.6
073030006000	HENSLER JOSEPH & GAYLE TR	3	1	1	3	0	3	3	1	1	1.6
073050022000	DOLE GARY TR	1	3	1	1	2	3	3	0	3	1.6
073100084000	THOMASON COLBURN R & VALDENE	3	1	1	1	2	3	3	0	3	1.6
074110008000	AGEE GERALD A	2	2	1	0	3	3	3	1	1	1.6
074180014000	LEA ROBERT & NANCY F ETAL	3	1	1	2	2	2	3	0	3	1.6
074230005000	TUSCANY REDDING LLC	3	1	1	2	2	2	3	1	1	1.6
075370009000	REDDING CITY OF DEPT OF FINANCE	3	1	3	0	2	2	3	0	1	1.6
104660049000	DOBIE ENTERPRISES LLC	3	1	1	1	3	1	3	1	2	1.6
104680003000	CHRISTIAN CHURCH DISCIPLES OF CHRI	3	1	1	0	3	1	3	1	3	1.6
107290037000	REDDING CITY OF	1	1	3	0	3	1	3	1	0	1.6
107460021000	NORTHERN CALIF PROPERTIES	2	2	1	3	3	1	3	1	0	1.6
107460025000	NORTHERN CALIF PROPERTIES	2	2	1	3	3	1	3	1	0	1.6
108480027000	COUNTRY HEIGHTS LTD PTNRSHP	3	1	1	0	2	1	3	3	0	1.6
109150015000	NORTH VALLEY BAPTIST CHURCH	2	2	2	1	3	1	3	1	0	1.6
109150016000	NORTH VALLEY BAPTIST CHURCH	2	2	2	1	3	1	3	1	0	1.6
109320030000	OSIER RICHARD H REVOC LIV TRU STMI	3	3	1	2	3	1	3	1	0	1.6

Table E-8
Identified Natural Treatment System Projects (Phase I Rank)

APN	Owner	Ranking Scores									
		Imperv-iousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Septic System	Soils	Size of Usable Area	Weighted Overall Score
110020014000	SIGNATURE NORTHWEST PARTNERSH	3	3	1	1	3	1	3	1	1	1.6
110040007000	MAPLETON OF REDDING LLC ATTN: ADA	3	3	2	0	0	1	3	1	3	1.6
112320023000	REDDING CITY OF	3	1	3	0	2	1	3	0	2	1.6
113010006000	REDDING CITY OF	3	1	3	0	2	1	3	1	0	1.6
113190005000	MCCONNELL FOUNDATION	3	1	2	0	1	1	3	1	3	1.6
113210013000	FRANK JOHN M & KATHLEEN M TR FRA	3	3	1	0	2	1	3	1	3	1.6
114070006000	PAGE TIMOTHY & ELLEN	3	3	1	1	3	1	3	0	3	1.6
114150002000	NOLAN WAYNE E & ANNEMARIE 1994 F	3	1	1	1	3	1	3	1	2	1.6
114340033000	PELLA PROPERTIES LLC	2	2	1	0	3	1	3	1	3	1.6
115050008000	RHYNE CHRISTOPHER CURTIS 2006	3	1	1	1	2	1	3	1	3	1.6
115180017000	REDDING CITY OF	3	1	3	1	0	1	3	1	1	1.6
115180022000	CREATIVE LIVING	3	1	1	0	3	1	3	1	3	1.6
115180028000	ALIZE LLC C/O W JAXON BAKER	3	1	1	0	3	1	3	1	3	1.6
115470033000	MOUNTAIN PROPERTIES INC	3	1	1	0	3	1	3	1	3	1.6
116030011000	3D LLC	2	2	1	3	3	1	3	0	2	1.6
117070007000	DEAN G ROESNER CONSTR INC	3	3	1	2	3	1	3	0	2	1.6
117150004000	KNIGHTEN GARY & PATSY 1995 TRUST	3	3	1	2	3	1	3	0	2	1.6
306560010000	REDDING CITY OF	3	1	3	1	2	0	3	1	0	1.6
049130036000	MUNK 1993 TRUST - TRUST B ETA LRON	3	3	1	0	2	2	3	1	2	1.6
070280061000	LITHIA REAL ESTATE INC	3	1	1		3	2	3	1	0	1.6
104130062000	P G & E	3	1	2		2	1	3	0	2	1.6
113280001000	REDDING MHP ESTATES LP C/O DE ANZ	2	2	1		0	1	3	2	2	1.6
104900010000	REDDING CITY OF C/O ORRICK HERRING	1	2	3	0	3	1	3	0	1	1.6
074120004000	GRAVES JAMES G TRUST ETAL JAMES G	1	2	1	1	3	2	3	1	1	1.6
103230045000	REDDING CITY OF	1	2	3	0	3	1	0	1	2	1.6
107200045000	MANCASOLA ROSE M TR	0	3	1	3	3	1	3	1	0	1.6
107430059000	DIGNITY HEALTH ATTN CORPORATE REA	0	3	1	2	3	1	0	3	0	1.6
112370014000	REDDING CITY OF	3	2	3	0	3	1	3	0	0	1.6
116220036000	REDDING CITY OF	1	2	3	2	2	1	3	0	0	1.6
117460050000	REDDING CITY OF	3	2	3	0	3	0	3	0	1	1.6
048600004000	SOUTH REDDING INDUSTRIAL PARK	3	2	1	3	1	2	3	1	0	1.6
050330025000	MCCONNELL FOUNDATION	3	2	2	2	0	2	0	1	3	1.6
050360024000	BIBLE RAE DEAN	3	2	1	2	1	2	3	0	3	1.6
050360027000	REDDING CITY OF	3	2	3	2	2	2	0	0	1	1.6
050440032000	COX & SONS LLC	3	2	1	0	1	2	3	1	3	1.6
050560024000	REDDING CITY OF	3	2	3	0	2	2	3	0	0	1.6
068100013000	PASADENA WEST PROPERTIES LLC	3	2	1	0	3	2	3	1	1	1.6
068210006000	HALL CHRISTOPHER E & BARBARA	3	2	1	0	2	2	3	1	2	1.6
068280012000	REDDING CITY OF	3	2	3	0	0	2	3	1	0	1.6
070100031000	JELLISON LISA M TRUST OF 2014 LISA M	3	2	1	0	3	2	3	1	1	1.6
073050030000	BMV HOTELS GROUP LP	3	2	1	1	3	2	3	0	2	1.6
073100086000	THOMASON COLBURN R & VALDENE	3	2	1	0	2	3	3	0	3	1.6
073410026000	FEYLING PAUL B & JEAN-MARIE T	3	2	1	1	2	3	3	0	2	1.6
073520026000	EPICK HOMES-BELLA VISTA 6 LP C/O PE	3	2	1	1	2	2	3	0	3	1.6
074010010000	OASIS LAND COMPANY LP	3	2	1	1	1	3	3	0	3	1.6
074260004000	OASIS LAND COMPANY LP	3	2	1	1	2	2	3	1	1	1.6
076070024000	BETHEL CHURCH OF REDDING	3	2	1	2	3	3	0	0	3	1.6
077220025000	TATOM LON M & DEENA C TR	3	2	1	2	3	1	3	0	2	1.6
077260002000	FERRELL DENNIS P & SUSAN R TR FERRE	3	2	1	2	3	1	3	0	2	1.6
101780062000	SHASTA COUNTY OF	0	1	2	1	3	1	3	1	1	1.6
101790043000	SHASTA TEHAMA TRINITY JOINT C	0	3	2	1	3	1	3	1	0	1.6
104040045000	REPROP FINANCIAL MORTGAGE INV	3	2	1	1	3	1	3	0	3	1.6
104480027000	ROMAN CATHOLIC BISHOP OF SACRAM	1	2	2	0	3	1	3	1	1	1.6
107530002000	CERAMI FAMILY TRUST 2014 JOE T & JO	3	2	1	1	3	1	3	1	1	1.6
109040037000	WOOD NANCE J ETAL	3	2	1	1	3	1	3	0	3	1.6
109070001000	WARD NORMAN W & VIRGINIA	3	2	1	0	1	1	3	2	2	1.6
109080007000	WOMACK CAROL W & MARIA E FAM TR	2	1	1	1	3	1	3	1	2	1.6
109150017000	NORTH VALLEY BAPTIST CHURCH	2	1	2	1	3	1	3	1	0	1.6
110020045000	AGEE GERALD A	3	2	1	1	3	1	3	1	1	1.6
110200018000	LITHIA REAL ESTATE INC ETAL ATTN: TA	3	2	1	1	3	1	3	0	3	1.6
113030001000	GATEWAY UNIFIED SCHOOL DISTRI	2	3	2	0	2	1	3	0	3	1.6
113300028000	MYGRANT RONALD G & M A TR ETA	3	2	1	1	3	1	3	0	3	1.6
114060032000	REDDING REDEVELOPMENT AGENCY	3	2	1	1	3	1	3	0	3	1.6
114070002000	RITTENHOUSE TRUST ETAL C/O ERIKA K	3	2	1	1	3	1	3	0	3	1.6
114110014000	GREEN MARK & P DIANE	3	2	1	1	3	1	3	0	3	1.6
114330039000	BURKE MICHAEL P ETAL	3	2	1	1	3	1	3	0	3	1.6
114350012000	CALIFORNIA STATE OF	1	2	2	1	2	1	3	0	3	1.6
114350016000	MARLER ERIC S & EVA E	1	2	2	1	3	1	3	0	2	1.6
116280001000	BOOHER HAZEL J TR	3	2	1	2	0	1	3	1	3	1.6
116320006000	HANKIN DAVID & JOYCE	3	2	1	1	3	1	3	1	1	1.6
116410007000	GREENGARD PAUL A & JEANNE A L IVIN	3	2	1	1	3	1	3	1	1	1.6
116460020000	EQUITY STREAMS LLC	3	2	1	1	3	1	3	1	1	1.6
117120003000	UNITED STATES OF AMERICA	2	1	2	0	3	1	3	1	1	1.6
117530003000	BELLA VISTA WATER DISTRICT	2	3	2	0	3	0	3	0	3	1.6
117620001000	SHASTA COUNTY TANGLEWOOD VILLAG	2	3	1	3	3	0	3	1	0	1.6
105410012000	FIRST BAPTIST CHURCH OF RDG	1	2	2	0	3	1	3	1	1	1.6
068140041000	ARMSTRONG STACY A	1	2	2	0	3	2	3	1	0	1.6
109040056000	IRVIN MARK ANTHONY & BOBBIE L	3	2	1	1	2	1	3	1	2	1.6
110020009000	GOODMAN DANIEL M & RAQUEL C T	3	2	1	0	3	1	3	1	2	1.6
115420057000	STANFORD HILLS COMMUNITY ASSN AS	3	2	1	0	3	1	3	1	2	1.6
116350052000	REDDING NORTH SENIOR LIVING L LCC/	3	2	1	0	3	1	3	1	2	1.6
116440025000	REDDING REDEVELOPMENT AGENCY	3	2	1	1	2	1	3	1	2	1.6
048110024000	BLANKEN CASE & DEBORAH TRUST 201	1	3	1	0	3	2	3	1	1	1.5
068380007000	WESTBY DAVID ETAL	3	1	1	0	3	2	3	1	1	1.5
068380010000	WESTBY DAVID ETAL	3	1	1	0	3	2	3	1	1	1.5
070280053000	RESOURCES FOR RURAL COMMUNITY	2	2	1	0	3	2	3	1	1	1.5
073080023000	BAKER W JAXON ETAL	3	1	1	0	3	2	3	0	3	1.5

Table E-8
Identified Natural Treatment System Projects (Phase I Rank)

APN	Owner	Ranking Scores									
		Imperv-iousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Septic System	Soils	Size of Usable Area	Weighted Overall Score
074170008000	RISEN KING COMMUNITY CHURCH	3	1	1	2	0	3	3	0	3	1.5
077010012000	MCCONNELL FOUNDATION	3	1	2	0	2	1	3	0	3	1.5
101440051000	CIBULA ALVIN M JR & GLENDA L	2	2	1	3	3	1	3	0	1	1.5
101780069000	SHASTA COUNTY OF	1	1	2	0	3	1	3	1	1	1.5
102170026000	REDDING JOINT POWERS FIN AUTH	1	3	2	0	3	1	3	0	2	1.5
104880004000	CALIFORNIA STATE OF	1	1	2	2	3	1	3	0	1	1.5
105230009000	SHASTA CO BOARD OF EDUCATION	2	2	2	0	2	1	3	1	1	1.5
107520001000	OSL PROPERTIES LLC	3	3	1	0	3	1	3	1	1	1.5
108030086000	WU GRANT	1	3	1	1	3	1	3	1	1	1.5
109220024000	SAINT JAMES EVANGELICAL LUTHERAN	3	1	2	0	2	1	3	0	3	1.5
111140011000	MEMEO JOHN RANDALL & JOSEPH	3	1	1	1	3	1	3	0	3	1.5
112080030000	REDDING CITY OF	2	2	3	2	1	1	3	0	0	1.5
113190030000	CHJ BEL AIR PROPERTIES LLC ATTN BLA	3	3	1	0	3	1	3	0	3	1.5
114300047000	OGDEN PAUL C ETAL	2	2	1	1	3	1	3	0	3	1.5
114300049000	MEDFORD COCA COLA BOTTLING CO P	2	2	1	1	3	1	3	0	3	1.5
114330038000	MACK-REDDING LLC C/O R & B COMPA	1	3	1	1	3	1	3	0	3	1.5
114430001000	REDDING CITY OF	2	2	3	0	2	1	3	0	1	1.5
116080045000	SUPERIOR CALIFORNIA INVESTMEN	2	2	1	1	3	1	3	0	3	1.5
116350013000	OLD 44 VENTURES LLC	3	1	1	1	3	1	3	1	1	1.5
116360014000	NUNEZ LUIS	3	1	1	1	3	1	3	0	3	1.5
117170016000	MD DEVELOPMENT	3	1	1	2	3	1	3	0	2	1.5
117450008000	REDDING CITY OF	3	1	3	0	3	0	3	0	1	1.5
117530002000	BELLA VISTA WATER DISTRICT	3	3	1	1	3	0	3	0	3	1.5
203190015000	HOWELL JOAN & HOFF DONALD FRE	3	1	1	0	1	0	3	2	3	1.5
208120017000	MCCONNELL FOUNDATION	3	1	2	0	3	0	3	0	3	1.5
208160010000	MCCONNELL FOUNDATION	3	3	2	2	3	0	3	0	0	1.5
048110035000	BARZIN TRUST AZIZOLLAH & ALENE L B	3	3	1	0	3	2	3	1	0	1.5
048110036000	FLOWERS KENT L & WORKMAN-FLOW	3	3	1	0	2	2	3	1	1	1.5
048110040000	REUTHER FAMILY 2004 TRUST EDWARD	3	3	1	2	3	2	0	1	1	1.5
048320020000	FALCON CABLE SYSTEMS CO II LP	2	2	2	1	3	2	0	1	1	1.5
049470003000	MINDVIA LLC C/O CLIFF YANG	3	3	1	0	0	2	3	1	3	1.5
054070025000	FITZGERALD JOHN & MARY ANN TR	3	3	1	0	0	2	3	1	3	1.5
054200090000	STEVENSON VINT WAYNE ETAL	3	3	1	1	1	2	3	1	1	1.5
054210006000	GARNERO RICHARD & LORI TRUST OF 2	3	3	1	0	0	2	3	1	3	1.5
067120038000	LORING CHERYL D TR	3	3	1	0	3	2	3	0	2	1.5
068060022000	HUDSON MERILEE J TR	3	1	1	1	2	3	3	1	0	1.5
068210007000	HALL CHRISTOPHER E & BARBARA	3	3	1	0	2	2	3	1	1	1.5
068300013000	WILEYS SUPERMARKET	3	3	1	2	0	2	3	0	3	1.5
068310028000	LYNN JAMES T & PATRICIA J TR	3	3	1	2	2	2	3	0	1	1.5
068320054000	SCHLAPPATHA 1999 LIVING TRUST	3	1	1	0	2	2	3	1	2	1.5
070070008000	BOWER FAMILY TRUST ETAL MARYLOIS	2	2	1	1	3	2	3	1	0	1.5
073170055000	GNOVEL JOHN & SOOSUR SUSAN	3	1	1	1	3	2	3	0	2	1.5
074220011000	RISEN KING COMMUNITY CHURCH	3	1	2	1	3	2	0	0	3	1.5
101480019000	REDDING AREA BUS AUTHORITY	0	2	2	1	3	1	3	1	0	1.5
103620030000	KEEF FAMILY TRUST	3	1	1	0	3	1	3	1	2	1.5
104280065000	CP PARTNERS	0	2	1	1	3	1	3	1	2	1.5
108130057000	DIETRICH GARY & SHARYREEN	3	1	1	0	3	1	3	1	2	1.5
108480016000	PICK ROBERT A & DEBORAH D	3	1	1	0	3	1	3	1	2	1.5
112250007000	TI HILLTOP LLC C/O SAM & MARIA TUM	3	1	1	0	3	1	3	1	2	1.5
113210004000	FRANK JOHN M & KATHLEEN M TR FRA	3	1	1	0	2	1	3	1	3	1.5
114340009000	PELLA PROPERTIES LLC	2	2	1	0	3	1	3	1	2	1.5
115050011000	RHYNE CHRISTOPHER CURTIS 2006	3	1	1	2	0	1	3	1	3	1.5
116450006000	NELSON LILLIAN H & LEONARD LI	3	1	1	2	0	1	3	1	3	1.5
306560009000	FAIRMONT INVESTMENT LLC C/O DANI	3	1	1	0	3	0	3	1	3	1.5
048150009000	SHASTA UNION HIGH SCHOOL	3	3	2	0	1	2	3	1	0	1.5
104040030000	REDDING CITY OF	2	1	3	0	3	1	0	1	1	1.5
048310011000	FISHER FAMILY TRUST FISHER THOMAS	3	2	1	1	1	2	3	1	1	1.5
048320015000	FALCON CABLE SYSTEMS CO II LP	0	3	2	1	3	2	0	1	1	1.5
050010002000	FOGLE CHRYSTIE L	3	2	1	0	2	2	3	0	3	1.5
054750035000	CAPENER TOM D & REBECCA A	3	2	1	1	3	2	3	0	1	1.5
070280055000	GALLINO DONALD F & EILEEN K T	2	1	1	0	3	2	3	1	1	1.5
070320016000	SINGH JASPAL & GILL BALWINDER	1	2	1	1	3	2	3	1	0	1.5
073070048000	B & L MOTELS INC	1	2	1	1	3	2	3	0	2	1.5
073540009000	KNIGHTEN GARY & PATSY 1995 TR UST	3	2	1	1	3	2	3	0	1	1.5
073540010000	CAPOBIANCO ROBERT & REBECCA E	3	2	1	1	3	2	3	0	1	1.5
077220024000	TATOM LON M & DEENA C TR	3	2	1	2	3	1	3	0	1	1.5
104230001000	PATENAUDE 1999 TRUST ETAL JEAN &	1	2	1	1	3	1	3	1	1	1.5
107480007000	KMR REDDING INVESTORS LLC	2	3	1	2	3	1	3	0	1	1.5
110210027000	LEMING JEFFREY GARLAND & DORO	2	1	1	3	1	1	3	1	1	1.5
112290003000	DENHAM RANDY J & DENISE L	1	2	1	1	3	1	3	1	1	1.5
116350057000	COULTER MARK L & JANET L ETAL	3	2	1	3	3	1	3	0	0	1.5
117190005000	DRC PROPERTIES LLC	3	2	1	3	3	0	3	0	1	1.5
203210003000	BROWN HUBERT E 2013 REV LIVIN G TR	3	2	1	1	1	0	3	1	3	1.5
204430014000	SIGNATURE NORTHWEST PARTNERSH	3	2	1	0	0	0	3	3	1	1.5
048110034000	KRZYWICKI ERIC	2	3	1	0	3	2	3	1	0	1.5
048250006000	RICHTER FAMILY TRUST RICHTER ALTO	3	2	1	1	2	2	3	1	0	1.5
067120036000	BORELLO LEONARD	3	2	1	0	3	2	3	0	2	1.5
068080041000	PENDERGRASS DOUGLAS	2	3	1	0	3	2	3	1	0	1.5
068170068000	SEIGLE MICHAEL JOHN & SUSAN L	3	2	1	3	0	2	3	1	0	1.5
068300021000	KARR JEAN C FAMILY TRUST JEAN C KA	3	2	1	0	3	2	3	0	2	1.5
074150002000	LEVENSON NORMAN TR ETAL C/O DON	3	2	1	3	2	2	3	0	0	1.5
075210048000	JONES DAVID T & LINDA I	3	2	1	2	0	3	3	0	2	1.5
105470026000	ROMAN CATHOLIC BISHOP OF SAC	3	2	1	2	1	1	3	1	1	1.5
107460003000	LOWDEN REDDING PARTNERS LLC	3	2	1	0	2	1	3	1	2	1.5
107510033000	BLUFFS HOMEOWNERS ASSN THE ASS	1	2	1	2	3	1	3	1	0	1.5
107520002000	OSL PROPERTIES LLC	3	2	1	0	3	1	3	1	1	1.5
108130012000	HIBSHMAN RAY L & JUANITA M TR	2	3	1	1	3	1	3	1	0	1.5

Table E-8
Identified Natural Treatment System Projects (Phase I Rank)

APN	Owner	Ranking Scores									
		Imperv-iousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Septic System	Soils	Size of Usable Area	Weighted Overall Score
110020037000	NORTH STATE GROCERY INC ATTN: MIC	3	2	1	0	2	1	3	1	2	1.5
110020038000	NORTH STATE GROCERY INC ATTN: MIC	3	2	1	1	1	1	3	1	2	1.5
110200020000	LITHIA REAL ESTATE INC ETAL ATTN: TA	3	2	1	0	3	1	3	0	3	1.5
110270023000	SHUFELBERGER MICHAEL & SHERRY 20	3	2	1	1	3	1	3	0	2	1.5
114050005000	OLIVER JAMES C & NETTIE R FAMILY LIV	3	2	1	1	2	1	3	0	3	1.5
114130013000	MCCLOSKEY SHIRLEY G	3	2	1	1	3	1	3	1	0	1.5
114330037000	MACK-REDDING LLC C/O R & B COMPA	2	3	1	0	3	1	3	0	3	1.5
115170014000	BRUNS JEFFERY M & DIANE E	3	2	1	0	3	1	3	0	3	1.5
116430016000	OLD 44 VENTURES LLC	3	2	1	1	3	1	3	1	0	1.5
116470025000	BROWN CHARLES R & JENNIFER L	3	2	1	1	3	1	3	1	0	1.5
203220021000	BROGOITTI FAMILY TRUST BROGOITTI J	3	2	1	0	3	0	3	1	2	1.5
203220022000	BROGOITTI FAMILY TRUST C/O JERRY B	3	2	1	0	3	0	3	1	2	1.5
208120007000	UNITED STATES OF AMERICA	3	1	2		1	0	3	0	3	1.4
117130003000	MCCONNELL FOUNDATION	3	1	2		2	1	3	0	1	1.4
114400007000	MOUNT VISTA HOMEOWNERS ASSN	2	2	1	2	3	1	3	0	1	1.4
117130023000	MCCONNELL FOUNDATION	3	1	2	0	3	1	3	0	1	1.4
050770047000	CROWN ESTATES LLC C/O RON LAKEY	3	3	1	0	3	3	3	0	0	1.4
068040002000	LU TAI PENG PETER & HSING MEI	2	2	1	0	3	2	3	1	0	1.4
068090048000	LAYA JOSEPH WILLIAM & DEBORAH	1	3	1	0	3	2	3	1	0	1.4
068560037000	SANTA CLARITA NATIONAL BANK C/O M	3	1	1	1	1	2	3	1	1	1.4
070060068000	GOLENOR 1996 REV LIVING TRUST GOL	2	2	1	1	3	2	3	0	1	1.4
073030008000	HENSLER JOSEPH & GAYLE TR	3	1	1	1	0	3	3	1	1	1.4
073030050000	MEISSNER ERNEST R III REVOCAB LE TR	3	1	1	0	3	2	3	1	0	1.4
073030051000	MEISSNER ERNEST R III REVOCAB LE TR	3	1	1	1	3	2	3	0	1	1.4
073050029000	BMV HOTELS GROUP LP	2	2	1	0	3	2	3	0	2	1.4
073170050000	GNOVEL JOHN & SOOSUR SUSAN	3	1	1	1	1	2	3	0	3	1.4
073400029000	DECHNER RUHAMA	3	1	1	2	3	2	3	0	0	1.4
073420018000	SISCO LOWELL TR	3	3	1	0	2	3	3	0	1	1.4
074170005000	RHOADS JOSEPH CHARLES	3	1	1	0	3	2	3	0	2	1.4
074210008000	LOGICAL FAITH MINISTRIES INC	3	1	1	0	2	2	3	0	3	1.4
077260005000	PETERMANN ELLEN L TR	3	1	1	0	3	1	3	0	3	1.4
101150007000	SHASTA COUNTY OF	1	1	2	0	3	1	3	1	0	1.4
101440003000	CIBULA ALVIN M JR & GLENDA L	3	3	1	2	3	1	3	0	0	1.4
102230072000	KUTRAS CHRISTOPHER G C/O MODUS C	3	3	1	1	2	1	3	0	2	1.4
104510006000	HINDS FEET II LLC C/O ANDREW AUSON	3	1	1	0	3	1	3	0	3	1.4
105230012000	SHASTA CO BOARD OF EDUCATION	1	1	2	0	3	1	3	1	0	1.4
107370030000	REDDING BANK OF COMMERCE	0	2	2	2	3	1	3	0	0	1.4
107470025000	BIRK FAMILY TRUST HARVINDER S & HA	2	2	1	0	3	1	3	1	1	1.4
107520014000	CERAMI FAMILY TRUST 2014 JOE T & JO	2	2	1	1	2	1	3	1	1	1.4
108030084000	TATOM 2001 TRUST LON M & DEENA C	1	3	1	1	3	1	3	1	0	1.4
108480005000	COUNTRY HEIGHTS LTD PTNR ETAL	3	1	1	1	3	1	3	1	0	1.4
109130028000	DEBORD DAWN MICHELLE	3	1	1	0	3	1	3	1	1	1.4
109420043000	SONATA OWNERS ASSOCIATION	3	3	1	1	3	1	3	0	1	1.4
110020001000	NORTH STATE GROCERY INC ATTN: MIC	2	2	1	0	3	1	3	1	1	1.4
110040096000	SCHMIDT ALICIA M	3	3	1	1	2	1	3	1	0	1.4
110040097000	BEARD TIMOTHY A	3	3	1	0	3	1	3	1	0	1.4
110270022000	TETENS FAMILY TRUST JOHN M & SUSA	2	2	1	1	3	1	3	0	2	1.4
113190014000	TERRA NOVA DEVELOPMENT LLC	3	1	1	0	3	1	3	0	3	1.4
113300001000	KNIGHTEN GARY & PATSY 1995 TR	3	3	1	1	1	1	3	1	1	1.4
114120008000	MARTINEZ VICKIE LEE	3	1	1	1	2	1	3	1	1	1.4
114260021000	REDDING CITY OF	3	1	3	0	1	1	3	0	1	1.4
114410038000	MOUNT VISTA HOMEOWNERS ASSN	2	2	1	1	3	1	3	0	2	1.4
115410007000	MOUNTAIN PROPERTIES INC	3	1	1	0	3	1	3	1	1	1.4
116040003000	ROBERTS RODERICK R	2	2	1	3	1	1	3	1	0	1.4
116140010000	WILLIAMS VICKIE M LLC	3	1	1	0	3	1	3	1	1	1.4
116350022000	SIMPSON COLLEGE	3	1	1	1	3	1	3	0	2	1.4
116450010000	LEONARD FAMILY TRUST LIONEL R JR &	3	1	1	0	1	1	3	1	3	1.4
117230002000	NELSON LILLIAN ETAL	3	1	1	0	2	0	3	1	3	1.4
117270001000	MCCONNELL FOUNDATION	3	1	2	0	2	0	3	1	1	1.4
117290014000	REDDING CITY OF	1	1	3	0	3	0	3	0	1	1.4
306560032000	REDDING CITY OF	3	1	3	0	1	0	3	0	2	1.4
049130035000	MUNK 1993 TRUST - TRUST B RONALD	3	3	1	0	0	2	3	1	2	1.4
049470005000	MINDVIA LLC C/O CLIFF YANG	3	3	1	0	2	2	3	1	0	1.4
109040015000	KEYE JOHN D JR FAMILY TRUST KEYE JO	3	3	1	2	1	1	3	0	2	1.4
109200035000	BEACON MISSIONARY BAPTIST CHU	2	2	2	0	0	1	3	1	2	1.4
104620051000	LU TAIPENG PETER & HSING MEI	1	2	1	3	3	1	3	0	0	1.4
104680020000	HOVIS DAVID & TAMRA	2	1	1	0	3	1	3	1	1	1.4
107430049000	U-HAUL REAL ESTATE COMPANY	1	2	1	0	3	1	3	1	1	1.4
116040002000	WILLIAMS VICKIE M LLC	1	2	1	0	3	1	3	1	1	1.4
048120017000	TATOM 2001 TRUST LON M & DEENA C	1	2	1	0	3	2	3	1	0	1.4
049130034000	MUNK 1993 TRUST - TRUST B ETA LRON	3	2	1	0	0	2	3	1	2	1.4
049160018000	SIERRA PACIFIC INDUSTRIES ATTN: JACK	3	2	1	0	2	2	0	1	3	1.4
067080057000	PRESCOTT KENNETH R & KEELER T	2	1	1	3	0	2	3	1	0	1.4
067090011000	ENGELL CHARLES W	3	2	1	0	2	2	3	1	0	1.4
067120037000	SHASTA COUNTY HEAD START CHIL	1	2	1	0	3	2	3	0	2	1.4
067170069000	SHASTA COMMUNITY HEALTH CENTE R	3	2	1	0	1	2	3	1	1	1.4
068310040000	STEVENS RAYMOND L & HENDERSON	3	2	1	2	0	2	3	1	0	1.4
073030019000	MEISSNER ERNEST R III REVOCAB LE TR	2	3	1	1	2	2	3	0	1	1.4
073030052000	MEISSNER ERNEST R III REVOCAB LE TR	3	2	1	1	2	2	3	0	1	1.4
073060028000	CROSS JAMES & DENNIS C/O CROSS PE	2	3	1	1	2	2	3	0	1	1.4
073420019000	SISCO LOWELL TR	3	2	1	0	3	2	3	0	1	1.4
074150003000	LEVENSON NORMAN TR ETAL C/O DON	3	2	1	3	1	2	3	0	0	1.4
074150004000	LEVENSON NORMAN TR ETAL C/O DON	3	2	1	3	0	3	3	0	0	1.4
074150007000	LEVENSON NORMAN TR ETAL C/O DON	3	2	1	1	2	2	3	0	1	1.4
074150013000	BLOXHAM CARLA TRUST 1999 ETAL SU	3	2	1	1	3	2	3	0	0	1.4
074260005000	OASIS LAND COMPANY LP	3	2	1	0	1	2	3	1	1	1.4
077020029000	MCCONNELL FOUNDATION	3	2	2	0	0	1	3	0	3	1.4

Table E-8
Identified Natural Treatment System Projects (Phase I Rank)

APN	Owner	Ranking Scores									
		Imperv-iousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Septic System	Soils	Size of Usable Area	Weighted Overall Score
077020030000	MCCONNELL FOUNDATION	3	2	2	0	0	1	3	0	3	1.4
077220013000	TATOM 2001 TRUST LON M & DEENA C	3	2	1	0	2	1	3	0	3	1.4
103610011000	REDDING CITY OF	3	2	3	0	0	1	3	0	1	1.4
104680004000	DOHLE KIMBERLY S ETAL	3	2	1	1	3	1	0	1	2	1.4
107300008000	CORRIGAN CHRISTOPHER J FAMILY TRU	3	2	1	0	2	1	3	1	1	1.4
107300038000	CORRIGAN CHRISTOPHER J 1995 FAMIL	3	2	1	0	2	1	3	1	1	1.4
107430043000	U-HAUL REAL ESTATE COMPANY	1	2	1	0	2	1	3	1	2	1.4
107450005000	FRINGE PLAYERS LLC C/O FRANK ROGE	3	2	1	1	1	1	3	1	1	1.4
107520016000	CERAMI FAMILY TRUST 2014 JOE T & JO	2	1	1	1	3	1	3	1	0	1.4
107520017000	CERAMI FAMILY TRUST 2014 JOE T & JO	2	1	1	1	3	1	3	1	0	1.4
108440051000	SIGNATURE NORTHWEST PARTNERSH	1	2	1	1	3	1	3	1	0	1.4
109220031000	ROMAN CATHOLIC BISHOP OF SAC C/O	1	2	2	0	1	1	3	0	3	1.4
109330002000	SHASTA COUNTY OFFICE OF EDUCA	2	3	1	1	3	1	3	0	1	1.4
110020016000	BRADBURY CHRISTOPHER	3	2	1	1	0	1	3	1	2	1.4
113040005000	REDDING CITY OF	3	2	3	0	1	1	3	0	0	1.4
113320027000	ORWITZ REVOCABLE TRUST ETAL	3	2	1	0	2	1	3	1	1	1.4
114120025000	GREEN MARK & P DIANE	3	2	1	1	3	1	3	0	1	1.4
114340028000	BROWN THOMAS & JESSIE 1998 TR US	1	2	1	1	3	1	3	0	2	1.4
116190045000	LORING CHERYL D TR	3	2	1	3	2	1	3	0	0	1.4
117300037000	REDDING CITY OF	3	2	3	0	2	0	3	0	0	1.4
208170022000	GLANZER GARRETT	3	2	1	0	3	0	3	0	3	1.4
306560036000	TIERRA OAKS ESTATE HOMEOWNERS A	3	2	1	0	3	0	3	1	1	1.4
104840018000	REDDING CITY OF	3	2	3	0	0	1	3	0	1	1.4
117350054000	ENTERPRISE ELEMENTARY SCHOOL DIS	1	2	2	1	3	0	3	0	1	1.4
077020016000	MCCONNELL FOUNDATION	3	2	2	0	1	1	3	0	2	1.4
103130042000	LIFEPOINT MISSIONARY BAPTIST	1	2	2	0	2	1	3	1	0	1.4
103160016000	HUGHES FAMILY REVOCABLE TRUST	3	2	1	0	3	1	3	1	0	1.4
109270028000	CARTWRIGHT 1996 TRUST	3	2	1	0	3	1	3	0	2	1.4
109300040000	STATE COMPENSATION INSURANCE	3	2	1	1	2	1	3	1	0	1.4
110270027000	MUNK 1993 TRUST ETAL RONALD R MU	3	2	1	0	3	1	3	0	2	1.4
113050022000	DRC PROPERTIES LLC	3	2	1	0	3	1	3	0	2	1.4
113050023000	DRC PROPERTIES LLC	3	2	1	0	3	1	3	0	2	1.4
113190020000	CHJ BEL AIR PROPERTIES LLC ATTN BLA	3	2	1	0	3	1	3	0	2	1.4
114330007000	REDDING BUSINESS PARK LLC C/O MIKE	2	3	1	0	3	1	3	0	2	1.4
116150015000	LAKE BOULEVARD DEVELOPMENT CO	3	2	1	1	2	1	3	0	2	1.4
073030007000	HENSLER JOSEPH & GAYLE TR	3	1	1	1	1	3	3	0	1	1.3
073030018000	MEISSNER ERNEST R III REVOCAB LE TR	2	2	1	0	3	2	3	0	1	1.3
073540003000	LOWERY STEPHEN E & STACEY L	2	2	1	0	3	2	3	0	1	1.3
077250076000	PAYNE MATT	3	3	1	0	3	1	3	0	1	1.3
102560029000	CATHOLIC CEMETERY ROMAN CATHOLI	2	2	2	0	2	1	3	0	1	1.3
104440066000	BURWELL JOHN B & KATHLEEN T T	2	2	1	1	3	1	3	0	1	1.3
109110042000	BARKER FAMILY TRUST JOSHUA RAY &	3	1	1	1	3	1	3	0	1	1.3
114240033000	SEVERSON FAMILY TRUST DALE W & JA	2	2	1	1	3	1	3	0	1	1.3
114270001000	REDDING CITY OF	3	1	3	0	0	1	3	0	1	1.3
114300017000	ECONOMIC DEVEL CORP SHASTA CO	1	3	1	1	3	1	3	0	1	1.3
114320045000	W C GARCIA & ASSOCIATES INC C/O JU	1	3	1	1	3	1	3	0	1	1.3
114390051000	MOUNT VISTA HOMEOWNERS ASSN	2	2	1	1	3	1	3	0	1	1.3
116360004000	DUGGER BILLIE M & ELISABETH	3	3	1	1	2	1	3	0	1	1.3
116450004000	NELSON LILLIAN H TR ETAL C/O WILLIA	3	1	1	1	3	1	3	0	1	1.3
204030019000	BRESLAUER MANUEL ESTATE ETAL	3	1	1	2	3	0	3	0	1	1.3
050440022000	PACIFIC GAS & ELECTRIC COMPAN YTA	3	3	1	1	2	2	0	0	3	1.3
050500006000	UNITED STATES OF AMERICA	3	1	2	0	0	2	3	0	2	1.3
054070011000	PARKS FAMILY TRUST OF 1988 DONNA	3	1	1	0	2	2	3	1	0	1.3
067470044000	PENTECOSTAL CHURCH OF GOD OF AM	1	1	2	1	0	2	3	1	0	1.3
068150009000	ROWE GARY J & MARY L TR	2	2	1	0	1	3	3	1	0	1.3
068400050000	HAUSER RANDALL & JILL	2	2	1	0	2	2	3	1	0	1.3
073030020000	MEISSNER ERNEST R III REVOCAB LE TR	3	3	1	1	1	2	3	0	1	1.3
073030061000	MEISSNER ERNEST R III REVOCAB LE TR	3	1	1	1	0	2	3	0	3	1.3
073060029000	CROSS JAMES & DENNIS C/O CROSS PE	2	2	1	1	2	2	3	0	1	1.3
073420020000	SISCO LOWELL TR	3	1	1	2	1	3	3	0	0	1.3
073540005000	GIBSON JAY & PENNY 1999 TRUST	1	3	1	0	3	3	3	0	0	1.3
074150008000	LEVENSON NORMAN TR ETAL C/O DON	2	2	1	1	2	3	3	0	0	1.3
077020022000	MCCONNELL FOUNDATION	3	1	2	0	0	1	3	0	3	1.3
101150025000	MORROW DAVID L & JOYCE M 1997 RE	2	2	1	0	3	1	3	1	0	1.3
102590026000	REDDING CITY OF	1	3	3	0	1	1	3	0	0	1.3
102590027000	REDDING CITY OF	1	3	3	0	1	1	3	0	0	1.3
104440002000	QWEST COMMUNICATIONS CORP ATT	1	1	2	1	3	1	3	0	0	1.3
104540030000	M & H PROPERTIES	2	2	1	0	2	1	3	1	1	1.3
107520003000	OSL PROPERTIES LLC	3	1	1	0	3	1	3	1	0	1.3
107520013000	CERAMI FAMILY TRUST 2014 JOE T & JO	2	2	1	1	2	1	3	1	0	1.3
108130037000	BEVANS JAMES J & BEVERLY R TR	3	1	1	0	3	1	3	1	0	1.3
110010017000	MCCLENDON PAT 2013 TRUST LORI BU	3	3	1	0	0	1	3	1	2	1.3
112250015000	SHASTA COUNTY BOARD OF EDUCAT	2	2	1	0	3	1	3	0	2	1.3
113090008000	HR APARTMENTS LIMITED PARTNER	1	1	1	0	3	1	3	0	3	1.3
113190019000	CHJ BEL AIR PROPERTIES LLC ATTN BLA	3	1	1	0	2	1	3	0	3	1.3
114020036000	ANDERSON BRUCE A & CATHALEEN	3	1	1	2	0	1	3	0	3	1.3
114030023000	PENTECOSTAL CHURCH OF GOD	2	2	2	0	1	1	3	0	2	1.3
116280002000	METRO FAMILY 1994 REV LIV TRU	3	1	1	0	0	1	3	1	3	1.3
116510025000	BARZIN TRUST AZIZOLLAH & ALENE L B	3	1	1	0	1	1	3	1	2	1.3
116600005000	LAKE LAWRENCE R & DEBRA J	3	3	1	1	3	1	3	0	0	1.3
117150012000	J & S HIGHLAND PARK LLC ETAL	3	1	1	0	3	1	3	0	2	1.3
117230003000	NELSON LILLIAN H ETAL	3	1	1	1	3	0	3	0	2	1.3
104840017000	REDDING CITY OF	2	2	3	0	1	1	3	0	0	1.3
068210008000	HALL CHRISTOPHER E & BARBARA	3	2	1	0	0	2	3	1	1	1.3
068450049000	SCHLIE CRAIG A REVOCABLE TRUS T ET	1	2	1	0	1	3	3	1	0	1.3
074130037000	POLYCOMP TRUST COMPANY CSTDN E	1	2	1	0	3	2	3	0	1	1.3
102470013000	GERARD LOUIS J JR & DIANE TR	2	1	1	1	3	1	3	0	1	1.3

Table E-8
Identified Natural Treatment System Projects (Phase I Rank)

APN	Owner	Ranking Scores									
		Imperv-iousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Septic System	Soils	Size of Usable Area	Weighted Overall Score
104920026000	PARKVIEW NEIGHBORHOOD LLC NEW U	2	3	1	1	0	1	3	1	1	1.3
107310047000	WONG JOE TR	1	2	1	1	3	1	3	0	1	1.3
108150001000	SABET 2012 TRUST FARZAD & MARIKIT	2	1	1	3	0	1	3	1	0	1.3
108430010000	BOURNE RICHARD & CORINNE REV TRU	2	1	1	0	3	1	3	1	0	1.3
109300005000	TATOM LON M & DEENA C TR	1	2	1	0	3	1	3	1	0	1.3
110340037000	MEEHAN RHONDA K TR	3	2	1	0	1	1	3	1	1	1.3
114330006000	REDDING BUSINESS PARK LLC C/O MIKE	2	1	1	0	3	1	3	0	2	1.3
114330014000	REDDING BUSINESS PARK LLC C/O MIKE	1	2	1	1	2	1	3	0	2	1.3
114340030000	TUTTLE FAMILY TRUST TERRANCE L & J	1	2	1	1	3	1	3	0	1	1.3
054150004000	SIERRA PACIFIC CONFERENCE OF	2	3	2	0	0	2	0	1	2	1.3
068180055000	MUNDY LAUREL E & DAVID M	3	2	1	0	2	2	0	1	2	1.3
073370038000	NADEKER FAMILY TRUST NADEKER JOS	3	2	1	0	0	3	3	0	2	1.3
074150006000	LEVENSON NORMAN TR ETAL C/O DON	3	2	1	1	1	3	3	0	0	1.3
077220017000	TATOM LON M & DEENA C TR	3	2	1	2	1	1	3	0	1	1.3
077220023000	TATOM LON M & DEENA C TR	3	2	1	0	3	1	3	0	1	1.3
112150058000	DEL MAR GARDENS ASSN	2	3	1	0	3	1	3	0	1	1.3
113060005000	LAROCHE MARIO	3	2	1	1	3	1	3	0	0	1.3
113300005000	REDDING MHP ESTATES II LP C/O DEAN	2	3	1	0	0	1	3	1	2	1.3
114040005000	EADES BENNIE MAE ETAL	3	2	1	0	2	1	3	1	0	1.3
114050006000	OLIVER JAMES C & NETTIE R FAMILY LIV	3	2	1	1	0	1	3	0	3	1.3
114060039000	ESPINOSA RALPH D TR	3	2	1	0	3	1	3	0	1	1.3
114360006000	MEIER MARK W & JUDY A REV LIV TRUS	2	3	1	1	1	1	3	0	2	1.3
116180005000	GREEN & GREEN INVESTMENTS LLC	2	1	1	0	2	1	3	0	3	1.3
204030018000	BRESLAUER MANUEL ESTATE ETAL	3	2	1	1	2	0	3	0	2	1.3
208140010000	ADAMO ALBERT F & ROCHOVITZ DO	3	2	1	0	3	0	3	1	0	1.3
113030002000	GATEWAY UNIFIED SCHOOL DISTRI	3	2	2	0	2	1	3	0	0	1.3
116020011000	MIHAN MERVYN & JANET TRUST	2	2	1		3	1	3	0	0	1.2
073030054000	MEISSNER ERNEST R III REVOCAB LE TR	3	1	1	1	0	3	3	0	1	1.2
073540022000	GREGORY STEVE & JO 2010 TRUST STEV	1	1	1	0	3	2	3	0	1	1.2
074200001000	KOWALSKI JON RYAN	3	1	1	0	0	2	3	0	3	1.2
077220022000	TATOM LON M & DEENA C TR	2	2	1	2	1	1	3	0	1	1.2
077250062000	GILMORE MARY ETAL	3	1	1	0	3	1	3	0	1	1.2
077450020000	MCCONNELL FOUNDATION	2	2	2	0	3	1	0	0	2	1.2
077450031000	BALDWIN LARRY & SHIRLEY TR	3	1	1	1	3	1	3	0	0	1.2
104820088000	ROACH-CARR TRUST OF 2014 JOHN CAR	2	2	1	1	3	1	3	0	0	1.2
104900001000	OVERTON THELMA L FAMILY TRUST	3	1	1	0	1	1	3	1	1	1.2
107240001000	YI NOEL & MEILING	3	1	1	0	1	1	3	0	3	1.2
108170005000	HAMPTON STEVEN M	3	1	1	1	0	1	3	1	1	1.2
109010030000	BUDHRAM HAROLD S	3	1	1	0	3	1	3	0	1	1.2
109010062000	BUDHRAM HAROLD S	3	1	1	0	1	1	3	0	3	1.2
109040035000	NORTHERN CA BIBLE INSTITUTE C/O SH	3	3	1	0	0	1	3	0	3	1.2
110270009000	BELLA VISTA WATER DISTRICT	2	2	2	1	0	1	3	0	1	1.2
112020022000	CHU CHENG MING ETAL	3	1	1	0	3	1	3	0	1	1.2
114040001000	CORDI FAMILY TRUST 2012 ETA LREEC	3	1	1	0	1	1	3	0	3	1.2
114130040000	MILLER DUANE K ETAL	3	1	1	1	3	1	3	0	0	1.2
114320046000	W C GARCIA & ASSOCIATES INC C/O JU	2	2	1	1	3	1	3	0	0	1.2
114340031000	PELLA PROPERTIES LLC	2	2	1	0	3	1	3	0	1	1.2
117070006000	CALLAN GLADYS ANN TR	3	3	1	0	0	1	3	0	3	1.2
117130030000	MCCONNELL FOUNDATION	3	1	2	0	2	1	3	0	0	1.2
117180005000	STEWART AVENUE PARTNERS LLC	3	1	1	3	2	0	3	0	0	1.2
117260006000	REDDING CITY OF	3	1	3	1	0	0	3	0	0	1.2
203190024000	MCCALL PROPERTIES LLC	3	1	1	0	2	0	3	0	3	1.2
204430011000	GREENVIEW DEVELOPMENT CO INC	3	1	1	0	0	0	3	1	3	1.2
114150001000	PEARL BOB & ROSE FAMILY TRUST ROS	3	1	1	1	2	1	3	0	1	1.2
071110040000	ROMERO WILLIAM & SHANDA	2	2	1	0	1	2	3	1	0	1.2
077020007000	MCCONNELL FOUNDATION	3	1	2	0	0	1	3	0	2	1.2
077240010000	JACKSON ALMA JEAN TR	3	1	1	0	2	1	3	0	2	1.2
103290037000	NOB HILL LLC	3	1	1	0	2	1	3	1	0	1.2
110010018000	ROSE TIMOTHY E & PATSY J	3	3	1	0	1	1	3	1	0	1.2
112010026000	CHJ BEL AIR PROPERTIES LLC ATTN BLA	3	1	1	0	2	1	3	0	2	1.2
112250008000	SHASTA-REDDING	2	2	1	0	2	1	3	0	2	1.2
114020012000	HOPKINS JERRY LEE	3	1	1	0	0	1	3	1	2	1.2
114110015000	GREEN MARK E & PAMELA D TR	3	1	1	0	3	1	0	1	2	1.2
114320010000	MILLER 2001 TRUST ANTHONY D & TON	2	2	1	0	2	1	3	0	2	1.2
114440007000	MEIER MARK W & JUDY A REV LIV TRUS	3	3	1	1	0	1	3	0	2	1.2
115460038000	LORING FAMILY TRUST CHERYL D LORIN	3	1	1	2	0	1	3	1	0	1.2
306600001000	JASON TRENT	3	1	1	0	3	0	3	0	2	1.2
107550008000	FIELDS JOANN MARIE 1978 REV L IV TR	3	2	1		0	1	3	1	0	1.2
114080001000	BRYSON BERNARD & CHARLOTTE 20	2	1	1	0	3	1	3	0	1	1.2
114350017000	SHASTA COUNTY OFFICE OF EDUCA	1	2	1	0	3	1	3	0	1	1.2
114430011000	BAKER W JAXON	1	2	1	0	3	1	3	0	1	1.2
073170041000	THOMAS BRIGITTE I TR	2	1	1	0	2	2	3	0	1	1.2
073420024000	PETERSON R RUSS TR	3	2	1	2	0	2	3	0	0	1.2
074180006000	ANDERSON BRUCE A & CATHALEEN	3	2	1	0	0	2	3	0	2	1.2
074180007000	PARKS LIVING TRUST HOWARD PARKS	3	2	1	0	0	2	3	0	2	1.2
077220018000	TATOM LON M & DEENA C TR	3	2	1	2	0	1	3	0	1	1.2
102190026000	GIRARD JUNE FUND LIMITED LIABILITY	0	3	1	1	3	1	3	0	0	1.2
104010028000	PAYNE ROBERT C & VERNA J TR	2	1	1	1	3	1	3	0	0	1.2
110020006000	MCDEMOS JOAN M C/O CHRIS MCDEM	3	2	1	0	0	1	3	1	1	1.2
110200008000	GORDON FRASER TRUST ETAL GORDO	3	2	1	0	2	1	3	0	1	1.2
112010031000	CHJ BEL AIR PROPERTIES LLC ATTN BLA	3	2	1	0	0	1	3	0	3	1.2
114080034000	MC HUGH CHARLES A III & BARBA	3	2	1	1	1	1	3	0	1	1.2
114280018000	OGDEN PAUL C ETAL	3	2	1	0	1	1	3	0	2	1.2
116330012000	LAGUNA HARBOUR LLC ETAL	3	2	1	0	1	1	3	1	0	1.2
117620033000	TANGLEWOOD-SHASTA HOMEOWNERS	1	2	1	2	3	0	3	0	0	1.2
204480005000	WILLIAMS FAMILY TRUST STEVEN L & N	3	2	1	0	3	0	3	0	1	1.2
208130013000	COOK DANIEL GEORGE TR	3	2	1	1	3	0	0	1	1	1.2

Table E-8
Identified Natural Treatment System Projects (Phase I Rank)

APN	Owner	Ranking Scores									
		Imperv-iousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Septic System	Soils	Size of Usable Area	Weighted Overall Score
306560008000	BELLA VISTA WATER DIST	3	2	2	0	0	0	3	1	0	1.2
102650049000	HEDMAN ANDREW F & JEANINE M B	1	2	2	0	2	1	3	0	0	1.2
114020049000	TRAPP FAMILY TRUST TRAPP JACK L & M	3	2	1	0	3	1	3	0	0	1.2
115460036000	LORING FAMILY TRUST CHERYL D LORIN	3	2	1	0	3	1	3	0	0	1.2
117200006000	THOMPSON STEFFNEY & RASMUSSEN	3	2	1	3	2	0	0	0	2	1.2
068350045000	NORTON MARK G ETAL C/O MARTA NO	2	2	1	0	2	2	0	1	1	1.1
073030053000	MEISSNER ERNEST R III REVOCAB LE TR	3	1	1	1	0	2	3	0	1	1.1
074180010000	ANDERSON BRUCE A & CATHALEEN	3	1	1	0	0	2	3	0	2	1.1
077260026000	PETERMANN ELLEN L TR	3	1	1	0	2	1	3	0	1	1.1
101660028000	KELLER HWA MEL	0	2	1	0	2	1	3	1	0	1.1
105590012000	MONSON JOHN E	2	2	1	0	1	1	3	1	0	1.1
108230005000	AUNG FAMILY TRUST THAN T AUNG &	3	1	1	0	0	1	3	1	1	1.1
110040015000	FLYNN RUSSELL J & KAREN A REV LIV TR	3	3	1	0	0	1	3	1	0	1.1
112020002000	CHJ BEL AIR PROPERTIES LLC ATTN BLA	3	1	1	0	0	1	3	0	3	1.1
112020010000	DEVEREAUX EDWARD A JR TR C/O KATH	3	1	1	0	3	1	3	0	0	1.1
113280002000	REDDING MHP ESTATES LP C/O DE ANZ	3	1	1	0	2	1	3	0	1	1.1
113320034000	SHASTA COUNTY HEAD START CHIL	1	1	1	0	3	1	3	0	1	1.1
114020013000	HOPKINS JERRY L	3	1	1	1	0	1	3	1	0	1.1
114430009000	SOSS LLC	1	3	1	0	3	1	3	0	0	1.1
114430010000	WILLIAMS KAY REVOCABLE TRUST	1	3	1	0	3	1	3	0	0	1.1
115170002000	CUNNINGHAM STANLEY & YVONNE	3	1	1	0	0	1	3	1	1	1.1
115170003000	OLSON LARRY & SHEILA	3	1	1	0	2	1	3	0	1	1.1
116160002000	CAREY MARK ALAN TR ETAL	3	1	1	0	0	1	3	0	3	1.1
116170033000	GIBBS WYATT R & CAROL J	3	1	1	0	1	1	3	1	0	1.1
116370049000	SHASTA VINEYARD H O ASSOC C/O SCO	2	2	1	0	3	1	3	0	0	1.1
117590022000	J & S HIGHLAND PARK LLC ETAL	3	1	1	1	3	0	3	0	0	1.1
203210019000	UNITED STATES OF AMERICA	3	1	2	0	0	0	3	1	0	1.1
102110011000	WILSON FRANK LTD PARTNERSHIP	1	2	1	0	3	1	3	0	0	1.1
102110012000	WILSON FRANK LTD PARTNERSHIP	1	2	1	0	3	1	3	0	0	1.1
104880003000	DIGNITY HEALTH ATTN: CHIEF FINANCI	2	1	1	0	3	1	3	0	0	1.1
112250004000	MYGRANT RONALD G & M A TR ETA	2	1	1	0	3	1	3	0	0	1.1
113230061000	RODRIGUEZ HAROLD L JR ETAL	1	2	1	0	3	1	3	0	0	1.1
073030021000	MEISSNER ERNEST R III REVOCAB LE TR	3	2	1	1	0	2	3	0	0	1.1
074150005000	LEVENSON NORMAN TR ETAL C/O DON	3	2	1	1	0	2	3	0	0	1.1
077260028000	PETERMANN ELLEN L TR	3	2	1	0	0	1	3	0	2	1.1
107010046000	BAGM C/O J GRAVES	1	2	1	1	1	1	3	0	1	1.1
107250002000	WILGUS REV LIV TR-MARITAL TRS C/O	3	2	1	0	2	1	3	0	0	1.1
110010019000	BERGSTROM ENTERPRISES INC	3	2	1	0	0	1	3	1	0	1.1
110020008000	GOODMAN DANIEL M & RAQUEL C T	3	2	1	0	0	1	3	1	0	1.1
110020055000	BYZICK NEIL R	2	1	1	0	1	1	3	1	0	1.1
110200033000	LEA ROBERT TR ETAL	3	2	1	1	0	1	3	0	1	1.1
113100013000	NAPOLITANO FAM LIV TRUST-SURV IVO	3	2	1	0	1	1	3	0	1	1.1
114220049000	RUSSELL ARTHUR L	3	2	1	0	0	1	3	0	2	1.1
114220052000	GASTON STEPHEN C & CLARE S	3	2	1	0	1	1	3	0	1	1.1
114350030000	AJAMIAN DONALD V	3	2	1	1	0	1	3	0	1	1.1
117230008000	ZIMMER LANCE W	3	2	1	0	3	0	3	0	0	1.1
110020024000	CHURULICH AARON	2	2	1	2	0	1	0	1	1	1.0
204020013000	MATRIX GROUP LLC	3	1	1	0	2	0	3	0	1	1.0
077220021000	TATOM LON M & DEENA C TR	3	1	1	2	0	1	3	0	0	1.0
104460008000	HINDS FEET II LLC C/O ANDREW AUSON	3	1	1	2	0	1	3	0	0	1.0
108050044000	DRC PROPERTIES LLC	3	1	1	0	1	1	3	0	1	1.0
109010033000	LAMP GAYLE C	3	1	1	0	2	1	3	0	0	1.0
109040042000	BELLA VISTA WATER DISTRICT	2	2	2	0	0	1	3	0	0	1.0
112250005000	MYGRANT RONALD G & M A TR ETA	3	1	1	0	2	1	3	0	0	1.0
112400001000	WRIGHT FAMILY TRUST PERRY J & GLA	3	1	1	0	0	1	3	1	0	1.0
113190032000	CHJ BEL AIR PROPERTIES LLC ATTN BLA	3	1	1	0	0	1	3	0	2	1.0
114020029000	WYMORE RICHARD D	3	1	1	0	0	1	3	1	0	1.0
114020031000	WYMORE RICHARD D	3	1	1	1	0	1	3	0	1	1.0
116320005000	HANKIN DAVID W & JOYCE	3	1	1	1	1	1	3	0	0	1.0
116370048000	SHASTA VINEYARD H O ASSOC C/O SCO	1	1	1	0	3	1	3	0	0	1.0
117170017000	MD DEVELOPMENT	3	1	1	0	0	1	3	0	2	1.0
048240060000	LOHUIS CAROL	3	2	1	0	0	2	0	1	1	1.0
077220020000	TATOM LON M & DEENA C TR	3	2	1	0	0	1	3	0	1	1.0
102590021000	HASLETT JONELL	3	2	1	0	1	1	3	0	0	1.0
104620054000	LU TAIPENG PETER & HSING MEI	1	2	1	0	2	1	3	0	0	1.0
112020005000	CABEZUD FRANK	3	2	1	0	0	1	3	0	1	1.0
114030001000	SCOLNICK ROBERT	3	2	1	0	0	1	3	0	1	1.0
208150003000	MCCONNELL FOUNDATION	3	2	2	0	0	0	3	0	0	1.0
109010027000	KRUEGER TRUST MICHAEL L & DIANE M	3	2	1	0	0	1	3	0	1	1.0
112020004000	REINER RUSSELL P & DEBRA K TR	3	1	1	0	0	1	3	0	1	0.9
112020006000	CABEZUD FRANK	3	1	1	0	0	1	3	0	1	0.9
113100014000	NAPOLITANO FAM LIV TRUST-SURV IVO	3	1	1	0	1	1	3	0	0	0.9
113270005000	MOOSE HORN MOBILE HOME PARK L	3	1	1	0	0	1	3	0	1	0.9
114030002000	ANDERSON BRUCE A & CATHALEEN	3	1	1	0	0	1	3	0	1	0.9
113250006000	MCCOLLUM RYAN MICHAEL	2	2	1		0	1	3	0	0	0.9
077220019000	TATOM LON M & DEENA C TR	3	2	1	0	0	1	3	0	0	0.9
104470030000	SHUMAN MATTHEW S TR ETAL	3	2	1	0	0	1	3	0	0	0.9
104470033000	FREEMAN CHARLES & RUTH	3	2	1	0	0	1	3	0	0	0.9
113300027000	MCGREGOR LAND DEVELOPMENT CO	1	2	1	0	1	1	3	0	0	0.9
112020003000	TAGLIAFERRI EDWARD JR & VERON	3	1	1	0	0	1	3	0	0	0.8
306600002000	PENSCO TRUST COMPANY CSTDN FBO	3	1	1	0	0	0	3	0	0	0.7

Table E-9
Identified Direct Use Projects (Phase I Rank)

APN	Owner	Ranking Scores							
		Imperviousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Size of Usable Area	Weighted Overall Score
117070008000	REDDING CITY OF	3	3	3	3	3	3	0	2.7
054090039000	REDDING CITY OF	3	2	3	3	3	2	3	2.7
054280005000	REDDING CITY OF	2	3	3	3	3	2	3	2.7
056010025000	REDDING CITY OF	2	3	3	3	3	2	3	2.7
117150002000	REDDING CITY OF	3	3	3		3	3	0	2.6
048400005000	REDDING RANCHERIA	3	3	1	3	3	2	3	2.6
054090029000	LEWIS THOMAS A ETAL	3	3	1	3	3	2	3	2.6
054640001000	REDDING CITY OF	3	3	3	3	3	2	1	2.6
056610008000	REDDING CITY OF	3	3	3	3	3	2	1	2.6
076240013000	SIMPSON COLLEGE	3	2	2	3	3	2	3	2.6
077540036000	REDDING CITY OF	1	3	3	3	3	2	3	2.6
109040043000	REDDING CITY OF	3	3	3	3	3	1	3	2.6
112140007000	REDDING CITY OF	3	3	3	3	3	1	2	2.5
073090061000	THOMASON COLBURN R & VALDENE	3	2	1	3	3	3	1	2.5
077460022000	REDDING CITY OF	2	2	3	3	3	2	2	2.5
117290002000	REDDING CITY OF	2	2	3	3	3	2	2	2.5
050650026000	REDDING CITY OF	3	2	3	3	3	2	1	2.5
054090038000	PACHECO UNION SCHOOL DIST	3	2	1	3	3	2	3	2.5
068270037000	MICHALAK MICHAEL & BERTHA M T	3	2	1	2	3	3	3	2.5
073100072000	GOLD HILLS COUNTRY CLUB C/O COLBU	3	2	1	3	3	2	3	2.5
074230031000	TUSCANY REDDING LLC	3	2	1	2	3	3	3	2.5
104500036000	REDDING CITY OF	3	2	3	3	3	1	3	2.5
108350063000	PC REDDING APARTMENTS LIMITED	3	2	1	3	3	2	3	2.5
109320018000	T-K VENTURES LLC	3	2	1	3	3	2	3	2.5
110150021000	REDDING CITY OF	3	2	3	3	3	1	3	2.5
117200005000	THOMPSON STEFFNEY & RASMUSSEN	3	2	1	3	3	2	3	2.5
103780027000	REDDING CITY OF	3	3	3	3	3	1	1	2.4
048400003000	CALIFORNIA STATE OF	3	2	2	3	3	1	3	2.4
054280001000	UNITED STATES OF AMERICA	2	3	2	2	3	2	3	2.4
054280006000	REDDING CITY OF	3	3	3	1	3	2	3	2.4
067380047000	REDDING CITY OF	3	1	3	3	3	1	3	2.4
068320062000	JAMES WILLIAM G & NILA M TR	3	3	1	2	3	2	3	2.4
068320069000	REDDING CITY OF	3	1	3	3	2	2	3	2.4
068330013000	REDDING CITY OF	3	3	3	2	3	1	3	2.4
068730047000	REDDING CITY OF	3	3	3	1	3	2	3	2.4
070150029000	NEIGHBORHOOD CHURCH OF RDG CHR	3	3	2	2	3	2	2	2.4
073090062000	THOMASON COLBURN R & VALDENE	3	2	1	2	3	3	2	2.4
073100085000	GOLD HILLS COUNTRY CLUB C/O COLBU	3	2	1	2	3	3	2	2.4
074150043000	LEVENSON NORMAN TR ETAL C/O DON	3	3	1	3	3	1	3	2.4
074250041000	REDDING CITY OF DEPT OF FINANCE	3	1	3	1	3	3	3	2.4
101490011000	REDDING CITY OF	3	2	3	3	3	1	2	2.4
102470022000	REDDING CITY OF	2	2	3	3	3	1	3	2.4
103240046000	REDDING CITY OF	3	1	3	2	3	2	3	2.4
104420001000	REDDING CITY OF	3	1	3	2	3	2	3	2.4
104860026000	REDDING CITY OF	3	3	3	2	3	2	1	2.4
109040009000	REDDING CITY OF	3	3	3	3	2	1	3	2.4
110150002000	REDDING CITY OF	3	3	3	2	3	1	3	2.4
112140001000	MCCONNELL FOUNDATION	3	2	2	3	3	1	3	2.4
112270013000	MCCONNELL FOUNDATION	3	2	2	3	3	2	1	2.4
116370050000	SHASTA VINEYARD H O ASSOC C/O SCO	2	3	1	3	3	2	2	2.4
117170018000	MD DEVELOPMENT	3	1	1	2	3	3	3	2.4
117570059000	J & S HIGHLAND PARK LLC ETAL	3	2	1	3	3	3	0	2.4
204450041000	REDDING CITY OF	3	3	3	2	3	2	1	2.4
306560035000	M & N RANCH LLC	3	1	1	2	3	3	3	2.4
117290023000	LITTLE COUNTRY CHURCH OF RDG	2	2	2	3	3	2	2	2.4
050720034000	REDDING CITY OF	3	2	3	3	3	2	0	2.4
054080024000	REDDING CITY OF	3	2	3	3	2	1	3	2.3
054200072000	CURTO FAMILY TRUST JOE L & L LAVON	3	2	1	3	3	1	3	2.3
056130031000	REDDING CITY OF	3	3	3	2	3	1	2	2.3
068210028000	LU TAI PENG PETER & HSING MEI	3	2	1	3	3	1	3	2.3
102040013000	REDDING CITY OF	3	2	3	2	3	1	3	2.3
102090030000	MCCONNELL FOUNDATION	2	2	2	3	3	1	3	2.3
104040043000	REDDING CITY OF	3	2	3	2	3	1	3	2.3
107190024000	REDDING CITY OF	0	3	3	3	3	1	3	2.3
109040062000	REDDING JT POWERS FINAN AUTH	2	2	2	3	3	1	3	2.3
116050022000	REDDING CITY OF	2	3	3	2	3	1	3	2.3
116380022000	SHASTA VINEYARD H O ASSOC	2	3	1	3	3	1	3	2.3
050270025000	REDDING BUSINESS TRUST ETAL	3	3	1	2	3	2	2	2.3
073080003000	BAKER W JAXON ETAL	3	1	1	3	3	2	2	2.3
074220005000	BURK BRIAN & SANDRA ETAL	3	1	1	3	2	3	2	2.3
074250022000	MD DEVELOPMENT	3	1	1	2	3	3	2	2.3
074250023000	MD DEVELOPMENT	3	1	1	2	3	3	2	2.3
107230001000	UNITED STATES OF AMERICA	2	3	2	3	2	2	2	2.3
112090001000	RECTOR WARDENS & VESTRYMEN OF	2	2	2	3	3	2	1	2.3
112090003000	THORESON KENNY A	3	1	1	3	3	2	2	2.3
112140006000	REDDING CITY OF C/O ORRICK HERRING	3	2	3	3	3	1	1	2.3
115460023000	REDDING CITY OF	3	3	3	2	3	2	0	2.3
117070007000	DEAN G ROESNER CONSTR INC	3	3	1	2	3	2	2	2.3
117070009000	REDDING CITY OF	3	1	3	3	3	2	0	2.3
117150004000	KNIGHTEN GARY & PATSY 1995 TRUST	3	3	1	2	3	3	0	2.3
306560037000	TIERRA OAKS GOLF CLUB INC	3	1	1	3	3	3	0	2.3
076240024000	SIMPSON UNIVERSITY	3	2	2	2	3	2	2	2.3
107070006000	ENTERPRISE SCHOOL DIST	2	3	2	3	3	2	0	2.3
116180023000	BETHEL REDDING PROPERTIES	3	2	2	3	3	2	0	2.3
054790020000	REDDING PROPERTIES LP	3	2	1	2	3	2	3	2.3
070150030000	REDDING CITY OF	3	2	3	2	2	2	3	2.3
110020064000	YOUNG EDWARD H & JUDY J TR	3	2	1	2	3	2	3	2.3
117200006000	THOMPSON STEFFNEY & RASMUSSEN	3	2	1	3	2	2	3	2.3
054210017000	DENTON CINDEE ETAL	3	3	1		3	1	3	2.3
070270026000	SASSO PAUL	3	1	1		3	2	3	2.3
050500029000	REDDING CITY OF	2	2	3	3	3	1	1	2.2
050820040000	STOLZ REINHARD H II & WANELL	3	2	1	3	3	1	2	2.2
054220018000	REDDING CITY OF	3	3	3	3	2	1	1	2.2
101330019000	SHASTA COUNTY OF DEPT OF PUBLIC W	1	3	2	3	3	1	2	2.2
101750043000	REDDING CITY OF	2	2	3	3	3	1	1	2.2
117290022000	INSIGNIA BUILDERS INC	3	3	1	3	3	1	1	2.2

Table E-9
Identified Direct Use Projects (Phase I Rank)

APN	Owner	Ranking Scores							
		Imperviousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Size of Usable Area	Weighted Overall Score
054210084000	REDDING CITY OF	3	3	3	1	3	1	3	2.2
054210089000	REDDING CITY OF	3	3	3	1	3	2	1	2.2
068330009000	REDDING CITY OF	3	1	3	2	3	1	3	2.2
068380040000	REDDING CITY OF	3	1	3	1	3	2	3	2.2
070130001000	NEIGHBORHOOD CHURCH OF RDG CHR	2	3	2	1	3	2	3	2.2
071330009000	CREATIVE LIVING	1	3	1	3	3	1	3	2.2
073090031000	MEYER ADOLPH C JR & PATRICIA	3	1	1	1	3	3	3	2.2
074140011000	LEVENSON FAMILY REVOCABLE TRU ST	3	1	1	3	3	2	1	2.2
074180008000	SEO YOUNG S & GIL-SOON	3	1	1	2	3	2	3	2.2
074210004000	KENT WALTER A & INGRID M REV TRUS	3	1	1	3	2	3	1	2.2
074220016000	C & L JEWELL ENTERPRISES INC C/O CH	3	1	1	2	3	2	3	2.2
076070024000	BETHEL CHURCH OF REDDING	3	2	1	2	3	2	2	2.2
077560032000	ASHRAF AHMAD & SHAHNAZ	3	2	1	2	3	3	0	2.2
101330018000	UNION PACIFIC RAILROAD COMPAN YP	1	2	2	3	3	1	3	2.2
102490013000	REDDING CITY OF	2	3	3	3	3	1	0	2.2
104100032000	REDDING CITY OF	2	2	3	2	3	2	1	2.2
104770061000	REDDING CITY OF	3	3	3	0	3	2	3	2.2
104930038000	REDDING CITY OF	3	3	3	1	3	1	3	2.2
109040022000	REDDING JT POWERS FINAN AUTH	1	2	2	3	3	1	3	2.2
109040044000	REDDING JT POWERS FINAN AUTH	3	2	2	2	3	1	3	2.2
109070053000	VILLAGES AT SHASTA VIEW GARDE NS A	3	3	1	1	3	2	3	2.2
109150027000	NORTH VALLEY BAPTIST CHURCH	2	2	2	2	3	2	2	2.2
110020014000	SIGNATURE NORTHWEST PARTNERSH	3	3	1	1	3	2	3	2.2
110360008000	NAMIHAS B NICHOLAS	3	1	1	2	3	3	1	2.2
112240025000	SUNDIAL VILLAS LLC ETAL	3	1	1	2	2	3	3	2.2
114110006000	GATEWAY UNIFIED SCHOOL DISTRI	3	2	2	3	3	0	3	2.2
114150010000	UNITED STATES OF AMERICA	3	2	2	3	3	0	3	2.2
115170001000	REDDING REDEVELOPMENT AGENCY AT	3	1	1	2	3	3	1	2.2
117070016000	REDDING CITY OF	3	2	3	1	3	3	0	2.2
117620001000	SHASTA COUNTY TANGLEWOOD VILLAG	2	2	1	3	3	2	1	2.2
048130004000	J W FISHER LOGGING CO	3	2	1		2	2	3	2.1
048140003000	SHASTA COUNTY OF	3	2	2		3	2	0	2.1
050440016000	SHILOH PARK LIMITED PARTNERSH	3	2	1		2	3	1	2.1
054280008000	REDDING CITY OF	3	2	3	0	3	2	3	2.1
070170023000	ROTHER EUGENE H & DONNA L TR	3	2	1	1	3	2	3	2.1
073100081000	THOMASON COLBURN R & VALDENE	3	2	1	0	3	3	3	2.1
073310001000	REDDING CITY OF	3	2	3	0	2	3	3	2.1
073410026000	FEYLING PAUL B & JEAN-MARIE T	3	2	1	1	2	3	3	2.1
074170003000	RHOADS JOSEPH CHARLES	3	2	1	3	3	1	1	2.1
074220011000	RISEN KING COMMUNITY CHURCH	3	1	2	1	3	2	3	2.1
102410030000	CALIFORNIA STATE OF	1	3	2	3	3	1	1	2.1
104900018000	PIERCE FAMILY TRUST ETAL MARGARET	3	3	1	3	3	1	0	2.1
110020066000	YOUNG EDWARD H & JUDY J TR	3	2	1	1	3	2	3	2.1
117460050000	REDDING CITY OF	3	2	3	0	3	2	3	2.1
208160010000	MCCONNELL FOUNDATION	3	3	2	2	3	0	3	2.1
068380088000	BAKER W JAMES	3	2	1	0	3	3	3	2.1
077010027000	COLUMBIA ELEM SCHOOL DIST	3	3	2	2	3	1	1	2.1
103100025000	REDDING ELEM SCHOOL DISTRICT	2	2	2	1	3	2	3	2.1
048330013000	FIVE SPEARS TRUST PIYUSH K & PROMI	3	3	2	1	3	1	3	2.1
050270019000	REDDING CITY OF	3	2	3	1	3	1	3	2.1
050610039000	HANSON JASON JOHN & CONNIE	2	3	1	2	3	2	1	2.1
077260002000	FERRELL DENNIS P & SUSAN R TR FERRE	3	2	1	2	3	2	1	2.1
101440003000	CIBULA ALVIN M JR & GLENDA L	3	3	1	2	3	1	2	2.1
102040014000	ALLIANCE OF REDDING MUSEUMS	2	2	2	2	3	1	3	2.1
102090023000	MCCONNELL FOUNDATION	2	3	2	3	2	1	2	2.1
102490006000	CALIFORNIA STATE OF	1	2	2	3	3	1	2	2.1
103740014000	NO CALIF CONF ASSN/7TH DAY AD VEN	1	1	2	3	3	2	1	2.1
108030082000	REDDING AREA BUS AUTHORITY	0	3	2	3	3	2	0	2.1
109030027000	REDDING CITY OF	3	2	3	1	3	1	3	2.1
109040007000	REDDING CITY OF C/O W LEONARD WIN	2	2	3	2	3	1	2	2.1
109040008000	REDDING CITY OF	3	2	3	1	3	1	3	2.1
112390012000	SMITH GLEN A & PATRICIA A FAMILY TR	2	2	1	3	3	1	2	2.1
114310019000	REDDING CITY OF	3	1	3	2	3	1	2	2.1
115170009000	REDDING CITY OF	3	1	3	2	3	2	0	2.1
116030009000	HILLSIDE CHURCH OF THE ASSEMB	2	3	2	3	3	1	0	2.1
116360009000	SIMPSON COLLEGE	3	1	2	1	3	3	1	2.1
116360014000	NUNEZ LUIS	3	1	1	1	3	3	2	2.1
306560033000	M & N RANCH LLC	3	1	1	3	2	3	0	2.1
067350038000	ENTERPRISE SCHOOL DISTRICT	2	3	2	3	3	1	0	2.1
068070016000	SHASTA UNION HIGH SCHOOL DIST	2	3	2	3	3	1	0	2.1
050730028000	REDDING CITY OF	3	2	3	0	3	2	2	2.0
054840002000	SHASTA VIEW MILL LLC C/O MOORES F	3	3	1	1	3	2	1	2.0
054840007000	SHASTA VIEW MILL LLC	3	3	1	1	3	2	1	2.0
077560028000	REDDING CITY OF	3	1	3	1	3	2	1	2.0
102490009000	REDDING CITY OF CITY CLERK	1	2	3	3	3	1	0	2.0
104900016000	OVERTON THELMA L FAMILY TRUST	3	2	1	3	3	1	0	2.0
109150016000	NORTH VALLEY BAPTIST CHURCH	2	2	2	1	3	2	2	2.0
117130033000	REDDING CITY OF	3	1	3	1	3	2	1	2.0
077180054000	REDDING CITY OF	3	2	3	2	3	1	0	2.0
049350005000	MCCONNELL FOUNDATION	3	3	2	2	2	2	0	2.0
050360027000	REDDING CITY OF	3	2	3	2	2	1	2	2.0
050370041000	REDDING CITY OF	3	1	3	1	3	1	3	2.0
054200002000	CURTO FAMILY TRUST JOE L & L LAVON	3	2	1		2	2	2	2.0
054210045000	REDDING CITY OF	3	3	3	1	3	1	1	2.0
054220024000	REDDING CITY OF	3	2	3		3	1	0	2.0
054570006000	REDDING CITY OF	3	3	3	1	3	1	1	2.0
054640013000	REDDING CITY OF	3	3	3	1	1	2	3	2.0
054840001000	SHASTA VIEW MILL LLC	3	3	1	0	3	2	3	2.0
068090028000	REDDING BANK OF COMMERCE	2	2	1	3	3	0	3	2.0
068290004000	REDDING CITY OF	3	1	3	0	3	2	3	2.0
068320058000	WESTBY DAVID ETAL	3	1	1	1	3	2	3	2.0
070020005000	RIVERVIEW GOLF & COUNTRY CLUB	2	2	1	2	3	1	3	2.0
071280006000	BRUNELLI TRUST BRUNELLI DARRELL &	3	3	1	0	3	2	3	2.0
076240025000	SIMPSON COLLEGE	3	2	2	1	3	2	1	2.0
101330002000	REDDING CITY OF	1	2	3	2	3	1	2	2.0
101440051000	CIBULA ALVIN M JR & GLENDA L	2	2	1	3	3	1	1	2.0

Table E-9
Identified Direct Use Projects (Phase I Rank)

APN	Owner	Ranking Scores							
		Imperviousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Size of Usable Area	Weighted Overall Score
101480037000	REDDING CITY OF	0	3	3	2	3	1	2	2.0
101780056000	CALIFORNIA STATE OF JUDICIAL	1	2	2	3	3	1	1	2.0
102020008000	CHAPEL OF THE FERNS INC	3	2	2	3	2	1	1	2.0
102020009000	CHAPEL OF THE FERNS INC PROPERTY T	3	2	2	3	2	1	1	2.0
102040015000	REDDING CITY OF	1	3	3	1	3	1	3	2.0
102170022000	CALIFORNIA BROADCASTING INC	1	2	2	3	3	1	1	2.0
103250027000	CALIFORNIA STATE OF	1	2	2	3	3	1	1	2.0
103690022000	REDDING CITY OF	3	2	3	2	2	2	0	2.0
103730002000	REDDING CITY OF	3	1	3	3	2	1	1	2.0
104100031000	AVIATOR MEDICAL LLC	3	1	2	2	3	1	2	2.0
104550055000	REDDING CITY OF	3	1	3	1	3	1	3	2.0
104900011000	REDDING CITY OF	2	2	3	2	3	1	1	2.0
107200045000	MANCASOLA ROSE M TR	0	3	1	3	3	1	2	2.0
107480007000	KMR REDDING INVESTORS LLC	2	3	1	2	3	2	0	2.0
108020027000	SHASTA CO OFFICE OF EDUCATION	0	2	2	3	3	2	0	2.0
109040047000	REDDING CITY OF	3	3	3	0	3	1	3	2.0
109040054000	REDDING CITY OF	3	3	3	0	3	1	3	2.0
109150017000	NORTH VALLEY BAPTIST CHURCH	2	1	2	1	3	2	3	2.0
110150008000	REDDING CITY OF	3	3	3	0	3	1	3	2.0
110210001000	PACIFIC TELEPHONE & TELEGRAPH C/O	1	2	2		3	1	3	2.0
110240051000	REDDING CITY OF	3	3	3	1	3	1	1	2.0
111250036000	REDDING CITY OF	3	2	3	1	3	1	2	2.0
112140008000	MCCONNELL FOUNDATION	2	2	2	3	2	1	2	2.0
112230005000	REDDING CITY OF	3	1	3	0	2	3	3	2.0
113190014000	TERRA NOVA DEVELOPMENT LLC	3	1	1	0	3	3	3	2.0
114140005000	PINCIN JAMES W TR	3	1	1	3	3	0	3	2.0
114440009000	TOPS INDUSTRIES C/O DAN A RYAN	2	2	1	2	3	1	3	2.0
117130003000	MCCONNELL FOUNDATION	3	1	2		2	2	2	2.0
117170016000	MD DEVELOPMENT	3	1	1	2	3	2	1	2.0
117260012000	ENTERPRISE ELEMENTARY SCHOOL DIST	3	3	2	2	2	1	2	2.0
117470028000	SHASTA VINEYARD HOMEOWNERS	1	2	1	3	3	1	2	2.0
117530003000	BELLA VISTA WATER DISTRICT	2	3	2	0	3	2	3	2.0
117590022000	J & S HIGHLAND PARK LLC ETAL	3	1	1	1	3	3	1	2.0
204350040000	REDDING CITY OF	3	1	3	2	3	1	1	2.0
208160009000	MCCONNELL FOUNDATION	3	2	2	2	3	0	3	2.0
048140008000	DEPT OF CORRECTIONS & REHABIL	3	2	2	1	3	2	1	2.0
048200008000	REDDING ELEMENTARY SCHOOL DIST	2	3	2	1	3	2	1	2.0
049420037000	SHASTA BAPTIST CHURCH	2	2	2	2	3	2	0	2.0
103740027000	SHASTA UNION HIGH SCHOOL & JR	1	2	2	2	3	2	1	2.0
114100026000	GATEWAY UNIFIED SCHOOL DISTRI	2	3	2	3	3	0	1	2.0
112050040000	REDDING CITY OF	3	2	3	1	2	2	2	2.0
116020011000	MIHAN MERVYN & JANET TRUST	2	2	1		3	1	3	2.0
048140007000	SHASTA COUNTY OF	2	2	2	1	3	2	1	1.9
048200001000	REDDING ELEMENTARY SCHOOL DIST	3	3	2	0	3	2	1	1.9
050660041000	REDDING CITY OF	3	2	3	0	3	2	1	1.9
054090037000	REDDING CITY OF	3	3	3	0	3	2	0	1.9
054210051000	REDDING CITY OF	3	3	3	0	3	2	0	1.9
103230045000	REDDING CITY OF	1	2	3	0	3	3	1	1.9
103280027000	SHASTA UNION HIGH SCHOOL & JR	2	2	2	1	3	2	1	1.9
103280029000	SHASTA UNION HIGH SCHOOL & JR	2	2	2	1	3	2	1	1.9
109150015000	NORTH VALLEY BAPTIST CHURCH	2	2	2	1	3	2	1	1.9
113190015000	REDDING CITY OF	3	2	3	0	3	2	1	1.9
117070028000	REDDING CITY OF	3	1	3	1	3	2	0	1.9
117530002000	BELLA VISTA WATER DISTRICT	3	3	1	1	3	2	0	1.9
117620033000	TANGLEWOOD-SHASTA HOMEOWNERS	1	2	1	2	3	2	1	1.9
049290001000	REDDING SCHOOL DISTRICT	3	3	2	0	3	2	1	1.9
048200007000	DEAN TRUDY L ETAL	3	3	1	1	2	2	2	1.9
048320041000	POLLOCK PARKER & PHYLLIS 2005 REV T	3	2	1	1	3	1	3	1.9
048330011000	BENNETT FAMILY TRUST C/O MURIEL N	3	3	1	1	3	1	2	1.9
050600044000	MEADOW WOOD ESTATES HOME OWN	3	2	1	2	3	1	1	1.9
054200034000	REDDING CITY OF	3	3	3	1	3	1	0	1.9
054200074000	DENTON CINDEE ETAL	3	2	1	1	3	1	3	1.9
054210030000	REDDING CITY OF	3	2	3	0	3	1	3	1.9
054270004000	REDDING CITY OF	3	3	3	1	3	1	0	1.9
054750035000	CAPENER TOM D & REBECCA A	3	2	1	1	3	1	3	1.9
054840005000	WOODS STEVEN E & SANDRA F	3	3	1	0	3	2	2	1.9
067110052000	MCCONNELL FOUNDATION	3	2	2	2	3	1	0	1.9
068200025000	GRACE BAPTIST CHURCH	3	3	2	0	3	1	3	1.9
070320016000	SINGH JASPAL & GILL BALWINDER	1	2	1	1	3	2	3	1.9
074240002000	NORCAL INVESTMENT PARTNERS LP	3	1	1	0	3	3	2	1.9
075220003000	MD DEVELOPMENT	3	1	1	1	3	3	0	1.9
077010024000	MCCONNELL FOUNDATION	3	1	2	2	3	1	1	1.9
077010028000	REDDING CITY OF	3	2	3	0	3	1	3	1.9
101510031000	CALIFORNIA STATE OF	0	2	2	3	3	1	1	1.9
101790034000	REDDING CITY OF	0	3	3	2	3	1	1	1.9
102170011000	JOHANNESSEN FAMILY TRUST JOHANN	1	2	2	3	3	1	0	1.9
102470002000	REDDING CITY OF	3	2	3	1	3	1	1	1.9
104440002000	QWEST COMMUNICATIONS CORP ATTN	1	1	2	1	3	2	3	1.9
104510005000	P G & E	2	2	2	0	3	2	3	1.9
104670001000	REDDING CITY OF	2	1	3	1	3	1	3	1.9
104670002000	REDDING CITY OF	1	2	3	1	3	1	3	1.9
104680004000	DOHLE KIMBERLY S ETAL	3	2	1	1	3	1	3	1.9
108450017000	REDDING CITY OF	3	2	3	0	3	1	3	1.9
109040037000	WOOD NANCE J ETAL	3	2	1	1	3	1	3	1.9
109040059000	JOHNSTON-FRANKLIN INC C/O CA DEPT	3	2	1	1	3	1	3	1.9
109070013000	DOWNS GLENN W & SHAWNA L	3	2	1	1	2	2	3	1.9
109090016000	REDDING CITY OF	3	2	3	2	2	1	1	1.9
110020009000	GOODMAN DANIEL M & RAQUEL C T	3	2	1	0	3	2	3	1.9
112240010000	MCCONNELL FOUNDATION	3	1	2	2	1	2	3	1.9
112300006000	REDDING CITY OF	3	3	3	0	3	1	2	1.9
114430022000	PACIFIC BELL TELEPHONE CO ATTN: DAV	1	3	2	2	3	0	3	1.9
116030011000	3D LLC	2	2	1	3	3	1	0	1.9
116180006000	REDDING CITY OF	3	2	3	0	2	2	3	1.9
116460020000	EQUITY STREAMS LLC	3	2	1	1	3	1	3	1.9
116460023000	REDDING CITY OF	2	2	3	1	3	1	2	1.9
117130023000	MCCONNELL FOUNDATION	3	1	2	0	3	2	3	1.9

Table E-9
Identified Direct Use Projects (Phase I Rank)

APN	Owner	Ranking Scores							
		Imperviousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Size of Usable Area	Weighted Overall Score
117230003000	NELSON LILLIAN H ETAL	3	1	1	1	3	2	2	1.9
117250003000	REDDING CITY OF	3	3	3	2	2	1	0	1.9
117280015000	MCCONNELL FOUNDATION	3	1	2	1	3	1	3	1.9
204030018000	BRESLAUER MANUEL ESTATE ETAL	3	2	1	1	2	2	3	1.9
204560040000	REDDING CITY OF	3	2	3	1	3	1	1	1.9
068200013000	GRACE BAPTIST CHURCH OF RDG	2	3	2	2	3	1	0	1.9
048130018000	SHASTA COUNTY OF	2	3	2	1	3	2	0	1.9
074140012000	LEVENSON FAMILY REVOCABLE TRU ST	3	1	1	2	3	2	0	1.9
112290046000	DENHAM RANDY JAY ETAL	1	3	1	2	3	1	2	1.9
048130005000	J W FISHER LOGGING CO	3	2	1		2	2	1	1.9
104130062000	P G & E	3	1	2		2	2	1	1.9
104200026000	REDDING CITY OF	3	1	3		1	2	2	1.9
114430002000	REDDING CITY OF	3	2	3		2	0	3	1.9
048320014000	MATHIS FAM REVOC LIVING TRUST MA	3	3	1	1	2	1	3	1.8
048520038000	REDDING CITY OF	3	1	3	0	3	1	3	1.8
050270018000	REDDING CITY OF	2	2	3	1	3	1	1	1.8
054210052000	REDDING CITY OF	3	3	3	0	3	1	1	1.8
067010005000	REDDING CHRISTIAN FELLOWSHIP	3	1	2	1	3	2	0	1.8
074260002000	OASIS LAND COMPANY LP	3	3	1	1	3	1	1	1.8
077020021000	MCCONNELL FOUNDATION	3	1	2	1	3	2	0	1.8
077500044000	REDDING CITY OF	3	1	3	0	3	1	3	1.8
103430003000	REDDING CITY OF	3	3	3	0	3	1	1	1.8
107200038000	STIRRING OF THE CHRISTIAN & M	0	2	1	3	3	1	1	1.8
108030084000	TATOM 2001 TRUST LON M & DEENA C	1	3	1	1	3	2	1	1.8
110080070000	REDDING CITY OF	2	2	3	0	3	1	3	1.8
112080030000	REDDING CITY OF	2	2	3	2	1	2	1	1.8
112370014000	REDDING CITY OF	3	2	3	0	3	2	0	1.8
112390007000	REDDING CITY OF	3	1	3	0	3	1	3	1.8
117120003000	UNITED STATES OF AMERICA	2	1	2	0	3	3	1	1.8
306560036000	TIERRA OAKS ESTATE HOMEOWNERS A	3	2	1	0	3	3	0	1.8
114150011000	SHASTA CO BOARD OF EDUCATION	2	2	2	3	3	0	0	1.8
048320015000	FALCON CABLE SYSTEMS CO II LP	0	3	2	1	3	1	3	1.8
048320045000	FISHER FAMILY TRUST THOMAS P & RA	3	2	1	1	3	1	2	1.8
048320060000	FIVE SPEARS TRUST PIYUSH K & PROMI	2	3	2	0	3	1	3	1.8
050490075000	BOWER JOSEPH LIVING TRUST JOSEPH	3	2	1	1	3	1	2	1.8
054210055000	BRUNELLO PETE	3	3	1	0	2	2	3	1.8
067110024000	UNITED STATES POSTAL SERVICE ATTN	1	3	2	2	3	1	0	1.8
068090043000	REDDING CHURCH OF RELIGIOUS SCIEN	2	2	2	1	3	1	2	1.8
068380007000	WESTBY DAVID ETAL	3	1	1	0	3	2	3	1.8
068380010000	WESTBY DAVID ETAL	3	1	1	0	3	2	3	1.8
070180023000	ANDERSON-COTTONWOOD IRIG DIST	3	2	2	0	2	2	3	1.8
073100084000	THOMASON COLBURN R & VALDENE	3	1	1	1	2	2	3	1.8
074120001000	CALIFORNIA STATE OF	1	2	2	1	3	1	3	1.8
076120033000	SIMPSON COLLEGE	3	1	2	2	3	1	0	1.8
077450020000	MCCONNELL FOUNDATION	2	2	2	0	3	2	2	1.8
101330014000	REDDING AREA BUS AUTHORITY	0	2	2	2	3	1	2	1.8
102020015000	REDDING JOINT POWERS FIN AUTH	2	2	2	2	3	1	0	1.8
102470011000	REDDING CITY OF	1	2	3	1	3	1	2	1.8
104040045000	REPROP FINANCIAL MORTGAGE INV	3	2	1	1	3	1	2	1.8
104880004000	CALIFORNIA STATE OF	1	1	2	2	3	1	2	1.8
104880005000	DIGNITY HEALTH ATTN CHIEF FINANCIA	2	2	2	2	3	1	0	1.8
107010028000	NO CONG OF JEHOVAHS WITNESSES S	1	2	2	2	3	1	1	1.8
107190035000	MORROW WEBB B JR TR	1	2	1	2	3	1	2	1.8
109080026000	ROTHER FAMILY REVOCABLE TRUST OF	3	2	1	1	3	1	2	1.8
109130003000	BAYON FAM 1990 REV LIV TRUST	1	3	1	3	2	1	1	1.8
112230001000	MCCONNELL FOUNDATION	3	3	2	0	2	2	2	1.8
113120012000	REDDING CITY OF	3	2	3	1	3	1	0	1.8
114390051000	MOUNT VISTA HOMEOWNERS ASSN	2	2	1	1	3	1	3	1.8
114400007000	MOUNT VISTA HOMEOWNERS ASSN	2	2	1	2	3	1	1	1.8
204030019000	BRESLAUER MANUEL ESTATE ETAL	3	1	1	2	3	1	1	1.8
067110057000	NO CALIF CONF ASSN/7TH DAY AD	2	2	2	1	3	1	2	1.8
102410020000	REDDING SCHOOL DISTRICT	2	3	2	1	3	1	1	1.8
117350054000	ENTERPRISE ELEMENTARY SCHOOL DIST	1	2	2	1	3	1	3	1.8
050440013000	SHILOH PARK LIMITED PARTNERSH	3	3	1		0	3	1	1.8
048130016000	SHASTA COUNTY OF	1	3	2	0	3	2	1	1.7
049340008000	MCCONNELL FOUNDATION	3	3	2	3	0	1	1	1.7
050600045000	REDDING CITY OF	3	1	3	0	3	1	2	1.7
050640025000	MARVIN GARDENS PLND H/O ASSOC C/	3	2	1	0	3	2	1	1.7
054210018000	DENTON CINDEE ETAL	3	2	1	0	3	1	3	1.7
054220023000	REDDING CITY OF	3	3	3	3	1	0	0	1.7
067040008000	FULLER NANCY LEE	3	2	1	1	3	1	1	1.7
067490076000	CHURCH OF GOD ASSN OF NO CA	2	2	2	0	3	1	3	1.7
068020041000	REDDING CITY OF	0	3	3	0	3	1	3	1.7
068200023000	GRACE BAPTIST CHURCH REDDING	2	2	2	0	3	1	3	1.7
068300021000	KARR JEAN C FAMILY TRUST JEAN C KA	3	2	1	0	3	2	1	1.7
070100031000	JELLISON LISA M TRUST OF 2014 LISA M	3	2	1	0	3	1	3	1.7
074010005000	OASIS LAND COMPANY LP	3	2	1	1	3	1	1	1.7
074110007000	OASIS LAND COMPANY LP	3	2	1	0	3	1	3	1.7
074260001000	OASIS LAND COMPANY LP	3	2	1	1	3	1	1	1.7
074260003000	OASIS LAND COMPANY LP	3	2	1	1	3	1	1	1.7
074410001000	BURK BRIAN E & SANDRA A	3	1	1	1	2	3	0	1.7
077450019000	MCCONNELL FOUNDATION	3	1	2	0	3	2	1	1.7
102070009000	SCHC PROPERTY CORPORATION	1	3	2	0	3	1	3	1.7
103620030000	KEEF FAMILY TRUST	3	1	1	0	3	3	0	1.7
104040030000	REDDING CITY OF	2	1	3	0	3	1	3	1.7
108440051000	SIGNATURE NORTHWEST PARTNERSH	1	2	1	1	3	1	3	1.7
109040056000	IRVIN MARK ANTHONY & BOBBIE L	3	2	1	1	2	1	3	1.7
109070002000	REDDING CITY OF	3	2	3	1	1	2	1	1.7
109080007000	WOMACK CAROL W & MARIA E FAM TR	2	1	1	1	3	1	3	1.7
109080013000	SUNDQUIST RICHARD ETAL	3	2	1	0	3	1	3	1.7
109270028000	CARTWRIGHT 1996 TRUST	3	2	1	0	3	1	3	1.7
110090064000	SOLL CHARLOTTE	2	2	2	0	3	1	3	1.7
110270023000	SHUFELBERGER MICHAEL & SHERRY 20	3	2	1	1	3	1	1	1.7
112290003000	DENHAM RANDY J & DENISE L	1	2	1	1	3	1	3	1.7
112300005000	REDDING CITY OF	3	3	3	0	3	1	0	1.7
112390006000	REDDING CITY OF	2	2	3	0	3	1	2	1.7

Table E-9
Identified Direct Use Projects (Phase I Rank)

APN	Owner	Ranking Scores							
		Imperviousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Size of Usable Area	Weighted Overall Score
114110026000	POWELL WILLIAM D	1	3	2	1	3	0	3	1.7
116350022000	SIMPSON COLLEGE	3	1	1	1	3	2	0	1.7
116360004000	DUGGER BILLIE M & ELISABETH	3	3	1	1	2	2	0	1.7
116460011000	MCCONNELL FOUNDATION	3	1	2	0	3	1	3	1.7
117150012000	J & S HIGHLAND PARK LLC ETAL	3	1	1	0	3	3	0	1.7
102090025000	REDDING ELEMENTARY SCHOOL DIST	3	3	2	0	3	1	1	1.7
105470011000	ROMAN CATHOLIC BISHOP OF SAC C/O	2	2	2	1	3	1	1	1.7
050340007000	PRATHER JEFFREY J	3	2	1	0	2	2	3	1.7
050460018000	LEE KAREN I	3	2	1	2	0	2	3	1.7
067110042000	REDDING MEMORIAL PARK INC	3	2	2	1	3	1	0	1.7
068280005000	REDDING CITY OF	3	2	3	1	0	2	3	1.7
070340024000	REDDING CITY OF	3	2	3	0	1	2	3	1.7
070340025000	REDDING CITY OF ATTN: SUE THOMPSO	3	2	3	0	1	2	3	1.7
073090060000	GOLD HILLS COUNTRY CLUB C/O COLBU	3	1	1	0	3	2	2	1.7
073340046000	REDDING CITY OF	2	1	3	2	1	1	3	1.7
102120015000	KUTRAS CHRISTOPHER G C/O MCCONN	3	2	2	1	3	1	0	1.7
102470012000	REDDING JOINT POWERS FINANCIN	1	2	2	2	3	1	0	1.7
103240015000	PILGRIM CONGREGATIONAL CHURCH	2	1	2	0	3	2	2	1.7
107160020000	REDDING CITY OF	3	2	3	0	1	2	3	1.7
107320001000	SAINT LUKES EPISCOPAL CHURCH OF RE	1	2	2	2	3	1	0	1.7
107540016000	BLUFFS HOMEOWNERS ASSN INC ASSO	2	2	1	2	3	1	0	1.7
110040056000	ENTERPRISE CHURCH OF CHRIST INC	2	3	2	0	3	1	2	1.7
112250007000	TI HILLTOP LLC C/O SAM & MARIA TUM	3	1	1	0	3	2	2	1.7
113210013000	FRANK JOHN M & KATHLEEN M TR FRA	3	3	1	0	2	2	2	1.7
114300023000	UNITED STATES OF AMERICA C/O WEST	1	2	2	2	3	0	2	1.7
116040003000	ROBERTS RODERICK R	2	2	1	3	1	1	2	1.7
116080045000	SUPERIOR CALIFORNIA INVESTMEN	2	2	1	1	3	1	2	1.7
116220036000	REDDING CITY OF	1	2	3	2	2	1	1	1.7
117270014000	ENTERPRISE ELEMENTARY SCHOOL DIST	2	3	2	1	3	1	0	1.7
067120038000	LORING CHERYL D TR	3	3	1	0	3	1	1	1.6
103280024000	REDDING CITY OF	3	1	3	0	3	1	1	1.6
112390003000	REDDING CITY OF	2	2	3	0	3	1	1	1.6
114140001000	REDDING CITY OF	2	2	3	0	3	0	3	1.6
117450008000	REDDING CITY OF	3	1	3	0	3	1	1	1.6
048320020000	FALCON CABLE SYSTEMS CO II LP	2	2	2	1	3	1	0	1.6
050330025000	MCCONNELL FOUNDATION	3	2	2	2	0	1	3	1.6
050560024000	REDDING CITY OF	3	2	3	0	2	2	0	1.6
050640026000	MARVIN GARDENS C/O FREDERICK NEL	3	1	1	0	3	2	1	1.6
050660034000	REDDING CITY OF	2	2	3	0	2	2	1	1.6
054200041000	BAUGH DANNY W & MARY K ETAL	3	3	1	1	1	1	3	1.6
067010006000	DOWNS GLENN W & SHAWNA L	3	2	1	1	2	2	0	1.6
067020031000	REDDING CHRISTIAN FELLOWSHIP	3	1	1	1	3	1	1	1.6
068010003000	ENTERPRISE SCHOOL DISTRICT	2	2	2	0	3	2	0	1.6
068320054000	SCHLAPPATHA 1999 LIVING TRUST	3	1	1	0	2	2	3	1.6
073230028000	REDDING CITY OF DEPT OF FINANCE	2	1	3	0	3	1	2	1.6
075370009000	REDDING CITY OF DEPT OF FINANCE	3	1	3	0	2	2	1	1.6
076090006000	MCCONNELL FOUNDATION	3	1	2	0	3	2	0	1.6
076120038000	MCCONNELL FOUNDATION	3	1	2	1	3	1	0	1.6
077020032000	MCCONNELL FOUNDATION	3	2	2	0	3	1	1	1.6
101480028000	REDDING CITY OF	0	3	3	0	3	1	2	1.6
101660046000	SCHC PROPERTY CORPORATION	1	2	2	0	3	1	3	1.6
101790033000	REDDING CITY OF	1	2	3	1	3	1	0	1.6
102170025000	REDDING CITY OF	1	2	3	1	3	1	0	1.6
102190017000	SHASTA SECONDARY HOME SCHOOL	0	3	1	1	3	1	2	1.6
103290037000	NOB HILL LLC	3	1	1	0	2	3	1	1.6
104020056000	REDDING CITY OF	3	1	3	0	2	2	1	1.6
104480027000	ROMAN CATHOLIC BISHOP OF SACRAM	1	2	2	0	3	1	3	1.6
104680003000	CHRISTIAN CHURCH DISCIPLES OF CHRI	3	1	1	0	3	1	3	1.6
104760033000	ROMAN CATHOLIC BISHOP OF SAC	3	1	2	0	3	2	0	1.6
107510033000	BLUFFS HOMEOWNERS ASSN THE ASSO	1	2	1	2	3	1	0	1.6
109110042000	BARKER FAMILY TRUST JOSHUA RAY &	3	1	1	1	3	1	1	1.6
110340041000	CHURCH IN REDDING THE	2	3	2	0	3	1	1	1.6
112150058000	DEL MAR GARDENS ASSN	2	3	1	0	3	1	2	1.6
112270007000	REDDING CITY OF	3	2	3	0	3	1	0	1.6
113190016000	REDDING CITY OF	3	3	3	0	1	2	1	1.6
114050005000	OLIVER JAMES C & NETTIE R FAMILY LIV	3	2	1	1	2	1	2	1.6
114070002000	RITTENHOUSE TRUST ETAL C/O ERIKA K	3	2	1	1	3	1	0	1.6
114200001000	SHASTA CO BOARD OF EDUCATION	3	1	2	0	3	1	2	1.6
114310012000	UNITED STATES OF AMERICA	1	2	2	2	3	0	1	1.6
114340031000	PELLA PROPERTIES LLC	2	2	1	0	3	1	3	1.6
115460036000	LORING FAMILY TRUST CHERYL D LORIN	3	2	1	0	3	2	0	1.6
116410007000	GREENGARD PAUL A & JEANNE A L IVIN	3	2	1	1	3	1	0	1.6
117390024000	REDDING CITY OF	3	2	3	0	3	1	0	1.6
204020013000	MATRIX GROUP LLC	3	1	1	0	2	3	1	1.6
306600001000	JASON TRENT	3	1	1	0	3	2	1	1.6
068010011000	ENTERPRISE SCHOOL DIST	2	3	2	0	3	1	1	1.6
070120031000	ENTERPRISE SCHOOL DISTRICT	2	3	2	0	3	1	1	1.6
110150001000	ENTERPRISE ELEM SCHOOL DIST	2	3	2	2	1	1	1	1.6
073100086000	THOMASON COLBURN R & VALDENE	3	2	1	0	2	2	2	1.6
101550002000	CALIFORNIA STATE OF	0	2	2	3	2	1	0	1.6
067010009000	HANSEN REVOCABLE LIVING TRUST HAI	3	2	1	0	3	1	1	1.5
068280012000	REDDING CITY OF	3	2	3	0	0	2	3	1.5
074260004000	OASIS LAND COMPANY LP	3	2	1	1	2	1	1	1.5
101790002000	REDDING CITY OF	1	3	3	0	3	1	0	1.5
102040011000	ALLIANCE OF REDDING MUSEUMS	2	2	2	0	3	1	1	1.5
103570028000	REDDING CITY OF	3	2	3	0	2	1	1	1.5
104900010000	REDDING CITY OF C/O ORRICK HERRING	1	2	3	0	3	1	1	1.5
113190005000	MCCONNELL FOUNDATION	3	1	2	0	1	2	3	1.5
114300001000	REDDING CITY OF	2	2	3	0	3	0	2	1.5
116460007000	MCCONNELL FOUNDATION	3	1	2	0	3	1	1	1.5
117070006000	CALLAN GLADYS ANN TR	3	2	1	0	0	3	3	1.5
117300037000	REDDING CITY OF	3	2	3	0	2	1	1	1.5
208120008000	REDDING CITY OF	2	2	3	0	3	0	2	1.5
306560032000	REDDING CITY OF	3	1	3	0	1	3	0	1.5
112390005000	REDDING CITY OF	2	2	3	0	3	1	0	1.5
048310011000	FISHER FAMILY TRUST FISHER THOMAS	3	2	1	1	1	1	3	1.5

Table E-9
Identified Direct Use Projects (Phase I Rank)

APN	Owner	Ranking Scores							
		Imperviousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Size of Usable Area	Weighted Overall Score
048420024000	HUI ALFONSO K & TAYLOR-HUI EL	3	2	1	0	2	1	3	1.5
050300008000	TRENT WENDY ETAL	3	1	1	0	2	2	2	1.5
050790055000	STILLWATER PROPERTIES	3	3	1	0	2	1	2	1.5
054070011000	PARKS FAMILY TRUST OF 1988 DONNA	3	1	1	0	2	2	2	1.5
067020010000	REDDING CHRISTIAN FELLOWSHIP	1	2	2	0	3	1	2	1.5
074010010000	OASIS LAND COMPANY LP	3	2	1	1	1	1	3	1.5
074210008000	LOGICAL FAITH MINISTRIES INC	3	1	1	0	2	3	0	1.5
077010013000	MCCONNELL FOUNDATION	3	2	2	0	3	1	0	1.5
077220013000	TATOM 2001 TRUST LON M & DEENA C	3	2	1	0	2	1	3	1.5
101150007000	SHASTA COUNTY OF	1	1	2	0	3	1	3	1.5
101790043000	SHASTA TEHAMA TRINITY JOINT C	0	3	2	1	3	1	0	1.5
102490012000	REDDING JOINT POWERS FINANCIN G A	1	2	2	1	3	1	0	1.5
103020031000	P G & E	1	2	2	0	3	1	2	1.5
104280065000	CP PARTNERS	0	2	1	1	3	1	2	1.5
104680020000	HOVIS DAVID & TAMRA	2	1	1	0	3	1	3	1.5
104710012000	REDDING CITY OF	3	1	3	1	1	1	2	1.5
104880003000	DIGNITY HEALTH ATTN: CHIEF FINANCI	2	1	1	0	3	1	3	1.5
105470026000	ROMAN CATHOLIC BISHOP OF SAC	3	2	1	2	1	1	1	1.5
107250002000	WILGUS REV LIV TR-MARITAL TRS C/O L	3	2	1	0	2	2	1	1.5
107300008000	CORRIGAN CHRISTOPHER J FAMILY TRU	3	2	1	0	2	1	3	1.5
107300038000	CORRIGAN CHRISTOPHER J 1995 FAMIL	3	2	1	0	2	1	3	1.5
108030086000	WU GRANT	1	3	1	1	3	1	0	1.5
110270022000	TETENS FAMILY TRUST JOHN M & SUSA	2	2	1	1	3	1	0	1.5
112320023000	REDDING CITY OF	3	1	3	0	2	1	2	1.5
114080034000	MC HUGH CHARLES A III & BARBA	3	2	1	1	1	1	3	1.5
114300047000	OGDEN PAUL C ETAL	2	2	1	1	3	1	0	1.5
114310002000	WILLIAMS KAY A TRUST ETAL	3	1	1	2	3	0	0	1.5
114360006000	MEIER MARK W & JUDY A REV LIV TRUS	2	3	1	1	1	1	3	1.5
117290014000	REDDING CITY OF	1	1	3	0	3	1	2	1.5
306560009000	FAIRMONT INVESTMENT LLC C/O DANI	3	1	1	0	3	1	2	1.5
110080072000	MOUNT CALVARY EVANGELICAL LUTHE	2	3	2	0	3	1	0	1.5
067080064000	REDDING MEMORIAL PARK INC	3	2	2	1	2	1	0	1.5
050450014000	REDDING CITY OF	3	3	3	0	0	2	1	1.4
306560010000	REDDING CITY OF	3	1	3	1	2	0	1	1.4
048420020000	COGLE FAMILY 2007 TRUST KENNETH L	3	3	1	0	1	1	3	1.4
050440032000	COX & SONS LLC	3	2	1	0	1	2	2	1.4
067110041000	CUSHMAN 2002 TRUST ETAL C/O HAED	3	1	2	0	3	1	0	1.4
067120036000	BORELLO LEONARD	3	2	1	0	3	1	0	1.4
067120040000	LORING CHERYL D TR	3	2	1	0	3	1	0	1.4
068090048000	LAYA JOSEPH WILLIAM & DEBORAH	1	3	1	0	3	0	3	1.4
068350045000	NORTON MARK G ETAL C/O MARTA NO	2	2	1	0	2	1	3	1.4
074170008000	RISEN KING COMMUNITY CHURCH	3	1	1	2	0	2	1	1.4
101480019000	REDDING AREA BUS AUTHORITY	0	2	2	1	3	1	0	1.4
101780062000	SHASTA COUNTY OF	0	1	2	1	3	1	1	1.4
102170026000	REDDING JOINT POWERS FIN AUTH	1	3	2	0	3	1	0	1.4
102470013000	GERARD LOUIS J JR & DIANE TR	2	1	1	1	3	1	0	1.4
102590026000	REDDING CITY OF	1	3	3	0	1	1	3	1.4
104540030000	M & H PROPERTIES	2	2	1	0	2	1	3	1.4
104680010000	CHRISTIAN CHURCH OF NO CAL-NV	2	1	2	0	3	1	1	1.4
105240002000	SHASTA CO BOARD OF EDUCATION	2	3	2	0	2	1	1	1.4
107290037000	REDDING CITY OF	1	1	3	0	3	1	1	1.4
109080014000	REDDING CITY OF	2	2	3	1	0	1	3	1.4
109130028000	DEBORD DAWN MICHELLE	3	1	1	0	3	1	1	1.4
110010018000	ROSE TIMOTHY E & PATSY J	3	3	1	0	1	1	3	1.4
110270027000	MUNK 1993 TRUST ETAL RONALD R MU	3	2	1	0	3	1	0	1.4
112390001000	REDDING CITY OF	1	2	3	0	3	1	0	1.4
113050022000	DRC PROPERTIES LLC	3	2	1	0	3	1	0	1.4
113050023000	DRC PROPERTIES LLC	3	2	1	0	3	1	0	1.4
114110015000	GREEN MARK E & PAMELA D TR	3	1	1	0	3	0	3	1.4
114120008000	MARTINEZ VICKIE LEE	3	1	1	1	2	0	3	1.4
114150002000	NOLAN WAYNE E & ANNEMARIE 1994 I	3	1	1	1	3	0	1	1.4
114430001000	REDDING CITY OF	2	2	3	0	2	0	3	1.4
116180005000	GREEN & GREEN INVESTMENTS LLC	2	1	1	0	2	3	0	1.4
116440025000	REDDING REDEVELOPMENT AGENCY	3	2	1	1	2	1	0	1.4
117230002000	NELSON LILLIAN ETAL	3	1	1	0	2	2	1	1.4
203190024000	MCCALL PROPERTIES LLC	3	1	1	0	2	2	1	1.4
208130013000	COOK DANIEL GEORGE TR	3	2	1	1	3	0	0	1.4
067310031000	ENTERPRISE SCHOOL DISTRICT	3	2	2	0	2	1	1	1.4
077020034000	MCCONNELL FOUNDATION	2	2	2	0	3	1	0	1.4
105410012000	FIRST BAPTIST CHURCH OF RDG	1	2	2	0	3	1	1	1.4
112390002000	REDDING CITY OF	1	2	3	0	3	1	0	1.4
113030002000	GATEWAY UNIFIED SCHOOL DISTRI	3	2	2	0	2	1	1	1.4
050010002000	FOGLE CHRYSTIE L	3	2	1	0	2	1	2	1.4
054200013000	DENTON CINDEE ETAL	3	2	1	2	1	1	0	1.4
068560037000	SANTA CLARITA NATIONAL BANK C/O M	3	1	1	1	1	1	3	1.4
076090001000	PACIFIC GAS & ELECTRIC CO	3	2	2	0	1	2	1	1.4
077010012000	MCCONNELL FOUNDATION	3	1	2	0	2	1	2	1.4
109040024000	REDDING CITY OF	3	2	3	0	1	1	2	1.4
116040002000	WILLIAMS VICKIE M LLC	1	2	1	0	3	1	2	1.4
117130030000	MCCONNELL FOUNDATION	3	1	2	0	2	2	0	1.4
048130017000	SHASTA COUNTY OF	1	3	2	0	1	2	1	1.3
208120017000	MCCONNELL FOUNDATION	3	1	2	0	3	0	1	1.3
208140010000	ADAMO ALBERT F & ROCHOVITZ DO	3	2	1	0	3	0	1	1.3
050010001000	REDDING RANCHERIA	3	3	2	0	1	1	1	1.3
077240010000	JACKSON ALMA JEAN TR	3	1	1	0	2	1	2	1.3
101780069000	SHASTA COUNTY OF	1	1	2	0	3	1	1	1.3
102010057000	SHASTA COMMUNITY HEALTH CENTE	0	2	2	0	3	0	3	1.3
102560029000	CATHOLIC CEMETERY ROMAN CATHOLI	2	2	2	0	2	1	1	1.3
103130042000	LIFEPOINT MISSIONARY BAPTIST	1	2	2	0	2	1	2	1.3
105230009000	SHASTA CO BOARD OF EDUCATION	2	2	2	0	2	1	1	1.3
109040035000	NORTHERN CA BIBLE INSTITUTE C/O SH	3	3	1	0	0	2	2	1.3
109220024000	SAINT JAMES EVANGELICAL LUTHERAN	3	1	2	0	2	1	1	1.3
110040007000	MAPLETON OF REDDING LLC ATTN: AD	3	3	2	0	0	1	3	1.3
113030001000	GATEWAY UNIFIED SCHOOL DISTRI	2	3	2	0	2	1	0	1.3
113040005000	REDDING CITY OF	3	2	3	0	1	1	1	1.3
113210004000	FRANK JOHN M & KATHLEEN M TR FRA	3	1	1	0	2	2	0	1.3

Table E-9
Identified Direct Use Projects (Phase I Rank)

APN	Owner	Ranking Scores							
		Imperviousness	Slope	Ownership	Size of Storm Drain (if applicable)	Distance from Source	Planned Subdivision	Size of Usable Area	Weighted Overall Score
113320027000	ORWITZ REVOCABLE TRUST ETAL	3	2	1	0	2	1	1	1.3
114300049000	MEDFORD COCA COLA BOTTLING CO PF	2	2	1	1	3	0	0	1.3
114340009000	PELLA PROPERTIES LLC	2	2	1	0	3	1	0	1.3
114340033000	PELLA PROPERTIES LLC	2	2	1	0	3	0	2	1.3
114440007000	MEIER MARK W & JUDY A REV LIV TRUS	3	3	1	1	0	1	2	1.3
115460038000	LORING FAMILY TRUST CHERYL D LORIN	3	1	1	2	0	2	0	1.3
116370048000	SHASTA VINEYARD H O ASSOC C/O SCO	1	1	1	0	3	1	2	1.3
116370049000	SHASTA VINEYARD H O ASSOC C/O SCO	2	2	1	0	3	1	0	1.3
068400050000	HAUSER RANDALL & JILL	2	2	1	0	2	1	1	1.2
102590027000	REDDING CITY OF	1	3	3	0	1	1	1	1.2
113320034000	SHASTA COUNTY HEAD START CHIL	1	1	1	0	3	1	1	1.2
114260021000	REDDING CITY OF	3	1	3	0	1	1	1	1.2
116450010000	LEONARD FAMILY TRUST LIONEL R JR &	3	1	1	0	1	2	1	1.2
104840017000	REDDING CITY OF	2	2	3	0	1	1	1	1.2
114150001000	PEARL BOB & ROSE FAMILY TRUST ROS	3	1	1	1	2	0	1	1.2
067120037000	SHASTA COUNTY HEAD START CHIL	1	2	1	0	3	1	0	1.2
068150009000	ROWE GARY J & MARY L TR	2	2	1	0	1	1	3	1.2
071110040000	ROMERO WILLIAM & SHANDA	2	2	1	0	1	1	3	1.2
074260005000	OASIS LAND COMPANY LP	3	2	1	0	1	1	2	1.2
105230012000	SHASTA CO BOARD OF EDUCATION	1	1	2	0	3	1	0	1.2
108150001000	SABET 2012 TRUST FARZAD & MARIKIT	2	1	1	3	0	1	0	1.2
109220031000	ROMAN CATHOLIC BISHOP OF SAC C/O	1	2	2	0	1	1	3	1.2
114050006000	OLIVER JAMES C & NETTIE R FAMILY LIV	3	2	1	1	0	1	2	1.2
114080001000	BRYSON BERNARD & CHARLOTTE 20	2	1	1	0	3	1	0	1.2
114280018000	OGDEN PAUL C ETAL	3	2	1	0	1	1	2	1.2
117270001000	MCCONNELL FOUNDATION	3	1	2	0	2	1	0	1.2
048150009000	SHASTA UNION HIGH SCHOOL	3	3	2	0	1	1	0	1.2
054210006000	GARNERO RICHARD & LORI TRUST OF 2	3	3	1	0	0	2	0	1.1
067470044000	PENTECOSTAL CHURCH OF GOD OF AM	1	1	2	1	0	1	3	1.1
068450049000	SCHLIE CRAIG A REVOCABLE TRUS T ET	1	2	1	0	1	1	3	1.1
109070001000	WARD NORMAN W & VIRGINIA	3	2	1	0	1	1	1	1.1
109200035000	BEACON MISSIONARY BAPTIST CHU	2	2	2	0	0	1	3	1.1
110010017000	MCCLENDON PAT 2013 TRUST LORI BU	3	3	1	0	0	1	2	1.1
110010019000	BERGSTROM ENTERPRISES INC	3	2	1	0	0	1	3	1.1
110040015000	FLYNN RUSSELL J & KAREN A REV LIV TR	3	3	1	0	0	1	2	1.1
110270009000	BELLA VISTA WATER DISTRICT	2	2	2	1	0	1	1	1.1
110340037000	MEEHAN RHONDA K TR	3	2	1	0	1	1	1	1.1
117260006000	REDDING CITY OF	3	1	3	1	0	1	0	1.1
077020016000	MCCONNELL FOUNDATION	3	2	2	0	1	1	0	1.1
077020030000	MCCONNELL FOUNDATION	3	2	2	0	0	1	2	1.1
104900001000	OVERTON THELMA L FAMILY TRUST	3	1	1	0	1	1	2	1.1
114270001000	REDDING CITY OF	3	1	3	0	0	1	1	1.0
054260014000	REDDING CITY OF	3	2	3		0	0	0	1.0
109040042000	BELLA VISTA WATER DISTRICT	2	2	2	0	0	1	2	1.0
113300032000	REDDING CITY OF	3	2	3	0	0	1	0	1.0
114030023000	PENTECOSTAL CHURCH OF GOD	2	2	2	0	1	1	0	1.0
114220052000	GASTON STEPHEN C & CLARE S	3	2	1	0	1	1	0	1.0
208120007000	UNITED STATES OF AMERICA	3	1	2		1	0	0	1.0
306600002000	PENSCO TRUST COMPANY CSTDN FBO I	3	1	1	0	0	2	1	1.0
104840018000	REDDING CITY OF	3	2	3	0	0	1	0	1.0
306560008000	BELLA VISTA WATER DIST	3	2	2	0	0	1	1	1.0
050010004000	ROBINSON FAMILY TRUST DTD 4/2 5/1	3	2	1	0	0	1	1	0.9
050500006000	UNITED STATES OF AMERICA	3	1	2	0	0	1	1	0.9
074200001000	KOWALSKI JON RYAN	3	1	1	0	0	2	0	0.9
117170017000	MD DEVELOPMENT	3	1	1	0	0	2	0	0.9
077020029000	MCCONNELL FOUNDATION	3	2	2	0	0	1	0	0.9
067030031000	TIPTON ANTHONY & DIANA REV TR	3	2	1	0	0	1	0	0.8
077020007000	MCCONNELL FOUNDATION	3	1	2	0	0	1	0	0.8
113300005000	REDDING MHP ESTATES II LP C/O DEAN	2	3	1	0	0	1	0	0.8
114220049000	RUSSELL ARTHUR L	3	2	1	0	0	1	0	0.8
208150003000	MCCONNELL FOUNDATION	3	2	2	0	0	0	1	0.8
116280002000	METRO FAMILY 1994 REV LIV TRU	3	1	1	0	0	1	0	0.7

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
4901	HARTNELL AVE	3	2	3	2	3	3	2.7
5160	FREEBRIDGE ST	2	3	3	2	3	3	2.6
15134	HARTNELL AVE	3	2	3	2	3	1	2.5
611	EASTSIDE RD	2	2	3	2	3	3	2.5
1395	GIRVAN RD	2	2	3	2	3	3	2.5
1397	GIRVAN RD	2	2	3	2	3	3	2.5
1398	GIRVAN RD	2	2	3	2	3	3	2.5
1844	PARKVIEW AVE	3	2	3	1	3	3	2.5
3162	PARK MARINA DR	3	2	3	1	3	3	2.5
3583	HARTNELL AVE	3	2	3	1	3	3	2.5
389	BUENAVENTURA BLVD	3	1	3	1	3	3	2.4
1727	QUARTZ HILL RD	3	3	3	1	3	1	2.4
4901	HARTNELL AVE	3	2	3	2	3	0	2.4
5156	FREEBRIDGE ST	2	3	3	2	3	1	2.4
9	BECHELLI LN	3	2	3	2	1	3	2.3
82	CHURN CREEK RD	3	2	3	2	1	3	2.3
184	OASIS RD	3	0	3	3	1	3	2.3
718	AIRPORT RD	3	2	3	2	1	3	2.3
2313	RANCHO RD	3	2	3	2	1	3	2.3
2419	AIRPORT RD	3	2	3	2	1	3	2.3
2610	OLD ALTURAS RD	3	2	3	2	1	3	2.3
3314	SHASTA VIEW DR	3	2	3	2	1	3	2.3
3587	BECHELLI LN	3	2	3	2	1	3	2.3
3589	BECHELLI LN	3	2	3	2	1	3	2.3
3603	BECHELLI LN	3	2	3	2	1	3	2.3
4077	AIRPORT RD	3	2	3	2	1	3	2.3
312	QUARTZ HILL RD	3	2	3	1	3	1	2.3
313	QUARTZ HILL RD	3	2	3	1	2	3	2.3
1420	EASTSIDE RD	2	2	3	2	3	1	2.3
1454	ISLAND DR	2	2	3	1	3	3	2.3
1729	QUARTZ HILL RD	3	3	3	1	3	0	2.3
1863	CYPRESS AVE	3	2	3	1	2	3	2.3
3559	BUTTE ST	3	2	3	1	2	3	2.3
3813	RAILROAD AVE	3	1	3	2	3	0	2.3
3844	GIRVAN RD	2	2	3	1	3	3	2.3
4283	CIVIC CENTER DR	2	2	3	1	3	3	2.3
5153	FREEBRIDGE ST	2	2	3	2	3	1	2.3
5158	FREEBRIDGE ST	2	3	3	2	3	0	2.3
4	HARTNELL AVE	3	1	3	2	1	3	2.2
312	QUARTZ HILL RD	3	2	3	1	3	0	2.2
496	PARKVIEW AVE	3	1	3	1	3	1	2.2
758	SHASTA VIEW DR	3	1	3	2	1	3	2.2
858	OLD ALTURAS RD	3	1	3	2	1	3	2.2
1061	CANYON CREEK RD	2	1	3	2	3	1	2.2
1260	EASTSIDE RD	2	2	3	2	3	0	2.2
1322	BRANSTETTER LN	2	1	3	1	3	3	2.2
1578	BECHELLI LN	3	1	3	2	1	3	2.2
1731	QUARTZ HILL RD	3	2	3	1	3	0	2.2
1732	QUARTZ HILL RD	3	2	3	1	3	0	2.2
1854	CYPRESS AVE	3	2	3	1	3	0	2.2
2507	OLD ALTURAS RD	3	1	3	2	1	3	2.2
2533	OLD ALTURAS RD	3	1	3	2	1	3	2.2
2595	OLD ALTURAS RD	3	1	3	2	1	3	2.2
2994	OLD OREGON TRL	3	1	3	2	1	3	2.2
3213	SHASTA VIEW DR	3	3	3	1	1	3	2.2
3375	COURT ST	2	1	3	2	3	1	2.2
3383	SHASTA VIEW DR	3	1	3	2	1	3	2.2
3384	SHASTA VIEW DR	3	3	3	2	0	3	2.2
3604	BECHELLI LN	3	1	3	2	1	3	2.2
3605	BECHELLI LN	3	1	3	2	1	3	2.2
3900	S BONNYVIEW RD	3	1	3	2	2	1	2.2
3900	S BONNYVIEW RD	3	1	3	2	2	1	2.2
4043	OLD ALTURAS RD	3	1	3	2	1	3	2.2
4074	AIRPORT RD	3	1	3	2	1	3	2.2
4075	AIRPORT RD	3	1	3	2	1	3	2.2
4188	MORNING DEW WAY	0	3	3	2	3	3	2.2
4279	LOCUST ST	2	1	3	1	3	3	2.2
4751	VICTOR AVE	3	3	3	1	1	3	2.2
4889	AIRPORT RD	3	1	3	2	1	3	2.2
5150	FREEBRIDGE ST	2	2	3	2	3	0	2.2
79	CHURN CREEK RD	3	2	3	2	1	1	2.1
81	CHURN CREEK RD	3	2	3	2	1	1	2.1
124	HARTNELL AVE	3	2	3	2	1	1	2.1
124	HARTNELL AVE	3	2	3	2	1	1	2.1
546	RAILROAD AVE	3	2	3	2	1	1	2.1
615	STAR DR	0	2	3	2	3	3	2.1
620	WATERFORD DR	0	2	3	2	3	3	2.1

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
762	OLD ALTURAS RD	3	2	3	2	1	1	2.1
830	RIVERVIEW DR	0	2	3	2	3	3	2.1
1316	AIRPORT RD	3	2	3	2	1	1	2.1
1396	DANYEUR RD	0	2	3	2	3	3	2.1
1428	STAR DR	0	2	3	2	3	3	2.1
1534	LAGOON DR	0	2	3	2	3	3	2.1
1543	RIVERVIEW DR	0	2	3	2	3	3	2.1
1574	SHOTWICK TRL	0	2	3	2	3	3	2.1
1973	HILLTOP DR	3	2	3	2	0	3	2.1
2589	ARROYO MANOR DR	0	2	3	2	3	3	2.1
3584	HARTNELL AVE	3	1	3	1	3	0	2.1
3608	FREEBRIDGE ST	2	2	3	1	3	1	2.1
3609	RUSSELL ST	0	2	3	2	3	3	2.1
3727	CORTO ST	0	2	3	2	3	3	2.1
4021	RANCHO RD	3	2	3	2	1	1	2.1
4282	LOCUST ST	2	2	3	1	3	1	2.1
4287	SOUTH ST	2	3	3	1	3	0	2.1
4297	SOUTH ST	2	2	3	1	3	1	2.1
4305	LOCUST ST	2	2	3	1	3	1	2.1
4697	LAKE BLVD	3	2	3	2	0	3	2.1
4888	AIRPORT RD	3	2	3	2	1	1	2.1
5292	SOUTH ST	2	2	3	1	3	1	2.1
15117	BERETTA LN	0	2	3	2	3	3	2.1
15119	OXBOW ST	0	2	3	2	3	3	2.1
41	EASTSIDE RD	2	2	3	2	1	3	2.1
109	AIRPORT RD	3	2	3	1	1	3	2.1
385	GOODWATER AVE	2	2	3	2	1	3	2.1
535	BUENAVENTURA BLVD	3	0	3	2	1	3	2.1
543	SCHLEY AVE	3	0	3	2	2	1	2.1
612	EASTSIDE RD	2	2	3	2	1	3	2.1
886	QUARTZ HILL RD	3	1	3	2	2	0	2.1
1110	CHURN CREEK RD	3	2	3	1	1	3	2.1
1501	E BONNYVIEW RD	2	2	3	2	1	3	2.1
1575	HARTNELL AVE	3	0	3	2	2	1	2.1
1575	HARTNELL AVE	3	0	3	2	2	1	2.1
2247	CHURN CREEK RD	3	2	3	1	1	3	2.1
2403	HARTNELL AVE	3	2	3	1	1	3	2.1
2406	HARTNELL AVE	3	2	3	1	1	3	2.1
2435	SHASTA VIEW DR	3	2	3	1	1	3	2.1
2454	E CYPRESS AVE	3	2	3	1	1	3	2.1
2530	FRIENDLY RD	2	2	3	2	1	3	2.1
2581	VICTOR AVE	2	2	3	2	1	3	2.1
2731	OASIS RD	3	0	3	2	1	3	2.1
2887	PLACER ST	3	0	3	2	1	3	2.1
2888	PLACER ST	3	2	3	1	1	3	2.1
2991	OLD OREGON TRL	3	0	3	2	1	3	2.1
3128	SHASTA VIEW DR	3	2	3	1	1	3	2.1
3167	E BONNYVIEW RD	2	2	3	2	1	3	2.1
3211	SHASTA VIEW DR	3	2	3	1	1	3	2.1
3373	ROSALINE AVE	2	0	3	2	3	1	2.1
3888	EASTSIDE RD	2	2	3	2	1	3	2.1
4032	ALTA MESA DR	2	2	3	2	1	3	2.1
4114	CHURN CREEK RD	3	2	3	1	1	3	2.1
4580	BECHELLI LN	3	2	3	1	1	3	2.1
4743	SHASTA VIEW DR	3	2	3	1	1	3	2.1
4752	VICTOR AVE	3	2	3	1	1	3	2.1
4855	HAWLEY RD	3	2	3	1	1	3	2.1
4906	AKRICH ST	3	0	3	2	1	3	2.1
5044	PARKVIEW AVE	3	2	3	1	2	1	2.1
5120	VICTOR AVE	3	2	3	1	1	3	2.1
5207	BUENAVENTURA BLVD	3	0	3	1	2	3	2.1
4	HARTNELL AVE	3	1	3	2	1	1	2
65	CHURN CREEK RD	3	2	3	2	1	0	2
65	CHURN CREEK RD	3	2	3	2	1	0	2
79	CHURN CREEK RD	3	2	3	2	1	0	2
85	CHURN CREEK RD	3	1	3	2	1	1	2
125	HARTNELL AVE	3	1	3	2	1	1	2
346	HAWLEY RD	3	3	3	1	1	1	2
386	CHURN CREEK RD	3	1	3	1	1	3	2
412	OLD ALTURAS RD	3	1	3	1	1	3	2
475	CANBY RD	3	1	3	1	1	3	2
476	CANBY RD	3	1	3	1	1	3	2
484	E CYPRESS AVE	3	1	3	1	2	1	2
485	E CYPRESS AVE	3	1	3	1	1	3	2
546	RAILROAD AVE	3	2	3	2	1	0	2
763	SHASTA VIEW DR	3	1	3	2	1	1	2
812	WESTSIDE RD	2	3	3	1	1	3	2

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
887	QUARTZ HILL RD	3	2	3	2	1	0	2
887	QUARTZ HILL RD	3	2	3	2	1	0	2
1038	BUENAVENTURA BLVD	3	1	3	1	1	3	2
1069	CENTER WAVERLY AVE	0	3	3	2	3	1	2
1193	PARKVIEW AVE	3	3	3	1	1	1	2
1262	BECHELLI LN	3	1	3	1	1	3	2
1429	CENTER DR	0	3	3	2	3	1	2
1455	RIVER DR	0	3	3	2	3	1	2
1475	RIVER DR	0	3	3	2	3	1	2
1535	LAGOON DR	0	3	3	2	3	1	2
1553	BECHELLI LN	3	3	3	1	1	1	2
1577	BECHELLI LN	3	1	3	2	1	1	2
1591	PLACER ST	3	1	3	1	1	3	2
1692	COURT ST	3	1	3	1	1	3	2
1796	LAKE BLVD	3	1	3	1	1	3	2
1943	E CYPRESS AVE	3	1	3	1	1	3	2
2187	S BONNYVIEW RD	3	1	3	2	1	1	2
2189	S BONNYVIEW RD	3	2	3	2	1	0	2
2200	CHURN CREEK RD	3	3	3	1	1	1	2
2244	HARTNELL AVE	3	3	3	1	1	1	2
2288	RANCHO RD	3	1	3	2	1	1	2
2310	RANCHO RD	3	2	3	2	1	0	2
2377	VICTOR AVE	3	1	3	1	1	3	2
2575	SHASTA VIEW DR	3	1	3	2	1	1	2
2584	OLD ALTURAS RD	3	1	3	2	1	1	2
2645	HAWLEY RD	3	3	3	1	1	1	2
2995	OLD OREGON TRL	3	1	3	1	1	3	2
2996	OLD OREGON TRL	3	1	3	1	1	3	2
3214	SHASTA VIEW DR	3	1	3	2	1	1	2
3506	E CYPRESS AVE	3	1	3	1	1	3	2
3586	HARTNELL AVE	3	1	3	2	1	1	2
3734	CENTER WAVERLY AVE	0	3	3	2	3	1	2
3746	CANYON RD	3	1	3	1	1	3	2
3747	CANYON RD	3	1	3	1	1	3	2
3812	RAILROAD AVE	3	1	3	2	1	1	2
3942	SHASTA VIEW DR	3	1	3	1	1	3	2
4356	TEHAMA ST	2	3	3	1	1	3	2
4577	WELDON ST	0	3	3	2	3	1	2
4631	VICTOR AVE	3	1	3	1	1	3	2
4744	VICTOR AVE	3	1	3	1	1	3	2
4747	VICTOR AVE	3	1	3	1	1	3	2
5054	ANITA ST	0	3	3	2	2	3	2
5124	E CYPRESS AVE	3	1	3	1	1	3	2
5142	RIO ST	0	3	3	2	3	1	2
5143	MAHAN ST	0	3	3	2	3	1	2
5154	WELDON ST	0	3	3	2	3	1	2
5334	CHURN CREEK RD	3	1	3	1	1	3	2
135	DANA DR	2	1	3	2	1	3	2
314	LOMA ST	0	3	3	1	3	3	2
471	CANBY RD	3	1	3	2	0	3	2
619	MULLEN PKWY	0	1	3	2	3	3	2
759	SHASTA VIEW DR	3	1	3	2	0	3	2
768	LOCUST ST	2	1	3	1	3	1	2
883	QUARTZ HILL RD	3	1	3	2	0	3	2
1409	ELY LN	0	1	3	2	3	3	2
1532	WYNDHAM LN	0	1	3	2	3	3	2
1863	CYPRESS AVE	3	2	3	1	2	0	2
1863	CYPRESS AVE	3	2	3	1	2	0	2
1889	E CYPRESS AVE	3	0	3	1	3	0	2
2457	OLD ALTURAS RD	3	1	3	2	0	3	2
2578	VICTOR AVE	2	1	3	2	1	3	2
2683	SHASTA VIEW DR	3	1	3	2	0	3	2
2684	SHASTA VIEW DR	3	1	3	2	0	3	2
2699	SHASTA VIEW DR	3	1	3	2	0	3	2
2851	CANBY RD	3	1	3	2	0	3	2
3021	QUARTZ HILL RD	3	1	3	2	0	3	2
3101	DELTA ST	0	3	3	1	3	3	2
3238	HILLTOP DR	3	1	3	2	0	3	2
3329	OLD ALTURAS RD	3	1	3	2	0	3	2
3832	QUARTZ HILL RD	3	2	3	1	2	0	2
3832	QUARTZ HILL RD	3	2	3	1	2	0	2
3832	QUARTZ HILL RD	3	2	3	1	2	0	2
3887	EASTSIDE RD	2	2	3	2	2	0	2
3950	BENTON DR	2	1	3	1	2	3	2
4115	OASIS RD	3	1	3	2	0	3	2
4115	OASIS RD	3	1	3	2	0	3	2
4281	EAST ST	2	1	3	1	3	1	2

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
4288	SOUTH ST	2	2	3	1	3	0	2
4535	PLEASANT ST	2	1	3	2	1	3	2
5002	SOUTH ST	2	1	3	1	3	1	2
5006	SOUTH ST	2	2	3	1	3	0	2
5007	SOUTH ST	2	2	3	1	3	0	2
5008	SOUTH ST	2	2	3	1	3	0	2
5069	HILLTOP DR	3	1	3	2	0	3	2
5085	HILLTOP DR	3	1	3	2	0	3	2
5088	HILLTOP DR	3	1	3	2	0	3	2
5148	WYNDHAM LN	2	1	3	2	1	3	2
5291	SOUTH ST	2	1	3	1	3	1	2
613	NORTH DR	0	2	3	2	3	1	1.9
614	SACRAMENTO DR	0	2	3	2	3	1	1.9
1114	HARTNELL AVE	3	0	3	1	2	1	1.9
1399	PIT RD	0	3	3	2	3	0	1.9
1403	PENELOPE ST	0	3	3	2	3	0	1.9
1410	DAVID TRL	0	2	3	2	3	1	1.9
1427	E WAVERLY AVE	0	2	3	2	3	1	1.9
1433	MARVIN TRL	0	2	3	2	3	1	1.9
1438	HEMLOCK ST	0	2	3	2	3	1	1.9
1439	HEMLOCK ST	0	2	3	2	3	1	1.9
1468	SEEDLING DR	0	2	3	2	3	1	1.9
1474	LAKEWOOD DR	0	2	3	2	3	1	1.9
1480	RIVERSIDE DR	0	2	3	2	2	3	1.9
1531	RIVERVIEW DR	0	2	3	2	2	3	1.9
1536	RIVELLA VISTA DR	0	2	3	2	2	3	1.9
1674	RAILROAD AVE	3	2	3	2	0	1	1.9
1675	RAILROAD AVE	3	2	3	2	0	1	1.9
1730	QUARTZ HILL RD	3	1	3	1	2	0	1.9
1859	HAMILTON ST	0	2	3	2	3	1	1.9
1861	PARKVIEW AVE	3	1	3	1	2	0	1.9
1938	SACRAMENTO DR	0	2	3	2	3	1	1.9
2332	HILLTOP DR	3	2	3	2	0	1	1.9
2335	HILLTOP DR	3	2	3	2	0	1	1.9
2488	GLENGARY DR	0	3	3	2	3	0	1.9
2580	CASA VEREDA WAY	0	2	3	2	2	3	1.9
2588	ATAJO CT	0	3	3	2	3	0	1.9
2840	IRVING RD	0	2	3	2	3	1	1.9
2913	LAKE BLVD	3	2	3	2	0	1	1.9
3047	HARLAN DR	0	2	3	2	3	1	1.9
3056	BASALT CT	0	2	3	2	3	1	1.9
3060	HARLAN DR	0	2	3	2	3	1	1.9
3243	HILLTOP DR	3	2	3	2	0	1	1.9
3349	PERNIE TRL	0	2	3	2	3	1	1.9
3356	CAPITOLA PL	0	2	3	2	2	3	1.9
3358	SACRAMENTO DR	0	2	3	2	2	3	1.9
3376	RIVERVIEW DR	0	2	3	2	3	1	1.9
3377	RIVERVIEW DR	0	2	3	2	3	1	1.9
3435	KEYSTONE CT	0	2	3	2	3	1	1.9
3729	W WAVERLY AVE	0	2	3	2	3	1	1.9
3730	S WAVERLY AVE	0	2	3	2	3	1	1.9
3731	E WAVERLY AVE	0	2	3	2	3	1	1.9
3745	REFLECTION ST	0	2	3	2	2	3	1.9
4189	GLENROCK WAY	0	2	3	2	3	1	1.9
4569	ELLIS ST	0	2	3	2	2	3	1.9
4575	MAHAN ST	0	2	3	2	3	1	1.9
4576	WELDON ST	0	2	3	2	3	1	1.9
4877	N BONNYVIEW RD	0	2	3	2	2	3	1.9
5146	RIVELLA VISTA DR	0	2	3	2	2	3	1.9
5157	HAMILTON ST	0	3	3	2	3	0	1.9
5194	LINDEN AVE	0	0	3	3	3	1	1.9
5196	LINDEN AVE	0	0	3	3	2	3	1.9
108	RANCHO RD	2	2	3	1	1	3	1.9
262	HILLTOP DR	3	2	3	1	0	3	1.9
307	QUARTZ HILL RD	3	0	3	2	0	3	1.9
474	DANA DR	2	2	3	1	1	3	1.9
494	HENDERSON RD	0	2	3	1	3	3	1.9
616	SACRAMENTO DR	0	2	3	1	3	3	1.9
660	ALTA MESA DR	2	2	3	1	1	3	1.9
770	LINCOLN ST	0	2	3	1	3	3	1.9
781	N COURT ST	2	2	3	1	1	3	1.9
829	WYNDHAM LN	2	2	3	2	1	1	1.9
843	BELL RD	0	2	3	1	3	3	1.9
854	ELM LN	0	2	3	1	3	3	1.9
884	QUARTZ HILL RD	3	0	3	2	0	3	1.9
885	QUARTZ HILL RD	3	0	3	2	1	1	1.9
1036	BUENAVENTURA BLVD	3	0	3	1	1	3	1.9

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
1064	HOWARD DR	2	2	3	1	1	3	1.9
1108	CHURN CREEK RD	3	2	3	1	1	1	1.9
1109	CHURN CREEK RD	3	2	3	1	1	1	1.9
1121	HOWARD DR	2	2	3	1	1	3	1.9
1122	CANYON CREEK RD	2	0	3	1	3	1	1.9
1141	PLACER ST	3	1	3	2	1	0	1.9
1195	HILLTOP DR	3	2	3	1	1	1	1.9
1200	INDUSTRIAL ST	2	2	3	1	1	3	1.9
1219	LOMA VISTA DR	2	2	3	1	1	3	1.9
1515	POLK ST	2	2	3	1	1	3	1.9
1527	POLK ST	2	2	3	2	1	1	1.9
1571	HENDERSON RD	0	2	3	1	3	3	1.9
1572	INEZ ST	0	2	3	1	3	3	1.9
1699	SOUTH ST	3	2	3	1	1	1	1.9
1789	LAKE BLVD	3	2	3	1	0	3	1.9
1790	LAKE BLVD	3	2	3	1	0	3	1.9
1795	OASIS RD	3	2	3	1	0	3	1.9
1815	LAKE BLVD	3	2	3	1	0	3	1.9
1880	N MARKET ST	3	2	1	1	3	1	1.9
1891	E CYPRESS AVE	3	2	3	1	1	1	1.9
1982	LAKE BLVD	3	0	3	2	0	3	1.9
2072	LAKE BLVD	3	0	3	2	0	3	1.9
2073	LAKE BLVD	3	0	3	2	1	1	1.9
2079	LAKE BLVD	3	1	3	2	1	0	1.9
2080	LAKE BLVD	3	1	3	2	1	0	1.9
2082	LAKE BLVD	3	1	3	2	1	0	1.9
2187	S BONNYVIEW RD	3	1	3	2	1	0	1.9
2190	CHURN CREEK RD	3	1	3	2	1	0	1.9
2197	CHURN CREEK RD	3	2	3	1	1	1	1.9
2201	CHURN CREEK RD	3	2	3	1	1	1	1.9
2239	CHURN CREEK RD	3	2	3	1	1	1	1.9
2240	CHURN CREEK RD	3	2	3	1	1	1	1.9
2242	HARTNELL AVE	3	2	3	1	1	1	1.9
2245	CHURN CREEK RD	3	2	3	1	1	1	1.9
2246	HARTNELL AVE	3	2	3	1	1	1	1.9
2283	RANCHO RD	3	1	3	2	1	0	1.9
2397	ALTA MESA DR	2	2	3	1	1	3	1.9
2575	SHASTA VIEW DR	3	1	3	2	1	0	1.9
2575	SHASTA VIEW DR	3	1	3	2	1	0	1.9
2698	SHASTA VIEW DR	3	2	3	1	0	3	1.9
2719	OASIS RD	3	2	3	1	1	1	1.9
2831	S BONNYVIEW RD	3	2	3	1	1	1	1.9
2890	BUENAVENTURA BLVD	3	0	3	1	1	3	1.9
2962	CHURN CREEK RD	3	0	3	2	0	3	1.9
2963	CHURN CREEK RD	3	0	3	2	0	3	1.9
2990	OASIS RD	3	0	3	2	0	3	1.9
2994	OLD OREGON TRL	3	1	3	2	1	0	1.9
2997	OLD OREGON TRL	3	0	3	1	1	3	1.9
3025	SHASTA VIEW DR	3	2	3	1	1	1	1.9
3025	SHASTA VIEW DR	3	2	3	1	1	1	1.9
3031	SHASTA VIEW DR	3	2	3	1	1	1	1.9
3109	KESWICK DAM RD	3	0	3	1	1	3	1.9
3165	E BONNYVIEW RD	2	3	3	2	1	0	1.9
3170	E BONNYVIEW RD	2	2	3	2	1	1	1.9
3172	E BONNYVIEW RD	2	2	3	2	1	1	1.9
3174	E BONNYVIEW RD	2	2	3	2	1	1	1.9
3178	CHURN CREEK RD	3	2	3	1	1	1	1.9
3252	CHURN CREEK RD	3	3	3	1	1	0	1.9
3370	PLACER ST	3	2	3	1	0	3	1.9
3400	BECHELLI LN	3	1	3	2	1	0	1.9
3475	VICTOR AVE	3	2	3	1	1	1	1.9
3503	E CYPRESS AVE	3	2	3	1	1	1	1.9
3565	MARKET ST	3	2	3	1	1	1	1.9
3694	BUENAVENTURA BLVD	3	0	3	1	1	3	1.9
3769	COURT ST	3	2	3	1	1	1	1.9
3805	BUENAVENTURA BLVD	3	0	3	1	1	3	1.9
3891	S BONNYVIEW RD	3	2	3	1	1	1	1.9
3989	HAWLEY RD	3	3	3	1	1	0	1.9
3998	ALTA MESA DR	2	2	3	1	1	3	1.9
4013	ALTA MESA DR	2	2	3	1	1	3	1.9
4022	RANCHO RD	3	1	3	2	1	0	1.9
4023	RANCHO RD	3	1	3	2	1	0	1.9
4029	ALTA MESA DR	2	2	3	1	1	3	1.9
4042	SHASTA VIEW DR	3	0	3	2	0	3	1.9
4043	OLD ALTURAS RD	3	1	3	2	1	0	1.9
4044	OLD ALTURAS RD	3	0	3	2	0	3	1.9
4173	HARTNELL AVE	3	2	3	1	1	1	1.9

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
4181	HARTNELL AVE	3	2	3	1	1	1	1.9
4190	ROSSWOOD LN	0	2	3	1	3	3	1.9
4233	SOUTH ST	3	2	3	1	1	1	1.9
4280	EAST ST	2	0	3	1	3	1	1.9
4303	LINCOLN ST	0	2	3	1	3	3	1.9
4487	COURT ST	3	2	3	1	1	1	1.9
4652	HARTNELL AVE	3	2	3	1	1	1	1.9
4659	PARK MARINA CIR	0	2	3	1	3	3	1.9
4669	BECHELLI LN	3	2	3	1	1	1	1.9
4753	VICTOR AVE	3	0	3	1	1	3	1.9
4856	HAWLEY RD	3	2	3	1	1	1	1.9
4906	AKRICH ST	3	0	3	2	1	1	1.9
4907	AKRICH ST	3	0	3	2	0	3	1.9
4907	AKRICH ST	3	0	3	2	0	3	1.9
4945	S BONNYVIEW RD	3	2	3	1	1	1	1.9
4997	GOLD ST	0	2	3	1	3	3	1.9
4999	GOLD ST	0	2	3	1	3	3	1.9
5004	SOUTH ST	2	1	3	1	3	0	1.9
5045	PARKVIEW AVE	3	2	3	1	1	1	1.9
5105	OLD OREGON TRL	3	2	3	1	0	3	1.9
5218	MISTLETOE LN	2	2	3	1	1	3	1.9
5251	E CYPRESS AVE	3	2	3	1	1	1	1.9
1283	BENTON DR	2	0	3	1	2	3	1.9
1292	TWIN VIEW BLVD	2	0	3	2	1	3	1.9
1292	TWIN VIEW BLVD	2	0	3	2	1	3	1.9
2875	PLACER ST	2	0	3	2	1	3	1.9
4529	SHASTA ST	2	0	3	2	1	3	1.9
4718	TWIN VIEW BLVD	2	0	3	1	2	3	1.9
308	QUARTZ HILL RD	3	1	3	2	0	1	1.8
325	DEL MAR AVE	0	3	3	1	3	1	1.8
380	HILLTOP DR	3	1	3	2	0	1	1.8
398	PLATINUM WAY	0	1	3	1	3	3	1.8
471	CANBY RD	3	1	3	2	0	1	1.8
483	HILLTOP DR	3	1	3	1	1	1	1.8
483	HILLTOP DR	3	1	3	1	1	1	1.8
545	RAILROAD AVE	3	2	3	2	0	0	1.8
548	RAILROAD AVE	3	1	3	1	0	3	1.8
571	SUTRO MINE RD	0	1	3	3	1	3	1.8
838	PIONEER LN	0	3	3	1	3	1	1.8
850	NICOLET CT	0	3	3	1	3	1	1.8
1026	PLACER ST	3	1	3	1	1	1	1.8
1040	EUREKA WAY	3	1	1	2	1	3	1.8
1114	HARTNELL AVE	3	0	3	1	2	0	1.8
1191	PARKVIEW AVE	3	1	3	1	1	1	1.8
1209	LARKSPUR LN	2	3	3	1	1	1	1.8
1402	YVONNE CT	0	2	3	2	3	0	1.8
1404	PIT RD	0	2	3	2	3	0	1.8
1405	PIT RD	0	2	3	2	3	0	1.8
1408	ELY LN	0	2	3	2	3	0	1.8
1411	PERNIE TRL	0	1	3	2	3	1	1.8
1434	MARVIN TRL	0	2	3	2	3	0	1.8
1437	PERNIE TRL	0	2	3	2	3	0	1.8
1449	GUNN CT	0	2	3	2	3	0	1.8
1450	IRVING RD	0	2	3	2	3	0	1.8
1463	CREEKSIDE ST	0	2	3	2	3	0	1.8
1509	MUNICIPAL BLVD	0	3	3	2	1	3	1.8
1537	RIVELLA VISTA DR	0	2	3	2	3	0	1.8
1541	DOVE ST	0	3	3	1	3	1	1.8
1542	WYNDHAM LN	0	2	3	2	3	0	1.8
1549	BECHELLI LN	3	1	3	1	1	1	1.8
1555	BECHELLI LN	3	1	3	1	1	1	1.8
1676	RAILROAD AVE	3	1	3	2	0	1	1.8
1682	COURT ST	3	1	3	1	1	1	1.8
1858	REVILO DR	0	2	3	2	3	0	1.8
1860	STATE ST	0	2	3	2	3	0	1.8
1887	PARKVIEW AVE	0	1	3	1	3	3	1.8
1945	HILLTOP DR	3	1	3	1	1	1	1.8
1975	LAKE BLVD	3	2	3	2	0	0	1.8
2198	CHURN CREEK RD	3	1	3	1	1	1	1.8
2336	HILLTOP DR	3	2	3	2	0	0	1.8
2339	HILLTOP DR	3	2	3	2	0	0	1.8
2358	VICTOR AVE	3	1	3	1	1	1	1.8
2391	OLD OREGON TRL	3	1	3	1	0	3	1.8
2456	OLD ALTURAS RD	3	1	3	2	0	1	1.8
2504	CHURN CREEK RD	3	1	3	1	1	1	1.8
2506	CHURN CREEK RD	3	1	3	1	1	1	1.8
2511	CANBY RD	3	1	3	1	0	3	1.8

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
2585	ARROYO MANOR DR	0	1	3	2	3	1	1.8
2682	SHASTA VIEW DR	3	1	3	2	0	1	1.8
2712	OASIS RD	3	1	3	1	0	3	1.8
2718	POPPY HILLS DR	0	1	3	3	1	3	1.8
2889	BUENAVENTURA BLVD	3	1	3	1	0	3	1.8
3041	ELK DR	0	1	3	2	3	1	1.8
3058	AQUAMARINE WAY	0	2	3	2	3	0	1.8
3063	BEDROCK LN	0	1	3	2	3	1	1.8
3064	HARLAN DR	0	2	3	2	3	0	1.8
3066	HARLAN DR	0	1	3	2	3	1	1.8
3069	HARLAN DR	0	1	3	2	2	3	1.8
3240	HILLTOP DR	3	1	3	2	0	1	1.8
3244	HILLTOP DR	3	1	3	2	0	1	1.8
3351	PENDANT WAY	0	1	3	1	3	3	1.8
3367	PLACER ST	3	1	3	1	0	3	1.8
3378	TEAL CT	0	2	3	2	3	0	1.8
3385	CHARADE WAY	0	3	3	2	1	3	1.8
3428	CHURN CREEK RD	3	1	3	1	0	3	1.8
3501	E CYPRESS AVE	3	1	3	1	1	1	1.8
3502	E CYPRESS AVE	3	1	3	1	1	1	1.8
3504	E CYPRESS AVE	3	1	3	1	1	1	1.8
3505	E CYPRESS AVE	3	1	3	1	1	1	1.8
3518	COURT ST	3	1	3	1	1	1	1.8
3519	COURT ST	3	1	3	1	1	1	1.8
3564	SOUTH ST	3	1	3	1	1	1	1.8
3580	PARKVIEW AVE	3	1	3	1	1	1	1.8
3692	BUENAVENTURA BLVD	3	1	3	1	1	1	1.8
3716	EL CAMINO DR	0	1	3	1	3	3	1.8
3721	CLEAR CREEK RD	3	2	3	2	0	0	1.8
3722	PIT RD	0	2	3	2	3	0	1.8
3724	LONIGAN CT	0	2	3	2	3	0	1.8
3737	LAKEWOOD DR	0	2	3	2	3	0	1.8
3740	CLEO CT	0	2	3	2	3	0	1.8
3741	REFLECTION ST	0	2	3	2	3	0	1.8
3790	PLACER ST	3	1	3	1	1	1	1.8
3808	COURT ST	3	1	3	1	1	1	1.8
3893	E BONNYVIEW RD	2	3	3	1	1	1	1.8
3951	BENTON DR	2	1	3	1	2	1	1.8
4040	SHASTA VIEW DR	3	1	3	1	0	3	1.8
4105	AVIATION DR	0	3	3	2	1	3	1.8
4158	SHASTA VIEW DR	3	1	3	1	1	1	1.8
4172	SHASTA VIEW DR	3	1	3	1	1	1	1.8
4183	HARTNELL AVE	3	1	3	1	1	1	1.8
4306	CANAL DR	0	3	3	1	3	1	1.8
4377	CALIFORNIA ST	2	3	3	1	1	1	1.8
4401	TRAVELED WAY	0	1	3	1	3	3	1.8
4488	COURT ST	3	1	3	1	1	1	1.8
4545	PLACER ST	3	1	3	1	1	1	1.8
4559	CHURN CREEK RD	3	3	3	1	0	1	1.8
4748	VICTOR AVE	3	1	3	1	1	1	1.8
4820	HARTNELL AVE	3	1	3	1	0	3	1.8
4821	HARTNELL AVE	3	1	3	1	0	3	1.8
4874	ELM LN	0	3	3	1	3	1	1.8
4884	EASTSIDE RD	2	1	3	1	2	1	1.8
4890	BECHELLI LN	3	1	3	1	1	1	1.8
4939	KIMBERLY DR	0	1	3	2	2	3	1.8
4965	MARKET TRANSITION TO CYPRESS	3	1	3	1	1	1	1.8
5106	OLD OREGON TRL	3	1	3	1	0	3	1.8
5121	E CYPRESS AVE	3	1	3	1	1	1	1.8
5126	SHASTA VIEW DR	3	1	3	1	1	1	1.8
5128	SHASTA VIEW DR	3	1	3	1	0	3	1.8
5149	COVE POINT CT	0	2	3	2	3	0	1.8
5152	RIO ST	0	2	3	2	3	0	1.8
5159	REVILO DR	0	2	3	2	3	0	1.8
5161	SMILE PL	0	3	3	1	3	1	1.8
5190	PLACER ST	3	1	3	1	1	1	1.8
5264	CANYON RD	3	1	3	0	1	3	1.8
5284	WASHINGTON AVE	0	1	3	1	3	3	1.8
5285	WASHINGTON AVE	0	1	3	1	3	3	1.8
5288	WASHINGTON AVE	0	1	3	1	3	3	1.8
136	WYNDHAM LN	2	1	3	2	1	1	1.8
347	HAWLEY RD	3	2	3	1	1	0	1.8
720	HOWARD DR	2	1	3	1	1	3	1.8
818	BRANSTETTER LN	2	1	3	1	1	3	1.8
834	RADIO LN	2	1	3	1	1	3	1.8
835	RADIO LN	2	0	3	1	3	0	1.8
836	RADIO LN	2	1	3	2	1	1	1.8

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
1192	PARKVIEW AVE	3	2	3	1	1	0	1.8
1263	BECHELLI LN	3	2	3	1	1	0	1.8
1358	BRANSTETTER LN	2	1	3	1	1	3	1.8
1422	CEDARS RD	2	1	3	1	1	3	1.8
1426	EASTSIDE RD	2	1	3	1	1	3	1.8
1499	E BONNYVIEW RD	2	1	3	1	1	3	1.8
1510	EASTSIDE RD	2	1	3	1	1	3	1.8
1880	N MARKET ST	3	2	1	1	3	0	1.8
2237	CHURN CREEK RD	3	2	3	1	1	0	1.8
2238	CHURN CREEK RD	3	2	3	1	1	0	1.8
2404	HARTNELL AVE	3	2	3	1	1	0	1.8
2529	DANA DR	2	1	3	1	1	3	1.8
2531	DANA DR	2	1	3	2	1	1	1.8
2531	DANA DR	2	1	3	2	1	1	1.8
2540	BROWNING ST	2	1	3	2	0	3	1.8
2564	SHASTA VIEW DR	3	2	3	1	1	0	1.8
2714	TWIN VIEW BLVD	2	1	3	2	0	3	1.8
2714	TWIN VIEW BLVD	2	1	3	2	0	3	1.8
2885	PLACER ST	3	0	3	2	1	0	1.8
3025	SHASTA VIEW DR	3	2	3	1	1	0	1.8
3031	SHASTA VIEW DR	3	2	3	1	1	0	1.8
3031	SHASTA VIEW DR	3	2	3	1	1	0	1.8
3177	CHURN CREEK RD	3	2	3	1	1	0	1.8
3255	CHURN CREEK RD	3	2	3	1	1	0	1.8
3470	VICTOR AVE	3	2	3	1	1	0	1.8
3757	PLACER ST	3	2	3	1	1	0	1.8
3789	MAGNOLIA AVE	2	1	3	1	1	3	1.8
3991	HAWLEY RD	3	2	3	1	1	0	1.8
4192	HOWARD DR	2	1	3	1	1	3	1.8
4226	PLACER ST	3	2	3	1	1	0	1.8
4227	PLACER ST	3	2	3	1	1	0	1.8
4239	PLACER ST	3	2	3	1	1	0	1.8
4492	PLACER ST	3	2	3	1	1	0	1.8
4527	MANZANITA HILLS AVE	2	1	3	2	1	1	1.8
4561	LARKSPUR LN	2	1	3	1	1	3	1.8
4612	AIRPARK DR	2	1	3	2	0	3	1.8
4633	VICTOR AVE	3	2	3	1	1	0	1.8
4651	HARTNELL AVE	3	2	3	1	1	0	1.8
4852	HAWLEY RD	3	2	3	1	1	0	1.8
4856	HAWLEY RD	3	2	3	1	1	0	1.8
4885	EASTSIDE RD	2	1	3	1	1	3	1.8
4906	AKRICH ST	3	0	3	2	1	0	1.8
4972	PLACER ST	3	2	3	1	1	0	1.8
4974	PLACER ST	3	2	3	1	1	0	1.8
4981	BUTTE ST	3	2	3	1	1	0	1.8
10	BECHELLI LN	3	2	3	1	0	1	1.7
44	SHASTA ST	0	0	3	3	1	3	1.7
129	CITRINE AVE	0	3	3	1	3	0	1.7
176	MEADOW VIEW DR	2	2	3	1	1	1	1.7
249	E BONNYVIEW RD	2	2	3	1	1	1	1.7
292	BENTON DR	2	0	3	1	2	1	1.7
321	CORONADO ST	0	2	3	1	2	3	1.7
322	DEL MAR AVE	0	3	3	1	3	0	1.7
342	KESWICK DAM RD	3	1	3	1	1	0	1.7
387	CHURN CREEK RD	3	0	3	1	1	1	1.7
387	CHURN CREEK RD	3	0	3	1	1	1	1.7
387	CHURN CREEK RD	3	0	3	1	1	1	1.7
388	RAILROAD AVE	3	0	3	1	0	3	1.7
395	PLATINUM WAY	0	2	3	1	3	1	1.7
465	BUENAVENTURA BLVD	0	0	3	3	1	3	1.7
470	AIRPORT RD	3	2	3	0	1	1	1.7
473	DANA DR	2	2	3	1	1	1	1.7
483	HILLTOP DR	3	1	3	1	1	0	1.7
483	HILLTOP DR	3	1	3	1	1	0	1.7
495	HENDERSON RD	0	2	3	1	3	1	1.7
497	STATE ST	0	2	3	2	1	3	1.7
549	RAILROAD AVE	3	0	3	2	0	1	1.7
681	SARATOGA DR	0	2	3	2	1	3	1.7
705	HARTNELL AVE	3	2	3	0	1	1	1.7
719	AVTECH PKWY	0	2	3	2	1	3	1.7
738	WINTER GREEN CT	0	2	3	2	1	3	1.7
767	GRAPE AVE	0	2	3	1	3	1	1.7
771	LOWE ST	0	2	3	1	3	1	1.7
784	SHASTA ST	2	2	3	1	1	1	1.7
808	CEDARS RD	2	2	3	1	1	1	1.7
813	WESTSIDE RD	2	2	3	1	1	1	1.7
815	CONCORD LN	0	2	3	1	2	3	1.7

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
839	PIONEER LN	0	3	3	1	3	0	1.7
849	NICOLET LN	0	2	3	1	2	3	1.7
851	NICOLET LN	0	2	3	1	3	1	1.7
852	NICOLET LN	0	2	3	1	3	1	1.7
1022	PLACER ST	3	0	3	1	1	1	1.7
1043	HALLMARK DR	0	2	3	2	1	3	1.7
1075	SACRAMENTO DR	0	2	3	1	3	1	1.7
1178	DOMINION DR	0	2	3	2	1	3	1.7
1202	HILLTOP DR	3	1	3	1	1	0	1.7
1202	HILLTOP DR	3	1	3	1	1	0	1.7
1202	HILLTOP DR	3	1	3	1	1	0	1.7
1203	LARKSPUR LN	2	2	3	1	1	1	1.7
1211	MISTLETOE LN	2	2	3	1	0	3	1.7
1212	MISTLETOE LN	2	2	3	1	1	1	1.7
1264	BECHELLI LN	3	1	3	1	1	0	1.7
1297	CATERPILLAR RD	2	2	3	1	0	3	1.7
1393	CERRO LN	0	2	3	2	1	3	1.7
1406	PERNIE TRL	0	1	3	2	3	0	1.7
1407	YVONNE CT	0	1	3	2	3	0	1.7
1430	CENTER DR	0	1	3	2	3	0	1.7
1436	MARVIN TRL	0	1	3	2	3	0	1.7
1440	HEMLOCK ST	0	2	3	2	1	3	1.7
1441	HEMLOCK CT	0	1	3	2	3	0	1.7
1464	CREEKSIDE ST	0	2	3	2	2	1	1.7
1538	DOVE ST	0	1	3	2	3	0	1.7
1540	NEWPORT DR	0	2	3	1	3	1	1.7
1545	BRENT RD	0	2	3	1	3	1	1.7
1547	WILDWOOD DR	0	2	3	1	2	3	1.7
1556	LOMA VISTA DR	2	2	3	1	1	1	1.7
1561	LOMA VISTA DR	2	2	3	1	1	1	1.7
1570	WILSHIRE DR	0	2	3	1	3	1	1.7
1620	PLACER ST	3	1	3	2	0	0	1.7
1629	EUREKA WAY	3	0	1	2	1	3	1.7
1688	COURT ST	3	1	3	1	1	0	1.7
1693	COURT ST	3	1	3	1	1	0	1.7
1709	WEST ST	2	2	3	1	1	1	1.7
1721	SHASTA ST	2	3	3	1	1	0	1.7
1723	SHASTA ST	2	3	3	1	1	0	1.7
1737	DEODAR WAY	2	2	3	1	0	3	1.7
1756	LAKE BLVD	3	2	3	1	0	1	1.7
1773	LAKE BLVD	3	2	3	1	0	1	1.7
1778	LAKE BLVD	3	2	3	1	0	1	1.7
1787	LAKE BLVD	3	2	3	1	0	1	1.7
1805	OASIS RD	3	2	3	1	0	1	1.7
1865	ATHENS AVE	2	2	3	1	0	3	1.7
1866	ATHENS AVE	2	2	3	1	0	3	1.7
1870	PARIS AVE	0	2	3	1	3	1	1.7
1877	SEQUOIA ST	0	2	3	1	3	1	1.7
1888	CYPRESS AVE	3	0	3	1	0	3	1.7
1897	E CYPRESS AVE	3	1	3	1	1	0	1.7
1946	HILLTOP DR	3	1	3	1	1	0	1.7
2057	MOUNTAIN LAKES BLVD	2	2	3	1	0	3	1.7
2113	TWIN VIEW BLVD	2	2	3	1	0	3	1.7
2193	ARIZONA ST	0	2	3	2	1	3	1.7
2232	PENDANT WAY	0	2	3	1	3	1	1.7
2275	HARTNELL AVE	3	2	3	0	1	1	1.7
2311	AMANDA DR	0	2	3	2	1	3	1.7
2378	HARTNELL AVE	3	2	3	0	1	1	1.7
2394	ALTA MESA DR	2	2	3	1	1	1	1.7
2398	ALTA MESA DR	2	2	3	1	1	1	1.7
2493	INDUSTRIAL ST	2	2	3	1	1	1	1.7
2500	MISTLETOE LN	2	2	3	1	1	1	1.7
2504	CHURN CREEK RD	3	1	3	1	1	0	1.7
2504	CHURN CREEK RD	3	1	3	1	1	0	1.7
2506	CHURN CREEK RD	3	1	3	1	1	0	1.7
2527	CHURN CREEK RD	3	0	3	1	0	3	1.7
2554	VICTOR AVE	3	0	3	1	1	1	1.7
2573	STERLING DR	0	2	3	2	1	3	1.7
2721	OASIS RD	3	1	3	1	1	0	1.7
2753	NEWPORT DR	0	2	3	1	3	1	1.7
2766	WOODRUM CIR	0	2	3	2	1	3	1.7
2774	TETON DR	0	0	3	2	2	3	1.7
2832	FAGAN DR	0	2	3	1	2	3	1.7
2873	THOMPSON LN	0	2	3	3	0	3	1.7
2905	LAKE BLVD	3	0	3	1	0	3	1.7
2905	LAKE BLVD	3	0	3	1	0	3	1.7
2912	MASONIC AVE	0	2	3	3	0	3	1.7

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
2993	OLD OREGON TRL	3	0	3	2	0	1	1.7
3019	QUARTZ HILL RD	3	2	3	1	0	1	1.7
3045	AGATE WAY	0	3	3	2	2	0	1.7
3067	BEDROCK LN	0	2	3	2	1	3	1.7
3070	HARLAN DR	0	0	3	1	3	3	1.7
3071	MOONSTONE WAY	0	2	3	2	1	3	1.7
3074	LAKE REDDING DR	0	2	3	1	2	3	1.7
3079	AMETHYST WAY	0	2	3	2	1	3	1.7
3110	KESWICK DAM RD	3	2	3	1	0	1	1.7
3111	DEODAR WAY	2	2	3	1	0	3	1.7
3154	PARK MARINA DR	3	2	3	1	0	1	1.7
3158	PARK MARINA DR	3	2	3	1	0	1	1.7
3161	LOCUST ST	2	2	3	1	0	3	1.7
3171	FELSTET LN	0	2	3	2	2	1	1.7
3226	CLARK RIVER DR	0	2	3	2	1	3	1.7
3229	HILLTOP DR	3	0	3	2	0	1	1.7
3240	HILLTOP DR	3	1	3	2	0	0	1.7
3253	HAWLEY RD	3	0	3	1	1	1	1.7
3310	YELLOWSTONE DR	0	2	3	2	1	3	1.7
3386	FANCY OAKS DR	0	2	3	2	1	3	1.7
3399	MANZANITA LN	0	2	3	2	1	3	1.7
3446	MISTLETOE LN	2	2	3	1	1	1	1.7
3472	VICTOR AVE	3	1	3	1	1	0	1.7
3538	CYPRESS AVE	3	1	3	1	1	0	1.7
3560	BUTTE ST	3	0	3	1	0	3	1.7
3581	PARK MARINA DR	3	2	3	1	0	1	1.7
3606	HELEN ST	0	2	3	2	1	3	1.7
3610	RUSSELL ST	0	2	3	2	2	1	1.7
3658	FAVRETTO AVE	0	2	3	2	1	3	1.7
3725	DAYBREAK CT	0	1	3	2	3	0	1.7
3743	RIVERSIDE DR	0	2	3	1	2	3	1.7
3766	SHASTA ST	2	2	3	1	1	1	1.7
3817	LINDEN AVE	0	1	3	2	3	0	1.7
3883	EASTSIDE RD	2	2	3	1	0	3	1.7
3886	EASTSIDE RD	2	2	3	1	1	1	1.7
3907	JEWELL LN	0	2	3	2	1	3	1.7
3936	ALTA MESA DR	2	2	3	1	1	1	1.7
3939	ALTA MESA DR	2	2	3	1	1	1	1.7
3940	ALTA MESA DR	2	2	3	1	1	1	1.7
3953	BENTON DR	2	0	3	1	2	1	1.7
3953	BENTON DR	2	0	3	1	2	1	1.7
4033	ALTA CAMINO DR	0	2	3	2	1	3	1.7
4035	ALTA RICO DR	0	2	3	2	1	3	1.7
4079	LOCKHEED DR	0	2	3	2	1	3	1.7
4104	AVIATION DR	0	2	3	2	1	3	1.7
4128	PROGRESS DR	0	2	3	2	1	3	1.7
4163	SHASTA VIEW DR	3	1	3	1	1	0	1.7
4167	SHASTA VIEW DR	3	1	3	1	1	0	1.7
4187	PIONEER LN	0	3	3	1	3	0	1.7
4263	EAST ST	2	2	3	1	1	1	1.7
4290	SEQUOIA ST	0	2	3	1	3	1	1.7
4291	SEQUOIA ST	0	2	3	1	3	1	1.7
4293	CANAL DR	0	2	3	1	3	1	1.7
4301	CANAL DR	0	2	3	1	3	1	1.7
4304	CANAL DR	0	3	3	1	3	0	1.7
4312	GARDEN AVE	0	2	3	1	3	1	1.7
4316	SEQUOIA ST	0	2	3	1	3	1	1.7
4323	CONTINENTAL ST	0	2	3	1	3	1	1.7
4325	GARDEN AVE	0	2	3	1	3	1	1.7
4329	VERDA ST	0	2	3	1	3	1	1.7
4331	SEQUOIA ST	0	2	3	1	3	1	1.7
4368	CALIFORNIA ST	2	2	3	1	1	1	1.7
4369	SHASTA ST	2	3	3	1	1	0	1.7
4370	SHASTA ST	2	3	3	1	1	0	1.7
4373	CALIFORNIA ST	2	3	3	1	1	0	1.7
4410	WEST ST	2	2	3	1	1	1	1.7
4479	PLACER ST	3	0	3	1	1	1	1.7
4480	PLACER ST	3	1	3	1	1	0	1.7
4483	PLACER ST	3	1	3	1	1	0	1.7
4486	PLACER ST	3	1	3	1	1	0	1.7
4490	PLACER ST	3	1	3	1	1	0	1.7
4512	EUREKA WAY	3	0	1	2	1	3	1.7
4530	PLACER ST	3	1	3	2	0	0	1.7
4531	PLACER ST	3	1	3	2	0	0	1.7
4554	DEL MONTE ST	2	2	3	1	0	3	1.7
4557	CHURN CREEK RD	3	3	3	1	0	0	1.7
4667	KESWICK DAM RD	3	0	3	1	1	1	1.7

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
4756	ALTA MESA DR	2	2	3	1	1	1	1.7
4875	NICOLET LN	0	2	3	1	3	1	1.7
4902	SHASTA VIEW DR	3	2	3	1	0	1	1.7
4955	BIDWELL RD	0	2	3	2	1	3	1.7
4971	PLACER ST	3	1	3	1	1	0	1.7
4985	SHASTA ST	2	3	3	1	1	0	1.7
4998	GARDEN AVE	0	3	3	1	3	0	1.7
5009	GARDEN AVE	0	2	3	1	3	1	1.7
5015	VERDA ST	0	2	3	1	3	1	1.7
5016	FLORENCE ST	0	3	3	1	3	0	1.7
5020	VERDA ST	0	2	3	1	3	1	1.7
5123	E CYPRESS AVE	3	1	3	1	1	0	1.7
5127	GOODWATER AVE	2	2	3	1	1	1	1.7
5129	GOODWATER AVE	3	0	3	1	0	3	1.7
5144	DOVE ST	0	2	3	1	3	1	1.7
5145	DOVE ST	0	2	3	1	3	1	1.7
5188	PLACER ST	3	0	3	1	1	1	1.7
5212	CEDARS RD	2	2	3	1	1	1	1.7
5252	E CYPRESS AVE	3	2	3	1	0	1	1.7
5265	CANYON RD	3	0	3	0	1	3	1.7
5275	CANYON RD	3	0	3	1	1	1	1.7
5275	CANYON RD	3	0	3	1	1	1	1.7
5283	SOUTH ST	2	1	3	1	2	0	1.7
5293	PARIS AVE	0	2	3	1	3	1	1.7
5294	LONDON AVE	0	2	3	1	3	1	1.7
5295	OLYMPUS AVE	0	2	3	1	3	1	1.7
5302	ATHENS AVE	0	2	3	1	3	1	1.7
5303	ATHENS AVE	0	2	3	1	2	3	1.7
5335	CHURN CREEK RD	0	2	3	2	1	3	1.7
5385	CLEAR CREEK RD	3	0	3	1	0	3	1.7
15103	GEORGE DR	2	2	3	1	0	3	1.7
15124	SHASTA VIEW DR	3	0	3	1	1	1	1.7
251	DANA DR	2	1	3	2	1	0	1.7
251	DANA DR	2	1	3	2	1	0	1.7
317	BENTON DR	2	0	3	2	1	1	1.7
582	COLLEGE VIEW DR	2	0	3	1	1	3	1.7
1134	FOOTHILL BLVD	2	1	3	2	1	0	1.7
1646	AIRPARK DR	2	0	3	1	1	3	1.7
1720	RIVERSIDE DR	2	0	3	1	1	3	1.7
2541	BROWNING ST	2	0	3	2	0	3	1.7
2773	N COURT ST	2	0	3	1	1	3	1.7
2875	PLACER ST	2	0	3	2	1	1	1.7
2960	BODENHAMER BLVD	2	0	3	2	0	3	1.7
3103	BENTON DR	2	0	3	2	1	1	1.7
4357	CALIFORNIA ST	3	2	1	1	1	3	1.7
4515	ALMOND AVE	2	1	3	2	1	0	1.7
4523	FOOTHILL BLVD	2	1	3	2	1	0	1.7
4527	MANZANITA HILLS AVE	2	1	3	2	1	0	1.7
4578	WILSHIRE DR	2	0	3	2	1	1	1.7
4780	GOODWATER AVE	2	1	3	2	1	0	1.7
255	MILL VALLEY PKWY	0	1	3	3	0	3	1.6
269	E CYPRESS AVE	3	1	3	1	0	1	1.6
301	COGGINS ST	0	1	3	3	1	1	1.6
569	COGGINS ST	0	1	3	3	1	1	1.6
570	ALBION AVE	0	1	3	3	1	1	1.6
921	BONHURST DR	0	3	3	2	1	1	1.6
958	LAKESIDE DR	0	3	3	2	0	3	1.6
1186	EUREKA WAY	3	1	1	2	1	1	1.6
1526	SUTTER ST	0	3	3	2	1	1	1.6
1528	ELLIS ST	0	3	3	2	1	1	1.6
1530	SPORTING CT	0	3	3	2	0	3	1.6
1701	SOUTH ST	3	1	3	1	0	1	1.6
1802	LAKE BLVD	3	1	3	0	1	1	1.6
1809	OASIS RD	3	1	3	0	0	3	1.6
2277	HARTNELL AVE	3	1	3	0	1	1	1.6
2376	VICTOR AVE	3	1	3	0	1	1	1.6
2407	KNIGHTON RD	0	3	3	2	1	1	1.6
2415	WOODRUM CIR	0	3	3	2	1	1	1.6
2484	FERNDALE DR	0	1	3	1	3	1	1.6
2485	GLENGARY DR	0	1	3	1	3	1	1.6
2486	SOUTHGATE DR	0	1	3	1	3	1	1.6
2593	EDGEWOOD DR	0	3	3	2	1	1	1.6
2733	ALICIA PKWY	0	1	3	3	1	1	1.6
2735	TIERRA HEIGHTS RD	0	1	3	3	1	1	1.6
2735	TIERRA HEIGHTS RD	0	1	3	3	1	1	1.6
3220	RUSH CREEK CT	0	3	3	2	1	1	1.6
3369	PLACER ST	3	1	3	1	0	1	1.6

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
3539	MARKET TRANSITION TO CYPRESS	3	1	3	1	0	1	1.6
3638	S MARKET ST	3	1	1	2	1	1	1.6
3860	TITLEIST WAY	0	1	3	3	0	3	1.6
3870	BRINCARD WAY	0	1	3	3	1	1	1.6
3962	LAKE BLVD	3	1	3	0	1	1	1.6
4078	MUNI BLVD	0	3	3	2	1	1	1.6
4094	OASIS RD	3	1	3	0	0	3	1.6
4102	SHASTA VIEW DR	0	3	3	2	1	1	1.6
4116	OASIS RD	3	1	3	1	0	1	1.6
4194	HOWARD DR	0	3	3	2	0	3	1.6
4285	SOUTH ST	2	3	3	1	0	1	1.6
4302	ORCHARD ESTATES DR	0	1	3	1	3	1	1.6
4334	CONTINENTAL ST	0	1	3	1	3	1	1.6
4524	HILLCREST AVE	0	1	3	3	1	1	1.6
4675	MISSION DE ORO DR	0	1	3	3	0	3	1.6
4773	YELLOWSTONE DR	0	3	3	2	1	1	1.6
4908	AKRICH ST	3	1	3	1	0	1	1.6
4936	GLENROSE DR	0	1	3	1	3	1	1.6
5287	OLYMPUS AVE	0	1	3	1	3	1	1.6
15094	CLEAR CREEK RD	3	1	3	0	0	3	1.6
40	WYNDHAM LN	2	2	3	1	1	0	1.6
58	C ST	0	1	3	2	1	3	1.6
59	BOND ST	0	3	3	1	1	3	1.6
66	ALROSE LN	0	1	3	2	1	3	1.6
76	MIGHTY OAK LN	0	1	3	2	1	3	1.6
173	AIRPORT RD	3	2	3	0	1	0	1.6
177	MEADOW VIEW DR	2	2	3	1	1	0	1.6
461	LOFTY OAK DR	0	1	3	2	1	3	1.6
525	EASTSIDE RD	0	1	3	1	2	3	1.6
525	EASTSIDE RD	0	1	3	1	2	3	1.6
572	SANTA CRUZ DR	0	1	3	2	1	3	1.6
595	GOLD HILLS DR	0	1	3	2	1	3	1.6
748	MARIGOLD WAY	0	1	3	2	1	3	1.6
750	DEWBERRY DR	0	1	3	2	1	3	1.6
755	TRUMPET DR	0	1	3	2	1	3	1.6
756	CHARADE WAY	0	1	3	2	1	3	1.6
761	AIRSTRIP RD	0	1	3	2	1	3	1.6
769	GARDEN AVE	0	2	3	1	3	0	1.6
820	WESTSIDE RD	2	1	3	1	0	3	1.6
820	WESTSIDE RD	2	1	3	1	0	3	1.6
845	OLD BARN WAY	0	3	3	1	1	3	1.6
846	MILL POND LN	0	3	3	1	1	3	1.6
1060	CANYON CREEK RD	0	0	3	2	3	0	1.6
1072	EVERGREEN WAY	0	1	3	2	2	1	1.6
1073	OXBOW ST	0	1	3	2	1	3	1.6
1097	LEDELL DR	0	1	3	2	1	3	1.6
1099	DOMINION DR	0	1	3	2	1	3	1.6
1142	MESA ST	0	1	3	2	1	3	1.6
1201	HILLTOP DR	3	2	3	1	0	0	1.6
1201	HILLTOP DR	3	2	3	1	0	0	1.6
1224	GOLF DR	0	2	3	1	3	0	1.6
1232	RIVERCREST PKWY	0	1	3	2	1	3	1.6
1235	CHINOOK DR	0	1	3	2	1	3	1.6
1239	BECHELLI LN	0	1	3	2	1	3	1.6
1246	WESTWOOD AVE	0	1	3	2	1	3	1.6
1318	BRANSTETTER LN	2	1	3	0	1	3	1.6
1419	MERLE DR	0	2	3	2	2	0	1.6
1424	EASTSIDE RD	2	2	3	1	1	0	1.6
1493	EL RENO LN	2	2	3	1	1	0	1.6
1494	EL RENO LN	2	2	3	1	1	0	1.6
1495	EL RENO LN	2	2	3	1	1	0	1.6
1500	E BONNYVIEW RD	2	1	3	1	1	1	1.6
1514	WYNDHAM LN	2	2	3	1	1	0	1.6
1569	WILSHIRE DR	0	2	3	1	3	0	1.6
1603	MONTE BELLO DR	0	1	3	2	1	3	1.6
1845	LELAND AVE	0	2	3	2	2	0	1.6
1856	GARDEN AVE	0	2	3	1	3	0	1.6
1913	SOPHY PL	0	1	3	2	1	3	1.6
1949	HILLTOP DR	3	2	3	1	0	0	1.6
2028	CATERPILLAR RD	2	1	3	1	0	3	1.6
2078	BOULDER DR	0	1	3	2	1	3	1.6
2147	BEAUMONT DR	0	1	3	2	1	3	1.6
2160	AIRSTRIP RD	0	1	3	2	1	3	1.6
2196	ADAMS LN	0	3	3	1	1	3	1.6
2202	HILLTOP DR	3	2	3	1	0	0	1.6
2228	PENDANT WAY	0	2	3	1	3	0	1.6
2229	LEGACY CT	0	3	3	1	2	1	1.6

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
2271	HARTNELL AVE	3	2	3	0	1	0	1.6
2274	HARTNELL AVE	3	2	3	0	1	0	1.6
2412	LOCKHEED DR	0	1	3	2	1	3	1.6
2421	ELECTRO WAY	0	3	3	1	1	3	1.6
2424	OLD OREGON TRL	0	3	3	1	1	3	1.6
2437	BILLINGS DR	0	1	3	2	1	3	1.6
2487	GLENGARY DR	0	2	3	1	3	0	1.6
2501	MISTLETOE LN	2	1	3	1	1	1	1.6
2529	DANA DR	2	1	3	1	1	1	1.6
2532	FRIENDLY RD	0	1	3	2	1	3	1.6
2567	GOODWATER AVE	2	1	3	1	1	1	1.6
2568	SHASTA VIEW DR	3	0	3	1	1	0	1.6
2577	CANDLEWOOD DR	0	1	3	2	1	3	1.6
2728	HOPE LN	0	1	3	2	1	3	1.6
2738	TIERRA HEIGHTS RD	0	1	3	2	1	3	1.6
2917	NORTHPOINT DR	2	1	3	2	0	1	1.6
2959	BODENHAMER BLVD	2	1	3	2	0	1	1.6
3018	QUARTZ HILL RD	3	2	3	1	0	0	1.6
3042	ELK DR	0	2	3	1	3	0	1.6
3050	AGATE WAY	0	1	3	2	2	1	1.6
3055	HARLAN DR	0	1	3	2	2	1	1.6
3062	MOONSTONE WAY	0	1	3	2	2	1	1.6
3072	LAKE REDDING DR	0	1	3	1	2	3	1.6
3073	LAKE REDDING DR	0	1	3	1	2	3	1.6
3078	TOURMALINE WAY	0	1	3	2	1	3	1.6
3087	LAKE REDDING DR	0	1	3	2	2	1	1.6
3109	KESWICK DAM RD	3	0	3	1	1	0	1.6
3186	LORRAINE DR	0	1	3	2	1	3	1.6
3325	HERITAGETOWN DR	0	1	3	2	1	3	1.6
3347	MEADOW WOOD TRL	0	2	3	1	3	0	1.6
3348	MEADOW WOOD TRL	0	2	3	1	3	0	1.6
3350	LANDCASTER CT	0	2	3	1	3	0	1.6
3526	BUENAVENTURA BLVD	0	1	3	2	1	3	1.6
3764	SHASTA ST	2	2	3	1	1	0	1.6
3765	SHASTA ST	2	2	3	1	1	0	1.6
3798	AIRPARK DR	2	1	3	1	0	3	1.6
3894	E BONNYVIEW RD	0	3	3	1	1	3	1.6
3918	FERRINGTON CT	0	1	3	2	1	3	1.6
3920	SPINNAKER DR	0	1	3	2	1	3	1.6
4042	SHASTA VIEW DR	3	0	3	2	0	0	1.6
4046	BELCREST DR	0	1	3	2	1	3	1.6
4047	BELCREST DR	0	1	3	2	1	3	1.6
4048	OAKMONT DR	0	1	3	2	1	3	1.6
4142	GOODWATER AVE	2	1	3	1	1	1	1.6
4169	HAWN AVE	0	1	3	2	1	3	1.6
4184	E BONNYVIEW RD	2	1	3	1	1	1	1.6
4261	BUTTE ST	3	2	3	0	1	0	1.6
4266	EAST ST	2	1	3	1	1	1	1.6
4294	CANAL DR	0	2	3	1	3	0	1.6
4296	CANAL DR	0	2	3	1	3	0	1.6
4299	SOUTH ST	2	1	3	1	1	1	1.6
4299	SOUTH ST	2	1	3	1	1	1	1.6
4308	GARDEN AVE	0	2	3	1	3	0	1.6
4315	FLORENCE ST	0	2	3	1	3	0	1.6
4317	FLORENCE ST	0	2	3	1	3	0	1.6
4318	SACRAMENTO ST	0	2	3	1	3	0	1.6
4319	SACRAMENTO ST	0	2	3	1	3	0	1.6
4354	COURT ST	3	0	3	1	1	0	1.6
4359	MARKET ST	3	3	1	1	1	1	1.6
4372	CALIFORNIA ST	2	2	3	1	1	0	1.6
4376	TRINITY ST	2	2	3	1	1	0	1.6
4394	TRINITY ST	2	2	3	1	1	0	1.6
4396	TRINITY ST	2	2	3	1	1	0	1.6
4409	WEST ST	2	1	3	1	1	1	1.6
4412	WEST ST	2	1	3	1	1	1	1.6
4534	PLEASANT ST	2	1	3	2	0	1	1.6
4546	PLACER ST	3	2	3	1	0	0	1.6
4568	DOVE ST	0	2	3	1	3	0	1.6
4570	DOVE ST	0	2	3	1	3	0	1.6
4571	ASHLEY CT	0	2	3	1	3	0	1.6
4629	VINSON DR	0	1	3	2	1	3	1.6
4630	O'SHEA WAY	0	1	3	2	1	3	1.6
4634	MISTLETOE LN	2	2	3	1	1	0	1.6
4717	CATERPILLAR RD	2	1	3	1	0	3	1.6
4766	GREEN RIFFLE RD	0	1	3	2	1	3	1.6
4879	N BONNYVIEW RD	0	1	3	2	1	3	1.6
4885	EASTSIDE RD	2	1	3	1	1	1	1.6

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
4902	SHASTA VIEW DR	3	2	3	1	0	0	1.6
4902	SHASTA VIEW DR	3	2	3	1	0	0	1.6
4905	SAN VINCENTE DR	0	1	3	2	1	3	1.6
4911	TWIN VIEW BLVD	2	1	3	1	0	3	1.6
4978	PINE ST	3	3	1	1	1	1	1.6
4980	PINE ST	3	3	1	1	1	1	1.6
5005	CONTINENTAL ST	0	2	3	1	3	0	1.6
5011	LEE ST	0	2	3	1	3	0	1.6
5013	LEE ST	0	2	3	1	3	0	1.6
5014	LEE ST	0	2	3	1	3	0	1.6
5017	FLORENCE ST	0	2	3	1	3	0	1.6
5018	FLORENCE ST	0	2	3	1	3	0	1.6
5068	HILLTOP DR	3	0	3	2	0	0	1.6
5097	LAVENDER WAY	0	1	3	2	1	3	1.6
5101	PURPLE WAY	0	1	3	2	1	3	1.6
5125	E CYPRESS AVE	3	0	3	1	1	0	1.6
5131	GOODWATER AVE	2	1	3	1	0	3	1.6
5134	HAWN AVE	0	1	3	2	1	3	1.6
5135	SQUIRE AVE	0	1	3	2	1	3	1.6
5138	WILSON AVE	0	1	3	2	1	3	1.6
5188	PLACER ST	3	0	3	1	1	0	1.6
5218	MISTLETOE LN	2	2	3	1	1	0	1.6
5289	ROME AVE	0	2	3	1	3	0	1.6
5301	LONDON AVE	0	2	3	1	3	0	1.6
15095	CASCADE BLVD	2	1	3	1	0	3	1.6
15122	CALGARY PL	0	2	3	1	3	0	1.6
827	BLAZINGWOOD DR	2	0	3	2	1	0	1.6
2876	PLACER ST	2	0	3	2	1	0	1.6
2876	PLACER ST	2	0	3	2	1	0	1.6
3633	S MARKET ST	3	2	1	2	1	0	1.6
4522	FOOTHILL BLVD	2	0	3	2	1	0	1.6
4528	MANZANITA HILLS AVE	2	0	3	2	1	0	1.6
4578	WILSHIRE DR	2	0	3	2	1	0	1.6
4613	ROSALINE AVE	2	0	3	2	1	0	1.6
4613	ROSALINE AVE	2	0	3	2	1	0	1.6
45	SHASTA ST	0	1	3	3	1	0	1.5
80	ARIZONA ST	0	3	3	2	1	0	1.5
87	TARMAC RD	0	2	3	2	1	1	1.5
93	OASIS RD	3	0	3	1	0	1	1.5
96	OASIS RD	3	2	3	0	0	1	1.5
175	AIRPORT RD	3	1	3	0	1	0	1.5
256	ROGUE RIVER WAY	0	2	3	3	0	1	1.5
263	DANA DR	2	2	3	1	0	1	1.5
275	E CYPRESS AVE	3	0	3	1	0	1	1.5
304	SUTRO MINE RD	0	0	3	3	1	1	1.5
390	CANYON CREEK RD	0	1	3	1	3	0	1.5
394	TECHNOLOGY WAY	0	3	3	2	1	0	1.5
610	WAVERLY AVE	0	2	3	2	0	3	1.5
728	ROSE TERRACE DR	0	2	3	2	0	3	1.5
734	SUNGLOW DR	0	2	3	2	0	3	1.5
855	SIERRA MADRE DR	0	0	3	3	1	1	1.5
865	ARIZONA ST	0	2	3	2	1	1	1.5
919	FALLWORTH DR	0	2	3	2	1	1	1.5
920	BONHURST DR	0	2	3	2	1	1	1.5
971	VILLA DR	0	2	3	2	0	3	1.5
1094	STARTHMORE DR	0	2	3	2	1	1	1.5
1095	MURIETA LOOP	0	2	3	2	1	1	1.5
1096	DENTON WAY	0	2	3	2	1	1	1.5
1098	ROESNER AVE	0	2	3	2	1	1	1.5
1177	DENTON WAY	0	2	3	2	1	1	1.5
1179	NELSON DR	0	2	3	2	1	1	1.5
1190	EUREKA WAY	3	0	1	2	1	1	1.5
1196	HILLTOP DR	3	0	3	1	0	1	1.5
1208	LARKSPUR LN	2	3	3	1	0	0	1.5
1236	JANE ST	0	2	3	2	1	1	1.5
1291	TWIN VIEW BLVD	2	3	3	1	0	0	1.5
1296	CATERPILLAR RD	2	2	3	1	0	1	1.5
1344	SUNGLOW DR	0	2	3	2	0	3	1.5
1366	STARLIGHT BLVD	0	2	3	2	0	3	1.5
1467	SEEDLING DR	0	2	3	2	1	1	1.5
1472	CREEKSIDE ST	0	2	3	2	0	3	1.5
1507	AIRWAY DR	0	2	3	2	1	1	1.5
1522	ELLIS ST	0	2	3	2	1	1	1.5
1523	MARK ST	0	2	3	2	1	1	1.5
1524	MARK ST	0	2	3	2	1	1	1.5
1544	WILSHIRE DR	0	1	3	1	3	0	1.5
1563	DIANE ST	0	2	3	2	1	1	1.5

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
1609	PLACER ST	3	1	3	1	0	0	1.5
1743	PANORAMA DR	0	2	3	2	0	3	1.5
1794	LAKE BLVD	3	1	3	1	0	0	1.5
1804	LAKE BLVD	3	1	3	0	1	0	1.5
1851	MARKET ST	3	0	3	1	0	1	1.5
1869	PARIS AVE	0	1	3	1	3	0	1.5
1916	DARSHA LN	0	2	3	2	1	1	1.5
1923	OSHEA CIR	0	3	3	2	1	0	1.5
1925	KATHLEEN WAY	0	1	3	3	1	0	1.5
1937	MURIETA LOOP	0	2	3	2	1	1	1.5
2022	BELTLINE RD	2	2	3	0	0	3	1.5
2026	CATERPILLAR RD	2	2	3	0	0	3	1.5
2033	MOUNTAIN LAKES BLVD	2	2	3	1	0	1	1.5
2067	WOODCLIFF DR	0	2	3	2	0	3	1.5
2068	WOODCLIFF DR	0	2	3	2	0	3	1.5
2087	WOODHILL DR	0	2	3	2	0	3	1.5
2161	CHARADE WAY	0	3	3	2	1	0	1.5
2180	TUSCANY WAY	0	2	3	2	1	1	1.5
2186	SURREY DR	0	2	3	2	1	1	1.5
2191	HILLMONTE DR	0	2	3	2	1	1	1.5
2205	HILLTOP DR	3	1	3	1	0	0	1.5
2259	MIDDLETON LN	0	1	3	1	3	0	1.5
2312	ALTA SAGA DR	0	2	3	2	1	1	1.5
2341	HILLTOP DR	3	1	3	1	0	0	1.5
2387	OLD OREGON TRL	3	1	3	1	0	0	1.5
2410	LOCKHEED DR	0	2	3	2	1	1	1.5
2414	MUNICIPAL BLVD	0	2	3	2	1	1	1.5
2418	AVIATION DR	0	2	3	2	1	1	1.5
2420	ELECTRO WAY	0	2	3	2	1	1	1.5
2444	FOREST HOMES DR	0	2	3	2	1	1	1.5
2445	KENTWOOD DR	0	2	3	2	1	1	1.5
2489	ROXFORD CT	0	1	3	1	3	0	1.5
2490	SOUTHGATE DR	0	1	3	1	3	0	1.5
2527	CHURN CREEK RD	3	0	3	1	0	1	1.5
2574	CANDLEWOOD DR	0	2	3	2	1	1	1.5
2582	EDGEWOOD DR	0	2	3	2	1	1	1.5
2583	KIRKWOOD CIR	0	2	3	2	1	1	1.5
2601	EDGEWOOD DR	0	2	3	2	1	1	1.5
2709	LAKE BLVD	3	0	3	0	1	1	1.5
2711	BELTLINE RD	2	2	3	0	0	3	1.5
2733	ALICIA PKWY	0	1	3	3	1	0	1.5
2733	ALICIA PKWY	0	1	3	3	1	0	1.5
2761	KIRKWOOD CIR	0	2	3	2	1	1	1.5
2764	SEMINOLE DR	0	2	3	2	0	3	1.5
2772	ASPEN GLOW LN	0	2	3	2	0	3	1.5
2822	OLETA DR	0	2	3	2	0	3	1.5
2823	CHINOOK DR	0	2	3	2	1	1	1.5
2873	THOMPSON LN	0	2	3	3	0	1	1.5
3046	HARLAN DR	0	2	3	2	1	1	1.5
3051	HARLAN DR	0	2	3	2	1	1	1.5
3068	BEDROCK LN	0	2	3	2	1	1	1.5
3077	AMETHYST WAY	0	2	3	2	0	3	1.5
3137	KEY WEST DR	0	3	3	2	1	0	1.5
3137	KEY WEST DR	0	3	3	2	1	0	1.5
3138	YELLOWSTONE DR	0	2	3	2	1	1	1.5
3163	PARK MARINA DR	3	1	3	1	0	0	1.5
3173	N BONNYVIEW RD	0	2	3	2	1	1	1.5
3210	PACIFIC AVE	0	2	3	2	1	1	1.5
3216	LOST CREEK CT	0	3	3	2	1	0	1.5
3217	COPPER CREEK DR	0	3	3	2	1	0	1.5
3218	COPPER CREEK DR	0	2	3	2	1	1	1.5
3219	ELK CREEK DR	0	2	3	2	1	1	1.5
3221	ELK CREEK DR	0	2	3	2	1	1	1.5
3247	HILLTOP DR	3	0	3	1	0	1	1.5
3344	TRUMPET DR	0	2	3	2	1	1	1.5
3345	VICTOR AVE	3	0	3	0	1	1	1.5
3359	SACRAMENTO DR	0	2	3	2	0	3	1.5
3389	TARMAC RD	0	2	3	2	1	1	1.5
3432	WHALEY RD	0	2	3	2	1	1	1.5
3540	CYPRESS TRANSITION TO MARKET	3	0	3	1	0	1	1.5
3561	PARK MARINA DR	3	0	3	1	0	1	1.5
3607	SMILE PL	0	1	3	1	3	0	1.5
3638	S MARKET ST	3	1	1	2	1	0	1.5
3638	S MARKET ST	3	1	1	2	1	0	1.5
3638	S MARKET ST	3	1	1	2	1	0	1.5
3639	GRANGE ST	0	2	3	2	1	1	1.5
3642	LELAND AVE	0	2	3	2	1	1	1.5

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
3655	FELL ST	0	2	3	2	1	1	1.5
3678	EUREKA WAY	3	0	1	2	0	3	1.5
3679	EUREKA WAY	3	0	1	2	1	1	1.5
3732	W WAVERLY AVE	0	2	3	2	1	1	1.5
3800	PLACER ST	3	1	3	1	0	0	1.5
3801	PLACER ST	3	1	3	1	0	0	1.5
4076	FLIGHT AVE	0	2	3	2	1	1	1.5
4095	OASIS RD	3	0	3	0	0	3	1.5
4100	MISSION DE ORO DR	0	0	3	3	0	3	1.5
4103	SHASTA VIEW DR	0	3	3	2	1	0	1.5
4123	REDDINGTON DR	0	0	3	3	0	3	1.5
4200	FOXGLOVE LN	0	2	3	2	0	3	1.5
4205	MISTY GLEN DR	0	2	3	2	0	3	1.5
4246	CONTINENTAL ST	2	2	3	1	0	1	1.5
4258	EAST ST	2	2	3	0	1	1	1.5
4259	EAST ST	2	2	3	0	1	1	1.5
4300	CANAL DR	0	1	3	1	3	0	1.5
4336	PLACER ST	0	1	3	1	3	0	1.5
4341	YUBA ST	0	3	3	0	3	0	1.5
4513	EUREKA WAY	3	0	1	2	1	1	1.5
4598	SONOMA ST	0	1	3	1	3	0	1.5
4624	BALZAC CT	0	2	3	2	0	3	1.5
4722	WOODHILL DR	0	2	3	2	0	3	1.5
4723	WOODHILL DR	0	2	3	2	0	3	1.5
4727	TEAKWOOD DR	0	2	3	2	0	3	1.5
4772	SMITH RIVER DR	0	2	3	2	1	1	1.5
4775	CLEAR WATER CT	0	2	3	2	1	1	1.5
4778	BLUE CREEK DR	0	2	3	2	1	1	1.5
4779	MADISON RIVER DR	0	2	3	2	1	1	1.5
4790	MADISON RIVER DR	0	2	3	2	1	1	1.5
4792	MADISON RIVER DR	0	2	3	2	1	1	1.5
4793	MADISON RIVER DR	0	2	3	2	1	1	1.5
4809	ROBLES DR	0	2	3	2	1	1	1.5
4819	OLD OREGON TRL	3	0	3	1	0	1	1.5
4819	OLD OREGON TRL	3	0	3	1	0	1	1.5
4867	HOPE LN	0	2	3	2	0	3	1.5
4871	POSEY LN	0	2	3	2	1	1	1.5
4940	MEADOWBROOK DR	0	1	3	1	3	0	1.5
4964	CYPRESS AVE	3	1	3	1	0	0	1.5
4992	TRINITY ST	2	3	3	1	0	0	1.5
5047	STATE ST	0	2	3	2	1	1	1.5
5049	AKARD AVE	0	2	3	2	1	1	1.5
5052	STATE ST	0	2	3	2	1	1	1.5
5136	OAKVIEW DR	0	2	3	2	1	1	1.5
5147	BOARDWALK PL	0	2	3	2	1	1	1.5
5173	SEVERTSON DR	0	2	3	2	1	1	1.5
15107	GEORGE DR	2	2	3	1	0	1	1.5
15120	CALGARY PL	0	1	3	1	3	0	1.5
15121	CALGARY PL	0	1	3	1	3	0	1.5
19	ECHO RD	0	2	3	1	1	3	1.5
22	HARPOLE RD	0	2	3	1	1	3	1.5
33	MARLENE AVE	0	2	3	1	1	3	1.5
34	MARLENE AVE	0	2	3	1	1	3	1.5
188	QUARTZ HILL RD	2	0	3	0	1	3	1.5
228	JUPITER TER	0	2	3	1	1	3	1.5
230	SOLAR WAY	0	2	3	1	1	3	1.5
231	BEMBOW DR	0	2	3	1	1	3	1.5
234	COLUMBINE DR	0	2	3	1	1	3	1.5
242	FIDDLENECK DR	0	2	3	1	1	3	1.5
324	DELTA ST	0	2	3	1	1	3	1.5
326	DEL MAR AVE	0	2	3	1	2	1	1.5
397	PLATINUM WAY	0	0	3	1	3	1	1.5
464	BUENAVENTURA BLVD	0	0	3	2	1	3	1.5
503	LE BRUN LN	0	2	3	1	1	3	1.5
504	LAWRENCE RD	0	2	3	1	1	3	1.5
507	SCHOOL ST	0	2	3	1	1	3	1.5
508	SCHOOL ST	0	2	3	1	1	3	1.5
510	SCHOOL ST	0	2	3	1	1	3	1.5
516	OLD 44 DR	2	0	3	1	1	1	1.5
573	QUARTZ HILL RD	2	0	3	0	1	3	1.5
581	COLLEGE VIEW DR	2	0	3	1	1	1	1.5
582	COLLEGE VIEW DR	2	0	3	1	1	1	1.5
606	GOLD HILLS DR	0	0	3	2	1	3	1.5
627	DE MOLL DR	0	2	3	1	1	3	1.5
652	SILVERFIELD LOOP	0	2	3	1	1	3	1.5
659	GALAXY WAY	0	2	3	1	1	3	1.5
661	CAPELLA ST	0	2	3	1	1	3	1.5

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
662	CELESTIAL ST	0	2	3	1	1	3	1.5
666	CORONA ST	0	2	3	1	1	3	1.5
669	NEBULA ST	0	2	3	1	1	3	1.5
674	WESTERN OAK DR	0	2	3	1	1	3	1.5
675	SARATOGA DR	0	2	3	1	1	3	1.5
677	TIFFANY LN	0	2	3	1	1	3	1.5
680	BRITTANY DR	0	2	3	1	1	3	1.5
685	LA RINCONADA PL	0	2	3	1	1	3	1.5
688	CASABELLA DR	0	2	3	1	1	3	1.5
698	NORDONA LN	0	2	3	1	1	3	1.5
699	OLD OREGON TRL	0	2	3	1	1	3	1.5
707	WHEELER ST	0	2	3	1	1	3	1.5
773	SEQUOIA ST	0	2	3	0	3	1	1.5
778	GARDEN AVE	0	2	3	0	3	1	1.5
822	CEDARS RD	2	0	3	1	1	1	1.5
823	CEDARS RD	2	1	3	1	1	0	1.5
832	BRESLAUER WAY	0	2	3	1	1	3	1.5
901	PIONEER DR	0	0	3	2	1	3	1.5
968	BOSTON AVE	0	0	3	2	1	3	1.5
1012	CUMBERLAND DR	0	0	3	2	1	3	1.5
1039	SUNRIVER LN	0	0	3	2	1	3	1.5
1051	EUREKA WAY	3	0	1	1	1	3	1.5
1065	HOWARD DR	2	1	3	1	1	0	1.5
1115	HOWARD DR	2	1	3	1	1	0	1.5
1119	EL RENO LN	2	1	3	1	1	0	1.5
1204	COMMERCE ST	0	2	3	1	1	3	1.5
1225	CHERYL DR	0	2	3	1	1	3	1.5
1243	EAGLE PKWY	0	2	3	1	1	3	1.5
1319	BRANSTETTER LN	2	0	3	0	1	3	1.5
1376	EMILY WAY	0	2	3	1	1	3	1.5
1479	SACRAMENTO DR	0	2	3	1	2	1	1.5
1490	HARRISON AVE	0	2	3	1	1	3	1.5
1605	FOOTHILL BLVD	0	0	3	2	1	3	1.5
1720	RIVERSIDE DR	2	0	3	1	1	1	1.5
1722	MARKET ST	3	2	1	1	1	1	1.5
1842	GRAPE AVE	0	2	3	1	2	1	1.5
1852	GOLD ST	3	2	1	1	1	1	1.5
1964	BENTON DR	2	0	3	1	1	1	1.5
2055	CATERPILLAR RD	2	0	3	1	0	3	1.5
2101	TWIN VIEW BLVD	2	0	3	1	0	3	1.5
2124	CONSTITUTION WAY	0	0	3	2	1	3	1.5
2270	MIDDLETON LN	0	2	3	1	1	3	1.5
2276	ROBERT CT	0	2	3	1	1	3	1.5
2308	ALTA CAMPO DR	0	2	3	1	1	3	1.5
2370	TIMBERCREEK DR	0	2	3	1	1	3	1.5
2423	OLD OREGON TRL	0	2	3	1	1	3	1.5
2431	CAPRICORN WAY	0	2	3	1	1	3	1.5
2442	FOREST HOMES DR	0	2	3	1	1	3	1.5
2528	FRIENDLY RD	2	1	3	1	1	0	1.5
2539	BROWNING ST	2	0	3	2	0	1	1.5
2587	ARROYO MANOR DR	0	2	3	1	2	1	1.5
2646	OLD OREGON TRL	0	2	3	1	1	3	1.5
2706	TARMAC RD	0	2	3	1	1	3	1.5
2714	TWIN VIEW BLVD	2	1	3	2	0	0	1.5
2714	TWIN VIEW BLVD	2	1	3	2	0	0	1.5
2736	TIERRA HEIGHTS RD	0	0	3	2	1	3	1.5
2763	BRIDGER DR	0	2	3	1	1	3	1.5
2918	NORTHPOINT DR	2	0	3	1	0	3	1.5
2922	TWIN VIEW BLVD	2	1	3	1	1	0	1.5
2964	BODENHAMER BLVD	2	0	3	2	0	1	1.5
3023	DUNE ST	0	2	3	1	1	3	1.5
3024	CAPRICORN WAY	0	2	3	1	1	3	1.5
3052	TOURMALINE WAY	0	1	3	2	2	0	1.5
3127	CASTLEWOOD DR	0	2	3	1	1	3	1.5
3324	HERITAGETOWN DR	0	0	3	2	1	3	1.5
3403	LOWDEN LN	0	0	3	2	1	3	1.5
3427	BROWNING ST	2	0	3	1	0	3	1.5
3436	ASPIN AVE	0	0	3	2	1	3	1.5
3437	ASPIN AVE	0	1	3	2	2	0	1.5
3439	VICTOR AVE	2	1	3	1	1	0	1.5
3442	MISTLETOE LN	2	1	3	1	1	0	1.5
3443	DEERFIELD AVE	0	2	3	1	1	3	1.5
3444	LINDEENA LN	0	2	3	1	1	3	1.5
3445	CAMEO CT	0	2	3	1	1	3	1.5
3447	MISTLETOE LN	2	1	3	1	1	0	1.5
3447	MISTLETOE LN	2	1	3	1	1	0	1.5
3451	CANBY RD	0	2	3	1	1	3	1.5

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
3469	CASCADE LN	0	2	3	1	1	3	1.5
3483	COMET ST	0	2	3	1	1	3	1.5
3484	NEPTUNE TER	0	2	3	1	1	3	1.5
3490	VENUS WAY	0	2	3	1	1	3	1.5
3499	ALFREDA WAY	0	2	3	1	1	3	1.5
3520	TEHAMA ST	2	1	3	1	1	0	1.5
3901	RENO LN	0	2	3	1	1	3	1.5
3933	EL VERANO ST	0	2	3	1	1	3	1.5
3937	MARILYN AVE	0	2	3	1	1	3	1.5
3938	ALDEN AVE	0	2	3	1	1	3	1.5
3941	ALDEN AVE	0	2	3	1	1	3	1.5
3944	BARBARA RD	0	0	3	2	1	3	1.5
3970	GALAXY WAY	0	2	3	1	1	3	1.5
3972	PEGASUS ST	0	2	3	1	1	3	1.5
3975	PLUTO ST	0	2	3	1	1	3	1.5
3977	APOLLO ST	0	2	3	1	1	3	1.5
3996	GLEN VISTA CT	0	2	3	1	1	3	1.5
4004	SARATOGA DR	0	2	3	1	1	3	1.5
4027	AGNES MAY DR	0	2	3	1	1	3	1.5
4028	ALTA CAMPO DR	0	2	3	1	1	3	1.5
4037	VISTA OAKS CT	0	2	3	1	1	3	1.5
4038	WESTERN OAK DR	0	2	3	1	1	3	1.5
4060	SCORPIUS WAY	0	2	3	1	1	3	1.5
4062	SATURN SKWY	0	2	3	1	1	3	1.5
4063	BRITTANY DR	0	2	3	1	1	3	1.5
4064	BRITTANY DR	0	2	3	1	1	3	1.5
4067	WESTERN OAK DR	0	2	3	1	1	3	1.5
4117	LOUSTALOT WAY	0	2	3	1	1	3	1.5
4143	GOODWATER AVE	2	1	3	1	1	0	1.5
4174	CHURN CT	0	2	3	1	1	3	1.5
4177	EAST WAY	0	2	3	1	1	3	1.5
4238	PINE ST	3	2	1	1	1	1	1.5
4254	EAST ST	2	1	3	1	1	0	1.5
4307	LOCUST ST	2	0	3	1	1	1	1.5
4326	GARDEN AVE	0	2	3	0	3	1	1.5
4330	VERDA ST	0	2	3	0	3	1	1.5
4332	SEQUOIA ST	0	2	3	0	3	1	1.5
4339	VERDA ST	0	2	3	0	3	1	1.5
4346	CALIFORNIA ST	3	2	1	1	1	1	1.5
4358	TEHAMA ST	3	3	1	1	1	0	1.5
4363	TEHAMA ST	3	3	1	1	1	0	1.5
4375	EUREKA WAY	3	3	1	1	1	0	1.5
4382	RIVERSIDE DR	2	0	3	1	1	1	1.5
4388	CENTER ST	0	2	3	1	1	3	1.5
4393	MARKET ST	3	2	1	1	1	1	1.5
4397	TRINITY ST	2	1	3	1	1	0	1.5
4403	SHASTA ST	2	1	3	1	1	0	1.5
4404	SHASTA ST	2	1	3	1	1	0	1.5
4437	MAGNOLIA AVE	2	1	3	1	1	0	1.5
4560	MARAGLIA ST	0	2	3	1	1	3	1.5
4562	LARKSPUR LN	0	2	3	1	1	3	1.5
4566	BLUE VIEW ST	0	2	3	1	1	3	1.5
4572	VALENTINE LN	0	2	3	1	1	3	1.5
4586	RICARDO AVE	0	2	3	1	1	3	1.5
4650	IRWIN RD	0	2	3	1	1	3	1.5
4679	TEHAMA ST	2	1	3	1	1	0	1.5
4721	N BOULDER DR	0	0	3	2	2	1	1.5
4721	N BOULDER DR	0	0	3	2	2	1	1.5
4823	CAMULOS WAY	0	2	3	1	1	3	1.5
4857	RUGBY HILL DR	0	2	3	1	1	3	1.5
4862	HOLLOW LN	0	0	3	2	1	3	1.5
4887	LOCKHEED DR	0	2	3	1	1	3	1.5
4894	SATURN SKWY	0	2	3	1	1	3	1.5
4900	ALFREDA WAY	0	2	3	1	1	3	1.5
4904	SAN VINCENTE DR	0	0	3	2	1	3	1.5
4973	CALIFORNIA ST	3	2	1	1	1	1	1.5
4982	PINE ST	3	2	1	1	1	1	1.5
4984	PINE ST	3	2	1	1	1	1	1.5
4986	PINE ST	3	2	1	1	1	1	1.5
5130	GOODWATER AVE	2	0	3	1	1	1	1.5
5130	GOODWATER AVE	2	0	3	1	1	1	1.5
5141	JONQUIL WAY	0	2	3	1	1	3	1.5
5186	NANTUCKET DR	0	0	3	2	1	3	1.5
5198	LINDEN AVE	0	0	3	2	1	3	1.5
5211	EL RENO LN	2	0	3	1	1	1	1.5
5211	EL RENO LN	2	0	3	1	1	1	1.5
5228	HAWTHORNE AVE	0	2	3	1	1	3	1.5

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
5235	WOODSIDE MEADOWS DR	0	2	3	1	1	3	1.5
5239	DUSTY LN	0	2	3	1	1	3	1.5
5338	LEONARD ST	0	2	3	1	1	3	1.5
20	ECHO CT	0	1	3	1	2	1	1.4
2084	BOULDER CREEK DR	0	1	3	1	2	1	1.4
2855	HUNTER CT	0	1	3	3	0	1	1.4
2856	HOPE LN	0	1	3	3	0	1	1.4
2957	MOAB LN	0	1	3	3	0	1	1.4
3357	SEEDLING DR	0	3	3	2	0	1	1.4
3839	COLLEEN CT	0	1	3	3	0	1	1.4
3963	LAKE BLVD	3	1	3	0	0	1	1.4
4098	BELVEDERE DR	0	1	3	3	0	1	1.4
4121	MILL VALLEY PKWY	0	1	3	3	0	1	1.4
4125	DOMAIN WAY	0	1	3	3	0	1	1.4
4937	GLENROSE DR	0	1	3	1	2	1	1.4
5282	HENDERSON RD	0	1	3	1	2	1	1.4
6	BEVERLY DR	0	1	3	2	1	1	1.4
7	LEILA AVE	0	1	3	1	1	3	1.4
13	RAMONA PL	0	1	3	2	1	1	1.4
24	ALMA AVE	0	1	3	1	1	3	1.4
28	ALMA AVE	0	1	3	1	1	3	1.4
30	COCKERILL DR	0	3	3	1	1	1	1.4
55	GORDON LN	0	1	3	2	1	1	1.4
68	SCREECH OWL LN	0	1	3	2	1	1	1.4
72	LOFTY OAK DR	0	1	3	2	1	1	1.4
73	LOFTY OAK DR	0	1	3	2	1	1	1.4
74	HEAVENLY OAK LN	0	1	3	2	1	1	1.4
77	HEAVENLY OAK LN	0	1	3	2	1	1	1.4
84	DENTON WAY	0	1	3	2	1	1	1.4
92	OASIS RD	3	0	3	1	0	0	1.4
93	OASIS RD	3	0	3	1	0	0	1.4
99	ST ANDREWS DR	0	1	3	1	1	3	1.4
146	ROGUE RIVER WAY	0	2	3	3	0	0	1.4
164	VIENNA WAY	0	1	3	2	1	1	1.4
166	TARMAC RD	0	1	3	2	1	1	1.4
185	TALOFA DR	0	1	3	2	1	1	1.4
187	QUARTZ HILL RD	2	1	3	0	0	3	1.4
207	JUSTIN WAY	0	1	3	2	0	3	1.4
214	COLLEGE VIEW DR	0	1	3	2	0	3	1.4
220	MERCY OAKS DR	0	1	3	2	0	3	1.4
226	COCKERILL DR	0	1	3	1	1	3	1.4
241	DANDELION DR	0	1	3	1	1	3	1.4
245	WILLOW RD	0	3	3	1	1	1	1.4
246	PIONEER LN	0	3	3	1	1	1	1.4
250	WILLOWBRAE AVE	0	3	3	1	1	1	1.4
300	COGGINS	0	1	3	2	1	1	1.4
303	ALBION AVE	0	1	3	2	1	1	1.4
319	SANTA FE AVE	0	3	3	1	1	1	1.4
327	IRONWOOD LN	0	1	3	2	0	3	1.4
328	RIVER PARK DR	0	1	3	2	0	3	1.4
335	RIVER PARK DR	0	1	3	2	0	3	1.4
335	RIVER PARK DR	0	1	3	2	0	3	1.4
352	TWIN TOWER DR	0	1	3	2	0	3	1.4
370	KINENE CT	0	1	3	2	0	3	1.4
381	PIONEER DR	0	1	3	2	1	1	1.4
414	O'SHEA WAY	0	1	3	2	1	1	1.4
435	CONSTITUTION WAY	0	1	3	2	1	1	1.4
460	HILLMONTE DR	0	1	3	2	1	1	1.4
487	REDCLIFF DR	0	1	3	1	1	3	1.4
544	LOGAN ST	0	1	3	2	0	3	1.4
547	HENRY AVE	0	1	3	2	0	3	1.4
558	SUNRIVER LN	0	1	3	2	1	1	1.4
585	STRAUSS LN	0	1	3	2	1	1	1.4
589	CALLY CT	0	1	3	2	0	3	1.4
591	VISTA DEL RIO	0	1	3	2	0	3	1.4
605	HOPE LN	0	1	3	2	0	3	1.4
629	LAWRENCE RD	0	1	3	1	1	3	1.4
633	MERIDIAN DR	0	1	3	1	1	3	1.4
654	ORION WAY	0	1	3	1	1	3	1.4
673	WINDWOOD DR	0	3	3	1	1	1	1.4
686	ST CHARLES DR	0	1	3	1	1	3	1.4
697	VENTURE PKWY	0	1	3	1	1	3	1.4
706	YANA AVE	0	1	3	1	1	3	1.4
709	CARLETON ST	0	1	3	1	1	3	1.4
725	DAWNRIDGE DR	0	1	3	1	1	3	1.4
741	NIGHTBIRD WAY	0	1	3	2	0	3	1.4
743	BLAZINGWOOD DR	2	1	3	1	0	1	1.4

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
747	LAVENDER WAY	0	1	3	2	1	1	1.4
753	MARIGOLD WAY	0	1	3	2	1	1	1.4
774	PLACER ST	0	2	3	0	3	0	1.4
775	PLACER ST	0	2	3	0	3	0	1.4
776	PLACER ST	0	2	3	0	3	0	1.4
779	PLACER ST	0	2	3	0	3	0	1.4
782	ROSE AVE	0	1	3	1	1	3	1.4
783	EUREKA WAY	3	1	1	1	1	1	1.4
844	FARM HOUSE LN	0	3	3	1	1	1	1.4
859	PEREGRINE WAY	0	1	3	2	0	3	1.4
860	HERITAGETOWN DR	0	1	3	2	1	1	1.4
861	BELLETERRE DR	0	1	3	2	0	3	1.4
875	OLD LANTERN DR	0	1	3	2	0	3	1.4
942	WICKLOW ST	0	1	3	1	1	3	1.4
944	OCONNER AVE	0	1	3	1	1	3	1.4
950	WICKLOW ST	0	1	3	1	1	3	1.4
967	RUTGERS PL	0	1	3	1	1	3	1.4
974	DARTMOUTH DR	0	1	3	2	0	3	1.4
975	SIENA AVE	0	1	3	2	0	3	1.4
1041	SUNLIGHT CT	0	1	3	2	1	1	1.4
1074	HEMLOCK ST	0	1	3	1	1	3	1.4
1100	JAMES PL	0	2	3	2	1	0	1.4
1101	ARIZONA ST	0	2	3	2	1	0	1.4
1102	STARTHMORE DR	0	2	3	2	1	0	1.4
1103	KAYLA DR	0	1	3	2	1	1	1.4
1124	AUBURN DR	0	1	3	2	1	1	1.4
1132	STARLIGHT BLVD	0	1	3	2	0	3	1.4
1180	DENTON WAY	0	1	3	2	1	1	1.4
1184	WALNUT AVE	0	1	3	2	1	1	1.4
1194	PRESIDIO ST	0	1	3	1	1	3	1.4
1205	LARKSPUR LN	2	2	3	1	0	0	1.4
1206	LARKSPUR LN	2	2	3	1	0	0	1.4
1229	EGRET WAY	0	1	3	2	1	1	1.4
1233	RIVERCREST PKWY	0	1	3	2	1	1	1.4
1237	WOODACRE DR	0	1	3	2	1	1	1.4
1238	WOODACRE DR	0	1	3	2	1	1	1.4
1248	WILDER DR	0	1	3	2	1	1	1.4
1261	CHERYL DR	0	1	3	1	1	3	1.4
1288	TWIN VIEW BLVD	2	1	3	1	0	1	1.4
1294	CATERPILLAR RD	2	1	3	1	0	1	1.4
1310	AMIGO WAY	0	1	3	2	1	1	1.4
1346	CUMBERLAND DR	0	1	3	2	0	3	1.4
1347	CUMBERLAND DR	0	1	3	2	0	3	1.4
1348	CUMBERLAND DR	0	1	3	2	0	3	1.4
1416	LEONARD DR	0	1	3	1	1	3	1.4
1417	MERLE DR	0	2	3	2	1	0	1.4
1432	BARREL CT	0	3	3	1	1	1	1.4
1458	HEMLOCK ST	0	1	3	2	0	3	1.4
1478	CORTO ST	0	2	3	2	1	0	1.4
1486	EASTSIDE RD	2	1	3	1	0	1	1.4
1508	FLIGHT AVE	0	2	3	2	1	0	1.4
1516	MARK ST	0	3	3	1	1	1	1.4
1517	GEARY ST	0	3	3	1	1	1	1.4
1562	WOODACRE DR	0	1	3	2	1	1	1.4
1568	CHARLENE WAY	0	1	3	2	1	1	1.4
1579	PARSONS DR	0	1	3	2	1	1	1.4
1583	PARSONS DR	0	2	3	2	1	0	1.4
1585	SISKIYOU ST	0	1	3	2	0	3	1.4
1608	OAK ST	0	1	3	2	1	1	1.4
1658	LAUREL AVE	0	2	3	3	0	0	1.4
1702	CALIFORNIA ST	3	1	1	1	1	1	1.4
1808	VIGIL CT	0	3	3	1	0	3	1.4
1833	MOUNTAIN LAKES BLVD	2	1	3	0	0	3	1.4
1843	LELAND AVE	0	2	3	2	1	0	1.4
1883	HWY 44 EB OFF/R	3	1	1	1	0	3	1.4
1892	JUNE ST	0	1	3	2	0	3	1.4
1900	MINDER DR	0	1	3	1	1	3	1.4
1905	PEREGRINE WAY	0	1	3	2	1	1	1.4
1911	SAGEWAY DR	0	1	3	2	1	1	1.4
1912	SAGEWAY DR	0	1	3	2	1	1	1.4
1914	OAK MESA LN	0	1	3	2	1	1	1.4
1915	OAK MESA LN	0	1	3	2	1	1	1.4
1917	OAK MESA LN	0	2	3	2	1	0	1.4
1918	OAK MESA LN	0	2	3	2	1	0	1.4
1919	OAK MESA LN	0	1	3	2	1	1	1.4
1921	SOPHY PL	0	2	3	2	1	0	1.4
1922	DARSHA LN	0	2	3	2	1	0	1.4

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
1926	LEMA RD	0	1	3	2	0	3	1.4
1930	STERLING DR	0	2	3	2	1	0	1.4
2017	BELTLINE RD	2	1	3	0	0	3	1.4
2069	HANLAND CT	0	1	3	2	1	1	1.4
2075	BOULDER CREEK DR	0	0	3	1	3	0	1.4
2077	RHYOLITE DR	0	1	3	2	1	1	1.4
2114	CATERPILLAR RD	2	2	3	1	0	0	1.4
2149	MONTCLAIR DR	0	1	3	2	1	1	1.4
2150	AVERY WAY	0	2	3	2	1	0	1.4
2152	MONTCLAIR DR	0	1	3	2	1	1	1.4
2167	SHINING STAR WAY	0	1	3	2	1	1	1.4
2168	LA VILLA WAY	0	1	3	2	1	1	1.4
2185	SURREY DR	0	2	3	2	1	0	1.4
2248	DEL SOL PL	0	1	3	1	1	3	1.4
2348	GALAXY WAY	0	1	3	1	1	3	1.4
2353	OAK HAVEN CT	0	1	3	1	1	3	1.4
2392	OLD 44 DR	2	1	3	1	0	1	1.4
2417	AIRWAY DR	0	2	3	2	1	0	1.4
2422	AVIATION DR	0	3	3	1	1	1	1.4
2436	BILLINGS DR	0	1	3	2	1	1	1.4
2439	WOODBURY DR	0	1	3	2	1	1	1.4
2440	FOREST HILLS DR	0	1	3	2	1	1	1.4
2446	WOODBURY DR	0	1	3	2	1	1	1.4
2513	VIEWPOINT DR	0	1	3	2	0	3	1.4
2544	BRADFORD WAY	0	1	3	2	1	1	1.4
2551	KENCO AVE	0	1	3	1	1	3	1.4
2562	KERRY AVE	0	1	3	1	1	3	1.4
2572	OAK MESA LN	0	1	3	2	1	1	1.4
2576	LACEY LN	0	1	3	2	0	3	1.4
2586	EDGEWOOD DR	0	2	3	2	1	0	1.4
2600	NIGHTHAWK LN	0	1	3	2	1	1	1.4
2602	EDGEWOOD DR	0	2	3	2	1	0	1.4
2606	KINGSTON CT	0	2	3	2	1	0	1.4
2608	MAYWOOD LN	0	2	3	2	1	0	1.4
2609	FAYETTE LN	0	2	3	2	1	0	1.4
2620	ROLLINGVIEW DR	0	1	3	2	0	3	1.4
2629	COLLYER DR	0	1	3	1	1	3	1.4
2658	RIDGEWOOD RD	0	1	3	2	0	3	1.4
2665	HOLLOW LN	0	1	3	2	0	3	1.4
2669	LEXINGTON LN	0	1	3	2	0	3	1.4
2671	LEXINGTON LN	0	1	3	2	0	3	1.4
2723	TWIN VIEW BLVD	2	1	3	1	0	1	1.4
2732	ALICIA PKWY	0	0	3	3	1	0	1.4
2737	ESCADA CT	0	1	3	2	1	1	1.4
2758	EVEREST DR	0	1	3	2	0	3	1.4
2762	SODA SPRINGS CIR	0	1	3	1	1	3	1.4
2790	OLD 44 DR	2	1	3	1	0	1	1.4
2805	NORWICH CT	0	1	3	1	1	3	1.4
2824	EGRET CT	0	2	3	2	1	0	1.4
2838	HOMINY WAY	0	1	3	2	0	3	1.4
2849	SPRINGER DR	0	1	3	2	0	3	1.4
2873	THOMPSON LN	0	2	3	3	0	0	1.4
2891	SUNFLOWER DR	0	1	3	2	1	1	1.4
2894	SUNDAY CT	0	1	3	2	1	1	1.4
2895	SUNRIVER LN	0	1	3	2	1	1	1.4
2909	BUCKEYE TER	0	1	3	2	0	3	1.4
2945	CROSBY LN	0	1	3	2	1	1	1.4
2956	GRANTS PASS PL	0	2	3	3	0	0	1.4
2999	ALICIA PKWY	0	1	3	1	1	3	1.4
3008	RIVER RIDGE DR	0	1	3	2	0	3	1.4
3022	POLARIS WAY	0	1	3	1	1	3	1.4
3054	AMETHYST WAY	0	2	3	2	1	0	1.4
3057	HARLAN DR	0	1	3	2	1	1	1.4
3080	URANIUM CT	0	2	3	2	1	0	1.4
3086	LAKE REDDING DR	0	1	3	2	1	1	1.4
3089	SNOW LN	0	1	3	2	0	3	1.4
3181	MONTERRA LN	0	1	3	1	1	3	1.4
3184	ROESNER AVE	0	2	3	2	1	0	1.4
3185	LORRAINE DR	0	2	3	2	1	0	1.4
3187	ROESNER AVE	0	2	3	2	1	0	1.4
3205	TEMPLETON DR	0	1	3	1	1	3	1.4
3222	HENRY'S FORK DR	0	1	3	2	1	1	1.4
3223	RISING RIVER CT	0	2	3	2	1	0	1.4
3224	HENRY'S FORK DR	0	2	3	2	1	0	1.4
3247	HILLTOP DR	3	0	3	1	0	0	1.4
3249	COLLEGE VIEW DR	0	3	3	1	1	1	1.4
3269	DANBURY DR	0	1	3	2	0	3	1.4

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
3311	WESTERN OAK DR	0	2	3	2	1	0	1.4
3312	WESTERN OAK DR	0	2	3	2	1	0	1.4
3313	YELLOWSTONE DR	0	1	3	2	1	1	1.4
3326	FOREST HILLS DR	0	1	3	2	0	3	1.4
3343	TRUMPET DR	0	1	3	2	1	1	1.4
3345	VICTOR AVE	3	0	3	0	1	0	1.4
3363	ADIRONDACK DR	0	1	3	2	0	3	1.4
3391	HEATHER LN	0	1	3	1	1	3	1.4
3401	MARKWOOD DR	0	1	3	2	1	1	1.4
3406	BECHELLI LN	0	1	3	1	1	3	1.4
3408	BECHELLI LN	0	1	3	1	1	3	1.4
3473	LAZELLE CT	0	1	3	1	1	3	1.4
3474	MANCHESTER DR	0	1	3	1	1	3	1.4
3479	CANTERBURY DR	0	1	3	1	1	3	1.4
3492	JONQUIL WAY	0	1	3	1	1	3	1.4
3493	HAWN AVE	0	1	3	1	1	3	1.4
3507	GREEN ST	0	1	3	1	1	3	1.4
3509	BUNKER ST	0	1	3	1	1	3	1.4
3510	OXFORD RD	0	1	3	1	1	3	1.4
3524	EUREKA WAY	3	1	1	1	1	1	1.4
3529	SUNFLOWER DR	0	1	3	2	1	1	1.4
3531	LEISHA LN	0	1	3	2	1	1	1.4
3535	SUNRIVER LN	0	1	3	2	1	1	1.4
3537	SUNRIVER LN	0	1	3	2	1	1	1.4
3591	FIFTH ST	0	1	3	1	1	3	1.4
3600	SECOND ST	0	1	3	1	1	3	1.4
3601	LAYTON RD	0	1	3	1	1	3	1.4
3616	VEDA ST	0	1	3	2	0	3	1.4
3640	GRANGE ST	0	2	3	2	1	0	1.4
3641	GRANGE ST	0	2	3	2	1	0	1.4
3644	LANNING AVE	0	2	3	2	1	0	1.4
3648	AKARD AVE	0	2	3	2	1	0	1.4
3649	FELL ST	0	2	3	2	1	0	1.4
3652	LANNING AVE	0	2	3	2	1	0	1.4
3653	FELL ST	0	2	3	2	1	0	1.4
3657	FAVRETTO AVE	0	1	3	2	1	1	1.4
3660	LANNING AVE	0	1	3	2	1	1	1.4
3661	LANNING AVE	0	2	3	2	1	0	1.4
3682	RIDGE DR	0	1	3	2	1	1	1.4
3701	NORTHRIDGE DR	0	1	3	1	1	3	1.4
3714	REDBUD DR	0	2	3	2	1	0	1.4
3742	RIVERSIDE DR	0	3	3	1	1	1	1.4
3774	RAILROAD AVE	0	3	3	1	1	1	1.4
3795	GOLD ST	0	1	3	1	1	3	1.4
3807	ALMADEN DR	0	1	3	1	1	3	1.4
3827	LAUREL AVE	0	1	3	2	0	3	1.4
3852	RIVIERA DR	0	1	3	1	1	3	1.4
3853	RIVIERA DR	0	1	3	1	1	3	1.4
3854	ENCHANTED WAY	0	1	3	1	1	3	1.4
3864	CONSTITUTION WAY	0	2	3	2	1	0	1.4
3917	FERRINGTON CT	0	2	3	2	1	0	1.4
3920	SPINNAKER DR	0	1	3	2	1	1	1.4
3931	ALTA SAGA DR	0	1	3	1	1	3	1.4
3945	PEARL ST	0	1	3	2	1	1	1.4
3948	NANCY CT	0	1	3	2	1	1	1.4
3954	IRONWOOD LN	0	1	3	2	0	3	1.4
3955	TRAILVIEW CT	0	1	3	2	0	3	1.4
3997	EL VISTA ST	0	1	3	1	1	3	1.4
4014	EDWARDO DR	0	3	3	1	1	1	1.4
4017	CALLE SECA CT	0	3	3	1	1	1	1.4
4019	LA MADRE CT	0	3	3	1	1	1	1.4
4025	TEMPLETON DR	0	1	3	1	1	3	1.4
4051	EDGEWOOD DR	0	1	3	1	1	3	1.4
4053	GROUSE DR	0	1	3	2	0	3	1.4
4055	GROUSE DR	0	1	3	2	0	3	1.4
4056	MALLARD ST	0	1	3	2	0	3	1.4
4099	MISSION DE ORO DR	0	1	3	2	1	1	1.4
4112	LEAR WAY	0	1	3	1	1	3	1.4
4154	CHRISTIAN AVE	0	1	3	1	1	3	1.4
4156	ROSEBUD LN	0	1	3	1	1	3	1.4
4159	WILSON AVE	0	1	3	1	1	3	1.4
4164	BELLADONNA ST	0	1	3	1	1	3	1.4
4165	BELLADONNA ST	0	1	3	1	1	3	1.4
4170	HAWN AVE	0	2	3	2	1	0	1.4
4182	YANA AVE	0	1	3	1	1	3	1.4
4185	LIVE OAK LN	0	1	3	1	1	3	1.4
4191	SUMMERBREEZE PL	0	1	3	1	1	3	1.4

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
4198	BLUE BELL DR	0	1	3	2	0	3	1.4
4201	BLUE BELL DR	0	1	3	2	0	3	1.4
4203	SHADOW BROOK LN	0	1	3	2	0	3	1.4
4206	CRESCENT MOON CT	0	1	3	2	0	3	1.4
4207	TETON DR	0	1	3	2	0	3	1.4
4241	TRINITY ST	2	2	3	1	0	0	1.4
4244	TRINITY ST	2	2	3	1	0	0	1.4
4253	BUTTE ST	3	0	3	0	1	0	1.4
4262	EAST ST	2	1	3	0	1	1	1.4
4286	SOUTH ST	2	2	3	1	0	0	1.4
4320	SACRAMENTO ST	0	2	3	0	3	0	1.4
4321	SACRAMENTO ST	0	2	3	0	3	0	1.4
4322	SACRAMENTO ST	0	2	3	0	3	0	1.4
4333	PLACER ST	0	2	3	0	3	0	1.4
4335	CONTINENTAL ST	0	1	3	0	3	1	1.4
4374	EUREKA WAY	3	1	1	1	1	1	1.4
4378	CALIFORNIA ST	2	1	3	1	0	1	1.4
4398	MARKET ST	3	1	1	1	0	3	1.4
4425	WEST ST	0	3	3	1	1	1	1.4
4442	SHASTA ST	0	1	3	2	1	1	1.4
4455	NORTH ST	0	2	3	2	1	0	1.4
4457	OLIVE AVE	0	1	3	2	1	1	1.4
4458	OLIVE AVE	0	1	3	2	1	1	1.4
4459	NORTH ST	0	2	3	2	1	0	1.4
4494	CHESTNUT ST	0	1	3	1	1	3	1.4
4504	PLACER ST	3	0	3	1	0	0	1.4
4505	PLACER ST	3	0	3	1	0	0	1.4
4516	OLD EUREKA WAY	0	1	3	2	1	1	1.4
4518	WALNUT AVE	0	2	3	2	1	0	1.4
4519	OLD EUREKA WAY	0	1	3	2	1	1	1.4
4536	COTTONWOOD AVE	0	1	3	2	1	1	1.4
4547	STRATFORD AVE	0	1	3	2	1	1	1.4
4553	INDUSTRIAL ST	2	2	3	1	0	0	1.4
4584	TERRACE DR	0	1	3	1	1	3	1.4
4618	RAILROAD AVE	0	1	3	2	0	3	1.4
4620	DELLWOOD DR	0	1	3	2	1	1	1.4
4625	JOLIE WAY	0	1	3	2	0	3	1.4
4626	TRUMPET DR	0	1	3	2	1	1	1.4
4632	MISTLETOE LN	0	1	3	2	1	1	1.4
4632	MISTLETOE LN	0	1	3	2	1	1	1.4
4635	DEERFIELD AVE	0	1	3	1	1	3	1.4
4653	RESERVOIR LN	0	1	3	1	1	3	1.4
4661	BRANSTETTER LN	2	2	3	0	1	0	1.4
4677	BECHELLI LN	0	1	3	1	1	3	1.4
4680	NELSON DR	0	2	3	2	1	0	1.4
4704	BRECKENWOOD DR	0	1	3	1	1	3	1.4
4724	ROSEWOOD DR	0	1	3	2	0	3	1.4
4728	BOTTLEBRUSH DR	0	2	3	3	0	0	1.4
4732	ALAMINE DR	0	1	3	2	1	1	1.4
4768	BIG HORN DR	0	1	3	2	1	1	1.4
4770	YELLOWSTONE DR	0	2	3	2	1	0	1.4
4774	SMITH RIVER DR	0	2	3	2	1	0	1.4
4776	BLUE CREEK DR	0	1	3	2	1	1	1.4
4777	WESTERN OAK DR	0	2	3	2	1	0	1.4
4817	GORDON LN	0	2	3	2	1	0	1.4
4827	TWIN TOWER DR	0	1	3	2	0	3	1.4
4828	COLLYER DR	0	1	3	2	0	3	1.4
4835	COUNTRY OAK DR	0	3	3	1	1	1	1.4
4860	WALES DR	0	1	3	2	0	3	1.4
4860	WALES DR	0	1	3	2	0	3	1.4
4870	PARAMOUNT WAY	0	1	3	2	0	3	1.4
4873	PARAMOUNT WAY	0	1	3	2	1	1	1.4
4879	N BONNYVIEW RD	0	1	3	2	1	1	1.4
4898	BOULDER DR	0	1	3	2	1	1	1.4
4954	BRANSTETTER CIR	0	1	3	1	1	3	1.4
5043	AKARD AVE	0	2	3	2	1	0	1.4
5046	AKARD AVE	0	2	3	2	1	0	1.4
5048	STATE ST	0	1	3	2	1	1	1.4
5050	LANNING AVE	0	2	3	2	1	0	1.4
5051	LANNING AVE	0	2	3	2	1	0	1.4
5087	MARTINIQUE CIR	0	1	3	2	1	1	1.4
5092	MONTCREST DR	0	1	3	2	0	3	1.4
5096	ATRIUM WAY	0	1	3	2	1	1	1.4
5098	SALMONBERRY DR	0	1	3	2	1	1	1.4
5099	SALMONBERRY DR	0	1	3	2	1	1	1.4
5100	PURPLE WAY	0	1	3	2	1	1	1.4
5102	MARIGOLD WAY	0	1	3	2	1	1	1.4

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
5107	OLD 44 DR	0	3	3	1	0	3	1.4
5108	INNSBRUCK DR	0	3	3	1	0	3	1.4
5109	OLD 44 DR	0	3	3	1	0	3	1.4
5117	VOLTAIRE WAY	0	2	3	2	1	0	1.4
5162	GRANGE ST	0	2	3	2	1	0	1.4
5163	GRANGE ST	0	2	3	2	1	0	1.4
5164	LELAND AVE	0	1	3	2	1	1	1.4
5165	KITE LN	0	2	3	2	1	0	1.4
5167	KITE LN	0	2	3	2	1	0	1.4
5178	FELL ST	0	2	3	2	1	0	1.4
5179	LELAND AVE	0	2	3	2	1	0	1.4
5180	LINWOOD AVE	0	2	3	2	1	0	1.4
5181	LELAND CT	0	2	3	2	1	0	1.4
5185	NANTUCKET DR	0	1	3	1	1	3	1.4
5213	OXFORD RD	0	1	3	1	1	3	1.4
5244	CARTER WAY	0	1	3	1	1	3	1.4
5272	RANCHETTE DR	0	1	3	1	1	3	1.4
5273	COPPER DR	0	1	3	1	1	3	1.4
5274	REDBANK RD	0	1	3	1	1	3	1.4
5278	REDBANK RD	0	1	3	1	1	3	1.4
5355	TARMAC RD	0	3	3	1	0	3	1.4
15102	MOUNTAIN LAKES BLVD	2	1	3	1	0	1	1.4
1155	EUREKA WAY	3	2	1	1	1	0	1.4
1218	LOMA VISTA DR	2	0	3	1	1	0	1.4
1218	LOMA VISTA DR	2	0	3	1	1	0	1.4
1359	BRANSTETTER LN	2	0	3	1	1	0	1.4
1718	EUREKA WAY	3	2	1	1	1	0	1.4
1726	EUREKA WAY	3	2	1	1	1	0	1.4
1963	BENTON DR	2	0	3	1	1	0	1.4
2774	TETON DR	0	0	3	2	2	0	1.4
3525	MAGNOLIA AVE	2	0	3	1	1	0	1.4
3578	EUREKA WAY	3	2	1	1	1	0	1.4
3750	MAGNOLIA AVE	2	0	3	1	1	0	1.4
4235	PINE ST	3	2	1	1	1	0	1.4
4307	LOCUST ST	2	0	3	1	1	0	1.4
4360	TEHAMA ST	3	2	1	1	1	0	1.4
4366	TEHAMA ST	3	2	1	1	1	0	1.4
4367	SHASTA ST	3	2	1	1	1	0	1.4
4438	MAGNOLIA AVE	2	0	3	1	1	0	1.4
4477	SHASTA ST	2	0	3	1	1	0	1.4
4987	EUREKA WAY	3	2	1	1	1	0	1.4
5300	ATHENS AVE	0	2	3	1	2	0	1.4
50	MISSION DE ORO DR	0	1	3	3	0	0	1.3
128	PLATINUM WAY	0	1	3	1	2	0	1.3
147	GRANTS PASS PL	0	1	3	3	0	0	1.3
194	FANTENELL DR	0	0	3	3	0	1	1.3
209	STETSON WAY	0	2	3	2	0	1	1.3
213	JUAREZ LN	0	2	3	2	0	1	1.3
351	TWIN TOWER DR	0	2	3	2	0	1	1.3
354	LA COSTA CT	0	2	3	2	0	1	1.3
415	ROLLINGVIEW DR	0	1	3	3	0	0	1.3
550	STOKES CT	0	2	3	2	0	1	1.3
740	HOWARD DR	0	2	3	2	0	1	1.3
1343	MOUNTAIN GLEN CT	0	2	3	2	0	1	1.3
1370	AUBURN DR	0	2	3	2	0	1	1.3
1664	LAUREL AVE	0	1	3	3	0	0	1.3
1875	YUBA ST	0	1	3	0	3	0	1.3
1876	YUBA ST	0	1	3	0	3	0	1.3
2030	MOUNTAIN LAKES BLVD	2	2	3	0	0	1	1.3
2084	BOULDER CREEK DR	0	1	3	1	2	0	1.3
2408	MUNICIPAL BLVD	0	2	3	2	0	1	1.3
2409	MUNI BLVD	0	2	3	2	0	1	1.3
2663	RICHSAN CT	0	2	3	2	0	1	1.3
2780	MISTY GLEN DR	0	2	3	2	0	1	1.3
2781	MISTY GLEN DR	0	2	3	2	0	1	1.3
2794	SUNGLOW DR	0	2	3	2	0	1	1.3
2802	CRESCENT MOON CT	0	2	3	2	0	1	1.3
2804	CRESCENT MOON CT	0	2	3	2	0	1	1.3
2828	MILL VALLEY PKWY	0	0	3	3	0	1	1.3
2880	PLEASANT ST	0	2	3	2	0	1	1.3
2954	MONTCREST DR	0	1	3	3	0	0	1.3
2955	GRANTS PASS PL	0	1	3	3	0	0	1.3
3053	HARLAN DR	0	2	3	2	0	1	1.3
3072	LAKE REDDING DR	0	1	3	1	2	0	1.3
3365	ADIRONDACK DR	0	2	3	2	0	1	1.3
3558	YUBA ST	0	1	3	0	3	0	1.3
3628	ELMWOOD ST	0	2	3	2	0	1	1.3

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
3728	SQUAW CREEK CT	0	2	3	2	0	1	1.3
3744	MIRAMAR WAY	0	2	3	2	0	1	1.3
3821	EUGENIA AVE	0	2	3	2	0	1	1.3
3862	HOPE LN	0	1	3	3	0	0	1.3
4096	MILL VALLEY PKWY	0	0	3	3	0	1	1.3
4097	STINSON LOOP	0	0	3	3	0	1	1.3
4097	STINSON LOOP	0	0	3	3	0	1	1.3
4120	BELVEDERE DR	0	0	3	3	0	1	1.3
4122	MILL VALLEY PKWY	0	1	3	3	0	0	1.3
4124	REDDINGTON DR	0	1	3	3	0	0	1.3
4193	WARBLER CT	0	2	3	2	0	1	1.3
4340	YUBA ST	0	1	3	0	3	0	1.3
4599	SONOMA ST	0	1	3	1	2	0	1.3
4664	BELLAGIO TER	0	0	3	3	0	1	1.3
4869	POSEY LN	0	2	3	2	0	1	1.3
4938	MEADOWBROOK DR	0	1	3	1	2	0	1.3
1	MARAGLIA ST	0	2	3	1	1	1	1.3
2	MARAGLIA ST	0	2	3	1	1	1	1.3
3	DOWNARD LN	0	2	3	1	1	1	1.3
11	LEILA AVE	0	2	3	1	1	1	1.3
14	LOWDEN LN	0	0	3	1	1	3	1.3
17	ALEXANDER DR	0	2	3	1	1	1	1.3
18	ALEXANDER DR	0	2	3	1	1	1	1.3
26	HARROW CT	0	2	3	1	1	1	1.3
27	HARPOLE RD	0	2	3	1	1	1	1.3
31	MARLENE AVE	0	2	3	1	1	1	1.3
35	BRIDGER DR	0	2	3	1	1	1	1.3
53	JULIE WAY	0	2	3	1	1	1	1.3
56	ADAMS LN	0	2	3	1	1	1	1.3
67	ALROSE LN	0	1	3	2	1	0	1.3
71	LOFTY OAK DR	0	1	3	2	1	0	1.3
75	MIGHTY OAK LN	0	1	3	2	1	0	1.3
97	INDIAN COUNTRY DR	0	0	1	3	1	3	1.3
104	CARMEL DR	0	0	3	2	1	1	1.3
118	SILVER LACE LN	0	2	3	1	0	3	1.3
126	WOODBURY CT	0	1	3	2	1	0	1.3
127	WOODBURY DR	0	1	3	2	1	0	1.3
167	TARMAC RD	0	0	3	2	0	3	1.3
196	DEVERE DR	0	2	3	1	1	1	1.3
222	COLLEGE VIEW DR	0	0	3	2	0	3	1.3
232	CIRRUS ST	0	2	3	1	1	1	1.3
235	EL VERANO ST	0	2	3	1	1	1	1.3
239	DANDELION DR	0	2	3	1	1	1	1.3
243	FARM HOUSE LN	0	2	3	1	1	1	1.3
244	PIONEER LN	0	2	3	1	1	1	1.3
248	WILLOWBRAE AVE	0	3	3	1	1	0	1.3
284	BECHELLI LN	0	0	3	1	1	3	1.3
298	COGGINS ST	0	1	3	2	1	0	1.3
299	ALTOONA WAY	0	1	3	2	1	0	1.3
306	SAN MARTIN PL	0	1	3	2	1	0	1.3
316	LOMA ST	0	1	3	2	1	0	1.3
320	SANTA FE AVE	0	2	3	1	1	1	1.3
339	SPIRE POINT DR	0	0	3	2	0	3	1.3
345	GENEVIEVE RD	0	2	3	1	1	1	1.3
399	BLUE HORIZON DR	0	2	3	1	1	1	1.3
400	SAFFRON WAY	0	2	3	1	1	1	1.3
413	KATRINA WAY	0	1	3	2	1	0	1.3
467	EASTSIDE RD	0	2	3	0	1	3	1.3
479	MISSION DE ORO DR	0	0	3	2	0	3	1.3
486	HEMSTED DR	0	0	3	1	1	3	1.3
493	ROSEMARY AVE	0	2	3	1	1	1	1.3
501	MERIDIAN DR	0	2	3	1	1	1	1.3
506	SHIRLEY LN	0	2	3	1	1	1	1.3
515	OLD 44 DR	2	0	3	1	0	1	1.3
520	TARMAC RD	0	2	3	1	0	3	1.3
539	OAK RIDGE DR	0	0	3	1	1	3	1.3
555	SUMMIT DR	0	0	3	2	1	1	1.3
557	SUMMIT DR	0	0	3	2	1	1	1.3
562	SCENIC DR	0	0	3	1	1	3	1.3
572	SANTA CRUZ DR	0	1	3	2	1	0	1.3
572	SANTA CRUZ DR	0	1	3	2	1	0	1.3
592	VISTA DEL RIO	0	1	3	2	1	0	1.3
606	GOLD HILLS DR	0	0	3	2	1	1	1.3
609	WAVERLY AVE	0	1	3	2	1	0	1.3
623	LEDELL DR	0	1	3	2	1	0	1.3
624	ROESNER AVE	0	2	3	1	1	1	1.3
630	MADEWOOD LN	0	2	3	1	1	1	1.3

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
636	ADAMS LN	0	3	3	1	1	0	1.3
639	GALAXY WAY	0	2	3	1	1	1	1.3
640	BRIGHTWOOD DR	0	2	3	1	1	1	1.3
642	SUNWOOD DR	0	2	3	1	1	1	1.3
651	SILVERFIELD LOOP	0	2	3	1	1	1	1.3
672	WINDWOOD DR	0	2	3	1	1	1	1.3
676	SARATOGA DR	0	2	3	1	1	1	1.3
679	WESTERN OAK DR	0	2	3	1	1	1	1.3
691	TEMPLETON DR	0	2	3	1	1	1	1.3
696	VENTURE PKWY	0	2	3	0	1	3	1.3
739	SPICEWOOD DR	0	0	3	2	1	1	1.3
742	HOWARD DR	2	1	3	1	0	0	1.3
749	MARIGOLD WAY	0	1	3	2	1	0	1.3
751	ATRIUM WAY	0	1	3	2	1	0	1.3
752	TRUMPET DR	0	1	3	2	1	0	1.3
847	MILL POND LN	0	2	3	1	1	1	1.3
848	WILLOW RD	0	2	3	1	1	1	1.3
866	ARIZONA ST	0	1	3	2	1	0	1.3
929	KINVARRA WAY	0	0	3	1	1	3	1.3
960	MARY LAKE DR	0	2	3	1	0	3	1.3
1032	EL CAPITAN DR	0	2	3	1	1	1	1.3
1042	SUNBIRD CT	0	1	3	2	1	0	1.3
1059	HALLMARK DR	0	1	3	2	1	0	1.3
1066	CRIMSONWOOD DR	0	2	3	1	1	1	1.3
1104	ARIZONA ST	0	1	3	2	1	0	1.3
1107	EL PORTAL DR	0	2	3	1	1	1	1.3
1116	FRANCES DR	0	2	3	1	1	1	1.3
1135	WHISKEYTOWN CT	0	1	3	2	1	0	1.3
1147	LAS ANIMAS DR	0	1	3	2	1	0	1.3
1158	W COURT ALLEY	0	2	3	1	1	1	1.3
1210	LARKSPUR LN	0	2	3	1	0	3	1.3
1214	SUZANNE WAY	0	2	3	1	1	1	1.3
1215	JOAQUIN AVE	0	2	3	1	1	1	1.3
1216	JOAQUIN AVE	0	2	3	1	1	1	1.3
1217	EL PORTAL DR	0	2	3	1	1	1	1.3
1221	TRAVERSE ST	0	2	3	1	1	1	1.3
1223	JULIE WAY	0	2	3	1	1	1	1.3
1227	PASATIEMPO CT	0	2	3	1	1	1	1.3
1228	WOODACRE DR	0	2	3	1	1	1	1.3
1230	LONG DRIVE CT	0	2	3	1	1	1	1.3
1231	RIVERCREST PKWY	0	1	3	2	1	0	1.3
1242	INDIANWOOD DR	0	2	3	1	0	3	1.3
1274	KERRYJEN CT	0	2	3	1	1	1	1.3
1275	RICARDO AVE	0	2	3	1	1	1	1.3
1276	PANORAMA DR	0	2	3	1	0	3	1.3
1289	TWIN VIEW BLVD	2	0	3	1	0	1	1.3
1304	ALTA SAGA DR	0	2	3	1	1	1	1.3
1305	ALTA SAGA DR	0	2	3	1	1	1	1.3
1319	BRANSTETTER LN	2	0	3	0	1	1	1.3
1324	PASO DR	0	2	3	1	1	1	1.3
1375	FRANCES DR	0	2	3	1	1	1	1.3
1377	FRANCES DR	0	2	3	1	1	1	1.3
1418	LEONARD DR	0	1	3	2	1	0	1.3
1425	VANDIVER LN	0	2	3	1	1	1	1.3
1431	BARREL CT	0	3	3	1	1	0	1.3
1471	SACRAMENTO DR	0	2	3	1	0	3	1.3
1473	SACRAMENTO DR	0	2	3	1	0	3	1.3
1484	BRANSTETTER LN	2	1	3	1	0	0	1.3
1486	EASTSIDE RD	2	1	3	1	0	0	1.3
1487	EASTSIDE RD	2	1	3	1	0	0	1.3
1511	GEARY ST	0	2	3	1	1	1	1.3
1512	S MARKET ST	3	1	1	1	1	0	1.3
1513	MARK ST	0	2	3	1	1	1	1.3
1550	CHERYL DR	0	2	3	1	1	1	1.3
1554	RAFAEL ST	0	2	3	1	1	1	1.3
1564	TRAVERSE ST	0	2	3	1	1	1	1.3
1565	GARY CT	0	2	3	1	1	1	1.3
1566	GARY CT	0	2	3	1	1	1	1.3
1576	LOUSTALOT WAY	0	2	3	1	1	1	1.3
1582	PARSONS DR	0	1	3	2	1	0	1.3
1590	WASATCH DR	0	2	3	1	0	3	1.3
1604	PUEBLO CT	0	1	3	2	1	0	1.3
1605	FOOTHILL BLVD	0	0	3	2	1	1	1.3
1607	FOOTHILL BLVD	0	0	3	2	1	1	1.3
1613	OAK ST	0	1	3	2	1	0	1.3
1645	MIDDLE CREEK RD	0	0	3	1	2	1	1.3
1645	MIDDLE CREEK RD	0	0	3	1	2	1	1.3

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
1704	CALIFORNIA ST	3	1	1	1	1	0	1.3
1755	SANTA ROSA WAY	0	2	3	1	0	3	1.3
1800	CALEXICO DR	0	2	3	1	0	3	1.3
1835	S MARKET ST	3	0	1	1	1	1	1.3
1841	GRAPE AVE	0	2	3	1	1	1	1.3
1850	S MARKET ST	3	0	1	1	1	1	1.3
1895	GROVE ST	0	2	3	1	1	1	1.3
1903	SOUTH RIDGE DR	0	0	3	2	1	1	1.3
1920	SAGEWAY DR	0	1	3	2	1	0	1.3
1924	KATHLEEN WAY	0	1	3	2	1	0	1.3
1927	CARLA CIR	0	1	3	2	1	0	1.3
1944	HILLTOP DR	0	2	3	1	0	3	1.3
2019	EAGLE NEST RD	0	2	3	1	0	3	1.3
2032	ZACHI WAY	0	2	3	1	0	3	1.3
2070	ALAMINE DR	0	0	3	2	1	1	1.3
2105	GRAND AVE	0	2	3	1	0	3	1.3
2111	RIDGE RD	0	2	3	1	0	3	1.3
2134	COLLYER DR	0	2	3	1	0	3	1.3
2154	SHADOW GLEN DR	0	2	3	1	1	1	1.3
2157	BEAUMONT DR	0	2	3	1	1	1	1.3
2159	AIRSTRIP RD	0	2	3	1	0	3	1.3
2166	CRISPIN WAY	0	1	3	2	1	0	1.3
2181	DAPPLE GRAY DR	0	0	3	2	1	1	1.3
2182	SINGLE TREE LN	0	1	3	2	1	0	1.3
2183	SURREY DR	0	1	3	2	1	0	1.3
2195	ADAMS LN	0	2	3	1	1	1	1.3
2199	CAMINO CT	0	2	3	1	1	1	1.3
2233	RUTHIE LN	0	2	3	1	1	1	1.3
2236	LINDA LN	0	2	3	1	1	1	1.3
2249	LE BRUN LN	0	2	3	1	1	1	1.3
2257	CANTERBURY DR	0	2	3	1	1	1	1.3
2269	AUGUSTINE WAY	0	2	3	1	1	1	1.3
2284	DANDELION DR	0	2	3	1	1	1	1.3
2285	BUTTERCUP LN	0	2	3	1	1	1	1.3
2289	EL VISTA ST	0	3	3	1	1	0	1.3
2293	ALEXIS WAY	0	2	3	1	1	1	1.3
2309	MARTIAN WAY	0	2	3	1	1	1	1.3
2342	NICOLET LN	0	2	3	1	1	1	1.3
2351	CHERRYWOOD DR	0	3	3	1	1	0	1.3
2356	SUTTERWOOD DR	0	2	3	1	1	1	1.3
2362	CIRRUS ST	0	2	3	1	1	1	1.3
2363	GALAXY WAY	0	2	3	1	1	1	1.3
2367	DEIMOS CT	0	2	3	1	1	1	1.3
2368	PHOBOS CT	0	2	3	1	1	1	1.3
2371	WINTERWOOD CT	0	2	3	1	1	1	1.3
2379	MARLENE AVE	0	2	3	1	1	1	1.3
2399	SUZETTE AVE	0	2	3	1	1	1	1.3
2400	BRIDGER DR	0	2	3	1	1	1	1.3
2425	NORDONA LN	0	2	3	1	1	1	1.3
2429	TIFFANY LN	0	3	3	1	1	0	1.3
2430	EASTBROOK DR	0	2	3	1	1	1	1.3
2433	CAPRICORN WAY	0	2	3	1	1	1	1.3
2434	LEONARD ST	0	3	3	1	1	0	1.3
2441	FOREST HILLS CT	0	1	3	2	1	0	1.3
2476	BEAUMONT DR	0	2	3	1	1	1	1.3
2492	LARKSPUR LN	0	2	3	1	1	1	1.3
2498	FAIRWAY AVE	0	2	3	0	1	3	1.3
2594	EDGEWOOD DR	0	1	3	2	1	0	1.3
2688	HEMINGWAY ST	0	2	3	1	0	3	1.3
2727	HOPE LN	0	1	3	2	1	0	1.3
2729	HOPE LN	0	2	3	1	0	3	1.3
2734	ALICIA PKWY	0	1	3	2	1	0	1.3
2734	ALICIA PKWY	0	1	3	2	1	0	1.3
2744	LA QUINTA CT	0	1	3	2	1	0	1.3
2755	ORO ST	0	0	3	1	1	3	1.3
2769	EASTBROOK DR	0	2	3	1	1	1	1.3
2783	SUNDIAL BRIDGE DR	0	2	3	1	0	3	1.3
2798	MONTANA SKY DR	0	2	3	1	1	1	1.3
2826	PIKE CT	0	1	3	2	1	0	1.3
2827	TAMARACK DR	0	2	3	1	0	3	1.3
2884	HIGHLAND AVE	0	0	3	2	1	1	1.3
2892	SUNKIST CT	0	1	3	2	1	0	1.3
2896	SUNRIVER LN	0	1	3	2	1	0	1.3
2903	ROYAL OAKS DR	0	0	3	1	1	3	1.3
2918	NORTHPOINT DR	2	0	3	1	0	1	1.3
3000	TIERRA HEIGHTS RD	0	0	3	1	1	3	1.3
3001	TIERRA HEIGHTS RD	0	0	3	1	1	3	1.3

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
3028	CAPRICORN WAY	0	3	3	1	1	0	1.3
3029	GALAXY WAY	0	3	3	1	1	0	1.3
3037	GALAXY WAY	0	2	3	1	1	1	1.3
3065	TURQUOISE CT	0	0	3	2	1	1	1.3
3065	TURQUOISE CT	0	0	3	2	1	1	1.3
3081	AQUAMARINE WAY	0	1	3	2	1	0	1.3
3088	SNOW LN	0	0	3	2	0	3	1.3
3108	LYONS RD	0	0	3	1	1	3	1.3
3115	HIATT DR	0	2	3	0	1	3	1.3
3125	CASTLEWOOD DR	0	2	3	1	1	1	1.3
3126	CASTLEWOOD DR	0	2	3	1	1	1	1.3
3129	NEWBURY LN	0	3	3	1	1	0	1.3
3131	MEADOW OAK WAY	0	2	3	1	1	1	1.3
3132	MEADOW OAK WAY	0	2	3	1	1	1	1.3
3133	CLOVERWAY DR	0	2	3	1	1	1	1.3
3183	LOMA VISTA DR	0	2	3	1	1	1	1.3
3188	COLLEGE VIEW DR	0	0	3	2	0	3	1.3
3188	COLLEGE VIEW DR	0	0	3	2	0	3	1.3
3208	PACIFIC AVE	0	2	3	1	1	1	1.3
3209	PACIFIC AVE	0	2	3	1	1	1	1.3
3225	HENRY'S FORK DR	0	1	3	2	1	0	1.3
3237	RIVER BEND RD	0	0	3	2	0	3	1.3
3239	PALISADES AVE	0	0	3	2	0	3	1.3
3239	PALISADES AVE	0	0	3	2	0	3	1.3
3242	VIEW AVE	0	0	3	2	0	3	1.3
3246	VIEW AVE	0	0	3	2	0	3	1.3
3251	ROSE LN	0	2	3	1	1	1	1.3
3352	QUEENS WAY	0	2	3	1	0	3	1.3
3374	COURT ST	0	1	3	2	1	0	1.3
3382	ATRIUM WAY	0	1	3	2	1	0	1.3
3387	TARMAC RD	0	1	3	2	1	0	1.3
3392	ALFREDA WAY	0	0	3	1	1	3	1.3
3407	CRESTMONT DR	0	2	3	1	1	1	1.3
3449	FOREST GLEN CT	0	3	3	1	1	0	1.3
3450	CANBY RD	0	2	3	1	1	1	1.3
3453	HAWTHORNE AVE	0	2	3	1	1	1	1.3
3458	OAKDALE LN	0	2	3	1	1	1	1.3
3459	OAKDALE LN	0	2	3	1	1	1	1.3
3461	OAKDALE CT	0	2	3	1	1	1	1.3
3462	YALE CT	0	2	3	1	1	1	1.3
3466	OXFORD RD	0	2	3	1	1	1	1.3
3468	OXFORD RD	0	2	3	1	1	1	1.3
3482	MERCURY DR	0	2	3	1	1	1	1.3
3491	MERCURY DR	0	2	3	1	1	1	1.3
3500	ALFREDA WAY	0	2	3	1	1	1	1.3
3522	EUREKA WAY	3	0	1	1	1	1	1.3
3532	MARIO AVE	0	1	3	2	1	0	1.3
3533	MARIO AVE	0	0	3	2	1	1	1.3
3536	FERRERO WAY	0	0	3	2	1	1	1.3
3590	SAGINAW ST	0	2	3	1	1	1	1.3
3595	C ST	0	2	3	1	1	1	1.3
3597	FOURTH ST	0	0	3	1	1	3	1.3
3611	SHARON AVE	0	1	3	2	1	0	1.3
3613	SHARON AVE	0	1	3	2	1	0	1.3
3656	FELL ST	0	1	3	2	1	0	1.3
3663	LANNING AVE	0	1	3	2	1	0	1.3
3667	ANGELO AVE	0	2	3	1	1	1	1.3
3681	RIDGE DR	0	0	3	2	1	1	1.3
3695	ALMOND AVE	0	0	3	2	1	1	1.3
3696	ALMOND AVE	0	0	3	2	1	1	1.3
3698	ALMOND AVE	0	1	3	2	1	0	1.3
3756	OREGON ST	0	2	3	1	1	1	1.3
3767	OREGON ST	0	2	3	1	1	1	1.3
3773	SACRAMENTO ST	0	3	3	1	1	0	1.3
3777	RAILROAD AVE	0	3	3	1	1	0	1.3
3778	TERRACE ST	0	0	3	1	1	3	1.3
3824	WEST ST	0	0	3	2	1	1	1.3
3847	RHINESTONE WAY	0	2	3	1	0	3	1.3
3871	LARAMIE ST	0	2	3	1	1	1	1.3
3875	DENALI ST	0	2	3	1	1	1	1.3
3877	SUZETTE AVE	0	2	3	1	1	1	1.3
3889	EASTSIDE RD	0	1	3	2	1	0	1.3
3890	EASTSIDE RD	0	2	3	1	1	1	1.3
3896	INDIANWOOD DR	0	2	3	1	1	1	1.3
3921	KEEL CT	0	1	3	2	1	0	1.3
3925	YACHT CT	0	1	3	2	1	0	1.3
3930	ALTA SAGA DR	0	2	3	1	1	1	1.3

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
3932	EL VERANO ST	0	2	3	1	1	1	1.3
3934	FIDDLENECK DR	0	2	3	1	1	1	1.3
3943	ROSEMARY LN	0	0	3	2	1	1	1.3
3947	BARBARA RD	0	1	3	2	1	0	1.3
3967	CAPELLA ST	0	2	3	1	1	1	1.3
3990	FREDA LN	0	2	3	1	1	1	1.3
3995	EL VISTA ST	0	3	3	1	1	0	1.3
3999	EL VISTA ST	0	2	3	1	1	1	1.3
4000	EL VISTA ST	0	2	3	1	1	1	1.3
4002	EL VISTA ST	0	2	3	1	1	1	1.3
4011	SARATOGA DR	0	2	3	1	1	1	1.3
4016	ALTA CAMINO DR	0	2	3	1	1	1	1.3
4018	ALTA CAMINO DR	0	2	3	1	1	1	1.3
4020	ALTA CAMINO DR	0	2	3	1	1	1	1.3
4030	EL VERANO ST	0	2	3	1	1	1	1.3
4039	WESTERN OAK DR	0	2	3	1	1	1	1.3
4065	BIRCHWOOD CIR	0	2	3	1	1	1	1.3
4066	BIRCHWOOD CIR	0	2	3	1	1	1	1.3
4072	OLD OREGON TRL	0	0	3	1	1	3	1.3
4109	STRATFORD AVE	0	0	3	2	1	1	1.3
4153	CHRISTIAN AVE	0	2	3	1	1	1	1.3
4160	JASMINE WAY	0	2	3	1	1	1	1.3
4197	CRYSTAL TREE DR	0	0	3	1	1	3	1.3
4231	PINE ST	3	2	1	1	0	1	1.3
4249	CONTINENTAL ST	2	0	3	1	0	1	1.3
4257	SHASTA ST	3	2	1	0	1	1	1.3
4268	EAST ST	2	0	3	1	0	1	1.3
4292	LOWE ST	0	2	3	1	1	1	1.3
4342	BUTTE ST	0	3	3	1	1	0	1.3
4343	YUBA ST	0	3	3	1	1	0	1.3
4348	YUBA ST	0	3	3	1	1	0	1.3
4349	OREGON ST	0	2	3	1	1	1	1.3
4351	RAILROAD AVE	0	2	3	1	1	1	1.3
4353	YUBA ST	0	3	3	1	1	0	1.3
4374	EUREKA WAY	3	1	1	1	1	0	1.3
4381	RIVERSIDE DR	2	0	3	1	0	1	1.3
4399	N MARKET ST	3	0	1	1	0	3	1.3
4423	7TH ST	0	3	3	1	1	0	1.3
4431	LAKEVIEW DR	0	2	3	1	1	1	1.3
4443	OLIVE AVE	0	0	3	2	1	1	1.3
4453	NORTH ST	0	1	3	2	1	0	1.3
4456	NORTH ST	0	1	3	2	1	0	1.3
4493	OREGON ST	0	2	3	1	1	1	1.3
4517	WALNUT AVE	0	1	3	2	1	0	1.3
4520	OLD EUREKA WAY	0	0	3	2	1	1	1.3
4532	YUBA ST	0	1	3	2	1	0	1.3
4544	COTTONWOOD AVE	0	2	3	1	1	1	1.3
4552	INDUSTRIAL ST	0	2	3	1	0	3	1.3
4555	MERCHANT ST	0	2	3	1	1	1	1.3
4558	WALL ST	0	2	3	1	0	3	1.3
4564	PARSONS DR	0	2	3	1	1	1	1.3
4574	VALENTINE LN	0	2	3	1	0	3	1.3
4582	ESTATE ST	0	2	3	1	1	1	1.3
4588	TERRACE DR	0	2	3	1	1	1	1.3
4614	GOLD ST	0	2	3	1	1	1	1.3
4615	RAILROAD AVE	0	2	3	1	1	1	1.3
4638	DERBY LN	0	2	3	1	1	1	1.3
4712	HONEYCOMB WAY	0	2	3	1	0	3	1.3
4720	N BOULDER DR	0	0	3	1	1	3	1.3
4730	VANSICKLEN WAY	0	0	3	2	1	1	1.3
4767	BIG HORN DR	0	1	3	2	1	0	1.3
4769	BIG HORN DR	0	1	3	2	1	0	1.3
4788	CLARK RIVER DR	0	1	3	2	1	0	1.3
4789	CLARK RIVER DR	0	1	3	2	1	0	1.3
4804	WOODBURY DR	0	1	3	2	1	0	1.3
4804	WOODBURY DR	0	1	3	2	1	0	1.3
4814	GORDON LN	0	1	3	2	1	0	1.3
4816	GORDON LN	0	1	3	2	1	0	1.3
4829	COLLYER DR	0	0	3	2	0	3	1.3
4850	MOUNTAIN VIEW DR	0	2	3	1	0	3	1.3
4858	RUGBY HILL DR	0	0	3	2	0	3	1.3
4864	HOLLOW LN	0	0	3	2	0	3	1.3
4865	WILVERN LN	0	0	3	2	0	3	1.3
4876	NICOLET LN	0	2	3	1	1	1	1.3
4892	DESPERADO TRL	0	0	3	1	1	3	1.3
4895	SATURN SKWY	0	3	3	1	1	0	1.3
4897	BLACK MARBLE WAY	0	0	3	2	1	1	1.3

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
4910	OASIS CT	0	2	3	1	0	3	1.3
4942	PASO DR	0	2	3	1	1	1	1.3
4963	MARKET ST	3	0	1	1	0	3	1.3
4977	MARKET ST	0	2	3	1	1	1	1.3
4979	YUBA ST	0	3	3	1	1	0	1.3
4994	TRINITY ST	2	1	3	1	0	0	1.3
5022	WINDING WAY	0	2	3	1	0	3	1.3
5053	SUTTER ST	0	2	3	1	1	1	1.3
5093	HOMINY WAY	0	1	3	2	1	0	1.3
5094	HOMINY WAY	0	1	3	2	1	0	1.3
5103	LYNACO CT	0	1	3	2	1	0	1.3
5119	OAK MESA LN	0	1	3	2	1	0	1.3
5122	SABRE CT	0	2	3	1	1	1	1.3
5137	OAKVIEW DR	0	1	3	2	1	0	1.3
5215	OAKDALE LN	0	2	3	1	1	1	1.3
5223	WOODLAND TER	0	3	3	1	1	0	1.3
5227	PINELAND DR	0	2	3	1	1	1	1.3
5229	CANBY RD	0	2	3	1	1	1	1.3
5231	CANBY RD	0	2	3	1	1	1	1.3
5241	PINELAND DR	0	3	3	1	1	0	1.3
5242	PINELAND DR	0	2	3	1	1	1	1.3
5245	SHADY LN	0	2	3	1	1	1	1.3
5246	SHADY LN	0	2	3	1	1	1	1.3
5269	PROSPECTORS RD	0	0	3	1	1	3	1.3
5279	METZ RD	0	2	3	0	1	3	1.3
5320	RIVERCREST PKWY	0	1	3	2	1	0	1.3
5341	OVERHILL DR	0	0	3	1	1	3	1.3
15066	TEXAS SPRINGS RD	2	0	3	0	0	3	1.3
15104	GEORGE DR	2	1	3	1	0	0	1.3
15106	CHARLES DR	0	0	3	1	1	3	1.3
8	BEVERLY DR	0	1	3	1	1	1	1.2
12	LEILA AVE	0	1	3	1	1	1	1.2
16	SHIRLEY LN	0	1	3	1	1	1	1.2
25	HARPOLE RD	0	1	3	1	1	1	1.2
32	COCKERILL DR	0	1	3	1	1	1	1.2
36	CASTENDA DR	0	1	3	1	0	3	1.2
42	SELLINS VIEW CT	0	1	3	2	0	1	1.2
43	WILVERN LN	0	1	3	2	0	1	1.2
98	GLENEAGLES CT	0	1	3	1	1	1	1.2
142	ROANOKE AVE	0	1	3	2	0	1	1.2
145	MILO AVE	0	1	3	2	0	1	1.2
190	CARNEGIE DR	0	1	3	2	0	1	1.2
192	SAN GABRIEL ST	0	1	3	1	0	3	1.2
193	CADJEW ST	0	1	3	1	0	3	1.2
208	DAKOTA WAY	0	1	3	2	0	1	1.2
210	STETSON WAY	0	1	3	2	0	1	1.2
212	JUAREZ LN	0	2	3	2	0	0	1.2
216	COLLEGE VIEW DR	0	1	3	2	0	1	1.2
237	CHICORY CT	0	1	3	1	1	1	1.2
257	HWY 44 WB OFF/R	3	1	1	1	0	1	1.2
297	BORALMA ST	0	1	3	2	0	1	1.2
331	RIVER PARK DR	0	1	3	1	0	3	1.2
332	TRAILWOOD CT	0	1	3	1	0	3	1.2
333	KINGSVIEW CT	0	1	3	1	0	3	1.2
343	PROFANITY LN	0	1	3	1	1	1	1.2
349	RIDGEWOOD RD	0	1	3	1	0	3	1.2
350	TWIN TOWER DR	0	1	3	2	0	1	1.2
355	HOLLOW LN	0	1	3	2	0	1	1.2
356	HOLLOW LN	0	1	3	2	0	1	1.2
357	HOLLOW LN	0	1	3	2	0	1	1.2
401	BRISTOL DR	0	1	3	1	1	1	1.2
472	TANGLEWOOD DR	0	1	3	2	0	1	1.2
481	ROCKAWAY DR	0	1	3	2	0	1	1.2
492	GROVE ST	0	3	3	1	0	1	1.2
498	CAMBRIA DR	0	1	3	1	1	1	1.2
499	LAWRENCE RD	0	1	3	1	1	1	1.2
500	LAWRENCE RD	0	1	3	1	1	1	1.2
502	LAWRENCE RD	0	1	3	1	1	1	1.2
505	SHIRLEY LN	0	1	3	1	1	1	1.2
511	VERMEER PL	0	1	3	1	1	1	1.2
513	LYNBROOK LOOP	0	1	3	1	0	3	1.2
514	CROSSROADS DR	0	1	3	1	0	3	1.2
522	TARMAC RD	0	1	3	1	1	1	1.2
528	CAL ORE DR	0	1	3	1	1	1	1.2
530	JEN WAY	0	1	3	1	1	1	1.2
531	FOOTHILL BLVD	0	1	3	1	1	1	1.2
537	OLIVE AVE	0	1	3	1	1	1	1.2

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
538	OLIVE AVE	0	1	3	1	1	1	1.2
551	GRANDVIEW AVE	0	2	3	2	0	0	1.2
559	SCENIC DR	0	1	3	1	1	1	1.2
561	ROYAL OAKS DR	0	1	3	1	1	1	1.2
567	SUNSET DR	0	1	3	1	1	1	1.2
593	COLORADO CT	0	1	3	2	0	1	1.2
594	LEWALLEN CT	0	1	3	2	0	1	1.2
599	ST ANDREWS DR	0	1	3	1	1	1	1.2
600	ST ANDREWS DR	0	1	3	1	1	1	1.2
604	CROSBY LN	0	1	3	2	0	1	1.2
628	LAWRENCE RD	0	1	3	1	1	1	1.2
632	MERIDIAN DR	0	1	3	1	1	1	1.2
644	SUNWOOD DR	0	1	3	1	1	1	1.2
646	SUNWOOD DR	0	1	3	1	1	1	1.2
648	SUNWOOD DR	0	1	3	1	1	1	1.2
649	VEGA ST	0	1	3	1	1	1	1.2
653	SILVERWOOD ST	0	1	3	1	1	1	1.2
684	EL VERANO ST	0	1	3	1	1	1	1.2
695	OLD OREGON TRL	0	1	3	1	0	3	1.2
708	YANA AVE	0	1	3	1	1	1	1.2
712	YANA AVE	0	1	3	1	1	1	1.2
713	YAHI LN	0	1	3	1	1	1	1.2
714	SALTU DR	0	1	3	1	1	1	1.2
716	SALTU DR	0	1	3	1	1	1	1.2
722	SUDDEN WIND CT	0	1	3	1	1	1	1.2
723	DAWNRIDGE DR	0	1	3	1	1	1	1.2
724	DAWNRIDGE DR	0	1	3	1	1	1	1.2
727	RIVIERA DR	0	1	3	1	0	3	1.2
729	SUNGLOW DR	0	1	3	2	0	1	1.2
731	SUNGLOW DR	0	2	3	2	0	0	1.2
732	WILD LILAC CT	0	2	3	2	0	0	1.2
733	SUNGLOW DR	0	2	3	2	0	0	1.2
735	SUNGLOW DR	0	1	3	2	0	1	1.2
736	SUNGLOW DR	0	1	3	2	0	1	1.2
737	WINTER GREEN CT	0	1	3	2	0	1	1.2
745	SONGBIRD WAY	0	1	3	2	0	1	1.2
754	VIKING WAY	0	2	3	2	0	0	1.2
789	MARY ST	0	1	3	1	1	1	1.2
794	OVERHILL DR	0	1	3	1	1	1	1.2
800	FOOTHILL BLVD	0	1	3	1	1	1	1.2
828	WOLVERINE DR	0	1	3	2	0	1	1.2
857	WINGSETTER WAY	0	1	3	1	0	3	1.2
862	ALICIA PKWY	0	1	3	2	0	1	1.2
876	LANDMARK CT	0	1	3	2	0	1	1.2
880	DIAMOND BAR CT	0	1	3	2	0	1	1.2
882	RIVER RIDGE DR	0	1	3	2	0	1	1.2
917	VALLEYBROOK DR	0	1	3	1	0	3	1.2
928	SHANNON PL	0	1	3	1	1	1	1.2
936	GALWAY DR	0	1	3	1	1	1	1.2
945	KILDARE DR	0	1	3	1	1	1	1.2
947	WICKLOW ST	0	1	3	1	1	1	1.2
948	RECORD LN	0	1	3	1	1	1	1.2
951	KILDARE DR	0	1	3	1	1	1	1.2
954	MOYVANE DR	0	1	3	1	1	1	1.2
961	MARY LAKE DR	0	1	3	1	1	1	1.2
965	DREXEL WAY	0	1	3	1	1	1	1.2
966	DREXEL WAY	0	1	3	1	1	1	1.2
969	BOSTON AVE	0	1	3	1	1	1	1.2
972	DARTMOUTH DR	0	1	3	2	0	1	1.2
973	DARTMOUTH DR	0	1	3	2	0	1	1.2
976	DARTMOUTH DR	0	2	3	2	0	0	1.2
977	RAINIER DR	0	1	3	2	0	1	1.2
980	EVEREST DR	0	1	3	2	0	1	1.2
989	WISCONSIN AVE	0	1	3	1	0	3	1.2
995	WISCONSIN AVE	0	1	3	1	0	3	1.2
1005	ORO ST	0	1	3	1	0	3	1.2
1008	REMINGTON DR	0	1	3	1	1	1	1.2
1009	MEANDER DR	0	1	3	1	0	3	1.2
1010	QUARTZ WAY	0	1	3	1	0	3	1.2
1013	SISKIYOU ST	0	1	3	2	0	1	1.2
1015	APPALACHIAN WAY	0	1	3	1	0	3	1.2
1025	FUJIYAMA WAY	0	1	3	1	0	3	1.2
1030	LAKESIDE DR	0	1	3	1	1	1	1.2
1033	GLADSTONE CT	0	1	3	1	1	1	1.2
1034	FAIROAKS CT	0	1	3	1	1	1	1.2
1079	WALNUT AVE	0	1	3	1	1	1	1.2
1106	JOAQUIN AVE	0	1	3	1	1	1	1.2

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
1117	MEMORY LN	0	1	3	1	1	1	1.2
1126	STARLIGHT BLVD	0	1	3	2	0	1	1.2
1128	STARLIGHT BLVD	0	1	3	2	0	1	1.2
1130	SEMINOLE DR	0	1	3	2	0	1	1.2
1131	ELIZABETH WAY	0	1	3	2	0	1	1.2
1199	MONARDAS DR	0	3	3	1	0	1	1.2
1220	EL PORTAL DR	0	1	3	1	1	1	1.2
1244	CAMBRIA DR	0	1	3	1	1	1	1.2
1249	SYCAMORE DR	0	1	3	2	0	1	1.2
1261	CHERYL DR	0	1	3	1	1	1	1.2
1265	JOAQUIN AVE	0	1	3	1	1	1	1.2
1269	EL CEDRO AVE	0	1	3	1	1	1	1.2
1295	PRESTIGE WAY	0	1	3	1	0	3	1.2
1325	SUNGLOW DR	0	2	3	2	0	0	1.2
1326	AUTUMN MIST LN	0	2	3	2	0	0	1.2
1327	HEATHER RIDGE LN	0	2	3	2	0	0	1.2
1332	STONECREST PL	0	1	3	1	0	3	1.2
1333	SUNGLOW DR	0	1	3	2	0	1	1.2
1336	MELODY LN	0	1	3	1	1	1	1.2
1337	MEADOW LN	0	1	3	1	1	1	1.2
1341	SCENIC WAY	0	1	3	1	1	1	1.2
1345	HEATHER RIDGE LN	0	1	3	2	0	1	1.2
1349	HOWARD DR	0	1	3	2	0	1	1.2
1350	PINTAIL DR	0	1	3	2	0	1	1.2
1354	ROCKY RIDGE CT	0	1	3	1	1	1	1.2
1368	AUBURN DR	0	2	3	2	0	0	1.2
1369	SEMINOLE DR	0	2	3	2	0	0	1.2
1372	AUBURN DR	0	1	3	2	0	1	1.2
1373	CUTLAS CT	0	1	3	2	0	1	1.2
1378	MARINDA WAY	0	1	3	1	1	1	1.2
1379	WOLVERINE DR	0	1	3	2	0	1	1.2
1389	COURT ST	0	1	3	2	0	1	1.2
1391	COURT ST	0	1	3	2	0	1	1.2
1415	PASO DR	0	1	3	1	1	1	1.2
1469	LUCERNE CT	0	2	3	2	0	0	1.2
1552	LOMA VISTA DR	0	1	3	1	1	1	1.2
1584	ANDES DR	0	1	3	2	0	1	1.2
1592	CUMBERLAND DR	0	1	3	2	0	1	1.2
1631	PIONEER DR	0	1	3	1	1	1	1.2
1632	OVERHILL DR	0	1	3	1	1	1	1.2
1643	MARY ST	0	1	3	1	1	1	1.2
1645	MIDDLE CREEK RD	0	0	3	1	2	0	1.2
1677	GRANT ST	0	1	3	2	0	1	1.2
1683	GOLD ST	0	1	3	1	1	1	1.2
1751	GOLDEN HEIGHTS DR	0	1	3	1	0	3	1.2
1752	DARA CT	0	3	3	1	0	1	1.2
1758	SHERMAN WAY	0	1	3	1	1	1	1.2
1780	MAGNUMS WAY	0	1	3	1	0	3	1.2
1781	LAKE FOREST DR	0	1	3	1	0	3	1.2
1791	MAGNUMS WAY	0	1	3	1	0	3	1.2
1798	E KESWICK DAM RD	0	1	3	1	1	1	1.2
1799	E KESWICK DAM RD	0	1	3	1	0	3	1.2
1817	JULY WAY	0	1	3	1	0	3	1.2
1825	MAGNUMS WAY	0	1	3	1	0	3	1.2
1849	MARKET ST	3	1	1	1	0	1	1.2
1853	MARKET ST	3	1	1	1	0	1	1.2
1871	TEHAMA ST	3	1	1	0	1	1	1.2
1883	HWY 44 EB OFF/R	3	1	1	1	0	1	1.2
1898	OAKMONT DR	0	1	3	2	0	1	1.2
1899	TIBURON DR	0	1	3	1	1	1	1.2
1939	MELODY LN	0	1	3	1	1	1	1.2
1967	EASTER AVE	0	1	3	1	0	3	1.2
1974	WOODCLIFF DR	0	2	3	2	0	0	1.2
2021	EAGLE NEST RD	0	1	3	1	0	3	1.2
2051	JAXON WAY	0	1	3	1	0	3	1.2
2061	SHELL DR	0	1	3	2	0	1	1.2
2065	PEPPERTREE LN	0	1	3	2	0	1	1.2
2071	ARBUCKLE CT	0	2	3	2	0	0	1.2
2086	TEAKWOOD DR	0	2	3	2	0	0	1.2
2115	MASON ST	0	3	3	1	0	1	1.2
2129	DIAMOND RIDGE DR	0	1	3	1	0	3	1.2
2130	SPRING RIDGE DR	0	1	3	1	0	3	1.2
2136	TERRA LINDA WAY	0	3	3	1	0	1	1.2
2145	BEAUMONT DR	0	1	3	1	1	1	1.2
2153	MONTCLAIR DR	0	1	3	1	1	1	1.2
2155	FAIRMONT DR	0	1	3	1	1	1	1.2
2219	EASTBROOK DR	0	1	3	1	1	1	1.2

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
2226	NORTHWOODS WAY	0	1	3	1	1	1	1.2
2241	NORTHWOODS WAY	0	1	3	1	1	1	1.2
2256	LAWRENCE RD	0	1	3	1	1	1	1.2
2262	CHERRYWOOD DR	0	1	3	1	1	1	1.2
2263	SODA SPRINGS CIR	0	1	3	1	1	1	1.2
2265	SOMERSET AVE	0	1	3	1	1	1	1.2
2294	BOWYER BLVD	0	1	3	1	1	1	1.2
2297	EL VISTA ST	0	1	3	1	1	1	1.2
2299	AGNES MAY DR	0	1	3	1	1	1	1.2
2349	CANTERBURY DR	0	1	3	1	1	1	1.2
2360	FLINTWOOD WAY	0	1	3	1	1	1	1.2
2374	CONIFER WAY	0	1	3	1	1	1	1.2
2405	APPIAN WAY	0	1	3	1	1	1	1.2
2432	LEONARD ST	0	1	3	1	1	1	1.2
2458	MALLARD ST	0	1	3	2	0	1	1.2
2464	PARTRIDGE DR	0	1	3	1	0	3	1.2
2468	WHISTLING DR	0	1	3	1	0	3	1.2
2470	SPRINGER DR	0	1	3	2	0	1	1.2
2477	FAIRMONT DR	0	1	3	1	1	1	1.2
2478	BEAUMONT DR	0	1	3	1	1	1	1.2
2481	ST ANDREWS DR	0	1	3	1	1	1	1.2
2509	LANCERS LN	0	1	3	1	1	1	1.2
2542	LANCERS LN	0	2	3	2	0	0	1.2
2546	GROUSE DR	0	1	3	2	0	1	1.2
2550	LOTUS CT	0	2	3	2	0	0	1.2
2555	AZOULAY CT	0	1	3	1	1	1	1.2
2559	JESSICA WAY	0	1	3	1	1	1	1.2
2563	KEYLOD ST	0	1	3	1	1	1	1.2
2598	NIGHTHAWK LN	0	1	3	2	0	1	1.2
2599	OSPREY LN	0	1	3	2	0	1	1.2
2604	SOUTH RIDGE DR	0	1	3	2	0	1	1.2
2605	MAYWOOD LN	0	2	3	2	0	0	1.2
2607	CANDLEWOOD DR	0	1	3	2	0	1	1.2
2614	FAIR HILL DR	0	1	3	2	0	1	1.2
2614	FAIR HILL DR	0	1	3	2	0	1	1.2
2618	REDDINGTON DR	0	1	3	2	0	1	1.2
2623	REDDINGTON DR	0	1	3	2	0	1	1.2
2629	COLLYER DR	0	1	3	1	1	1	1.2
2655	RIDGEWOOD RD	0	1	3	2	0	1	1.2
2657	RIDGEWOOD RD	0	1	3	2	0	1	1.2
2666	NORTON LN	0	1	3	2	0	1	1.2
2672	CARNEGIE CT	0	1	3	2	0	1	1.2
2700	HOLLOW LN	0	2	3	2	0	0	1.2
2701	AMIR CT	0	1	3	2	0	1	1.2
2703	POSEY LN	0	2	3	2	0	0	1.2
2704	HOPE LN	0	1	3	2	0	1	1.2
2708	QUARTZ HILL RD	2	2	3	0	0	0	1.2
2739	CANDLEWOOD DR	0	1	3	2	0	1	1.2
2754	EL CAPITAN DR	0	1	3	1	1	1	1.2
2756	FUJIYAMA WAY	0	1	3	1	0	3	1.2
2757	ANDES DR	0	1	3	2	0	1	1.2
2775	DREAM ST	0	1	3	2	0	1	1.2
2777	DREAM ST	0	1	3	2	0	1	1.2
2779	CRESCENT MOON DR	0	1	3	2	0	1	1.2
2792	SINGING WIND CT	0	2	3	2	0	0	1.2
2793	EDEN RIDGE CT	0	2	3	2	0	0	1.2
2797	MONTANA SKY DR	0	1	3	1	1	1	1.2
2803	SEASONS CT	0	2	3	2	0	0	1.2
2809	RIDGEWOOD RD	0	1	3	2	0	1	1.2
2812	ROYAL OAKS DR	0	1	3	1	1	1	1.2
2816	SIERRA VISTA DR	0	1	3	1	1	1	1.2
2828	MILL VALLEY PKWY	0	0	3	3	0	0	1.2
2836	HOMINY WAY	0	1	3	2	0	1	1.2
2837	SALMONBERRY DR	0	1	3	2	0	1	1.2
2843	PINE ST	0	1	3	1	1	1	1.2
2848	GROUSE DR	0	1	3	1	0	3	1.2
2850	WHISTLING DR	0	1	3	2	0	1	1.2
2852	SPRINGER DR	0	1	3	1	0	3	1.2
2853	SPRINGER DR	0	1	3	1	0	3	1.2
2897	REDBUD DR	0	1	3	1	1	1	1.2
2901	SIERRA VISTA DR	0	1	3	1	1	1	1.2
2904	ROYAL OAKS DR	0	1	3	1	1	1	1.2
2942	REDWOOD BLVD	0	1	3	1	0	3	1.2
2952	GOLD HILLS DR	0	1	3	1	1	1	1.2
2958	DURANGO WAY	0	0	3	3	0	0	1.2
2958	DURANGO WAY	0	0	3	3	0	0	1.2
2989	GOLD HILLS DR	0	1	3	2	0	1	1.2

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
3004	RIVER RIDGE DR	0	1	3	2	0	1	1.2
3039	TRAVERTINE CT	0	2	3	2	0	0	1.2
3048	MARBLE CT	0	2	3	2	0	0	1.2
3076	AQUAMARINE WAY	0	1	3	1	1	1	1.2
3082	AQUAMARINE WAY	0	1	3	2	0	1	1.2
3136	DORGAN DR	0	1	3	1	1	1	1.2
3241	BROWNING ST	0	1	3	2	0	1	1.2
3245	E PALISADES AVE	0	1	3	2	0	1	1.2
3266	TIDMORE LN	0	1	3	1	1	1	1.2
3268	NATOMAS WAY	0	1	3	2	0	1	1.2
3270	DANBURY DR	0	1	3	2	0	1	1.2
3327	TROPICANA CT	0	1	3	2	0	1	1.2
3328	TROPICANA CT	0	1	3	2	0	1	1.2
3331	SNOW FIRE CT	0	1	3	2	0	1	1.2
3340	IMPERIAL DR	0	1	3	1	0	3	1.2
3342	TRUMPET DR	0	1	3	1	0	3	1.2
3346	AUGUSTINE WAY	0	1	3	1	1	1	1.2
3360	ALLEGHENY CT	0	2	3	2	0	0	1.2
3366	WASATCH DR	0	1	3	1	0	3	1.2
3372	STONE RIDGE PL	0	1	3	1	1	1	1.2
3381	ATRIUM WAY	0	2	3	2	0	0	1.2
3405	KNOLLCREST DR	0	1	3	1	1	1	1.2
3478	FLINTWOOD WAY	0	1	3	1	1	1	1.2
3515	STARLIGHT BLVD	0	1	3	2	0	1	1.2
3568	WALDON ST	0	1	3	1	0	3	1.2
3592	C ST	0	1	3	1	1	1	1.2
3599	THIRD ST	0	1	3	1	1	1	1.2
3627	VEDA ST	0	2	3	2	0	0	1.2
3684	RIDGE DR	0	1	3	2	0	1	1.2
3685	RIDGE DR	0	1	3	1	0	3	1.2
3707	REDBUD DR	0	1	3	1	1	1	1.2
3708	REDBUD DR	0	1	3	1	1	1	1.2
3755	WEST ST	0	1	3	1	1	1	1.2
3761	OREGON ST	0	1	3	1	1	1	1.2
3762	WEST ST	0	1	3	1	1	1	1.2
3763	WEST ST	0	1	3	1	1	1	1.2
3771	OREGON ST	0	1	3	1	1	1	1.2
3791	WILLIS ST	0	1	3	1	1	1	1.2
3796	GOLD ST	0	1	3	1	1	1	1.2
3806	REGENT AVE	0	1	3	1	1	1	1.2
3810	SHERIDAN ST	0	1	3	2	0	1	1.2
3834	BRINN DR	0	1	3	1	1	1	1.2
3835	QUINTON DR	0	1	3	1	1	1	1.2
3841	STETSON WAY	0	2	3	2	0	0	1.2
3853	RIVIERA DR	0	1	3	1	1	1	1.2
3855	CENTAVO WAY	0	1	3	1	0	3	1.2
3858	CLOVERWAY DR	0	1	3	1	1	1	1.2
3863	HOPE LN	0	1	3	2	0	1	1.2
3897	EAGLE PKWY	0	3	3	1	0	1	1.2
3898	EAGLE PKWY	0	1	3	1	0	3	1.2
3923	AMERICANA WAY	0	1	3	1	1	1	1.2
3935	FIDDLENECK DR	0	1	3	1	1	1	1.2
3966	CELESTIAL ST	0	1	3	1	1	1	1.2
4006	SARATOGA DR	0	1	3	1	1	1	1.2
4007	SARATOGA DR	0	1	3	1	1	1	1.2
4008	SARATOGA DR	0	1	3	1	1	1	1.2
4009	PHIL CT	0	1	3	1	1	1	1.2
4015	TEMPLETON DR	0	1	3	1	1	1	1.2
4031	EL VERANO ST	0	1	3	1	1	1	1.2
4034	EL VERANO ST	0	1	3	1	1	1	1.2
4036	EL VERANO ST	0	1	3	1	1	1	1.2
4050	EDGEWOOD DR	0	1	3	1	1	1	1.2
4052	TIBURON DR	0	1	3	1	0	3	1.2
4068	MONTANA SKY DR	0	1	3	1	1	1	1.2
4071	OLD OREGON TRL	0	1	3	1	0	3	1.2
4097	STINSON LOOP	0	0	3	3	0	0	1.2
4101	MISSION DE ORO DR	0	0	3	3	0	0	1.2
4107	BUTTE ST	0	1	3	1	1	1	1.2
4108	BUTTE ST	0	1	3	1	1	1	1.2
4120	BELVEDERE DR	0	0	3	3	0	0	1.2
4138	CAMULOS WAY	0	1	3	1	1	1	1.2
4150	RAINBOW LN	0	1	3	1	0	3	1.2
4164	BELLADONNA ST	0	1	3	1	1	1	1.2
4175	CHURN CT	0	1	3	1	1	1	1.2
4176	VALE DR	0	1	3	1	1	1	1.2
4179	VALE DR	0	1	3	1	1	1	1.2
4180	WEST WAY	0	1	3	1	1	1	1.2

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
4195	WILD FLOWER WAY	0	1	3	1	1	1	1.2
4196	CRYSTAL TREE DR	0	1	3	1	1	1	1.2
4204	ASPEN GLOW LN	0	1	3	2	0	1	1.2
4212	CLIFF DR	0	1	3	1	0	3	1.2
4234	PINE ST	3	1	1	1	0	1	1.2
4264	YUBA ST	0	1	3	1	1	1	1.2
4277	PINE ST	3	1	1	1	0	1	1.2
4278	PINE ST	3	1	1	1	0	1	1.2
4389	CENTER ST	0	1	3	1	1	1	1.2
4400	TRAVELED WAY	0	0	3	1	2	0	1.2
4406	WEST ST	0	1	3	1	1	1	1.2
4432	LAKEVIEW DR	0	1	3	1	1	1	1.2
4460	ORANGE AVE	0	1	3	1	1	1	1.2
4464	ORANGE AVE	0	1	3	1	1	1	1.2
4473	WILLIS ST	0	1	3	1	1	1	1.2
4497	CHESTNUT ST	0	1	3	1	1	1	1.2
4540	SAN FRANCISCO ST	0	1	3	1	1	1	1.2
4565	PARSONS DR	0	1	3	1	1	1	1.2
4567	ELLIS ST	0	1	3	2	0	1	1.2
4587	RICARDO AVE	0	1	3	1	1	1	1.2
4589	CHESTNUT ST	0	1	3	1	1	1	1.2
4611	SONOMA ST	0	1	3	1	0	3	1.2
4616	RAILROAD AVE	0	1	3	1	0	3	1.2
4619	TUSCANY WAY	0	1	3	2	0	1	1.2
4627	FRENCH LACE LN	0	1	3	1	0	3	1.2
4628	FRESIA WAY	0	1	3	2	0	1	1.2
4636	DERBY LN	0	1	3	1	1	1	1.2
4676	HEMSTED DR	0	1	3	1	0	3	1.2
4701	EMPRESS LN	0	1	3	1	1	1	1.2
4702	FLORAL WAY	0	1	3	1	1	1	1.2
4703	BRECKENWOOD DR	0	1	3	1	1	1	1.2
4706	MORNINGSUN DR	0	1	3	1	1	1	1.2
4711	WHITE RIVER DR	0	1	3	1	0	3	1.2
4729	TEAKWOOD DR	0	2	3	2	0	0	1.2
4734	ALAMINE DR	0	1	3	2	0	1	1.2
4735	FULLER CT	0	1	3	2	0	1	1.2
4740	PEPPERTREE LN	0	1	3	1	0	3	1.2
4783	LOGGERHEAD WAY	0	1	3	1	1	1	1.2
4785	EEL DR	0	1	3	1	1	1	1.2
4826	IVY HILL DR	0	1	3	1	1	1	1.2
4830	COLLYER DR	0	1	3	1	0	3	1.2
4833	COUNTRY OAK DR	0	3	3	1	0	1	1.2
4836	MICA CT	0	1	3	1	0	3	1.2
4845	SIERRA DR	0	1	3	1	0	3	1.2
4859	RUGBY HILL DR	0	1	3	1	1	1	1.2
4863	HOLLOW LN	0	1	3	2	0	1	1.2
4868	POSEY LN	0	1	3	2	0	1	1.2
4923	ARMANDO AVE	0	1	3	1	0	3	1.2
4933	PALACIO DR	0	1	3	1	0	3	1.2
4934	CASA BUENA ST	0	1	3	1	0	3	1.2
4970	CENTER ST	0	1	3	1	1	1	1.2
5032	SANTA ROSA WAY	0	1	3	1	0	3	1.2
5113	CARSON DR	0	1	3	1	0	3	1.2
5114	LYNBROOK LOOP	0	1	3	1	0	3	1.2
5192	ORO ST	0	1	3	1	0	3	1.2
5209	ANNETTE DR	0	1	3	1	1	1	1.2
5214	PENN DR	0	1	3	1	1	1	1.2
5216	PENN DR	0	1	3	1	1	1	1.2
5217	OAKDALE LN	0	1	3	1	1	1	1.2
5237	CEDARWOOD DR	0	1	3	1	1	1	1.2
5247	NORMAN DR	0	1	3	1	1	1	1.2
5248	WOODSIDE MEADOWS DR	0	1	3	1	1	1	1.2
5270	SILVERADO DR	0	1	3	1	1	1	1.2
5271	SILVERADO DR	0	1	3	1	1	1	1.2
5286	OLYMPUS AVE	0	1	3	1	1	1	1.2
5311	VIKING WAY	0	1	3	1	0	3	1.2
5336	TANGLEWOOD DR	0	0	3	3	0	0	1.2
5337	LEONARD ST	0	1	3	1	1	1	1.2
15098	VENUS WAY	0	1	3	1	1	1	1.2
15101	CHARLES DR	0	1	3	1	0	3	1.2
21	ECHO RD	0	2	3	1	1	0	1.2
23	HARPOLE RD	0	2	3	1	1	0	1.2
48	MORA CT	0	2	3	1	1	0	1.2
64	MANITOWA CT	0	2	3	1	1	0	1.2
91	REDBUD DR	0	2	3	1	1	0	1.2
165	TARMAC RD	0	0	3	2	1	0	1.2
227	MERCURY DR	0	2	3	1	1	0	1.2

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
229	MERCURY DR	0	2	3	1	1	0	1.2
296	COGGINS ST	0	0	3	2	1	0	1.2
315	LOMA ST	0	2	3	1	1	0	1.2
466	EASTSIDE RD	0	1	3	0	1	3	1.2
554	SUMMIT DR	0	0	3	2	1	0	1.2
554	SUMMIT DR	0	0	3	2	1	0	1.2
554	SUMMIT DR	0	0	3	2	1	0	1.2
568	SUNSET DR	0	2	3	1	1	0	1.2
588	DAKOTA WAY	0	0	3	2	1	0	1.2
588	DAKOTA WAY	0	0	3	2	1	0	1.2
596	WEE BURN CT	0	2	3	1	1	0	1.2
641	GALAXY WAY	0	2	3	1	1	0	1.2
650	SILVERWOOD ST	0	2	3	1	1	0	1.2
655	GALAXY WAY	0	2	3	1	1	0	1.2
656	GALAXY WAY	0	2	3	1	1	0	1.2
657	METEOR ST	0	2	3	1	1	0	1.2
658	METEOR ST	0	2	3	1	1	0	1.2
663	SCORPIUS WAY	0	2	3	1	1	0	1.2
664	SCORPIUS WAY	0	2	3	1	1	0	1.2
665	SCORPIUS WAY	0	2	3	1	1	0	1.2
667	VIRGO ST	0	2	3	1	1	0	1.2
668	VIRGO ST	0	2	3	1	1	0	1.2
687	ST CHARLES DR	0	2	3	1	1	0	1.2
780	ANGELO AVE	0	2	3	1	1	0	1.2
788	WEST ST	0	2	3	1	1	0	1.2
864	MARIJEAN WAY	0	2	3	1	1	0	1.2
1044	REDBUD DR	0	2	3	1	1	0	1.2
1081	BUTTE ST	0	0	3	2	1	0	1.2
1084	JAY ST	0	0	3	2	1	0	1.2
1111	MICHAEL LN	0	2	3	1	1	0	1.2
1112	TIMBERCREEK CT	0	2	3	1	1	0	1.2
1118	MILLER ST	0	2	3	1	1	0	1.2
1148	MESA ST	0	0	3	2	1	0	1.2
1156	11TH ST	0	2	3	1	1	0	1.2
1159	11TH ST	0	2	3	1	1	0	1.2
1160	11TH ST	0	2	3	1	1	0	1.2
1189	OLIVE AVE	0	0	3	2	1	0	1.2
1222	TRAVERSE ST	0	2	3	1	1	0	1.2
1226	WOODACRE DR	0	2	3	1	1	0	1.2
1338	RIVIERA DR	0	2	3	1	1	0	1.2
1414	MERLE DR	0	2	3	1	1	0	1.2
1488	MILLER ST	0	2	3	1	1	0	1.2
1529	ELLIS ST	0	0	3	2	1	0	1.2
1558	DEE CT	0	2	3	1	1	0	1.2
1559	DEE CT	0	2	3	1	1	0	1.2
1560	DEE ST	0	2	3	1	1	0	1.2
1601	MONTE BELLO DR	0	0	3	2	1	0	1.2
1624	TEHAMA ST	0	0	3	2	1	0	1.2
1690	SACRAMENTO ST	0	2	3	1	1	0	1.2
1700	OREGON ST	0	2	3	1	1	0	1.2
1703	SACRAMENTO ST	0	2	3	1	1	0	1.2
1835	S MARKET ST	3	0	1	1	1	0	1.2
1839	LANNING AVE	0	2	3	1	1	0	1.2
1955	ST THOMAS PKWY	0	0	3	2	1	0	1.2
2064	PEPPERTREE LN	0	0	3	2	1	0	1.2
2064	PEPPERTREE LN	0	0	3	2	1	0	1.2
2194	CAMINO CT	0	2	3	1	1	0	1.2
2199	CAMINO CT	0	2	3	1	1	0	1.2
2220	CASTLEWOOD DR	0	2	3	1	1	0	1.2
2234	ECHO RD	0	2	3	1	1	0	1.2
2273	REGAL AVE	0	1	3	0	1	3	1.2
2305	CIRRUS ST	0	2	3	1	1	0	1.2
2347	METEOR ST	0	2	3	1	1	0	1.2
2352	GALAXY WAY	0	2	3	1	1	0	1.2
2365	CIRRUS ST	0	2	3	1	1	0	1.2
2369	SILVERWOOD ST	0	2	3	1	1	0	1.2
2380	MARLENE AVE	0	2	3	1	1	0	1.2
2393	METEOR ST	0	2	3	1	1	0	1.2
2401	CAPRICORN WAY	0	2	3	1	1	0	1.2
2402	CAPRICORN WAY	0	2	3	1	1	0	1.2
2416	WOODRUM CIR	0	2	3	1	1	0	1.2
2428	BRITTANY DR	0	2	3	1	1	0	1.2
2443	LEONARD ST	0	2	3	1	1	0	1.2
2479	FAIRMONT DR	0	2	3	1	1	0	1.2
2494	EXECUTIVE WAY	0	2	3	1	1	0	1.2
2503	PINEWOOD DR	0	2	3	1	1	0	1.2
2558	JESSICA WAY	0	2	3	1	1	0	1.2

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
2561	CHELSA CIR	0	2	3	1	1	0	1.2
2579	CASA VEREDA WAY	0	2	3	1	1	0	1.2
2590	TIGER EYE RD	0	0	3	2	1	0	1.2
2591	SAGEWAY DR	0	0	3	2	1	0	1.2
2596	EDGEWOOD DR	0	0	3	2	1	0	1.2
2725	ST ANDREWS DR	0	2	3	1	1	0	1.2
2736	TIERRA HEIGHTS RD	0	0	3	2	1	0	1.2
2767	ASPEN SPRINGS CT	0	2	3	1	1	0	1.2
2768	ASPEN SPRINGS CT	0	2	3	1	1	0	1.2
2771	EASTBROOK DR	0	2	3	1	1	0	1.2
2795	CALLIOPE CT	0	2	3	1	1	0	1.2
2796	EASTBROOK DR	0	2	3	1	1	0	1.2
2815	SIERRA VISTA DR	0	2	3	1	1	0	1.2
2893	SUNFLOWER DR	0	0	3	2	1	0	1.2
2899	REDBUD DR	0	2	3	1	1	0	1.2
2916	NORTHPOINT DR	2	0	3	1	0	0	1.2
2920	NORTHPOINT DR	2	0	3	1	0	0	1.2
3027	CAPRICORN WAY	0	2	3	1	1	0	1.2
3030	GALAXY WAY	0	2	3	1	1	0	1.2
3033	CAPRICORN WAY	0	2	3	1	1	0	1.2
3035	POLARIS WAY	0	2	3	1	1	0	1.2
3038	POLARIS WAY	0	2	3	1	1	0	1.2
3091	DEL MAR AVE	0	2	3	1	1	0	1.2
3098	SANTA FE AVE	0	2	3	1	1	0	1.2
3100	SANTA FE AVE	0	2	3	1	1	0	1.2
3106	SULPHUR CREEK RD	0	0	3	2	1	0	1.2
3121	HALEY LN	0	1	3	0	1	3	1.2
3130	NEWBURY LN	0	2	3	1	1	0	1.2
3135	BLUE HORIZON DR	0	2	3	1	1	0	1.2
3152	ROBLES DR	0	2	3	1	1	0	1.2
3179	LOMA VISTA DR	0	2	3	1	1	0	1.2
3190	ROSE LN	0	2	3	1	1	0	1.2
3212	WESTERN OAK DR	0	2	3	1	1	0	1.2
3267	TIDMORE LN	0	2	3	1	1	0	1.2
3407	CRESTMONT DR	0	2	3	1	1	0	1.2
3438	VICTOR AVE	2	0	3	1	0	0	1.2
3454	HAWTHORNE CT	0	2	3	1	1	0	1.2
3457	KIMBER CT	0	2	3	1	1	0	1.2
3460	OXFORD RD	0	2	3	1	1	0	1.2
3464	OXFORD RD	0	2	3	1	1	0	1.2
3481	ELIN CT	0	2	3	1	1	0	1.2
3485	MERCURY DR	0	2	3	1	1	0	1.2
3487	VEGA ST	0	2	3	1	1	0	1.2
3489	MERCURY DR	0	2	3	1	1	0	1.2
3498	WURCH WAY	0	2	3	1	1	0	1.2
3527	SUNFLOWER DR	0	0	3	2	1	0	1.2
3528	SUNFLOWER DR	0	0	3	2	1	0	1.2
3533	MARIO AVE	0	0	3	2	1	0	1.2
3574	TEHAMA ST	3	2	1	0	1	0	1.2
3588	WILSHIRE DR	0	0	3	2	1	0	1.2
3588	WILSHIRE DR	0	0	3	2	1	0	1.2
3594	C ST	0	2	3	1	1	0	1.2
3664	STATE ST	0	2	3	1	1	0	1.2
3665	STATE ST	0	2	3	1	1	0	1.2
3670	FAVRETTO AVE	0	2	3	1	1	0	1.2
3671	FAVRETTO AVE	0	2	3	1	1	0	1.2
3673	ANGELO AVE	0	2	3	1	1	0	1.2
3680	PEBBLE DR	0	0	3	2	1	0	1.2
3683	WAUSHARA AVE	0	0	3	2	1	0	1.2
3683	WAUSHARA AVE	0	0	3	2	1	0	1.2
3697	SHASTA ST	0	0	3	2	1	0	1.2
3700	REDBUD DR	0	2	3	1	1	0	1.2
3709	HALLMARK DR	0	2	3	1	1	0	1.2
3770	CENTER ST	0	2	3	1	1	0	1.2
3809	WEST ST	0	0	3	2	1	0	1.2
3814	WEST ST	0	0	3	2	1	0	1.2
3872	PETROGLYPH ST	0	2	3	1	1	0	1.2
3873	PETROGLYPH ST	0	2	3	1	1	0	1.2
3876	DENALI CT	0	2	3	1	1	0	1.2
3902	RENO LN	0	2	3	1	1	0	1.2
3922	KEEL CT	0	0	3	2	1	0	1.2
3924	AMERICANA WAY	0	2	3	1	1	0	1.2
3965	POLARIS WAY	0	2	3	1	1	0	1.2
3968	POLARIS WAY	0	2	3	1	1	0	1.2
3971	GALAXY WAY	0	2	3	1	1	0	1.2
3973	GALAXY WAY	0	2	3	1	1	0	1.2
3976	GALAXY WAY	0	2	3	1	1	0	1.2

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
3992	GENEVIEVE RD	0	2	3	1	1	0	1.2
4001	PINION CT	0	2	3	1	1	0	1.2
4003	SARATOGA DR	0	2	3	1	1	0	1.2
4012	EL VERANO ST	0	2	3	1	1	0	1.2
4059	VENUS WAY	0	2	3	1	1	0	1.2
4110	STRATFORD AVE	0	0	3	2	1	0	1.2
4119	EMERALD LN	0	2	3	1	1	0	1.2
4149	ERIN LN	0	2	3	1	1	0	1.2
4151	RAINBOW LN	0	2	3	1	1	0	1.2
4152	CHRISTIAN AVE	0	2	3	1	1	0	1.2
4186	PIONEER LN	0	2	3	1	1	0	1.2
4199	STARBURST DR	0	0	3	2	1	0	1.2
4229	SACRAMENTO ST	0	2	3	1	1	0	1.2
4236	SACRAMENTO ST	0	2	3	1	1	0	1.2
4240	PLACER ST	0	2	3	1	1	0	1.2
4248	CONTINENTAL ST	2	0	3	1	0	0	1.2
4260	SHASTA ST	3	2	1	0	1	0	1.2
4265	YUBA ST	0	2	3	1	1	0	1.2
4267	PLACER ST	0	2	3	1	1	0	1.2
4269	SOUTH ST	2	0	3	1	0	0	1.2
4347	YUBA ST	0	2	3	1	1	0	1.2
4352	YUBA ST	0	2	3	1	1	0	1.2
4371	DIVISION ST	0	2	3	1	1	0	1.2
4380	CALIFORNIA ST	2	0	3	1	0	0	1.2
4387	TRINITY ST	0	2	3	1	1	0	1.2
4390	TRINITY ST	0	2	3	1	1	0	1.2
4391	TRINITY ST	0	2	3	1	1	0	1.2
4414	9TH ST	0	2	3	1	1	0	1.2
4417	8TH ST	0	2	3	1	1	0	1.2
4419	8TH ST	0	2	3	1	1	0	1.2
4420	7TH ST	0	2	3	1	1	0	1.2
4427	8TH ST	0	2	3	1	1	0	1.2
4441	SHASTA ST	0	2	3	1	1	0	1.2
4444	SHASTA ST	0	0	3	2	1	0	1.2
4446	WALNUT AVE	0	0	3	2	1	0	1.2
4448	WALNUT AVE	0	0	3	2	1	0	1.2
4451	NORTH ST	0	0	3	2	1	0	1.2
4461	NORTH ST	0	2	3	1	1	0	1.2
4496	BUTTE ST	0	2	3	1	1	0	1.2
4500	BUTTE ST	0	0	3	2	1	0	1.2
4526	MONTE BELLO DR	0	0	3	2	1	0	1.2
4621	DELLWOOD DR	0	0	3	2	1	0	1.2
4622	HEDGEROW AVE	0	0	3	2	1	0	1.2
4622	HEDGEROW AVE	0	0	3	2	1	0	1.2
4700	GEHRING CT	0	2	3	1	1	0	1.2
4749	ALTA SAGA DR	0	2	3	1	1	0	1.2
4750	ALTA SAGA DR	0	2	3	1	1	0	1.2
4757	VENUS WAY	0	2	3	1	1	0	1.2
4758	VENUS WAY	0	2	3	1	1	0	1.2
4759	VENUS WAY	0	2	3	1	1	0	1.2
4760	VENUS WAY	0	2	3	1	1	0	1.2
4762	VENUS WAY	0	2	3	1	1	0	1.2
4764	SATURN SKWY	0	2	3	1	1	0	1.2
4782	CLARK RIVER DR	0	2	3	1	1	0	1.2
4893	SATURN SKWY	0	2	3	1	1	0	1.2
4966	MARKET ST	0	2	3	1	1	0	1.2
4967	SACRAMENTO ST	0	2	3	1	1	0	1.2
4983	TEHAMA ST	3	2	1	0	1	0	1.2
4988	EUREKA WAY	0	2	3	1	1	0	1.2
4989	TRINITY ST	2	0	3	1	0	0	1.2
5095	ATRIUM WAY	0	0	3	2	1	0	1.2
5201	LINDEN AVE	0	0	3	2	1	0	1.2
5224	SHASTA PINES WAY	0	2	3	1	1	0	1.2
5225	SHASTA PINES WAY	0	2	3	1	1	0	1.2
5230	CANBY RD	0	2	3	1	1	0	1.2
5232	WOODSIDE MEADOWS DR	0	2	3	1	1	0	1.2
5238	CEDARWOOD CT	0	2	3	1	1	0	1.2
5240	PINELAND CT	0	2	3	1	1	0	1.2
5299	OLYMPUS AVE	0	2	3	1	1	0	1.2
29	HARPOLE RD	0	1	3	1	1	0	1.1
62	CATALPA CT	0	2	3	0	1	1	1.1
69	SQUIRREL RUN CT	0	1	3	2	0	0	1.1
70	SQUIRREL RUN CT	0	1	3	2	0	0	1.1
144	EUGENIA AVE	0	1	3	2	0	0	1.1
149	CHEVY CT	0	2	3	1	0	1	1.1
152	FANTENELL DR	0	0	3	2	0	1	1.1
153	FANTENELL DR	0	0	3	2	0	1	1.1

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
156	BELLAGIO TER	0	1	3	2	0	0	1.1
183	DOMAIN WAY	0	1	3	2	0	0	1.1
195	FANTENELL DR	0	0	3	2	0	1	1.1
224	MEARN CT	0	1	3	1	1	0	1.1
225	BUTTON PL	0	1	3	1	1	0	1.1
233	CIRRUS ST	0	1	3	1	1	0	1.1
236	COLUMBINE DR	0	1	3	1	1	0	1.1
240	EL VERANO ST	0	1	3	1	1	0	1.1
257	HWY 44 WB OFF/R	3	1	1	1	0	0	1.1
337	TERRA NOVA DR	0	1	3	2	0	0	1.1
348	GENEVIEVE RD	0	1	3	1	1	0	1.1
359	ST PATRICKS AVE	0	2	3	1	0	1	1.1
383	GARNET CT	0	2	3	1	0	1	1.1
393	ATLETAS WAY	0	1	3	1	1	0	1.1
403	GALAXY WAY	0	1	3	1	1	0	1.1
478	BROWNING ST	0	1	3	2	0	0	1.1
480	BROWNING ST	0	0	3	2	0	1	1.1
489	BECHELLI LN	0	2	3	1	0	1	1.1
490	GROVE ST	0	2	3	1	0	1	1.1
522	TARMAC RD	0	1	3	1	1	0	1.1
526	PALACIO DR	0	0	3	1	1	1	1.1
526	PALACIO DR	0	0	3	1	1	1	1.1
526	PALACIO DR	0	0	3	1	1	1	1.1
529	CAL ORE DR	0	0	3	1	1	1	1.1
533	LAKESIDE DR	0	0	3	1	1	1	1.1
536	LINCOLN ST	0	1	3	1	1	0	1.1
556	STARLIGHT BLVD	0	1	3	2	0	0	1.1
584	STRAUSS LN	0	1	3	2	0	0	1.1
586	STRAUSS LN	0	1	3	2	0	0	1.1
587	DAKOTA WAY	0	1	3	2	0	0	1.1
597	WEE BURN CT	0	1	3	1	1	0	1.1
598	BRASSIE WAY	0	0	3	1	1	1	1.1
625	DE MOLL DR	0	1	3	1	1	0	1.1
631	HERMITAGE CT	0	1	3	1	1	0	1.1
634	INDIO WAY	0	1	3	1	1	0	1.1
643	GALAXY WAY	0	1	3	1	1	0	1.1
678	WESTERN OAK DR	0	1	3	1	1	0	1.1
682	ST CHARLES DR	0	1	3	1	1	0	1.1
689	TEMPLETON DR	0	1	3	1	1	0	1.1
710	YAHI LN	0	1	3	1	1	0	1.1
711	YANA AVE	0	1	3	1	1	0	1.1
715	ISHI DR	0	1	3	1	1	0	1.1
717	ISHI DR	0	1	3	1	1	0	1.1
721	DAWNRIDGE DR	0	1	3	1	1	0	1.1
726	RISING MIST CIR	0	1	3	1	1	0	1.1
730	SUNGLOW DR	0	1	3	2	0	0	1.1
744	HOWARD DR	0	2	3	1	0	1	1.1
757	VIKING WAY	0	1	3	2	0	0	1.1
764	FOXTAIL CT	0	1	3	1	1	0	1.1
792	MAGNOLIA AVE	0	0	3	1	1	1	1.1
795	LAKESIDE DR	0	0	3	1	1	1	1.1
797	GREENHAVEN LN	0	0	3	1	1	1	1.1
826	KENYON DR	0	0	3	0	1	3	1.1
831	BRESLAUER WAY	0	1	3	1	1	0	1.1
841	PIONEER LN	0	2	3	1	0	1	1.1
842	ADELENE ST	0	2	3	1	0	1	1.1
869	SPINNAKER DR	0	0	3	1	1	1	1.1
881	RIVER RIDGE DR	0	1	3	2	0	0	1.1
927	HARVARD WAY	0	2	3	1	0	1	1.1
933	TRALEE LN	0	1	3	1	1	0	1.1
934	TRALEE LN	0	1	3	1	1	0	1.1
935	GALWAY DR	0	0	3	1	1	1	1.1
937	TRALEE LN	0	0	3	1	1	1	1.1
940	OCONNER AVE	0	1	3	1	1	0	1.1
941	OCONNER AVE	0	1	3	1	1	0	1.1
946	OCONNER AVE	0	0	3	1	1	1	1.1
949	IMELDA CT	0	1	3	1	1	0	1.1
957	MARY LAKE DR	0	0	3	1	1	1	1.1
979	RAINIER DR	0	1	3	2	0	0	1.1
988	ORO ST	0	2	3	1	0	1	1.1
997	CARLOW WAY	0	0	3	1	0	3	1.1
999	KILDARE DR	0	2	3	1	0	1	1.1
1000	KILDARE DR	0	2	3	1	0	1	1.1
1001	WISCONSIN AVE	0	0	3	1	1	1	1.1
1006	TRAVONA ST	0	0	3	1	1	1	1.1
1007	REMINGTON DR	0	1	3	1	1	0	1.1
1027	LAKESIDE DR	0	0	3	1	1	1	1.1

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
1031	EL CAPITAN DR	0	1	3	1	1	0	1.1
1031	EL CAPITAN DR	0	1	3	1	1	0	1.1
1035	FAIROAKS CT	0	1	3	1	1	0	1.1
1037	REGATTA CT	0	1	3	1	1	0	1.1
1053	SUNSET DR	0	1	3	1	1	0	1.1
1058	REDBUD DR	0	1	3	1	1	0	1.1
1062	BLUE BELL DR	0	1	3	2	0	0	1.1
1063	STARBURST DR	0	1	3	2	0	0	1.1
1067	CRIMSONWOOD DR	0	1	3	1	1	0	1.1
1067	CRIMSONWOOD DR	0	1	3	1	1	0	1.1
1068	CASTLE CT	0	1	3	1	1	0	1.1
1120	SUNGOLD CIR	0	1	3	1	1	0	1.1
1127	NAVAJO CT	0	1	3	2	0	0	1.1
1129	SENECA CT	0	1	3	2	0	0	1.1
1133	ELIZABETH WAY	0	1	3	2	0	0	1.1
1164	BELTLINE RD	0	2	3	1	0	1	1.1
1207	REMOR ST	0	2	3	1	0	1	1.1
1234	CHINOOK DR	0	1	3	2	0	0	1.1
1266	VICTOIRE WAY	0	2	3	1	0	1	1.1
1267	JOAQUIN AVE	0	2	3	1	0	1	1.1
1270	A ST	0	0	3	1	1	1	1.1
1271	THIRD ST	0	0	3	1	1	1	1.1
1272	THIRD ST	0	0	3	1	1	1	1.1
1273	B ST	0	1	3	1	1	0	1.1
1277	PANORAMA DR	0	2	3	1	0	1	1.1
1278	RIVER PARK DR	0	0	3	1	1	1	1.1
1286	PANORAMA DR	0	2	3	1	0	1	1.1
1287	PANORAMA DR	0	2	3	1	0	1	1.1
1306	VISTA MADRE CIR	0	1	3	1	1	0	1.1
1328	SUNGLOW DR	0	1	3	2	0	0	1.1
1339	SUNGLOW DR	0	2	3	1	0	1	1.1
1340	RIVIERA DR	0	1	3	1	1	0	1.1
1342	SCENIC WAY	0	1	3	1	1	0	1.1
1355	RIVIERA DR	0	1	3	1	1	0	1.1
1356	MIRA VISTA CT	0	0	3	1	1	1	1.1
1357	RIVIERA DR	0	1	3	1	1	0	1.1
1362	LOOKOUT CT	0	0	3	1	1	1	1.1
1363	BRIAN CT	0	1	3	2	0	0	1.1
1364	MCHALE WAY	0	1	3	2	0	0	1.1
1380	BADGER CT	0	1	3	2	0	0	1.1
1382	TOPAZ CT	0	1	3	2	0	0	1.1
1386	GRANDVIEW AVE	0	1	3	2	0	0	1.1
1388	WEST ST	0	0	3	2	0	1	1.1
1390	GRANDVIEW AVE	0	1	3	2	0	0	1.1
1413	LEONARD DR	0	1	3	1	1	0	1.1
1481	MADERA ST	0	3	3	1	0	0	1.1
1482	WORTLEY LN	0	3	3	1	0	0	1.1
1506	GOLD HILLS DR	0	1	3	2	0	0	1.1
1567	TRAVERSE ST	0	1	3	1	1	0	1.1
1581	A ST	0	1	3	1	1	0	1.1
1587	SISKIYOU ST	0	1	3	2	0	0	1.1
1593	ROSITA DR	0	1	3	1	1	0	1.1
1596	CESSNA CT	0	1	3	1	1	0	1.1
1597	SAN FRANCISCO ST	0	1	3	1	1	0	1.1
1635	PIONEER DR	0	0	3	1	1	1	1.1
1636	CASCADE CT	0	1	3	1	1	0	1.1
1686	SACRAMENTO ST	0	1	3	1	1	0	1.1
1687	SOUTH ST	0	0	3	1	1	1	1.1
1689	SACRAMENTO ST	0	1	3	1	1	0	1.1
1691	SONOMA ST	0	1	3	1	1	0	1.1
1697	WALDON ST	0	2	3	1	0	1	1.1
1705	SACRAMENTO ST	0	1	3	1	1	0	1.1
1715	9TH ST	0	1	3	1	1	0	1.1
1719	DIVISION ST	0	1	3	1	1	0	1.1
1734	DELTA ST	0	1	3	1	1	0	1.1
1736	HENRY MOORE LN	0	2	3	1	0	1	1.1
1738	SANTA ROSA WAY	0	2	3	1	0	1	1.1
1741	PANORAMA DR	0	2	3	1	0	1	1.1
1742	WINDING WAY	0	2	3	1	0	1	1.1
1748	ST MARKS ST	0	2	3	1	0	1	1.1
1753	SANTA ROSA WAY	0	2	3	1	0	1	1.1
1760	TAMARACK DR	0	2	3	1	0	1	1.1
1764	MIDDLE ST	0	2	3	1	0	1	1.1
1767	TAMARACK DR	0	2	3	1	0	1	1.1
1775	LAKE FOREST DR	0	2	3	1	0	1	1.1
1793	E KESWICK DAM RD	0	1	3	1	1	0	1.1
1801	GREENBACK LN	0	2	3	1	0	1	1.1

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
1806	E KESWICK DAM RD	0	2	3	1	0	1	1.1
1826	ST NICHOLAS AVE	0	0	3	1	1	1	1.1
1830	ST MARKS ST	0	2	3	1	0	1	1.1
1879	DELTA ST	0	1	3	1	1	0	1.1
1884	HWY 44 EB ON/R	3	0	1	1	0	1	1.1
1885	SUNDIAL BRIDGE DR	0	2	3	1	0	1	1.1
1928	STERLING DR	0	1	3	2	0	0	1.1
1933	CAMULOS WAY	0	0	3	1	1	1	1.1
1962	TANGLEWOOD DR	0	1	3	2	0	0	1.1
1988	REDWOOD BLVD	0	1	3	1	1	0	1.1
2020	FOX DEN DR	0	2	3	0	0	3	1.1
2024	WEDDING WAY	0	2	3	0	0	3	1.1
2031	TAHOE CT	0	2	3	1	0	1	1.1
2049	WHITE RIVER DR	0	2	3	1	0	1	1.1
2060	DOMINICA CT	0	0	3	2	0	1	1.1
2066	PEPPERTREE LN	0	1	3	2	0	0	1.1
2097	COUNTRY OAK DR	0	3	3	1	0	0	1.1
2100	COUNTRY OAK DR	0	3	3	1	0	0	1.1
2110	MIDWAY DR	0	2	3	1	0	1	1.1
2118	CASCADE DR	0	2	3	1	0	1	1.1
2123	DIAMOND RIDGE DR	0	2	3	1	0	1	1.1
2138	MOUNTAIN VIEW DR	0	2	3	1	0	1	1.1
2144	MONTCLAIR DR	0	1	3	1	1	0	1.1
2146	MONTCLAIR DR	0	1	3	1	1	0	1.1
2158	TARMAC RD	0	1	3	1	1	0	1.1
2175	HACIENDA ST	0	2	3	1	0	1	1.1
2218	CLOVERWAY DR	0	1	3	1	1	0	1.1
2225	CUMBERLAND DR	0	2	3	1	0	1	1.1
2255	WOODBRIDGE CT	0	1	3	1	1	0	1.1
2260	SOMERSET AVE	0	1	3	1	1	0	1.1
2264	SOMERSET CT	0	1	3	1	1	0	1.1
2266	SOMERSET AVE	0	1	3	1	1	0	1.1
2295	ALEXIS WAY	0	1	3	1	1	0	1.1
2296	BOWYER BLVD	0	1	3	1	1	0	1.1
2354	MARLENE AVE	0	0	3	1	1	1	1.1
2355	MARLENE AVE	0	1	3	1	1	0	1.1
2357	SILVERWOOD ST	0	1	3	1	1	0	1.1
2361	MARLENE AVE	0	1	3	1	1	0	1.1
2366	GALAXY WAY	0	1	3	1	1	0	1.1
2372	TIMBERCREEK DR	0	1	3	1	1	0	1.1
2373	TIMBERCREEK DR	0	1	3	1	1	0	1.1
2375	CONIFER WAY	0	2	3	0	1	1	1.1
2459	BURTON DR	0	0	3	2	0	1	1.1
2469	PARTRIDGE DR	0	2	3	1	0	1	1.1
2496	DOWNARD LN	0	1	3	1	1	0	1.1
2499	CEDARWOOD DR	0	1	3	1	1	0	1.1
2502	SHADY LN	0	1	3	1	1	0	1.1
2510	BRANDON CT	0	1	3	1	1	0	1.1
2512	MONTCREST DR	0	1	3	2	0	0	1.1
2518	MONTCREST DR	0	1	3	2	0	0	1.1
2523	WHET OWL WAY	0	0	3	2	0	1	1.1
2525	WHISTLING DR	0	1	3	2	0	0	1.1
2536	SERRANO PL	0	1	3	2	0	0	1.1
2537	BURTON DR	0	1	3	2	0	0	1.1
2549	GROUSE DR	0	1	3	2	0	0	1.1
2556	HWY 44 EB ON/R	0	0	1	2	1	3	1.1
2560	JASMINE WAY	0	1	3	1	1	0	1.1
2597	NIGHTHAWK LN	0	0	3	2	0	1	1.1
2611	LEMA RD	0	0	3	2	0	1	1.1
2613	WHET OWL WAY	0	0	3	2	0	1	1.1
2624	REDDINGTON DR	0	1	3	2	0	0	1.1
2648	FOX ESTATES CT	0	0	3	2	0	1	1.1
2653	WALES CT	0	1	3	2	0	0	1.1
2656	HOBO LN	0	0	3	1	1	1	1.1
2667	HOLLOW LN	0	1	3	2	0	0	1.1
2668	RIDGEWOOD RD	0	0	3	2	0	1	1.1
2697	PALACIO DR	0	2	3	1	0	1	1.1
2702	HOLLOW LN	0	1	3	2	0	0	1.1
2726	GOLD HILLS CT	0	0	3	1	1	1	1.1
2776	RAINDROP CT	0	1	3	2	0	0	1.1
2778	DREAM ST	0	1	3	2	0	0	1.1
2785	AUDITORIUM DR	0	2	3	1	0	1	1.1
2786	AUDITORIUM DR	0	2	3	1	0	1	1.1
2791	RESTING FAWN CT	0	2	3	1	0	1	1.1
2807	BEAUMONT DR	0	1	3	1	1	0	1.1
2808	MONTCLAIR DR	0	1	3	1	1	0	1.1
2813	MOUNTAIN OAK DR	0	1	3	1	1	0	1.1

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
2814	PERI DR	0	0	3	1	1	1	1.1
2818	BELTLINE RD	0	2	3	1	0	1	1.1
2835	SALMONBERRY DR	0	1	3	2	0	0	1.1
2841	YUBA ST	0	1	3	1	1	0	1.1
2845	WINGSETTER WAY	0	2	3	1	0	1	1.1
2874	CAMPO CALLE	0	0	3	2	0	1	1.1
2908	DOGWOOD LN	0	1	3	2	0	0	1.1
2910	DOGWOOD LN	0	1	3	2	0	0	1.1
2911	BUCKEYE TER	0	2	3	1	0	1	1.1
2937	REDWOOD BLVD	0	1	3	1	1	0	1.1
2937	REDWOOD BLVD	0	1	3	1	1	0	1.1
2946	CROSBY LN	0	0	3	1	1	1	1.1
2947	LAGORCE DR	0	1	3	2	0	0	1.1
2952	GOLD HILLS DR	0	1	3	1	1	0	1.1
2998	LA CRESCENTA DR	0	0	3	1	1	1	1.1
3002	PALERMO CT	0	0	3	1	0	3	1.1
3005	RIVER RIDGE DR	0	1	3	2	0	0	1.1
3006	SHOWBOAT CT	0	1	3	2	0	0	1.1
3012	STANFORD DR	0	1	3	2	0	0	1.1
3026	CAPRICORN WAY	0	1	3	1	1	0	1.1
3032	CAPRICORN WAY	0	3	3	1	0	0	1.1
3034	CORONA ST	0	2	3	1	0	1	1.1
3040	CARNELIAN WAY	0	1	3	1	1	0	1.1
3043	CARNELIAN WAY	0	2	3	1	0	1	1.1
3049	HARLAN DR	0	1	3	2	0	0	1.1
3061	HARLAN DR	0	1	3	2	0	0	1.1
3061	HARLAN DR	0	1	3	2	0	0	1.1
3095	CHRISTINE AVE	0	2	3	1	0	1	1.1
3113	JORDAN LN	0	2	3	1	0	1	1.1
3114	JORDAN LN	0	2	3	1	0	1	1.1
3134	CASTLEWOOD DR	0	2	3	1	0	1	1.1
3153	GOULANT LN	0	1	3	1	1	0	1.1
3180	ETHAN LN	0	1	3	1	1	0	1.1
3182	REMI LN	0	1	3	1	1	0	1.1
3206	TEMPLETON DR	0	1	3	1	1	0	1.1
3207	NESEE CT	0	1	3	1	1	0	1.1
3231	RIVER BEND RD	0	1	3	2	0	0	1.1
3233	RIVER BEND RD	0	1	3	2	0	0	1.1
3239	PALISADES AVE	0	0	3	2	0	1	1.1
3266	TIDMORE LN	0	1	3	1	1	0	1.1
3326	FOREST HILLS DR	0	1	3	2	0	0	1.1
3330	ROSE TREE LN	0	1	3	2	0	0	1.1
3334	SALMONBERRY DR	0	1	3	2	0	0	1.1
3337	IMPERIAL DR	0	2	3	1	0	1	1.1
3339	FRENCH LACE LN	0	1	3	2	0	0	1.1
3353	PIT RD	0	2	3	1	0	1	1.1
3361	ALLEGHENY CT	0	1	3	2	0	0	1.1
3362	TETON DR	0	1	3	2	0	0	1.1
3364	TETON DR	0	1	3	2	0	0	1.1
3379	WALDON ST	0	2	3	1	0	1	1.1
3380	CALIFORNIA ST	0	2	3	1	0	1	1.1
3388	CROSSFIRE WAY	0	1	3	2	0	0	1.1
3391	HEATHER LN	0	1	3	1	1	0	1.1
3404	KNOLLCREST DR	0	2	3	1	0	1	1.1
3418	SPANIEL DR	0	0	3	1	0	3	1.1
3420	WHISTLING DR	0	2	3	1	0	1	1.1
3423	BUNDY CT	0	1	3	2	0	0	1.1
3424	LANCERS LN	0	0	3	2	0	1	1.1
3425	LANCERS LN	0	0	3	2	0	1	1.1
3426	BURTON DR	0	0	3	1	0	3	1.1
3429	BROWNING ST	0	2	3	1	0	1	1.1
3430	MISSION SIERRA CT	0	0	3	2	0	1	1.1
3440	HWY 44 WB OFF/R	0	0	1	2	1	3	1.1
3452	HAWTHORNE AVE	0	1	3	1	1	0	1.1
3455	PINEWOOD DR	0	1	3	1	1	0	1.1
3465	OXFORD RD	0	1	3	1	1	0	1.1
3480	BLUFFSIDE CT	0	1	3	1	1	0	1.1
3494	HAWN AVE	0	1	3	1	1	0	1.1
3497	KING ST	0	1	3	1	1	0	1.1
3508	BUNKER ST	0	1	3	1	1	0	1.1
3511	OXFORD RD	0	1	3	1	1	0	1.1
3516	TEHAMA ST	0	1	3	1	1	0	1.1
3530	LEISHA LN	0	1	3	2	0	0	1.1
3543	S MARKET ST	3	0	1	1	0	1	1.1
3547	MARION CT	0	1	3	1	1	0	1.1
3548	EDITH AVE	0	1	3	2	0	0	1.1
3552	TRALEE LN	0	0	3	1	1	1	1.1

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
3552	TRALEE LN	0	0	3	1	1	1	1.1
3553	TRALEE LN	0	0	3	1	1	1	1.1
3554	KAY WAY	0	1	3	2	0	0	1.1
3575	EUREKA WAY	0	3	3	1	0	0	1.1
3582	PARKVIEW AVE	0	2	3	1	0	1	1.1
3593	C ST	0	1	3	1	1	0	1.1
3596	C ST	0	1	3	1	1	0	1.1
3616	VEDA ST	0	1	3	2	0	0	1.1
3620	VEDA ST	0	1	3	2	0	0	1.1
3623	SPRUCE ST	0	1	3	2	0	0	1.1
3625	VEDA ST	0	1	3	2	0	0	1.1
3668	FAVRETTO AVE	0	1	3	1	1	0	1.1
3699	SCENIC DR	0	0	3	1	1	1	1.1
3706	WOOD LN	0	0	3	1	1	1	1.1
3749	BUTTE ST	0	1	3	1	1	0	1.1
3758	BUTTE ST	0	1	3	1	1	0	1.1
3759	BUTTE ST	0	1	3	1	1	0	1.1
3780	SKYLINE DR	0	0	3	1	1	1	1.1
3785	OCTAVIA ST	0	0	3	1	1	1	1.1
3794	OAK RIDGE DR	0	1	3	1	1	0	1.1
3799	FIG AVE	0	0	3	2	0	1	1.1
3803	GLADSTONE CT	0	1	3	1	1	0	1.1
3804	STARLIGHT BLVD	0	0	3	1	0	3	1.1
3815	WEST ST	0	0	3	2	0	1	1.1
3822	WEST ST	0	0	3	2	0	1	1.1
3836	GALWAY DR	0	1	3	1	1	0	1.1
3838	QUINTON DR	0	1	3	1	1	0	1.1
3840	ORTEGA CT	0	1	3	2	0	0	1.1
3846	PLATINUM WAY	0	2	3	1	0	1	1.1
3848	PIT RD	0	2	3	1	0	1	1.1
3859	MONTANA SKY DR	0	1	3	1	1	0	1.1
3867	CHANDON CT	0	0	3	2	0	1	1.1
3899	INDIANWOOD DR	0	2	3	1	0	1	1.1
3919	KELLINGER ST	0	1	3	2	0	0	1.1
3919	KELLINGER ST	0	1	3	2	0	0	1.1
3926	STEAMBOAT ST	0	1	3	1	1	0	1.1
3928	FIRST CABIN CT	0	1	3	1	1	0	1.1
3929	SPINNAKER DR	0	1	3	1	1	0	1.1
3969	POLARIS WAY	0	1	3	1	1	0	1.1
3981	CROWN VIEW LN	0	0	3	0	1	3	1.1
3994	ROBLES DR	0	1	3	1	1	0	1.1
4005	SARATOGA DR	0	1	3	1	1	0	1.1
4010	CLARA CT	0	0	3	1	1	1	1.1
4054	DUCK TAIL CT	0	0	3	2	0	1	1.1
4057	WHISTLING DR	0	1	3	2	0	0	1.1
4061	SATURN SKWY	0	1	3	1	1	0	1.1
4139	CLOVER CREEK ST	0	0	3	1	1	1	1.1
4155	KERRY AVE	0	1	3	1	1	0	1.1
4157	ROSEBUD LN	0	1	3	1	1	0	1.1
4159	WILSON AVE	0	1	3	1	1	0	1.1
4166	HAWN AVE	0	1	3	1	1	0	1.1
4168	HAWN AVE	0	1	3	1	1	0	1.1
4202	BLUE BELL DR	0	1	3	2	0	0	1.1
4213	CALIFORNIA ST	0	2	3	1	0	1	1.1
4217	ADA ST	0	2	3	1	0	1	1.1
4219	WALDON ST	0	2	3	1	0	1	1.1
4230	LINCOLN ST	0	2	3	1	0	1	1.1
4237	SACRAMENTO ST	0	1	3	1	1	0	1.1
4256	EUREKA WAY	0	0	3	1	1	1	1.1
4310	APPLE LN	0	3	3	0	1	0	1.1
4350	YUBA ST	0	1	3	1	1	0	1.1
4385	PRINCE ST	0	1	3	1	1	0	1.1
4386	CENTER ST	0	1	3	1	1	0	1.1
4399	N MARKET ST	3	0	1	1	0	1	1.1
4411	10TH ST	0	1	3	1	1	0	1.1
4413	10TH ST	0	1	3	1	1	0	1.1
4415	9TH ST	0	1	3	1	1	0	1.1
4426	LAKEVIEW DR	0	1	3	1	1	0	1.1
4430	8TH ST	0	1	3	1	1	0	1.1
4433	PIONEER DR	0	0	3	1	1	1	1.1
4436	NORTH ST	0	1	3	1	1	0	1.1
4465	ORANGE AVE	0	0	3	1	1	1	1.1
4466	TEHAMA ST	0	1	3	1	1	0	1.1
4467	ORANGE AVE	0	1	3	1	1	0	1.1
4469	BUTTE ST	0	1	3	1	1	0	1.1
4471	ORANGE AVE	0	0	3	1	1	1	1.1
4478	WILLIS ST	0	0	3	1	1	1	1.1

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
4503	OLIVE AVE	0	0	3	1	1	1	1.1
4538	YUBA ST	0	1	3	1	1	0	1.1
4541	WAUSHARA AVE	0	1	3	1	1	0	1.1
4542	SAN FRANCISCO ST	0	1	3	1	1	0	1.1
4543	SAN FRANCISCO ST	0	1	3	1	1	0	1.1
4563	PARSONS DR	0	1	3	1	1	0	1.1
4581	ESTATE ST	0	1	3	1	1	0	1.1
4585	ESTATE ST	0	1	3	1	1	0	1.1
4590	SACRAMENTO ST	0	0	3	1	1	1	1.1
4591	GRACE AVE	0	0	3	1	1	1	1.1
4596	CHESTNUT ST	0	0	3	1	1	1	1.1
4601	WEST ST	0	0	3	1	1	1	1.1
4662	BRANSTETTER LN	0	2	3	0	1	1	1.1
4670	HWY 44 WB ON/R	3	0	1	1	0	1	1.1
4670	HWY 44 WB ON/R	3	0	1	1	0	1	1.1
4673	LONGVIEW AVE	0	1	3	1	1	0	1.1
4699	CAMPO CALLE	0	1	3	2	0	0	1.1
4705	MORNINGSUN DR	0	1	3	1	1	0	1.1
4725	ROSEWOOD DR	0	1	3	2	0	0	1.1
4726	ROCKWOOD CIR	0	1	3	2	0	0	1.1
4731	ALAMINE DR	0	1	3	2	0	0	1.1
4733	ALAMINE DR	0	1	3	2	0	0	1.1
4739	PEPPERTREE LN	0	0	3	1	1	1	1.1
4745	VEGA ST	0	1	3	1	1	0	1.1
4746	VEGA ST	0	1	3	1	1	0	1.1
4754	SATURN SKWY	0	1	3	1	1	0	1.1
4755	VENUS WAY	0	1	3	1	1	0	1.1
4761	VENUS WAY	0	1	3	1	1	0	1.1
4763	VENUS WAY	0	1	3	1	1	0	1.1
4765	SATURN SKWY	0	1	3	1	1	0	1.1
4781	CLARK RIVER DR	0	1	3	1	1	0	1.1
4784	EEL CT	0	1	3	1	1	0	1.1
4787	WINDWOOD CT	0	3	3	1	0	0	1.1
4824	IVY HILL CT	0	1	3	1	1	0	1.1
4825	IVY HILL DR	0	1	3	1	1	0	1.1
4843	TERRA LINDA WAY	0	0	3	1	0	3	1.1
4844	SIERRA DR	0	2	3	1	0	1	1.1
4849	MOUNTAIN VIEW DR	0	2	3	1	0	1	1.1
4861	HOLLOW LN	0	0	3	2	0	1	1.1
4872	RINCON WAY	0	1	3	1	1	0	1.1
4896	SIMPSON BLVD	0	0	3	2	0	1	1.1
4913	OLD OASIS RD	0	0	3	1	0	3	1.1
4931	PALACIO DR	0	0	3	1	0	3	1.1
4941	MEADOWBROOK DR	0	1	3	1	1	0	1.1
4996	LIBERTY ST	0	2	3	1	0	1	1.1
5023	ST PATRICKS AVE	0	2	3	1	0	1	1.1
5031	JULY WAY	0	2	3	1	0	1	1.1
5084	MERCEDES LN	0	0	3	1	0	3	1.1
5086	ST THOMAS PKWY	0	0	3	2	0	1	1.1
5116	VOLTAIRE WAY	0	1	3	2	0	0	1.1
5140	LICHEN AVE	0	1	3	1	1	0	1.1
5217	OAKDALE LN	0	1	3	1	1	0	1.1
5226	SHASTA PINES WAY	0	1	3	1	1	0	1.1
5233	WOODSIDE MEADOWS DR	0	1	3	1	1	0	1.1
5234	WOODSIDE MEADOWS CT	0	1	3	1	1	0	1.1
5236	CEDARWOOD DR	0	1	3	1	1	0	1.1
5247	NORMAN DR	0	1	3	1	1	0	1.1
5266	VALLEY VIEW RD	0	0	3	0	1	3	1.1
5268	SILVERADO DR	0	1	3	1	1	0	1.1
5276	CANYON RD	0	2	3	1	0	1	1.1
5290	ROME AVE	0	1	3	1	1	0	1.1
5296	ATHENS AVE	0	2	3	1	0	1	1.1
5387	ENTERPRISE DUMP RD	0	0	3	1	0	3	1.1
15066	TEXAS SPRINGS RD	2	0	3	0	0	1	1.1
15105	ROBBY WAY	0	2	3	1	0	1	1.1
88	CASA BUENA ST	0	1	3	1	0	1	1
120	TRADITION WAY	0	1	3	1	0	1	1
215	COLLEGE VIEW DR	0	1	3	1	0	1	1
221	MCAULEY WAY	0	1	3	1	0	1	1
330	RIVER PARK DR	0	1	3	1	0	1	1
363	NOTRE DAME AVE	0	1	3	1	0	1	1
477	JAMIESON CT	0	1	3	1	0	1	1
517	CARSON DR	0	1	3	1	0	1	1
565	ROYAL OAKS DR	0	1	3	1	0	1	1
626	ALMA AVE	0	1	3	1	0	1	1
872	OLD LANTERN DR	0	1	3	1	0	1	1
874	OLD LANTERN DR	0	1	3	1	0	1	1

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
877	RIVER RIDGE DR	0	1	3	1	0	1	1
879	WHITE WATER CIR	0	1	3	1	0	1	1
981	KILDARE DR	0	1	3	1	0	1	1
982	WISCONSIN AVE	0	1	3	1	0	1	1
985	JASPER WAY	0	1	3	1	0	1	1
991	MEANDER DR	0	1	3	1	0	1	1
993	KILDARE DR	0	1	3	1	0	1	1
996	TRAVONA ST	0	1	3	1	0	1	1
1011	WINCHESTER PL	0	1	3	1	0	1	1
1014	CUMBERLAND DR	0	1	3	1	0	1	1
1019	RUSHMORE DR	0	1	3	1	0	1	1
1123	AUBURN DR	0	1	3	1	0	1	1
1125	PAWNEE CT	0	1	3	1	0	1	1
1163	DEERHAVEN CT	0	1	3	1	0	1	1
1173	MONARCH CT	0	1	3	1	0	1	1
1198	MONARDAS DR	0	1	3	1	0	1	1
1280	KINGSWOOD WAY	0	1	3	1	0	1	1
1282	KINGSWOOD WAY	0	1	3	1	0	1	1
1293	CONSTITUTION WAY	0	1	3	1	0	1	1
1330	OAK GLEN DR	0	1	3	1	0	1	1
1331	OAK GLEN DR	0	1	3	1	0	1	1
1334	OAK GLEN DR	0	1	3	1	0	1	1
1351	OAK GLEN DR	0	1	3	1	0	1	1
1588	WASATCH DR	0	1	3	1	0	1	1
1639	ARBOR PL	0	1	3	1	0	1	1
1740	DAWSON CT	0	1	3	1	0	1	1
1744	BLACKSTONE CT	0	1	3	1	0	1	1
1749	GOLDEN HEIGHTS DR	0	1	3	1	0	1	1
1768	PANORAMA DR	0	1	3	1	0	1	1
1769	PANORAMA DR	0	1	3	1	0	1	1
1779	CAMELOT CT	0	1	3	1	0	1	1
1782	GOODVIEW WAY	0	1	3	1	0	1	1
1785	JULY WAY	0	1	3	1	0	1	1
1792	MISHKA CT	0	1	3	1	0	1	1
1818	PATTERSON CT	0	1	3	1	0	1	1
1820	JULY WAY	0	1	3	1	0	1	1
1821	ST NICHOLAS AVE	0	1	3	1	0	1	1
1822	AUGUST WAY	0	1	3	1	0	1	1
1942	VALENCIA ST	0	1	3	1	0	1	1
2007	NUGGET LN	0	1	3	1	0	1	1
2046	REDWOOD BLVD	0	1	3	1	0	1	1
2048	YOGI CT	0	1	3	1	0	1	1
2103	MIDWAY DR	0	1	3	1	0	1	1
2117	CASCADE DR	0	1	3	1	0	1	1
2169	HEMINGWAY ST	0	1	3	1	0	1	1
2171	HEMINGWAY ST	0	1	3	1	0	1	1
2344	COLLYER DR	0	1	3	1	0	1	1
2472	COBBLE CREEK CT	0	1	3	1	0	1	1
2474	WHISTLING DR	0	1	3	1	0	1	1
2644	COLLYER DR	0	1	3	1	0	1	1
2651	NIKE CT	0	1	3	1	0	1	1
2675	PRINCETON WAY	0	1	3	1	0	1	1
2677	PRINCETON WAY	0	1	3	1	0	1	1
2695	CHANCELLOR BLVD	0	1	3	1	0	1	1
2834	BOBWHITE WAY	0	1	3	1	0	1	1
2844	PARTRIDGE DR	0	1	3	1	0	1	1
2854	SPRINGER DR	0	1	3	1	0	1	1
2854	SPRINGER DR	0	1	3	1	0	1	1
2857	EL MANGO DR	0	1	3	1	0	1	1
2859	CILANTRO DR	0	1	3	1	0	1	1
2906	CLAY ST	0	1	3	1	0	1	1
2961	BRANDON CT	0	1	3	1	0	1	1
3044	CARNELIAN WAY	0	1	3	1	0	1	1
3075	AMETHYST WAY	0	1	3	1	0	1	1
3096	CHRISTINE AVE	0	1	3	1	0	1	1
3112	ONA LN	0	1	3	1	0	1	1
3191	BROOKRIDGE DR	0	1	3	1	0	1	1
3336	SALMONBERRY DR	0	1	3	1	0	1	1
3338	ANTIGUA DR	0	1	3	1	0	1	1
3368	MARY LAKE DR	0	1	3	1	0	1	1
3394	IRIS DR	0	1	3	1	0	1	1
3396	AZALEA AVE	0	1	3	1	0	1	1
3397	IRIS DR	0	1	3	1	0	1	1
3413	SPANIEL DR	0	1	3	1	0	1	1
3417	SETTER DR	0	1	3	1	0	1	1
3419	WHISTLING DR	0	1	3	1	0	1	1
3566	WALDON ST	0	1	3	1	0	1	1

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
3690	KILKEE DR	0	1	3	1	0	1	1
3802	SOUTH ST	0	1	3	1	0	1	1
3865	DICKSON DR	0	1	3	1	0	1	1
4049	EDGEWOOD DR	0	1	3	1	0	1	1
4070	MISTY LN	0	1	3	1	0	1	1
4146	VELIA ST	0	1	3	1	0	1	1
4232	GOLD ST	0	1	3	1	0	1	1
4602	CRESTVIEW AVE	0	1	3	1	0	1	1
4605	SONOMA ST	0	1	3	1	0	1	1
4607	SONOMA ST	0	1	3	1	0	1	1
4678	BECHELLI LN	0	1	3	1	0	1	1
4736	BROCK DR	0	1	3	1	0	1	1
4832	COUNTRY OAK DR	0	1	3	1	0	1	1
4842	TERRA LINDA WAY	0	1	3	1	0	1	1
4914	CORNELL PL	0	1	3	1	0	1	1
4921	PALACIO DR	0	1	3	1	0	1	1
4925	JULIAN ST	0	1	3	1	0	1	1
4928	HARTLY CIR	0	1	3	1	0	1	1
4929	HARTLY CIR	0	1	3	1	0	1	1
4962	SONOMA ST	0	1	3	1	0	1	1
5111	STONEWALK CT	0	1	3	1	0	1	1
5112	LYNBROOK LOOP	0	1	3	1	0	1	1
5206	TRADITION WAY	0	1	3	1	0	1	1
47	LAKESIDE DR	0	0	3	1	1	0	1
47	LAKESIDE DR	0	0	3	1	1	0	1
52	MOYVANE DR	0	0	3	1	1	0	1
60	BRAMBLE PL	0	2	3	0	1	0	1
61	BRAMBLE PL	0	1	3	0	1	1	1
63	BRAMBLE PL	0	1	3	0	1	1	1
97	INDIAN COUNTRY DR	0	0	1	3	1	0	1
117	SILVER LACE LN	0	2	3	1	0	0	1
123	SEA LAVENDER CT	0	2	3	1	0	0	1
258	SUNDIAL BRIDGE DR	0	2	3	1	0	0	1
334	RIVER PARK DR	0	0	3	2	0	0	1
338	TERRA NOVA DR	0	0	3	2	0	0	1
382	PLATINUM WAY	0	2	3	1	0	0	1
480	BROWNING ST	0	0	3	2	0	0	1
491	BECHELLI LN	0	2	3	1	0	0	1
526	PALACIO DR	0	0	3	1	1	0	1
541	KAREN PL	0	0	3	1	1	0	1
552	GRANDVIEW AVE	0	0	3	2	0	0	1
563	ROYAL OAKS DR	0	0	3	1	1	0	1
564	RIVER OAKS DR	0	0	3	1	1	0	1
647	VEGA ST	0	0	3	1	1	0	1
785	10TH ST	0	0	3	1	1	0	1
796	LAKESIDE DR	0	0	3	1	1	0	1
798	LAKESIDE DR	0	0	3	1	1	0	1
809	RIVIERA DR	0	0	3	1	1	0	1
924	LAFAYETTE CT	0	2	3	1	0	0	1
930	CORITA PL	0	0	3	1	1	0	1
931	TRALEE LN	0	0	3	1	1	0	1
931	TRALEE LN	0	0	3	1	1	0	1
938	MOYVANE DR	0	0	3	1	1	0	1
939	MOYVANE DR	0	0	3	1	1	0	1
952	OCONNER AVE	0	0	3	1	1	0	1
955	WEXFORD CT	0	0	3	1	1	0	1
962	COOPER DR	0	1	3	0	1	1	1
1028	MT ASHLAND AVE	0	0	3	1	1	0	1
1029	WOODLAWN ST	0	0	3	1	1	0	1
1054	ROYAL OAKS DR	0	0	3	1	1	0	1
1055	ROYAL OAKS DR	0	0	3	1	1	0	1
1078	GOLD ST	0	2	3	1	0	0	1
1165	WHITE RIVER DR	0	2	3	1	0	0	1
1268	RICARDO AVE	0	0	3	1	1	0	1
1278	RIVER PARK DR	0	0	3	1	1	0	1
1278	RIVER PARK DR	0	0	3	1	1	0	1
1287	PANORAMA DR	0	2	3	1	0	0	1
1365	MCHALE WAY	0	0	3	2	0	0	1
1384	RITA AVE	0	0	3	2	0	0	1
1385	HILLCREST ST	0	0	3	2	0	0	1
1551	LOMA VISTA DR	0	0	3	1	1	0	1
1598	OAKWOOD PL	0	0	3	1	1	0	1
1598	OAKWOOD PL	0	0	3	1	1	0	1
1610	SOUTH ST	0	2	3	1	0	0	1
1611	SACRAMENTO ST	0	2	3	1	0	0	1
1618	SOUTH ST	0	2	3	1	0	0	1
1637	OVERHILL DR	0	0	3	1	1	0	1

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
1655	MAGNOLIA AVE	0	0	3	1	1	0	1
1656	MAGNOLIA AVE	0	0	3	1	1	0	1
1681	WEST ST	0	0	3	1	1	0	1
1685	WEST ST	0	0	3	1	1	0	1
1696	SONOMA ST	0	2	3	1	0	0	1
1746	PANORAMA DR	0	2	3	1	0	0	1
1750	GOLDEN HEIGHTS CT	0	2	3	1	0	0	1
1754	VALLI CT	0	2	3	1	0	0	1
1757	SANTA ROSA WAY	0	2	3	1	0	0	1
1784	YULETIDE AVE	0	2	3	1	0	0	1
1786	YULETIDE AVE	0	2	3	1	0	0	1
1803	HIATT DR	0	2	3	0	1	0	1
1807	MARIPOSA CT	0	2	3	1	0	0	1
1810	WINDING WAY	0	2	3	1	0	0	1
1812	LITTLE ST	0	2	3	1	0	0	1
1813	PANORAMA DR	0	2	3	1	0	0	1
1819	AUGUST WAY	0	2	3	1	0	0	1
1828	ST MARKS ST	0	2	3	1	0	0	1
1829	ST MARKS ST	0	2	3	1	0	0	1
1831	ORMSBY WAY	0	2	3	1	0	0	1
1872	LIBERTY ST	0	1	3	0	1	1	1
1874	LIBERTY ST	0	0	3	1	1	0	1
1902	MINDER DR	0	0	3	1	1	0	1
1944	HILLTOP DR	0	2	3	1	0	0	1
1954	ST THOMAS PKWY	0	0	3	2	0	0	1
2104	MASON ST	0	2	3	1	0	0	1
2109	SHILOH CT	0	2	3	1	0	0	1
2120	CASCADE DR	0	2	3	1	0	0	1
2137	SIERRA DR	0	2	3	1	0	0	1
2174	HACIENDA ST	0	2	3	1	0	0	1
2323	HWY 44 WB ON/R	0	1	1	1	1	3	1
2359	MARLENE AVE	0	0	3	1	1	0	1
2459	BURTON DR	0	0	3	2	0	0	1
2524	TANGLEWOOD DR	0	0	3	2	0	0	1
2538	LANCERS LN	0	0	3	2	0	0	1
2548	GROUSE DR	0	2	3	1	0	0	1
2552	YAHI LN	0	0	3	1	1	0	1
2553	HWY 44 EB OFF/R	0	1	1	1	1	3	1
2621	REDDINGTON DR	0	0	3	2	0	0	1
2621	REDDINGTON DR	0	0	3	2	0	0	1
2628	COUNTRY OAK DR	0	0	3	1	1	0	1
2679	EDINBURGH WAY	0	2	3	1	0	0	1
2686	JULIAN ST	0	2	3	1	0	0	1
2689	HEMINGWAY ST	0	2	3	1	0	0	1
2821	MT ASHLAND AVE	0	0	3	1	1	0	1
2878	CESSNA DR	0	0	3	1	1	0	1
2881	PLEASANT ST	0	2	3	1	0	0	1
2882	SOUTH ST	0	2	3	1	0	0	1
2883	SOUTH ST	0	2	3	1	0	0	1
2953	BUCKTHORN DR	0	0	3	2	0	0	1
2953	BUCKTHORN DR	0	0	3	2	0	0	1
2998	LA CRESCENTA DR	0	0	3	1	1	0	1
3009	STANFORD DR	0	0	3	2	0	0	1
3010	STANFORD DR	0	0	3	2	0	0	1
3013	BELLAGIO TER	0	0	3	2	0	0	1
3014	REDONDO CT	0	0	3	2	0	0	1
3016	STONE CANYON DR	0	0	3	2	0	0	1
3017	RIVER RIDGE DR	0	2	3	1	0	0	1
3085	LAKE REDDING DR	0	2	3	1	0	0	1
3189	COLLEGE VIEW DR	0	0	3	1	1	0	1
3195	STONETHROW CT	0	2	3	1	0	0	1
3239	PALISADES AVE	0	0	3	2	0	0	1
3332	ROSE TREE LN	0	0	3	2	0	0	1
3333	ROSE TREE LN	0	0	3	2	0	0	1
3354	PIT RD	0	2	3	1	0	0	1
3354	PIT RD	0	2	3	1	0	0	1
3355	PLATINUM WAY	0	2	3	1	0	0	1
3395	AZALEA AVE	0	2	3	1	0	0	1
3433	WHALEY RD	0	0	3	1	1	0	1
3544	S MARKET ST	3	0	1	1	0	0	1
3545	MARKET ST	3	0	1	1	0	0	1
3550	RECORD LN	0	0	3	1	1	0	1
3551	DILLARD LN	0	0	3	1	1	0	1
3579	CALIFORNIA ST	0	0	3	1	1	0	1
3622	VEDA ST	0	0	3	2	0	0	1
3676	SUNSET DR	0	0	3	1	1	0	1
3676	SUNSET DR	0	0	3	1	1	0	1

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
3693	ROSITA DR	0	0	3	1	1	0	1
3693	ROSITA DR	0	0	3	1	1	0	1
3748	ALMOND AVE	0	0	3	2	0	0	1
3754	TEHAMA ST	0	0	3	1	1	0	1
3778	TERRACE ST	0	0	3	1	1	0	1
3780	SKYLINE DR	0	0	3	1	1	0	1
3784	OCTAVIA ST	0	0	3	1	1	0	1
3786	OAK RIDGE DR	0	0	3	1	1	0	1
3792	GOLD ST	0	0	3	1	1	0	1
3792	GOLD ST	0	0	3	1	1	0	1
3849	PIT RD	0	2	3	1	0	0	1
3850	PIT RD	0	2	3	1	0	0	1
3851	BROOCH CT	0	2	3	1	0	0	1
3927	SPINNAKER DR	0	0	3	1	1	0	1
3964	GLENWOOD DR	0	1	3	0	0	3	1
3978	HERBSCENTA LN	0	1	3	0	1	1	1
3984	HOLLOW LN	0	0	3	1	1	0	1
4130	AMELIA CT	0	0	3	1	1	0	1
4140	CAROLEE CT	0	0	3	1	1	0	1
4148	AVOLA ST	0	2	3	1	0	0	1
4161	WILSON AVE	0	0	3	1	1	0	1
4220	ADA ST	0	2	3	1	0	0	1
4223	CALIFORNIA ST	0	2	3	1	0	0	1
4225	LINCOLN ST	0	2	3	1	0	0	1
4252	LIBERTY ST	0	1	3	0	1	1	1
4255	EUREKA WAY	0	2	3	0	1	0	1
4311	DIGGER LN	0	2	3	0	1	0	1
4337	LIBERTY ST	0	0	3	1	1	0	1
4379	PRINCE ST	0	2	3	1	0	0	1
4383	PRINCE ST	0	2	3	1	0	0	1
4424	7TH ST	0	0	3	1	1	0	1
4470	ORANGE AVE	0	0	3	1	1	0	1
4474	WILLIS ST	0	0	3	1	1	0	1
4478	WILLIS ST	0	0	3	1	1	0	1
4481	WEST ST	0	0	3	1	1	0	1
4481	WEST ST	0	0	3	1	1	0	1
4482	WEST ST	0	0	3	1	1	0	1
4499	BUTTE ST	0	0	3	1	1	0	1
4503	OLIVE AVE	0	0	3	1	1	0	1
4539	SAN FRANCISCO ST	0	0	3	1	1	0	1
4549	CESSNA DR	0	0	3	1	1	0	1
4549	CESSNA DR	0	0	3	1	1	0	1
4551	CESSNA DR	0	0	3	1	1	0	1
4592	GOLD ST	0	0	3	1	1	0	1
4597	CHESTNUT ST	0	0	3	1	1	0	1
4601	WEST ST	0	0	3	1	1	0	1
4654	HEATHER LN	0	1	3	0	1	1	1
4665	BELLAGIO TER	0	0	3	2	0	0	1
4713	YOGI CT	0	2	3	1	0	0	1
4737	BROCK DR	0	0	3	1	1	0	1
4737	BROCK DR	0	0	3	1	1	0	1
4831	COLLYER DR	0	0	3	1	1	0	1
4846	MOUNTAIN VIEW DR	0	2	3	1	0	0	1
4847	MOUNTAIN VIEW DR	0	2	3	1	0	0	1
4848	PALO VISTA CT	0	2	3	1	0	0	1
4861	HOLLOW LN	0	0	3	2	0	0	1
4866	WILVERN LN	0	0	3	2	0	0	1
4896	SIMPSON BLVD	0	0	3	2	0	0	1
4924	ARMANDO AVE	0	2	3	1	0	0	1
4930	CHANCELLOR BLVD	0	2	3	1	0	0	1
4953	BRANSTETTER CIR	0	0	3	1	1	0	1
4953	BRANSTETTER CIR	0	0	3	1	1	0	1
4959	CLIFF DR	0	2	3	1	0	0	1
5035	POINSETTA AVE	0	2	3	1	0	0	1
5189	BOSTON AVE	0	0	3	1	1	0	1
5204	HILLCREST ST	0	0	3	2	0	0	1
5312	VIKING WAY	0	2	3	1	0	0	1
5342	OVERHILL DR	0	0	3	1	1	0	1
6375	AMERICAN RD	0	1	3	0	0	3	1
37	CENTAVO WAY	0	1	3	1	0	0	0.9
38	COLUMBIA WAY	0	1	3	1	0	0	0.9
110	HARVARD WAY	0	1	3	1	0	0	0.9
111	AMHERST PL	0	1	3	1	0	0	0.9
112	HARVARD WAY	0	1	3	1	0	0	0.9
113	HARVARD WAY	0	1	3	1	0	0	0.9
119	SEA LAVENDER CT	0	1	3	1	0	0	0.9
121	TRADITION WAY	0	1	3	1	0	0	0.9

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
122	WISTERIA CT	0	1	3	1	0	0	0.9
150	VIKING WAY	0	1	3	1	0	0	0.9
204	BELTLINE RD	0	0	3	0	0	3	0.9
329	SHADOWRUN CT	0	1	3	1	0	0	0.9
329	SHADOWRUN CT	0	1	3	1	0	0	0.9
360	SHAMROCK ST	0	1	3	1	0	0	0.9
416	WARM SPRING LN	0	1	3	1	0	0	0.9
837	PIONEER LN	0	1	3	1	0	0	0.9
871	WHITE WATER CIR	0	1	3	1	0	0	0.9
878	RIVER RIDGE DR	0	1	3	1	0	0	0.9
925	SIMPSON BLVD	0	1	3	1	0	0	0.9
926	SIMPSON BLVD	0	1	3	1	0	0	0.9
959	WISCONSIN AVE	0	1	3	1	0	0	0.9
986	WISCONSIN AVE	0	1	3	1	0	0	0.9
987	WISCONSIN AVE	0	1	3	1	0	0	0.9
990	WISCONSIN AVE	0	1	3	1	0	0	0.9
1002	ORO CT	0	1	3	1	0	0	0.9
1003	TRAVONA ST	0	1	3	1	0	0	0.9
1016	CUMBERLAND DR	0	1	3	1	0	0	0.9
1017	WHITNEY CT	0	1	3	1	0	0	0.9
1018	CUMBERLAND DR	0	1	3	1	0	0	0.9
1080	JAY ST	0	1	3	1	0	0	0.9
1161	SWALLOWTAIL CT	0	1	3	1	0	0	0.9
1162	SWALLOWTAIL CT	0	1	3	1	0	0	0.9
1166	WHITE RIVER DR	0	1	3	1	0	0	0.9
1247	PASO DR	0	1	3	1	0	0	0.9
1281	KINGSWOOD CT	0	1	3	1	0	0	0.9
1284	BLOSSOM CT	0	1	3	1	0	0	0.9
1521	BRIDGEWATER CT	0	1	3	0	1	0	0.9
1586	RUSHMORE DR	0	1	3	1	0	0	0.9
1589	WASATCH CT	0	1	3	1	0	0	0.9
1633	AURORA PL	0	1	3	1	0	0	0.9
1640	RIVER OAKS DR	0	1	3	1	0	0	0.9
1640	RIVER OAKS DR	0	1	3	1	0	0	0.9
1735	FOOTBRIDGE CT	0	1	3	1	0	0	0.9
1747	CARDIFF CT	0	1	3	1	0	0	0.9
1759	SHERMAN WAY	0	1	3	1	0	0	0.9
1765	PANORAMA DR	0	1	3	1	0	0	0.9
1770	WINDING WAY	0	1	3	1	0	0	0.9
1771	WINDING WAY	0	1	3	1	0	0	0.9
1776	SANTA ROSA WAY	0	1	3	1	0	0	0.9
1797	LANA CT	0	1	3	1	0	0	0.9
1816	ST NICHOLAS AVE	0	1	3	1	0	0	0.9
1848	LINCOLN ST	0	1	3	1	0	0	0.9
2000	WHITE RIVER CT	0	1	3	1	0	0	0.9
2006	BELTLINE RD	0	1	3	1	0	0	0.9
2011	WHITE RIVER DR	0	1	3	1	0	0	0.9
2012	REDWOOD BLVD	0	1	3	1	0	0	0.9
2014	REDWOOD BLVD	0	1	3	1	0	0	0.9
2062	ALAMINE DR	0	1	3	1	0	0	0.9
2063	SHOEMAKER CT	0	1	3	1	0	0	0.9
2112	MIDWAY DR	0	1	3	1	0	0	0.9
2125	DIAMOND RIDGE DR	0	1	3	1	0	0	0.9
2128	HILLSDALE CT	0	1	3	1	0	0	0.9
2132	TERRA LINDA WAY	0	1	3	1	0	0	0.9
2135	METRO WAY	0	1	3	1	0	0	0.9
2141	KAMP WAY	0	1	3	1	0	0	0.9
2143	MANZANITA TER	0	1	3	1	0	0	0.9
2170	HEMINGWAY ST	0	1	3	1	0	0	0.9
2460	GABRIEL ST	0	1	3	1	0	0	0.9
2463	PARTRIDGE DR	0	1	3	1	0	0	0.9
2465	WINGSETTER CT	0	1	3	1	0	0	0.9
2466	WINGSETTER WAY	0	1	3	1	0	0	0.9
2471	WINDSCAPE CT	0	1	3	1	0	0	0.9
2473	WHISTLING DR	0	1	3	1	0	0	0.9
2475	WILD GOOSE CT	0	1	3	1	0	0	0.9
2508	LANCERS LN	0	1	3	1	0	0	0.9
2526	WHISTLING DR	0	1	3	1	0	0	0.9
2534	WEATHERBY CT	0	1	3	1	0	0	0.9
2545	PARTRIDGE DR	0	1	3	1	0	0	0.9
2603	EDGEWOOD CT	0	1	3	1	0	0	0.9
2654	PINNACLE CT	0	1	3	1	0	0	0.9
2661	SNOWBURST CT	0	1	3	1	0	0	0.9
2676	SIMPSON BLVD	0	1	3	1	0	0	0.9
2680	EDINBURGH PL	0	1	3	1	0	0	0.9
2685	JULIAN ST	0	1	3	1	0	0	0.9
2687	JULIAN CT	0	1	3	1	0	0	0.9

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
2691	CHANCELLOR BLVD	0	1	3	1	0	0	0.9
2692	CHANCELLOR BLVD	0	1	3	1	0	0	0.9
2693	MAUDRAY WAY	0	1	3	1	0	0	0.9
2694	CILANTRO DR	0	1	3	1	0	0	0.9
2696	CHANCELLOR BLVD	0	1	3	1	0	0	0.9
2833	BOBWHITE WAY	0	1	3	1	0	0	0.9
2847	SPRINGER DR	0	1	3	1	0	0	0.9
2858	MAUDRAY WAY	0	1	3	1	0	0	0.9
2879	SACRAMENTO ST	0	1	3	1	0	0	0.9
2915	BAYWOOD DR	0	1	3	1	0	0	0.9
2948	AUGUSTA CT	0	1	3	1	0	0	0.9
3083	ONYX CT	0	1	3	1	0	0	0.9
3084	LAKE REDDING DR	0	1	3	1	0	0	0.9
3193	VALLEYRIDGE DR	0	1	3	1	0	0	0.9
3194	STONETHROW CT	0	1	3	1	0	0	0.9
3341	TRUMPET DR	0	1	3	1	0	0	0.9
3414	SETTER CT	0	1	3	1	0	0	0.9
3421	WILD GOOSE CT	0	1	3	1	0	0	0.9
3422	BURTON CT	0	1	3	1	0	0	0.9
3512	MINOR ST	0	1	3	0	1	0	0.9
3513	MINOR ST	0	1	3	0	1	0	0.9
3556	CONTINENTAL ST	0	0	3	0	1	1	0.9
3562	YUBA ST	0	1	3	0	1	0	0.9
3688	BANTRY CT	0	1	3	1	0	0	0.9
3691	KILKEE DR	0	1	3	1	0	0	0.9
3691	KILKEE DR	0	1	3	1	0	0	0.9
3856	WARM SPRING LN	0	1	3	1	0	0	0.9
3857	HEMINGWAY ST	0	1	3	1	0	0	0.9
3869	WARM SPRING LN	0	1	3	1	0	0	0.9
3960	WILMINGTON WAY	0	0	3	0	1	1	0.9
4145	FOREST CT	0	1	3	1	0	0	0.9
4147	AVOLA ST	0	1	3	1	0	0	0.9
4208	WOGGON LN	0	2	1	1	0	3	0.9
4214	SONOMA ST	0	1	3	1	0	0	0.9
4215	SONOMA ST	0	1	3	1	0	0	0.9
4247	EUREKA WAY	0	1	3	1	0	0	0.9
4507	WALNUT AVE	0	1	3	1	0	0	0.9
4604	ALAMEDA AVE	0	1	3	1	0	0	0.9
4606	SKYLINE DR	0	1	3	1	0	0	0.9
4609	SONOMA ST	0	1	3	1	0	0	0.9
4617	SONOMA ST	0	1	3	1	0	0	0.9
4655	MINOR ST	0	1	3	0	1	0	0.9
4696	ALDER ST	0	1	3	1	0	0	0.9
4714	MOSS CREEK RD	0	1	3	1	0	0	0.9
4715	WHITE RIVER DR	0	1	3	1	0	0	0.9
4738	SHELL DR	0	1	3	1	0	0	0.9
4840	TRISH CT	0	1	3	1	0	0	0.9
4841	JONELLA WAY	0	1	3	1	0	0	0.9
4922	CILANTRO DR	0	1	3	1	0	0	0.9
4927	HACIENDA ST	0	1	3	1	0	0	0.9
4932	CASA BUENA ST	0	1	3	1	0	0	0.9
4956	PIONEER LN	0	1	3	1	0	0	0.9
4960	CALIFORNIA ST	0	1	3	1	0	0	0.9
5034	POINSETTA AVE	0	1	3	1	0	0	0.9
5115	MYERWOOD DR	0	1	3	1	0	0	0.9
5182	LAKESIDE DR	0	1	3	1	0	0	0.9
5266	VALLEY VIEW RD	0	0	3	0	1	1	0.9
5266	VALLEY VIEW RD	0	0	3	0	1	1	0.9
115	TEA ROSE CT	0	0	3	1	0	1	0.9
446	KISLING RD	0	3	1	2	0	0	0.9
602	CARMEL DR	0	0	3	1	0	1	0.9
870	OLD LANTERN DR	0	0	3	1	0	1	0.9
916	VALLEYRIDGE DR	0	0	3	1	0	1	0.9
1021	CUMBERLAND DR	0	0	3	1	0	1	0.9
2004	PERSHING ST	0	2	3	0	0	1	0.9
2013	REDWOOD BLVD	0	0	3	1	0	1	0.9
2027	RECREATION TRL	0	2	3	0	0	1	0.9
2056	JAXON WAY	0	0	3	1	0	1	0.9
2139	ANSLEY CT	0	0	3	1	0	1	0.9
2461	GROUSE DR	0	0	3	1	0	1	0.9
2846	GROUSE DR	0	0	3	1	0	1	0.9
3192	VALLEYRIDGE DR	0	0	3	1	0	1	0.9
3782	SKYLINE DR	0	0	3	1	0	1	0.9
4106	PINE ST	0	0	3	1	0	1	0.9
4144	VELIA ST	0	0	3	1	0	1	0.9
4224	CALIFORNIA ST	0	0	3	1	0	1	0.9
4245	CONTINENTAL ST	0	0	3	1	0	1	0.9

Table E-10
Identified Green Street Projects (Phase I Rank)

Unique ID	Street Name	Ranking Scores						
		Street Type	Slope	Ownership	Planned Subdivision	Soils	Size of Usable Area	Weighted Overall Score
4583	ESTATE ST	0	0	3	1	0	1	0.9
4957	CALIFORNIA ST	0	0	3	1	0	1	0.9
4990	EAST ST	0	0	3	1	0	1	0.9
4993	GILBERT ST	0	0	3	1	0	1	0.9
4995	LIBERTY ST	0	0	3	1	0	1	0.9
5184	LAKESIDE DR	0	0	3	1	0	1	0.9
205	WOGGON LN	0	1	3	0	0	1	0.8
266	HWY 44 EB ON/R	0	1	1	1	0	3	0.8
361	SHAMROCK ST	0	0	3	1	0	0	0.8
603	PLAYER CT	0	0	3	1	0	0	0.8
863	REDWOOD BLVD	0	0	3	1	0	0	0.8
915	VALLEYRIDGE DR	0	0	3	1	0	0	0.8
915	VALLEYRIDGE DR	0	0	3	1	0	0	0.8
994	TRAVONA ST	0	0	3	1	0	0	0.8
997	CARLOW WAY	0	0	3	1	0	0	0.8
1020	CUMBERLAND DR	0	0	3	1	0	0	0.8
1023	CUMBERLAND DR	0	0	3	1	0	0	0.8
1024	CUMBERLAND DR	0	0	3	1	0	0	0.8
1279	KINGSWOOD WAY	0	0	3	1	0	0	0.8
1638	RIVER OAKS DR	0	0	3	1	0	0	0.8
1668	OCTAVIA ST	0	0	3	1	0	0	0.8
1823	ST NICHOLAS AVE	0	0	3	1	0	0	0.8
1832	BRADLEY DR	0	2	3	0	0	0	0.8
1901	CRESTLAKE DR	0	0	3	1	0	0	0.8
2001	BRADLEY DR	0	1	3	0	0	1	0.8
2002	ORMSBY WAY	0	2	3	0	0	0	0.8
2003	ORMSBY WAY	0	2	3	0	0	0	0.8
2005	BELTLINE RD	0	1	3	0	0	1	0.8
2013	REDWOOD BLVD	0	0	3	1	0	0	0.8
2015	BRADLEY DR	0	1	3	0	0	1	0.8
2023	TENAYA CT	0	1	3	0	0	1	0.8
2029	TAHOE CT	0	1	3	0	0	1	0.8
2050	FALLON CT	0	0	3	1	0	0	0.8
2343	METRO WAY	0	0	3	1	0	0	0.8
2462	GROUSE CT	0	0	3	1	0	0	0.8
2553	HWY 44 EB OFF/R	0	1	1	1	1	1	0.8
2556	HWY 44 EB ON/R	0	0	1	2	1	0	0.8
2752	HALVERSON CT	0	0	3	1	0	0	0.8
2949	GOLD HILLS DR	0	0	3	1	0	0	0.8
2950	GOLD HILLS DR	0	0	3	1	0	0	0.8
2951	BRAEBURN CT	0	0	3	1	0	0	0.8
3122	MCKINNEY LN	0	1	3	0	0	1	0.8
3335	SALMONBERRY DR	0	0	3	1	0	0	0.8
3416	SETTER DR	0	0	3	1	0	0	0.8
3434	ASPIN AVE	0	0	3	1	0	0	0.8
3569	GOLD ST	0	0	3	1	0	0	0.8
3615	TERRILL ST	0	0	3	1	0	0	0.8
3687	LAKESIDE DR	0	0	3	1	0	0	0.8
3837	BRINN DR	0	0	3	1	0	0	0.8
3837	BRINN DR	0	0	3	1	0	0	0.8
3961	BERKSHIRE LN	0	0	3	0	1	0	0.8
3979	HERBSCENTA LN	0	0	3	0	1	0	0.8
4218	ANDERSON ST	0	0	3	1	0	0	0.8
4218	ANDERSON ST	0	0	3	1	0	0	0.8
4338	PLACER ST	0	0	3	1	0	0	0.8
4839	JONELLA WAY	0	0	3	1	0	0	0.8
4903	PALERMO CT	0	0	3	1	0	0	0.8
4909	AKRICH ST	0	0	3	1	0	0	0.8
4958	HILL ST	0	0	3	1	0	0	0.8
4961	CALIFORNIA ST	0	0	3	1	0	0	0.8
5183	MAYO CT	0	0	3	1	0	0	0.8
5267	VALLEY VIEW RD	0	0	3	0	1	0	0.8
5267	VALLEY VIEW RD	0	0	3	0	1	0	0.8
5267	VALLEY VIEW RD	0	0	3	0	1	0	0.8
5324	RIDGEWOOD RD	0	0	3	1	0	0	0.8
203	DAUT RD	0	1	3	0	0	0	0.7
295	PINEHAVEN DR	0	0	3	0	0	1	0.7
760	VIKING WAY	0	1	1	2	0	0	0.7
2016	BELTLINE RD	0	1	3	0	0	0	0.7
3117	MCKINNEY LN	0	1	3	0	0	0	0.7
3557	CONTINENTAL ST	0	0	3	0	0	1	0.7
3964	GLENWOOD DR	0	1	3	0	0	0	0.7
3982	RYAN LN	0	0	3	0	0	1	0.7
4208	WOGGON LN	0	2	1	1	0	0	0.6
5321	COLONIAL AVE	0	1	1	1	0	0	0.5
5386	SUNRAY WAY	0	1	1	1	0	0	0.5

ATTACHMENT E-2.

LISTS OF PHASE II PROJECT RANKINGS BY SWRP PROJECT TYPE

Table E-11. Ranked Natural Treatment and Direct Use Projects (Phase II)

APN	Project Type	Project ID	Recommended by TAC/ Stakeholders	Observation								Prioritization Score							
				Drainage Area Size and % Urban	LPR Model CPI	Trash Priority Land Use	Project Benefits EDA	Infiltration Potential (Majority A or B soils in project area)	Liquefaction Potential if Infiltration is Possible	Implement-ability	Comments	Drainage Area Size and % Urban	LPR Model CPI	Trash Priority Land Use	Project Benefits EDA	Implement-ability	Weighted Phase II Score	Weighted Phase I Score	Average Score
117070008000	Direct Use	DU-1		Medium (>75%)	3	>50%	100% HUD			No issues	Open park at upper end of Little Churn Creek channel, smaller drainage and <25% trash if not pulling from channel	3	2	3	3	2	2.6	2.7	2.7
117070028000	NTS - Treatment	Redding-Sewer-Ponds	Yes	Large (>50%)	4	25-50%	50-100% in HUD or 100% EDA			Additional Benefits	All public parcels along once side of channel, existing infrastructure could be repurposed	3	2	2	2	3	2.6	2.1	2.3
116180006000	NTS - Treatment	Redding-Sewer-Ponds	Yes	Large (>50%)	4	25-50%	50-100% in HUD or 100% EDA			Additional Benefits	All public parcels along once side of channel, existing infrastructure could be repurposed	3	2	2	2	3	2.6	1.9	2.2
101490011000	NTS - Treatment	SHHSA-Trail	Yes	Medium (>75%)	3	25-50%	50-100% in HUD or 100% EDA	Yes	High	Additional Benefits	Adjacent to Sacramento River, natural open space - easy to implement, park-like location has high potential for community benefits	3	2	2	2	3	2.6	2.8	2.7
101330018000	Stream Restoration - Treatment	Redding-Callaboose-Creek	Yes	Medium (>75%)	3	25-50%	100% HUD			No issues	All public parcels along once side of channel	3	2	2	3	2	2.5	2.1	2.3
101330019000	Stream Restoration - Treatment	Redding-Callaboose-Creek	Yes	Medium (>75%)	3	25-50%	100% HUD			No issues	All public parcels along once side of channel	3	2	2	3	2	2.5	2.0	2.3
101780056000	Stream Restoration - Treatment	Redding-Callaboose-Creek	Yes	Medium (>75%)	3	25-50%	100% HUD			No issues	All public parcels along once side of channel	3	2	2	3	2	2.5	1.8	2.1
101790044000	NTS - Treatment	Redding-Mall	Yes	Small (>75%)	5	>50%	100% HUD			No issues	considering parking and walking areas within the mall	2	3	3	3	2	2.5		2.5
101790034000	NTS - Treatment	Redding-Mall	Yes	Small (>75%)	5	>50%	100% HUD			No issues	considering parking and walking areas within the mall	2	3	3	3	2	2.5	2.1	2.3
101790043000	NTS - Treatment	Redding-Mall	Yes	Small (>75%)	5	>50%	100% HUD			No issues	considering parking and walking areas within the mall	2	3	3	3	2	2.5	1.6	2.0
68050031000	NTS - Treatment	Redding-Trash-1	Yes	Large (>50%)	4	>50%	50-100% in HUD or 100% EDA			Some issues	Church owns parcels, more open space than option #2	3	2	3	2	1	2.1		2.1
67190028000	NTS - Treatment	Redding-Trash-2	Yes	Large (>50%)	4	>50%	50-100% in HUD or 100% EDA			Some issues	Privately owned mobile home parcels border creek, not much available footprint	3	2	3	2	1	2.1		2.1
117150002000	Direct Use	DU-5		Medium (25-75%)	3	25-50%	100% HUD			Some issues	Heavy tree cover	2	2	2	3	1	2.0	2.6	2.3
112140006000	NTS - Treatment	Redding-Caldwell-Park	Yes	Medium (25-75%)	4	0-25%	50-100% in HUD or 100% EDA	Yes	High	Additional Benefits \Some issues	pulling from two locations (3 storm drains ID 10125, 10126, 8223), some trees, adjacent to Sacramento River, park location has high potential for community benefits	2	2	1	2	2	1.9	2.6	2.2
068290004000, 068330013000, 068280005000, 068280004000, 068590015000	NTS - Treatment	Redding-Enterprise-Park	Yes	Extra large	3	0-25%	50-100% EDA			Additional Benefits \Some issues	Most of park is within combined floodplain, park location has high potential for community benefits	3	2	1	1	2	1.9		1.9
107500012000	Stream Restoration - Infiltration	Redding-Henderson	Yes	Medium (>75%)	0	>50%	50-100% in HUD or 100% EDA	Yes	High	Some issues	Within combined floodplain, heavy tree cover	3	0	3	2	1	1.9		1.9
56010025000	Direct Use	DU-4		Medium (25-75%)	2	0-25%	50-100% in HUD or 100% EDA			No issues	Part of Redding Airport	2	1	1	2	2	1.8	2.7	2.3
56610008000	NTS - Treatment	NTS-1		Small (25-75%)	2	25-50%	50-100% in HUD or 100% EDA			No issues	Near airport, some trees, >74% grassy	1	1	2	2	2	1.7	2.6	2.1
109090016000	NTS - Infiltration	NTS-5		Medium (25-75%)	3	0-25%	50-100% EDA	Yes		No issues	Open space adjacent to Churn Creek	2	2	1	1	2	1.7	2.6	2.1
50330025000	NTS - Treatment	Redding-Allens-Golf	Yes	Medium (25-75%)	3	0-25%	50-100% EDA			No issues	Assuming pulling from Olney Creek as described	2	2	1	1	2	1.7	1.6	1.6
54280005000	Direct Use	DU-3		Medium (25-75%)	3	0-25%	50-100% in HUD or 100% EDA			Some issues	Part of Redding Airport, about 1/2 of area is paved	2	2	1	2	1	1.6	2.7	2.2
204330030000	Lake Restoration	Redding-Mary-Lake	Yes	Medium (>75%)	3	0	<50% in HUD or EDA			No issues	Was originally eliminated since it includes a water body and all land within 300ft of it	3	2	0	0	2	1.6		1.6
050660018000, 050640027000, 050600051000	Stream Restoration - Infiltration	Redding-Olney-Creek	Yes	Extra large	2	0-25%	<50% in HUD or EDA	Yes	High	Some issues	heavily vegetated	3	1	1	0	1	1.3		1.3
50370041000	Stream Restoration - Infiltration	Redding-Olney-Creek	Yes	Extra large	2	0-25%	<50% in HUD or EDA	Yes	High	Some issues	heavily vegetated	3	1	1	0	1	1.3	2.3	1.8
50600045000	Stream Restoration - Infiltration	Redding-Olney-Creek	Yes	Extra large	2	0-25%	<50% in HUD or EDA	Yes	High	Some issues	heavily vegetated	3	1	1	0	1	1.3	2.3	1.8
54090039000	Direct Use	DU-2		Small (>75%)	2	0%	<50% in HUD or EDA			No issues	Near residential area in Churn Creek watershed	2	1	0	0	2	1.2	2.7	2.0
112140007000	NTS - Treatment	NTS-2		Medium (25-75%)	2	0-25%	<50% in HUD or EDA	Yes	High	Some issues	Adjacent to Sacramento River, many trees	2	1	1	0	1	1.0	2.6	1.8
50500029000	NTS - Treatment	NTS-3		Medium (25-75%)	2	0-25%	<50% in HUD or EDA	Yes	High	Some issues	about 1-2 acres of grassy usable area, rest heavy trees. Contains 4 SDs emptying into Olney Creek	2	1	1	0	1	1.0	2.6	1.8
112140001000	NTS - Treatment	NTS-6		Medium (25-75%)	2	0-25%	<50% in HUD or EDA	Yes	High	Some issues	Existing golf course, some trees/infrastructure to work around	2	1	1	0	1	1.0	2.6	1.8
203200005000, 203200006000, private: 049010014000, 049010005000, 049010013000, 049020034000, 049010006000	Stream Restoration - Infiltration	SEA-Oregon-Gulch	Yes	Medium (<25%)	2	0	<50% in HUD or EDA	Yes		No issues	3 parcels owned by Redding with no issues, rest are private	1	1	0	0	2	1.0		1.0
203190024000	Stream Restoration - Infiltration	SEA-Oregon-Gulch	Yes	Medium (<25%)	2	0	<50% in HUD or EDA	Yes		No issues	2 parcels owned by Redding with no issues, rest are private	1	1	0	0	2	1.0	1.2	1.1
104500021000	Stream Restoration - Infiltration	Redding-Canyon-Hollow	Yes	Large (10-50%)	2	0	<50% in HUD or EDA	Yes		Some issues	The 2 parcels which include the path and most of the stream are privately owned	2	1	0	0	1	0.9		0.9
108280014000	Stream Restoration - Infiltration	Redding-Canyon-Hollow	Yes	Large (10-50%)	2	0	<50% in HUD or EDA	Yes		Some issues	The 2 parcels which include the path and most of the stream are privately owned	2	1	0	0	1	0.9	2.1	1.5
108480027000	Stream Restoration - Infiltration	Redding-Canyon-Hollow	Yes	Large (10-50%)	2	0	<50% in HUD or EDA	Yes		Some issues	The 2 parcels which include the path and most of the stream are privately owned	2	1	0	0	1	0.9	1.6	1.3
108480005000	Stream Restoration - Infiltration	Redding-Canyon-Hollow	Yes	Large (10-50%)	2	0	<50% in HUD or EDA	Yes		Some issues	The 2 parcels which include the path and most of the stream are privately owned	2	1	0	0	1	0.9	1.4	1.2
73180062000	NTS - Treatment	Redding-Hollow	Yes	Medium (25-75%)	2	0	<50% in HUD or EDA			Some issues	Within combined floodplain	2	1	0	0	1	0.9		0.9
104500036000	NTS - Infiltration	NTS-4		Small (25-75%)	2	0%	<50% in HUD or EDA	Yes		Some issues	about 1 acre area in northern end of parcel, rest is covered in trees or was removed	1	1	0	0	1	0.7	2.6	1.6

Table E-12. Ranked Green Street Projects (Phase II)

Unique ID	Street Name	Project ID	Treatment or Infiltration Design	Recommended by TAC/ Stakeholders	Observation								Prioritization Score							
					Drainage Area Size and % Urban	LPR Model CPI	Trash Priority Land Use	Project Benefits EDA	Infiltration Potential (Majority A or B soils in project	Liquefaction Potential if Infiltration is Possible	Implement-ability	Comments	Drainage Area Size and % Urban	LPR Model CPI	Trash Priority Land Use	Project Benefits EDA	Implement ability	Weighted Phase II Score	Weighted Phase I Score	Average Phase I and II Score
39	MARKET ST	Redding-Mall	Treatment	Yes	Small (>75%)	5	>50%	100% HUD			Additional Benefits	Mall location has high potential for community benefits	2	3	3	3	3	2.8		2.8
4901	HARTNELL AVE	GS-1	Infiltration		Medium (>75%)	0	>50%	100% HUD	Yes		No issues		3	0	3	3	2	2.4	2.7	2.6
15134	HARTNELL AVE	GS-1	Infiltration		Medium (>75%)	0	>50%	100% HUD	Yes		No issues		3	0	3	3	2	2.4	2.5	2.5
3583	HARTNELL AVE	GS-1	Infiltration		Medium (>75%)	0	>50%	100% HUD	Yes		No issues		3	0	3	3	2	2.4	2.5	2.5
784	SHASTA ST	GS-AT3	Treatment	Yes	Medium (>75%)	5	>50%	100% HUD			Some issues	Shorter segment	3	3	3	3	1	2.4	1.7	2.1
1721	SHASTA ST	GS-AT3	Treatment	Yes	Medium (>75%)	5	>50%	100% HUD			Some issues	Shorter segment, includes intersection	3	3	3	3	1	2.4	1.7	2.1
1723	SHASTA ST	GS-AT3	Treatment	Yes	Medium (>75%)	5	>50%	100% HUD			Some issues	Shorter segment, includes intersection	3	3	3	3	1	2.4	1.7	2.1
4997	GOLD ST	GS-AT1	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA	Yes	High	No issues		3	2	3	2	2	2.4	1.9	2.1
4999	GOLD ST	GS-AT1	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA	Yes	High	No issues		3	2	3	2	2	2.4	1.9	2.1
1852	GOLD ST	GS-AT1	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	1.5	1.9
3795	GOLD ST	GS-AT1	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	1.4	1.9
4614	GOLD ST	GS-AT1	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	1.3	1.8
1683	GOLD ST	GS-AT1	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	1.2	1.8
3796	GOLD ST	GS-AT1	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	1.2	1.8
4232	GOLD ST	GS-AT1	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	1.0	1.7
1078	GOLD ST	GS-AT1	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	1.0	1.7
3792	GOLD ST	GS-AT1	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	1.0	1.7
3792	GOLD ST	GS-AT1	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	1.0	1.7
4592	GOLD ST	GS-AT1	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	1.0	1.7
3569	GOLD ST	GS-AT1	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	0.8	1.6
770	LINCOLN ST	GS-AT2	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA	Yes	High	No issues		3	2	3	2	2	2.4	1.9	2.1
4303	LINCOLN ST	GS-AT2	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA	Yes	High	No issues		3	2	3	2	2	2.4	1.9	2.1
536	LINCOLN ST	GS-AT2	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	1.1	1.7
4230	LINCOLN ST	GS-AT2	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	1.1	1.7
4225	LINCOLN ST	GS-AT2	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	1.0	1.7
1848	LINCOLN ST	GS-AT2	Treatment	Yes	Medium (>75%)	4	>50%	50-100% in HUD or 100% EDA			No issues		3	2	3	2	2	2.4	0.9	1.6
5155	FREEBRIDGE ST	GS-2	Treatment		Small (>75%)	2	0-25%	100% HUD	Yes	High	No issues		2	1	1	3	2	2.1		2.1
5160	FREEBRIDGE ST	GS-2	Treatment		Small (>75%)	2	0-25%	100% HUD	Yes	High	No issues		2	1	1	3	2	2.1	2.6	2.3
5156	FREEBRIDGE ST	GS-2	Treatment		Small (>75%)	2	0-25%	100% HUD	Yes	High	No issues		2	1	1	3	2	2.1	2.4	2.2
5158	FREEBRIDGE ST	GS-2	Treatment		Small (>75%)	2	0-25%	100% HUD	Yes	High	No issues		2	1	1	3	2	2.1	2.3	2.2
5150	FREEBRIDGE ST	GS-2	Treatment		Small (>75%)	2	0-25%	100% HUD	Yes	High	No issues		2	1	1	3	2	2.1	2.2	2.1
5152	FREEBRIDGE ST	GS-2	Treatment		Small (>75%)	2	0-25%	100% HUD	Yes	High	No issues		2	1	1	3	2	2.1	1.8	1.9
1724	Market Pine Alley	Redding-Market-Pine	Treatment	Yes	Extra-small (< 10 acres of Urban)	5	>50%	100% HUD			Some issues	Drainage area is about 5 acres, distance between buildings ~20 ft at tightest point	1	3	3	3	2	1.6		1.6
4828	COLLYER DR	SHHSA-Collyer	Treatment	Yes	Medium (>75%)	2	0-25%	<50% in HUD or EDA			No issues		3	1	1	0	2	1.6	1.4	1.5
4829	COLLYER DR	SHHSA-Collyer	Treatment	Yes	Medium (>75%)	2	0-25%	<50% in HUD or EDA			No issues		3	1	1	0	2	1.6	1.3	1.4
4830	COLLYER DR	SHHSA-Collyer	Treatment	Yes	Medium (>75%)	2	0-25%	<50% in HUD or EDA			No issues		3	1	1	0	2	1.6	1.2	1.4
4831	COLLYER DR	SHHSA-Collyer	Treatment	Yes	Medium (>75%)	2	0-25%	<50% in HUD or EDA			No issues		3	1	1	0	2	1.6	1.0	1.3
3383	SHASTA VIEW DR	SHHSA-Shasta	Treatment	Yes	Medium (>75%)	4	0	<50% in HUD or EDA			No issues		3	2	0	0	2	1.6	2.2	1.9
3384	SHASTA VIEW DR	SHHSA-Shasta	Treatment	Yes	Medium (>75%)	4	0	<50% in HUD or EDA			No issues		3	2	0	0	2	1.6	2.2	1.9

Prepared for

City of Redding

Stormwater Resource Plan

Appendix F – Project Design, Analysis, and Prioritization Technical Report

Redding, CA

Prepared by

Geosyntec consultants

engineers | scientists | innovators

924 Anacapa Street, Suite 4A
Santa Barbara, CA 93101

Geosyntec Project #: LA0443

October 2018

TABLE OF CONTENTS

SECTION 1 . Introduction F-3

SECTION 2 . Development of Conceptual Project Designs F-3

2.1 Spatial Data F-3
2.2 Drainage Area Delineation F-4
2.3 Conceptual Design Parameters F-5
2.3.1 Infiltration Basins F-6
2.3.2 Natural Treatment Systems F-8
2.3.3 Bioretention with Underdrains F-10
2.3.4 Green Streets (Permeable Pavement) F-12
2.3.5 Direct Use F-14
SECTION 3 . Modeling Approach F-15

3.1 Model Selection F-15
3.1.1 SBPAT F-17
3.1.2 SWMM F-18
3.1.3 TELR F-18
3.1.4 LPR Model F-19
3.1.5 Conclusion F-20
3.2 LPR Model Development F-20
3.2.1 Existing LPR Model F-21
SECTION 4 . Quantitative Analysis of Project Benefits F-23

SECTION 5 . Project Multiple Benefit Prioritization F-25

5.1 Scoring Multiple Benefits F-25
5.2 Project Prioritization F-32
SECTION 6 . References F-33

LIST OF TABLES

Table F-1. Spatial Datasets to be Used for Developing Conceptual Designs F-4

Table F-2. Evaluation of Modeling Methodologies F-16

Table F-3. GIS Datasets Used for the Existing LPR Modeling F-22

Table F-4. Multi-benefit Scoring Guidance for Conceptual Projects F-27

Table F-5. List of potential environmental benefits F-29

Table F-6. List of potential community benefits F-30

Table F-7. Priority Pollutant Weight Scores F-30

Table F-8. Multi-benefit Scoring Guidance for Non-modeled Projects F-31

LIST OF FIGURES

Figure F-1. Infiltration Basin Schematic F-7

Figure F-2. Wet Detention Basin Conceptual Design Schematic F-9

Figure F-3. Bioretention with Underdrain Conceptual Design Schematic F-11

Figure F-4. Permeable Pavement with Underdrain Conceptual Design Schematic F-13

Figure F-5. Subsurface Storage Tank Concept (Contech Engineered Solutions, 2016) F-14

Figure F-6. Structural BMP Modeling Approach F-21

SECTION 1. INTRODUCTION

Various project opportunities for stormwater and dry weather capture were identified in the City of Redding (City) that meet one or more of the criteria established for project selection included in the Water Code and the SWRP Guidelines (Guidelines) (SWRCB, 2015). These identified projects were then evaluated by the condition of the parcel, the potential benefits of the project, and barriers to implementation to establish a ranked list of projects for each BMP type. The City reviews the ranked projects and the Technical Advisory Committee (TAC) and stakeholders identified projects to select projects for conceptual development. These projects are then conceptually designed, and project benefits (water quality, water supply, flood management, and environmental) are quantified as required by the Water Code and Guidelines. These multiple benefits are then used to prioritize the conceptual projects. This document outlines the development of conceptual designs for selected projects, the procedures and assumptions used to quantify anticipated benefits from proposed projects, and the methods used to prioritize the projects.

SECTION 2. DEVELOPMENT OF CONCEPTUAL PROJECT DESIGNS

The project identification and ranking process was executed for each of the SWRP project types (natural treatment systems, green streets, and direct use), as described in Appendix E. Projects selected for the development of conceptual designs require delineating the upstream drainage area and determining appropriate conceptual design parameters. These processes, including the necessary spatial files, are described in the following subsections.

2.1 Spatial Data

Conceptual designs are developed largely in Geographic Information Systems (GIS) based on the spatial data listed in Table F-1. Descriptions of how these spatial files are used in project drainage area delineation and conceptual design are included in Sections 2.2 and 2.3, respectively.

Table F-1. Spatial Datasets to be Used for Developing Conceptual Designs

Task	Dataset Description	Dataset Format	Source	Downloaded/ Received
Drainage area delineation	Digital Elevation Model (DEM)	Raster	City of Redding	December 2017
	Ground surface elevations	Google Earth	Google Earth	January-April 2018
	Streams	Vector (polyline)	USGS National Hydrography Dataset (NHD) Plus and City of Redding	August 2017 and December 2017
	Storm Drains	Vector (polyline)	City of Redding	December 2017
	Catchments	Vector (polygon)	City of Redding	December 2017
	MS4 outfalls	Vector (point)	City of Redding	December 2017
Development of conceptual designs	Drainage areas[1]	Vector (polygon)	Developed by Geosyntec	
	Land use (imperviousness)	Vector (polygon)	Developed by Geosyntec based on land use designations provided by the City of Redding Parcel file and 2005 Shasta County land survey by the California Department of Water Resources (CA DWR)	December 2017
	Soils (hydrologic soil group)	Vector (polygon)	Soil Survey Geographic Database (SSURGO) database from the Natural Resources Conservation Service (United States Department of Agriculture)	January 2018

[1] Developed using files noted for the drainage area delineation task.

2.2 Drainage Area Delineation

A spatial file containing the area draining to the proposed project location is developed using waterbody and storm drain spatial files and elevation data. Elevations are based on both a three-foot Lidar-generated DEM and elevation information in Google Earth. Where available, MS4 catchment and outfall data are also utilized in delineation of the project drainage area.

The imperviousness of the drainage area to the project, which describes the portion of the drainage area where runoff is not able to infiltrate, is needed for the conceptual design process (to be discussed in Section 2.3). To calculate this, the average across the drainage area is calculated using the National Land Cover Database (NLCD) 2011 percent developed imperviousness raster.

2.3 Conceptual Design Parameters

General design parameters were determined for each SWRP project type based on guidance from the Ventura County Technical Guidance Manual (TGM) (Geosyntec Consultants and LWA, 2011). While many design parameters are BMP-specific, the calculation of the stormwater quality design volume (SQDV) is necessary for all SWRP project types. The SQDV is used to determine the size of a BMP to provide effective treatment for the specified drainage area. The SQDV is determined for each project using the Urban Runoff Quality Management (URQM) (WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87) approach. This method estimates the maximized stormwater quality captured volume based on the translation of rainfall to runoff using regression equations and approximately corresponds to the 85th percentile, 24-hour runoff event. The size and runoff coefficient of the drainage area is used as project-specific inputs[1] for this calculation.

PROJECT TYPES WITH DESIGN PARAMETERS

- infiltration basin
- natural treatment systems
- bioretention/rain garden
- green streets (porous pavement)
- direct use

Using the SQDV as the design storage capacity and other BMP-specific design parameters, conceptual designs characterizing project footprints, depths, and side slopes, are developed for each project. Parcels are then evaluated through aerial imagery analysis to identify constraints that might limit BMP implementation, such as heavy vegetation/trees, high slopes, utilities, buildings, existing uses such as sports fields, and to determine whether the useable area onsite could accommodate the BMP footprint calculated for the area draining to it. Files and investigations from the project identification and ranking process, as described in Appendix E, are utilized to aid in determining the maximum available area for implementation of each BMP.

For those conceptual projects without adequate space, the BMP is sized instead based on the maximum usable area of the parcel in order to capture and infiltrate, treat, or use the largest amount of stormwater and dry weather runoff volume feasible. For those conceptual projects with adequate space to accommodate the SQDV, the parcel is further evaluated to determine if it is cost effective

[1] Other inputs for calculation of the SQDV include the average storm event precipitation depth, which is assumed to be 0.55 inches for all projects. The representative runoff coefficient is determined by the soil type and imperviousness of the drainage area (Geosyntec Consultants and LWA, 2011). Regression equations include regression constants from the least-square analysis based on a 12, 24, or 48 hour drawdown time (WEF and ASCE, 1998). For purposes of this calculation, the volume capture ratio coefficients are used and a 48 hour drawdown time is assumed for all projects. These values may vary from the drawdown times used for other components of conceptual design due to availability of data using the regression constants.

to expand the footprint and provide storage capacity larger than the SQDV. If there are no site limitations, including even minor constraints such as moderate vegetation/trees, moderate slopes, paved areas, or other existing site uses such as developed parks, the footprint is expanded to the usable area with no site limitations in order to maximize the stormwater and dry weather runoff volume that could be captured. If constraints are noted that could make the BMP feasibility more difficult, such as moderate slopes, then expanding the footprint would not be cost-effective. The following subsections outline basic conceptual design parameters for the SWRP project types (see Sidebar). Conceptual design parameters for the SWRP conceptual projects, including the delineated drainage area information, are included in Appendix G.

2.3.1 Infiltration Basins

An infiltration basin consists of a flat-bottomed earthen basin constructed in naturally pervious soils (hydrologic soil groups A or B) and typically includes an inlet structure to dissipate the energy of incoming flow and an emergency spillway to control excess flows. A forebay settling basin or separate treatment control measure must be provided as pretreatment. An infiltration basin functions by retaining the SQDV in the basin and allowing the retained runoff to percolate into the underlying soils over a specified period of time. The bottoms of infiltration basins are typically vegetated with dry-land grasses or irrigated turf grass.

Infiltration basins can be implemented in various land uses, including mixed-use and commercial, roads and parking lots, parks and open space, and single and multi-family residential. Routine maintenance for infiltration basins includes removal of trash, debris, and sediment at inlet and outlets, inspection during wet weather to ensure drain time, weed removal, and inspection for mosquito breeding (Geosyntec Consultants and LWA, 2011).

For the SWRP, infiltration basins are conceptually designed based on the TGM parameters listed below. A conceptual schematic of an infiltration basin is shown in Figure F-1.

- Pretreatment: assume to occupy 25 percent of the available area
- Drawdown time: 48 hours (limited for vector control purposes)
- Infiltration rate: Based on the site-specific hydrologic soil group (1.5 in/hr for hydrologic soil group A (NRCS, 2007))
- Footprint Area: Determined based on space available for the BMP or the footprint needed to store the SQDV (as described in Section 2.3)
- Depth: Governed by the drawdown time and infiltration rate (6 ft for hydrologic soil group A)
- Side slope: 3:1
- Freeboard Depth: 1 ft

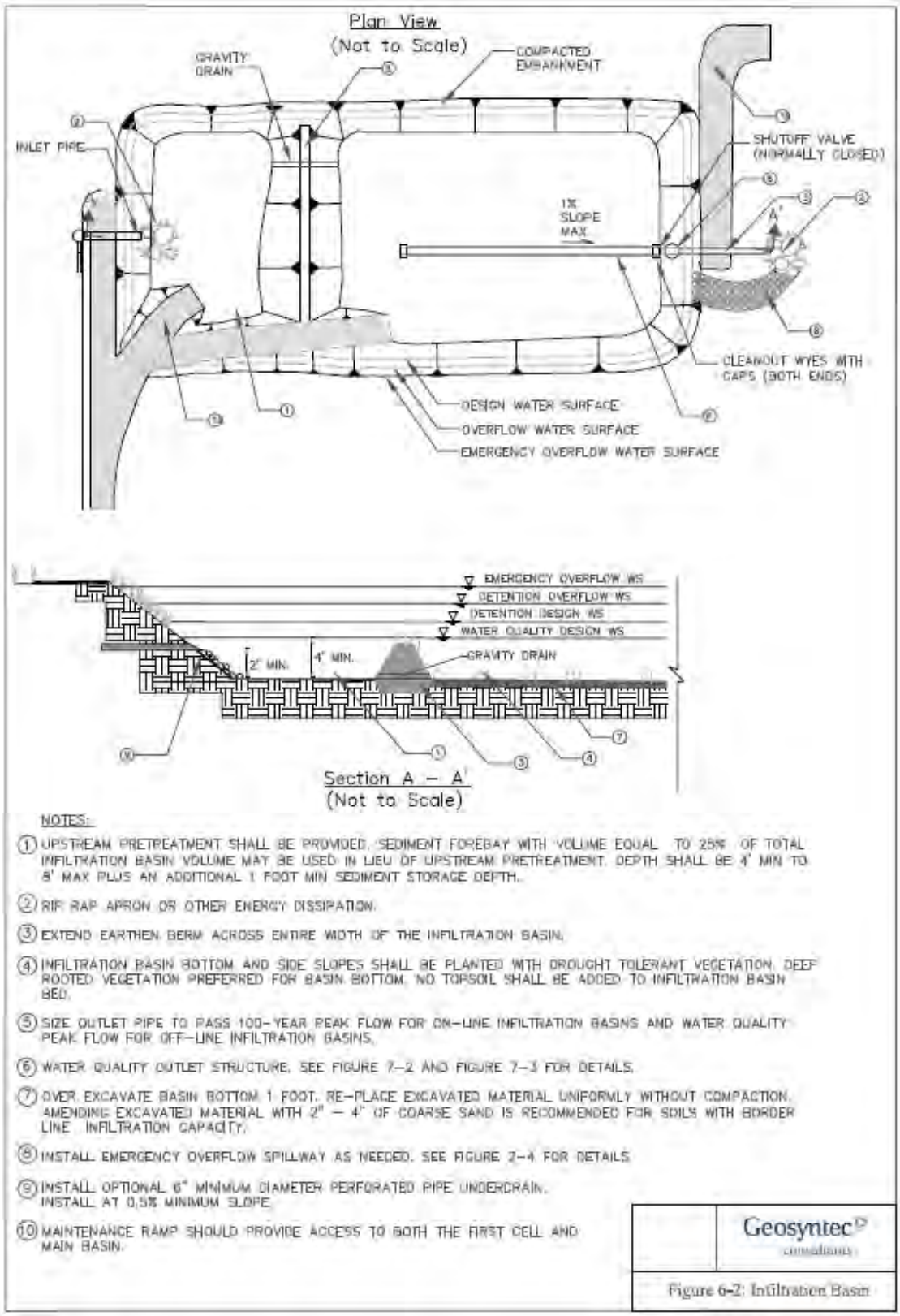


Figure F-1. Infiltration Basin Schematic

2.3.2 Natural Treatment Systems

Natural Treatments Systems represent a variety of stormwater treatment types, including constructed wetlands, wet detention basins, and bioinfiltration. The design guidance included here is for a wet detention basin, although based on findings from initial feasibility investigations project type or design may be modified.

Wet detention basins typically require base flows to exceed or match losses through evaporation and infiltration, and they are designed to maintain a permanent pool or seasonal pool of water. However, the SWRP projects also include infiltration capacity by allowing retained runoff to percolate into the underlying soils. They provide peak flow attenuation and pollutant removal, predominately through sedimentation, similar to dry basins. Extended detention of incoming flows is provided by utilizing the volume above the permanent pool surface.

Wet detention basins can be used for regional detention and treatment or smaller applications in parking lots, roads, or commercial/residential areas. Maintenance includes inspection annually (at a minimum) and after major storm events, pruning/removal of vegetation, large shrubs, or trees that interfere with operation, and removal of sediment buildup at inlets and outlets (Geosyntec Consultants and LWA, 2011).

Wet detention basins serve as the basis for design of the natural treatment systems and lake/pond restoration. The projects are conceptually designed based on the TGM parameters for wet detention basins listed below. A conceptual schematic is shown in Figure F-2.

- Active volume area: determined based on space available for the BMP – area of the berm
- Berm top width: 12 ft or 6 ft (TGM recommends at least 6 ft)
- Active volume: design volume plus an additional 5% for sediment accumulation
- Forebay volume: 10% of active volume
- Forebay depth: 8 ft or 4 ft based on available depth while maintaining gravity-driven flow (TGM recommends 4 – 8 ft)
- Minimum wetpool area: cell 2 volume (active volume – forebay volume) x 0.3 acre/acre-ft
- Actual wetpool area: active volume area – forebay area
- Emergent vegetation area: 45% of wetpool area
- Depth (vegetated area): 2 ft (TGM recommends 1.5 – 3 ft)
- Deeper volume surface area: wetpool area – shallow (vegetated) area
- Depth (deeper zone) (average of deeper zone volume): 3.8 – 4.4 ft (TGM recommends 4 – 8 feet average)
- Maximum residence time: 7 days
- Freeboard: 1 ft
- Side slope: 4:1 (interior) and 3:1 (exterior)

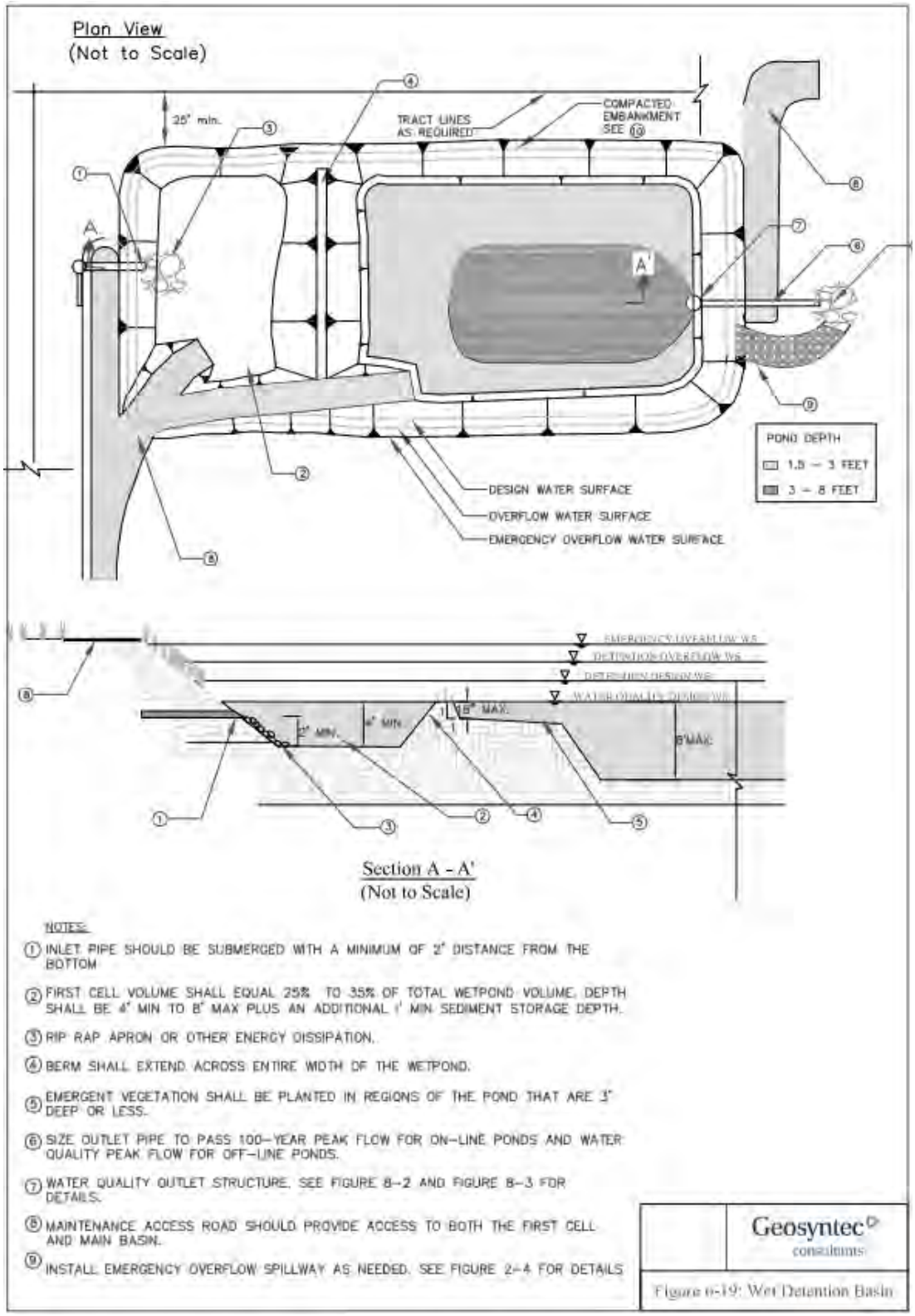


Figure F-2. Wet Detention Basin Conceptual Design Schematic

2.3.3 Bioretention with Underdrains

Bioretention stormwater treatment facilities are landscaped shallow depressions that capture and filter stormwater runoff. These facilities function as a soil and plant-based filtration device that removes pollutants through a variety of physical, biological, and chemical treatment processes. The facilities normally consist of a ponding area, mulch layer, planting soils, and plantings. As stormwater passes down through the planting soil, pollutants are filtered, adsorbed, and biodegraded by the soil and plants. An underdrain may be used in areas with low soil permeability, steep slopes, or shallow groundwater.

Bioretention facilities with underdrains are often utilized in parking lots, roadway parkways and medians, school entrances, courtyards, and walkways, playgrounds and sports field, etc. Maintenance includes repair of eroded surfaces, removal of trash and debris, raking of surface soils, removal of accumulated fine sediments, dead leaves, weeds, and trash, pruning back excess growth, removal of sediment and debris accumulation near inlet and outlets, and periodic observation of function during wet weather (Geosyntec Consultants and LWA, 2011).

Bioretention with underdrains are conceptually designed based on the plans for the Mall Alley green street project supplied by the City. Design parameters are listed below and conceptual schematic is shown in Figure F-3.

- Pretreatment: assumed to occupy 25 percent of the available area
- Maximum drawdown time of water ponded on surface: 72 hours
- Footprint Area: Determined based on space available for the BMP or the footprint needed to store the SQDV (as described in Section 2.3)
- Ponding depth: 4 inches
- Stabilized mulch depth: 1 inches
- Planting mix depth: 7 inches
- Gravel layer depth: 16 inches
- Mulch porosity: 0.4
- Planting mix porosity: 0.3
- Gravel layer porosity: 0.35
- Infiltration rate: Based on the site-specific hydrologic soil group (0.32 in/hr for hydrologic soil group C (NRCS, 2007))
- Side slope: 3:1

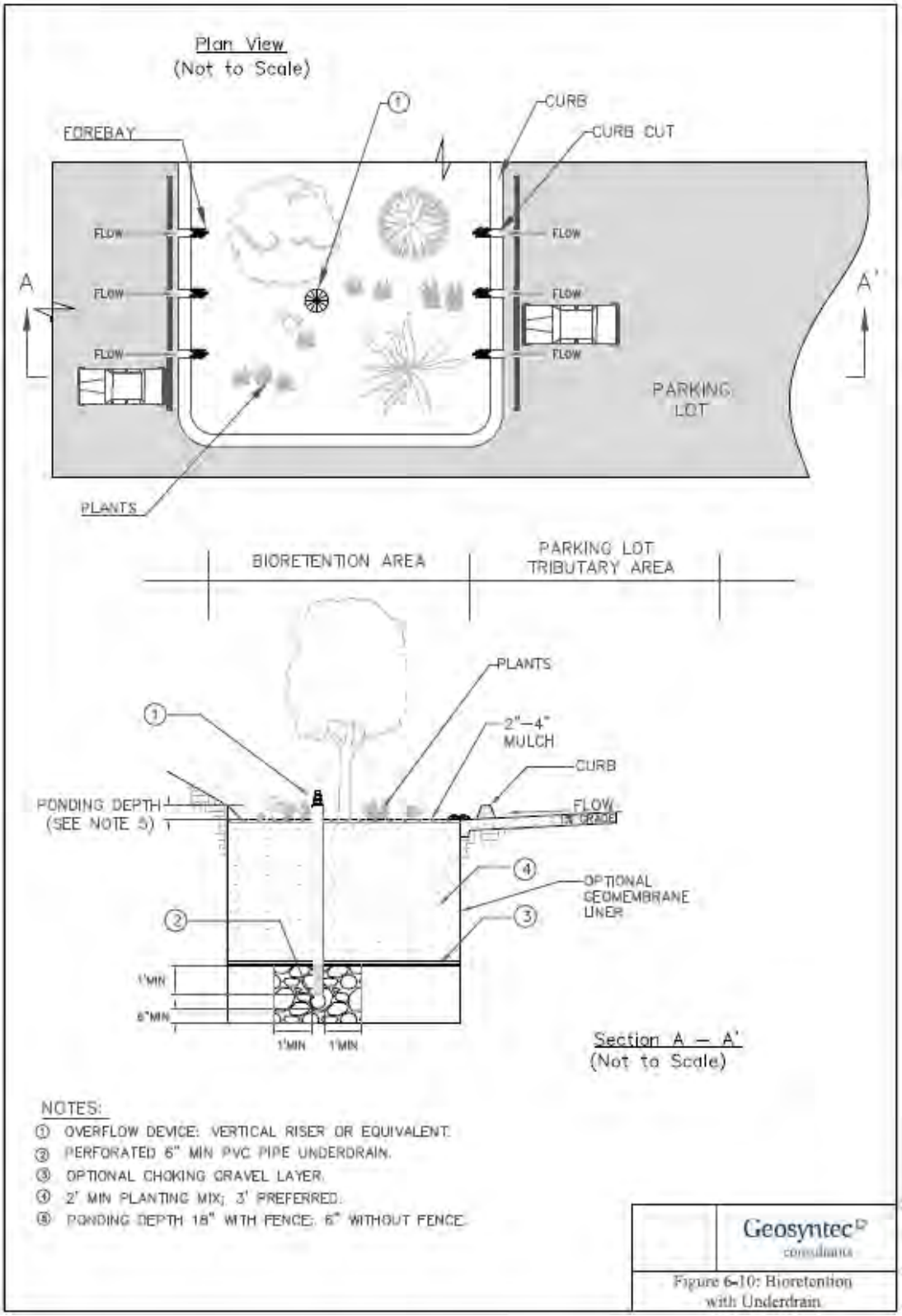


Figure F-3. Bioretention with Underdrain Conceptual Design Schematic

2.3.4 Green Streets (Permeable Pavement)

Green street projects can be designed as areas of permeable pavement bordered by rain gardens (bioretention with underdrains). Permeable pavement consists of a paved surface overlaying a gravel storage layer with underdrains. The pavement has less fine material than traditional concrete or asphalt which creates larger pore spaces that allows water to pass through. Permeable pavement reduces the stormwater runoff volume and peak flow when properly constructed and maintained, by allowing some of the stormwater to percolate through the pavement and infiltrate into the soil below. Permeable pavements allow for some stormwater treatment and volume reduction while maintaining the structural and functional features of the road, parking lot, or walkway.

The paving surface, subgrade, and installation requirements of permeable pavements are more complex than those for conventional asphalt or concrete surfaces. For porous pavements to function properly over an expected life span of 15 to 20 years, they must be properly sited, installed correctly, and have periodic maintenance performed to prevent clogging and failure (Geosyntec Consultants and LWA, 2011).

Permeable pavement conceptual designs are based on the plans for the Mall Alley green street project supplied by the City. Design parameters are listed below and conceptual schematic is shown in Figure F-4.

- Footprint Area: Determined based on space available for the BMP or the footprint needed to store the SQDV (as described in Section 2.3)
- Pervious pavement: 4 inches
- Open graded base: 8 inches (TGM recommends No. 8 aggregate)
- Open graded stone: 16 inches (TGM recommends No. 57 aggregate or 4 inches of No. 57 aggregate over No. 2 stone subase)
- Pervious pavement porosity: 0.15
- Gravel/graded stone layer porosity: 0.40
- Maximum drawdown time of water stored in pore spaces: 72 hours
- Infiltration rate: Based on the site-specific hydrologic soil group (0.32 in/hr for hydrologic soil group C (NRCS, 2007))
- Discharge rate: Based on the most limiting rate out of the following considerations: infiltration rate (based on the underlying soil and surface area available for infiltration), rate of flow into the underdrain pipe (based on total BMP depth, orifice coefficient, and perforations in the underdrain), and rate of flow out of the underdrain pipe (based on Manning's equation using the estimated size, roughness, and slope of the underdrain)

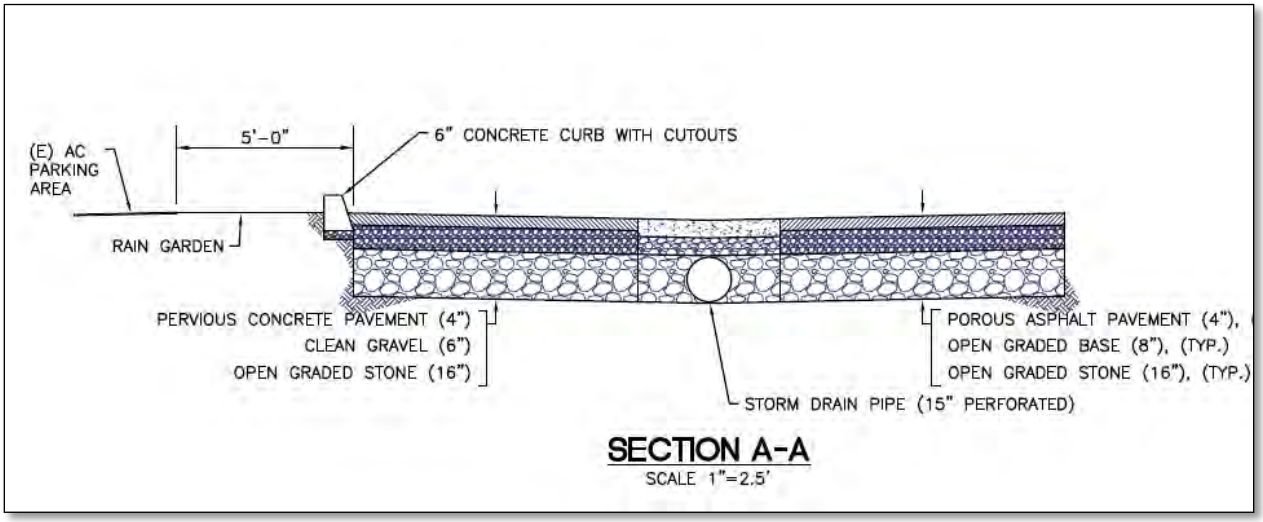


Figure F-4. Permeable Pavement with Underdrain Conceptual Design Schematic

2.3.5 Direct Use

Direct use BMPs capture and store stormwater runoff for later use. They are designed to store a specific volume of water and can be in the form of above ground tanks, open reservoirs, or underground storage systems. The stored water can be used for landscape irrigation, indoor non-potable or industrial uses, among others.

Direct use BMPs typically include a diversion to pull stormwater from the runoff source, pretreatment to remove large sediment and debris, an overflow in case the storage capacity is exceeded, and a distribution system for later use. Additional levels of treatment may be required depending on the intended use. Preventative maintenance includes debris and sediment removal and inspections after rain events.

The projects are conceptually designed based on the TGM parameters for rainwater harvesting, and a conceptual schematic is shown in Figure F-5.

- Storage Volume: Based on drainage area size, runoff coefficient, and design storm depth
- Drawdown Time: Depends on intended use, typically 72 hours
- Tank Depth: Depends on drawdown time and available space
- Freeboard Depth: 1.0 ft suggested

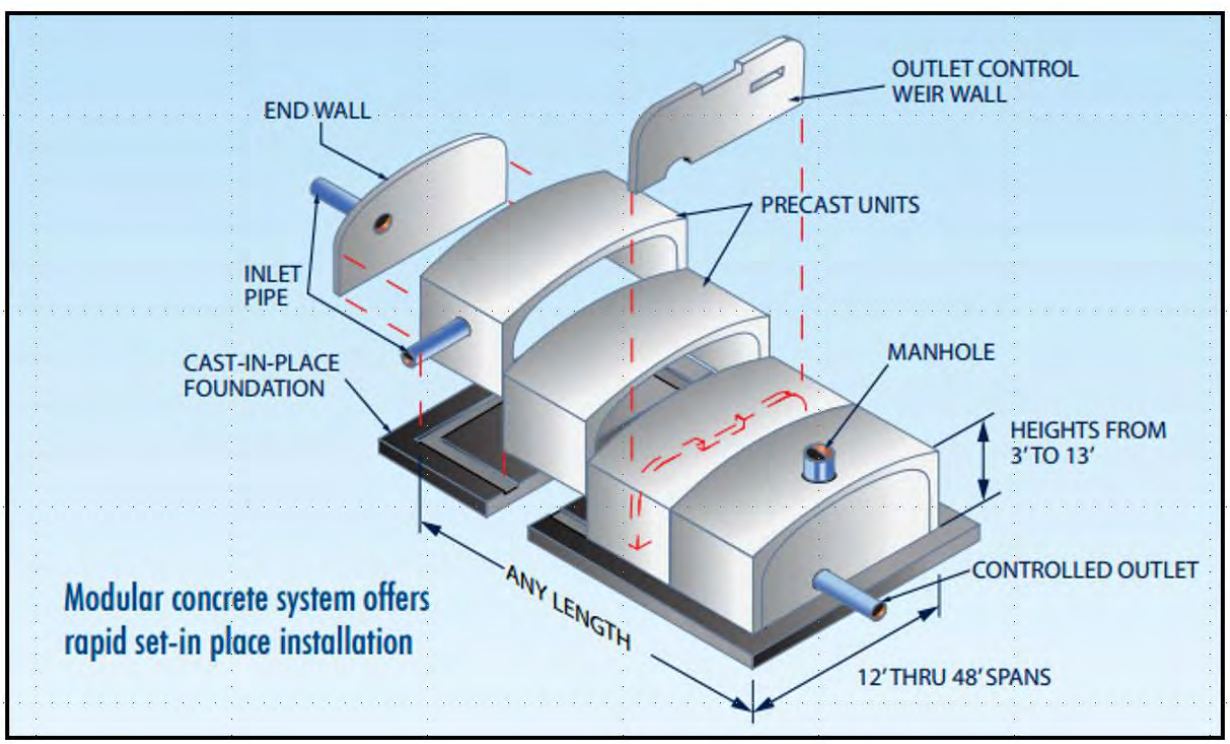


Figure F-5. Subsurface Storage Tank Concept (Contech Engineered Solutions, 2016)

SECTION 3. MODELING APPROACH

Section VI.C of the Guidelines state that quantitative metric-based analysis should be employed to evaluate the multiple benefits (i.e., water quality, water supply, flood management, environmental, and community) associated with projects. To meet this requirement, water quality, water supply, and flood management benefits are quantified (i.e., modeled) for conceptual projects using the Load, Prioritization, and Reduction (LPR) Model, developed by Geosyntec Consultants. The LPR Model quantifies anticipated project benefits by estimating average annual stormwater runoff volumes[2] and associated pollutant loads that would be captured and infiltrated or treated by the proposed projects. While other models were evaluated for use, the LPR Model was selected because it met requirements outlined in the Guidelines, is cost-effective, and allows for updates in the future by the City. This section describes the evaluation of potential models for SWRP modeling and the selection of the LPR Model (Section 3.1) and how the LPR Model will be applied to evaluate conceptual project benefits (Section 3.2).

3.1 Model Selection

The Guidelines specify a minimum level of information necessary to determine if proposed projects meet SWRP's management objectives. The following models were evaluated for their ability to quantify the benefits identified by the Guidelines and demonstrate that projects address necessary management objectives: The LPR Model, Structural BMP Prioritization and Analysis Tool (SBPAT), the EPA Stormwater Management Model (SWMM), and the Stormwater Tool to Estimate Load Reduction (TELR).

More specifically, the Guidelines Section VI.C define metrics for evaluating stormwater and dry weather runoff capture projects benefits. These include:

- **Water quality**: pollutant load reduction and/or volume treated
- **Water supply**: volume captured and/or cost of water augmented
- **Flood management**: rate, volume, and/or size of decreased flood risk
- **Environmental**: size and/or rate of environmental/habitat protection and improvement, increased urban green space, reduced energy use, reestablishment of the natural hydrograph, or water temperature improvements
- **Community**: size of enhanced or new recreational/public use space, number of people involved with the community, or number of employment opportunities provided

[2] Dry weather water quality benefits may also be expected, but are not estimated here.

The Guidelines also define the minimum level of information necessary for an integrated metrics-based analysis to demonstrate that proposed projects will address the SWRP's management objectives. Section VI.C of the Guidelines defines these as:

- Volume captured by the project, including the following:
  - Expressed as percentage of total runoff volume from the drainage area
  - Compared to the 85th percentile, 24-hour storm event
- Volume treated by the project and resulting pollutant load reductions achieved through treatment or infiltration, which also includes the following:
  - Quantification of how this captured volume may affect flooding risks
  - Difference between current and future pollutant loading after SWRP implementation
  - Stormwater and dry weather runoff infiltrated into a groundwater basin/aquifer and potable water offset resulting from the captured volume
  - Contribution to overland flow, groundwater recharge and infiltration, interflow, evapotranspiration, delivery of sediment and organic matter to receiving waters, and chemical and biological transformation
- Size of environmental habitat creation or improvement and community influence

Various modeling options were evaluated and narrowed down to four suitable models ranging from complex to simple. These included SBPAT, SWMM, TELR, and the LPR Model. Table F-2 compares the capabilities of the four models with respect to SWRP modeling requirements as well as other model features that would also be helpful. Sections 3.1.1 through 3.1.4 include additional information for each of the four potential models.

Table F-2. Evaluation of Modeling Methodologies

Required Integrated Metrics-Based Analyses	SBPAT	SWMM	TELR	LPR Model
Volume captured by the project during an average annual year (as percentage of total runoff volume from the drainage area and compared to 85th percentile, 24-hour event)	✓✓	✓✓	✓[1]	✓✓
Volume treated by the project and resulting pollutant load reductions achieved through treatment or infiltration (including difference between current and future pollutant loading after SWRP implementation)	✓✓	✓✓	✓[2]	✓✓
Runoff volume infiltrated into a groundwater basin or aquifer and potable water offset	✓[3]	✓[3]	✓[3]	✓[3]
Contribution to overland flow, groundwater recharge & infiltration, interflow, evapotranspiration, delivery of sediment/organic matter to receiving waters, and chemical and biological transformation	✓[4]	✓[5]	✓[6]	✓[5]

Required Integrated Metrics-Based Analyses	SBPAT	SWMM	TELR	LPR Model
Size of environmental habitat creation/improvement and community influence	[7]	[7]	[7]	[7]
Additional Model Features ("like to haves")	**SBPAT**	**SWMM**	**TELR**	**LPR Model**
Availability of required input data	✓✓	✓✓	✓✓	✓✓
Ability to quantify water quality benefits from a variety of structural BMPs	✓✓	✓✓	✓✓	✓✓
Cost-effectiveness		✓✓	✓	✓✓
Ease of use		✓	✓✓	✓✓
Ability for the city to consistently evaluate new projects after completion of the SWRP			✓✓	✓✓
Ability to support catchment-level siting of BMPs that reflects County-specific priority water body-pollutant combination	✓✓			✓✓
Ability to perform watershed-wide analyses and summaries of volume and pollutant load reductions	✓✓		✓	✓✓

✓✓ - Model fully meets or exceeds required/desired feature
✓ - Model partially meets required/desired feature
[1] For decentralized BMPs, it is assumed that the BMPs are sized to remove stormwater volumes from the impervious area treated for the local 85th percentile, 24-hour storm event.
[2] TELR only assesses total suspended solids (TSS) pollutant loadings, which is noted to be a surrogate for urban pollutants (2NDNATURE, 2016), while other models perform quantification for numerous pollutants.
[3] Models provide estimated runoff volume that is captured by a BMP and infiltrated. However, estimation of the portion of this infiltrated volume that is recharged to groundwater will be conducted outside of modeling framework. Potable water offset will also be estimated outside of modeling framework based on the runoff volume capture estimated by the models.
[4] Does not directly estimate groundwater recharge (as previously discussed), interflow, or chemical/biological transformation within the model interface.
[5] Does not directly estimate chemical/biological transformation or evapotranspiration within the model interface.
[6] Does not directly estimate groundwater recharge (as previously discussed), interflow, evapotranspiration, or chemical/biological transformation within the model interface.
[7] No models contain this functionality therefore this required quantification will be performed outside the model

3.1.1 SBPAT

SBPAT is a public domain, “open source” GIS-based water quality analysis tool that is specifically designed to prioritize urban catchments based on unit area pollutant loading, identify regional structural BMP retrofit opportunity sites, and quantify BMP pollutant load reductions and costs. SBPAT (available at www.sbpat.net) builds off the published and American Society of Civil Engineers (ASCE) award-winning structural BMP planning methodology (www.labmpmethod.org). The tool was named by the Los Angeles Regional Water Quality Control Board to be one of only two models approved for use in Reasonable Assurance Analysis (similar in nature to the modeling required for the MS4 Permit TMDL requirements) and has been successfully demonstrated in over fifteen Southern California TMDL implementation plans and watershed management plans for MS4 BMP siting and prioritization purposes (e.g., City of Los

Angeles Bureau of Sanitation, 2012, County of Ventura, 2015, Beach Cities EWMP Group, 2015, City of Los Angeles et al., 2015, North Santa Monica Bay Coastal Watersheds EWMP Group, 2015, Palos Verdes Peninsula Watershed Management Group, 2015, Geosyntec Consultants, 2012b, Geosyntec Consultants, 2012c, City of Los Angeles. 2009, Los Angeles Gateway Region, 2015, City of Walnut, 2015, Ventura County Watershed Protection District, 2010, etc.).

Although SBPAT meets most of the SWRP requirements, and many of the secondary factors as well, the tool provides unnecessary functionality (e.g., continuous hydrologic and hydraulic simulation) and level of detail (e.g., stochastic analysis) and therefore was not the most cost-effective option for use in the SWRP. Furthermore, additional training would be required for the City to consistently evaluate new projects after completion of the SWRP.

3.1.2 SWMM

SWMM, which was developed by EPA as a free, publicly available software, serves as a hydrologic and hydraulic model that can be used for long-term (continuous) simulation of runoff quantity and quality. Spatial variability of the hydrologic processes is achieved by dividing the area of interest into smaller, homogeneous catchments, containing a given fraction of pervious and impervious areas. The runoff volumes are estimated for catchment areas that receive precipitation and generate corresponding runoff and pollutant loads. The routing component of SWMM can then transport the runoff through any treatment system (i.e., BMP). SWMM is able to track the quantity and quality of runoff through each catchment and other components of the model, such as BMPs. SWMM is also able to account for hydrologic processes such as evaporation, rainfall interception from depression storage, percolation of infiltrated waters into groundwater layers, interflow between groundwater and the drainage system, etc.

After evaluating SWMM for use in quantifying benefits for the SWRP, it was determined that at the County-level, it would not meet all SWRP model requirements because: 1) it would be too data intensive to track runoff volumes and pollutant loads without the use of other tools such as Excel, 2) it does not have the capability to directly produce catchment-level siting based on priority water body-pollutant combinations (which LPR Model does), and 3), it would not be easy for the City to add new projects as they are developed.

3.1.3 TELR

TELR is a proprietary, easy to use model that produces estimates of average annual runoff volume and sediment loads and load reductions using a spatial, catchment-scale analysis. A baseline average annual total suspended solids (TSS) load is estimated based on land use distribution and unmodified hydrologic connectivity of the catchment to the receiving waters, and the average annual pollutant load reductions are estimated after implementation of stormwater program actions, including source control and structural BMPs, in the catchment for the respective year evaluated. The current loading after BMPs for each catchment area are normalized to produce catchment rankings.

After evaluation with respect to SWRP, it was determined that the TELR model is not appropriate for use in evaluating conceptual project benefits because: 1) it does not currently incorporate pollutant-based catchment loading (runoff volume and sediment loads are instead used as surrogates), 2) it also cannot prioritize catchments based on specific water body-pollutant combinations, and 3) it requires additional annual costs, making it a less cost effective option for the City.

3.1.4 LPR Model

The LPR Model[3] was developed to fulfill the 2013 California Phase II General Municipal Separate Storm Sewer System (MS4) Permit (MS4 Permit) (State Water Resources Control Board, 2013) and Central Coast Regional Water Quality Control Board requirements for quantifying MS4 Permit area average annual stormwater runoff volumes and pollutant loads, prioritizing catchments for BMP implementation, and inventorying, assessing, and estimating runoff volume and pollutant load reductions achieved by a MS4 Permittee's stormwater program.

The LPR Model's primary functions include quantification of runoff volumes and pollutant loads for the unmitigated scenario, prioritization of catchments, and estimation of runoff volume and pollutant load reductions from implementation of a stormwater program, including a suite of BMPs (mitigated condition). Therefore, the model is referred to as the **L**oad, **P**rioritization, and **R**eduction (LPR) Model. The model produces all results at the catchment, MS4 Permit area, and watershed scale.

Spatial data describing the area of interest, including land uses and soil types, are combined with historical rainfall data to determine predicted average annual runoff volumes for the unmitigated scenario. These volumes are then combined with the pollutant concentrations expected on various land uses to produce average annual stormwater pollutant loads. POCs are identified, based on those with significant potential to cause or contribute to receiving water limit exceedances and watershed-specific factors (e.g., status of Clean Water Act Section 303(d) listings and TMDLs), and used, with pollutant loads, to produce catchment prioritization results based on various pollutants. The LPR Model then computes the water quality benefits, in the form of estimated runoff volume and pollutant load reductions, expected to be achieved by implementing BMPs, for a variety of BMP types (both structural and non-structural) and implementation scenarios.

The LPR Model is a simple, easy-to-use tool that can directly evaluate and support stormwater program management. The LPR Model is in the non-proprietary Microsoft Excel format because the software is widely used, it is flexible and customizable, and requires no ongoing cost. The streamlined and intuitive layout allows for future use and modification based on additional land

[3] The LPR Model was developed by Geosyntec Consultants in collaboration with the County of Santa Barbara, and the Cities of Carpinteria, Goleta, Solvang, and Buellton.

use monitoring data, modified watershed GIS data, additional BMP performance data, and/or expanded BMP implementation. Output results from the LPR Model are provided in both tabular and graphical form to allow for easy transfer to reports.

The LPR Model is well-suited to meet watershed planning and multi-benefit quantification requirements necessary for the SWRP, in addition to prioritizing BMPs for mitigating various land use-based threats to water quality by comparing their relative benefit, supporting catchment-level siting of BMPs that reflect priority water body-pollutant combinations, and performs watershed-wide analyses and summaries of volume and pollutant load reductions. The LPR Model demonstrated prior project analysis and quantification capabilities during the Santa Barbara County-Wide Integrated SWRP development process.

3.1.5 Conclusion

Based on the criteria discussed above and summarized in Table F-2, the LPR Model was selected as the best and most cost-effective option for use in development of the Redding SWRP to meet the modeling requirements of the Guidelines. The LPR Model is able to produce average annual runoff volumes and pollutant loads for 12 different pollutants, in a given area, based on land use and soil spatial data and average annual rainfall for the area. The LPR Model includes the capability to estimate the percent of long-term runoff volume that is captured by structural BMPs, allowing the City of Redding to take full ownership of a simple-to-use comprehensive SWRP modeling tool. The LPR Model is able to estimate the runoff volume stored, treated, and/or infiltrated, and the corresponding pollutant load reductions, for a variety of structural BMPs.

Besides fulfilling requirements outlined in the Guidelines, other advantages of the LPR Model include its cost-effectiveness and its ability to easily add and inventory additional projects in the future. It also has the ability to support catchment-level siting of BMPs that reflects City-specific priority water body-pollutant combinations, in addition to providing output summaries by watershed or receiving water.

3.2 LPR Model Development

The LPR Model uses the Rational Method to estimate the average annual runoff volume generated within a watershed, using drainage area characterization (land use, imperviousness, and soils), runoff coefficients, and precipitation data. Since runoff coefficients are determined using an empirical formula that does not account for all site-specific conditions, the LPR Model allows modeled runoff volumes to be adjusted based on calibration results that compare the annual discharge volumes calculated by the LPR Model to streamflow gage observed annual discharge volumes[4]. Adjusted runoff volumes reported by the LPR Model are then used with pollutant event

[4] A calibration was not performed due to the lack of available urban streamflow data that is appropriate for the City.

mean concentrations (EMCs), representing the mean concentration of a pollutant expected in stormwater runoff, to determine average annual pollutant loadings.

Basic design details of stormwater projects (e.g., project type, drainage area and characteristics, project footprint and storage capacity, etc.) are then entered into the LPR Model for performance modeling. The LPR Model computes the estimated average annual infiltration volumes and pollutant load reductions, expected to be achieved by implementing the project. Project performance within the LPR Model is based on the average annual percent volume capture (percent capture), effluent quality (i.e., concentration), and percent volume reduction (see Figure F-6). Additional information and details on the LPR Model are presented in the LPR Model Technical Report (Geosyntec Consultants, 2017).

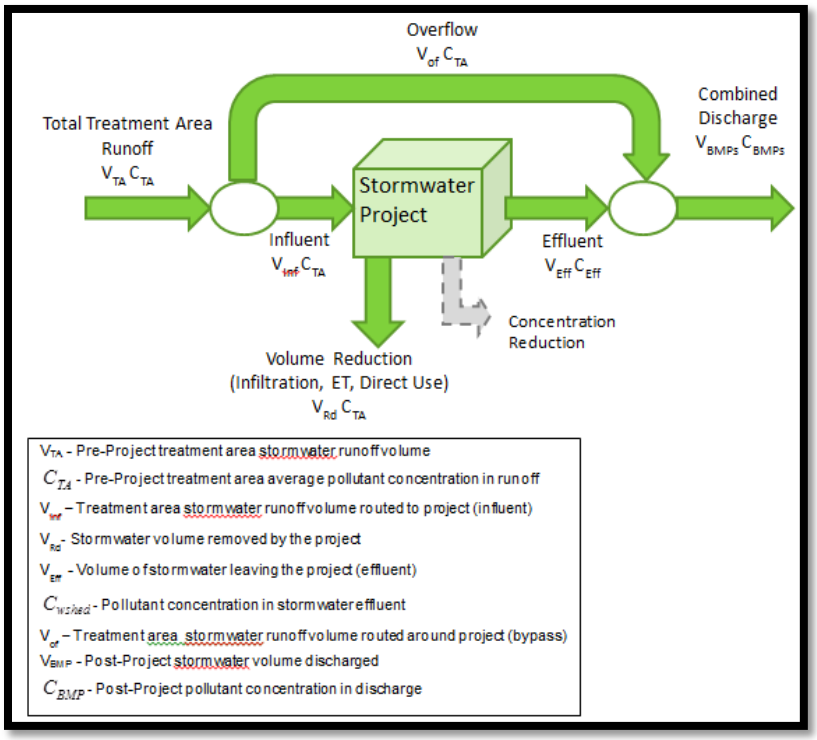


Figure F-6. Structural BMP Modeling Approach

3.2.1 Existing LPR Model

The LPR Model was populated (previously compiled and synthesized in GIS) with all the necessary spatial data that was compiled and synthesized in GIS, as shown in Table F-3, for the area within the City and the major watersheds that intersect the City. This spatial data was developed at the catchment level, which are defined as municipal drainage catchments and represent actual drainage areas where stormwater discharges through one or more identified outfall. Within each catchment, the LPR Model contains information for each unique combination of land use (land use category and imperviousness) and hydrologic soil group. Each catchment is

also characterized by a receiving water (i.e., subwatershed) and watershed. Catchments were developed by the City for areas within the City boundaries. Details regarding how land use designations and imperviousness were determined for areas within the City are included in Attachment A of the LPR Model Technical Report (Geosyntec Consultants, 2017).

Table F-3. GIS Datasets Used for the Existing LPR Modeling

Dataset Description[1]	Dataset Format	Source
Land Use (event mean concentration [EMC] land use[2])	Vector (polygon)	Based on land use designations provided by the City of Redding Parcel file, with areas outside of parcels (i.e., roadways) based on the 2017 update of the 2002 City zoning file, and areas outside of the City based on the 2005 Shasta County land survey by CA DWR
Imperviousness	Raster	NLCD 2011 Percent Developed Imperviousness
Catchments	Vector (polygon)	Provided by the City or developed based on subwatersheds
Soils (hydrologic soil group)	Vector (polygon)	Soil Survey Geographic Database (SSURGO) database from the Natural Resources Conservation Service (United States Department of Agriculture)
Watersheds	Vector (polygon)	USGS hydrologic unit code (HUC) – 10
Subwatersheds	Vector (polygon)	USGS hydrologic unit code (HUC) – 12

[1] Additional information is included in the LPR Model Technical Report (Geosyntec Consultants, 2017).
[2] Single-family residential, multi-family residential, transportation, vacant (open space), commercial, industrial, agriculture, education, and water.

SECTION 4. QUANTITATIVE ANALYSIS OF PROJECT BENEFITS

Table 3 of the Guidelines lists examples of the appropriate benefit metrics to be used in project analysis. The metrics for quantitative analysis included in this SWRP include pollutant load reductions (water quality benefit), groundwater recharge (water supply), runoff volume removal (flood management), and habitat restoration (environmental).

Water quality benefits of conceptual projects, in terms of the average annual pollutant loads that are expected to be removed from the receiving waters after implementing the conceptual projects, are evaluated by the LPR Model. For infiltration-based projects such as the infiltration basin, removing runoff volume from the BMP discharge also removes all associated pollutants. Therefore, the pollutant loading in the influent runoff volume that is able to be captured and infiltrated by the projects is also considered to be removed. Treatment-based BMPs, such as natural treatment systems and bioretention with underdrains, estimate the effluent quality of the runoff volume that is captured and treated by the projects and discharged, in addition to runoff volume that is removed through infiltration or evapotranspiration.

The water supply benefits for conceptual projects is also based on the volume of runoff infiltrated by the project. The infiltrated volume is multiplied by an adjustment factor to compute a potential groundwater recharge volume. This adjustment factor is based on a modeling analysis of groundwater recharge performed by Munévar and Mariño (in the Central California region), which showed that on average approximately 65 percent of infiltrated water reaches the water table and is therefore available for water supply (Munévar and Mariño, 1999). Therefore, the potential water supply volume provided by infiltration-based BMPs is calculated to be 65 percent of the estimated captured (or reduced) runoff volume.

Additionally, the number of households that could utilize their entire yearly water supply from the potential increase in water supply volume (household equivalents supplied) is also estimated, based on average annual household water use, 0.41 acre-ft per household per year or 362 gallons per household per day (Aquacraft, 2011), and the estimated groundwater recharge volumes.

Implementation of the conceptual projects can also provide benefits by reducing local flooding, both by reducing the rate and volume of runoff volume during storm events. These flood management benefits were quantified by the LPR Model as the average annual runoff volume that is captured by the conceptual project, then infiltrated/evapotranspired and/or detained and released at a controlled rate.

Implementation of the conceptual projects can also result in positive environmental outcomes. The Guidelines identifies protection and improvement of natural habitat, increased urban green space, reduced energy use or greenhouse gas emissions, reestablishment of the natural hydrograph, and water temperature improvement as examples of environmental benefits. Potential environmental benefits of conceptual projects are quantified by the size of the footprint for the proposed project,

when it represents the area that will undergo environmental enhancements (e.g., natural habitat created or converted to green space with natural vegetation, removal of invasive species).

The conceptual project design parameters used in the LPR Model and multi-benefit quantification results are included in Appendix G.

SECTION 5. PROJECT MULTIPLE BENEFIT PRIORITIZATION

As required by California Water Code Section 10562(e) and Section VI.D of the Guidelines, the SWRP must use measurable factors to prioritize projects. The approach for prioritizing the conceptual projects consists of two parts. Projects are first assigned multi-benefit indices based on their quantitative and qualitative potential to achieve multiple benefits in the five benefit categories identified by the Guidelines: water quality, water supply, flood control, community, and environmental Projects were then prioritized based on their multi-benefit indices and their potential to be implemented and maintained (i.e., with a committed landowner and operation and maintenance capabilities).

The methodology for scoring multiple benefits to determine multi-benefit indices is outlined in Section 5.1, and the process for prioritizing projects is described in Section 5.2. These processes vary slightly for those projects with quantified modeling results (conceptual projects) and other projects that have not been modeled to determine quantitative benefits. The methodologies for both modeled and non-modeled projects are described herein.

The results for scoring multiple benefits, including determination of the multi-benefit indices and prioritization of conceptual projects, are presented in Appendix G.

5.1 Scoring Multiple Benefits

Conceptual Projects

The multi-benefit index is calculated for each project and represents the ability of each project to provide benefits for the benefit categories identified in the Guidelines, with more emphasis on the benefit categories that are a priority to the City. To determine a multi-benefit index for each modeled conceptual project, scores for each benefit category (benefit scores) are determined as described in Table F-4. These quantitative benefit scores are normalized by dividing quantitative results (e.g. modeled pollutant loads) by the maximum value[5] for all projects and multiplying normalized values by five, yielding scores ranging from zero to five. These scores based on quantitative metrics are used to calculate quantitative benefit scores for water quality, water supply, flood control and environmental benefits as appropriate, as described in Table F-4. Water quality quantitative benefit scores differed slightly from the other benefit categories, in that a quantitative score ranging from zero to five is determined for each modeled pollutant. Scores for

[5] The maximum value is the largest quantitative result that is less than or equal to the "upper limit" of all quantitative results, which is calculated as the median + (1.5 x the interquartile range [IQR]). The IQR is equal to the 25th percentile value subtracted from the 75th percentile value. This procedure is used so that one or a couple very large projects do not result in very low quantitative scores for all other projects. Any projects with a quantitative result greater than the upper limit automatically receives a score of 5.0 for that pollutant/category.

each pollutant are then weighted by the pollutant priority weights for the relevant watershed, shown in Table F-7, to determine an overall water quality quantitative benefit score for each project. Priority pollutant weights are determined based on 303(d) and TMDL listed pollutants, in addition to urban vs. non-urban pollutants, as described in the water quality portion of Table F-4.

A qualitative benefit weight from zero to five is also determined for certain criteria, based on the project concept, aspects of the location of the project (proximity to groundwater basin, upstream of etc.), need for the benefit in the project area, and best professional judgement to reflect the effectiveness of the project at achieving each benefit. The overall benefit scores for water supply, flood control and environmental benefits are calculated by multiplying the quantitative score and qualitative weight and dividing by five to yield a final benefit score between zero and five. Water quality benefits are based solely on the quantitative scores and pollutant treatment priority weights, while community benefits are based entirely on a qualitative score.

Finally, in order to determine a multi-benefit index for each project, each benefit category is assigned a weight according to its relative importance to the City. The following multi-benefits weights are applied to each benefit:

- Water quality: 30%
- Water supply: 20%
- Flood management: 20%
- Environmental: 20%
- Community: 10%

The benefit scores are multiplied by the assigned multi-benefit weights and summed to calculate a multi-benefit index between zero and five. This approach is similar in concept to the ASCE award-winning Los Angeles Countywide BMP prioritization methodology (www.LABMPmethod.org). Table F-4 outlines the methodology described above (for conceptual projects), and potential environmental and community benefits are identified in Table F-5 and Table F-6. The qualitative scores for environmental and community benefits are selected based on the number of main and additional benefits that each project is expected to provide, as defined in the Guidelines.

Table F-4. Multi-benefit Scoring Guidance for Conceptual Projects

Benefit Category	Description	Scoring
Water Quality	Potential to address water quality priorities	Score is calculated based on quantitative metric of benefit multiplied by a qualitative pollutant weight **Quantitative metric**: Average annual pollutant load reduction (lb/year or 10^{12} MPN/year for fecal coliform) will be used to calculate a weighted score for each project based on qualitative watershed specific water quality priorities. **Quantitative pollutant priority weights (shown in Table F-7)**: 4 = TMDL listed 3 = 303(d) listed 2 = Urban, non-listed (TMDL or 303(d)) pollutant 1 = Non-urban, non-listed (TMDL or 303(d)) pollutant
Water Supply	Maximize infiltration, supplement groundwater, or reuse of captured stormwater or dry weather runoff	Score is calculated based on quantitative metric of benefit multiplied by a qualitative weight describing the effectiveness of the project at meeting that metric. **Quantitative metric**: Potential average annual water supply volume (acre-ft/yr) **Qualitative weight:** 0 = No infiltration or planned direct use 1 = Provides infiltration in a confined aquifer (not used for water supply) or direct use (in a parcel not currently using water) 2 = Improved water efficiency with drought tolerant vegetation or removal of high water use vegetation 3 = Provides groundwater recharge in an unconfined aquifer (not used for water supply) or direct use (in a parcel using recycled water) 4 = Provides infiltration in a confined aquifer (used for water supply) 5 = Provides groundwater recharge in an unconfined aquifer (used for water supply) or direct use (in a parcel using potable water)

Benefit Category	Description	Scoring
Flood Management	Minimize runoff / discharge	Score is calculated based on quantitative metric of benefit multiplied by a qualitative weight describing the effectiveness of the project at meeting that metric. **Quantitative metric**: Average annual runoff volume captured[6] (cu-ft/yr) **Qualitative weight**: 0 = No alleviation of a local flooding problem 1 = Minor alleviation of a local flooding problem 3 = Medium alleviation of a local flooding problem 5 = Significant alleviation of a local flooding problem
Environmental	Environmental benefits of project, listed in ***Table F-5***	Score is calculated based on a quantitative metric of benefit multiplied by a qualitative weight. **Quantitative metric**: Environmental enhancement area (represented by BMP footprint in square feet) **Qualitative weight**: A qualitative weight will be determined by the number of benefits in ***Table F-5***, as follows. 0 = No environmental benefit 1 = One (or more) additional environmental benefits and no main benefits 3 = One main environmental benefit 5 = Two (or more) main environmental benefit
Community	Community benefits of project, listed in ***Table F-6***	A qualitative score is determined by the number of benefits in ***Table F-6*** as follows. 0 = No community benefit 1 = One (or more) additional community benefits and no main benefits 3 = One main community benefit 5 = Two (or more) main community benefit

[6] Runoff volume metric used in lieu of peak flow since peak flow is not available.

Table F-5. List of potential environmental benefits

Benefit Description	Evaluation Criteria
Main Benefits	
Environmental and habitat protection and improvement, including: • Wetland enhancement/creation • Riparian enhancement; and/or • Instream flow enhancement	• Parcel is located near a water body and could enhance or restore aquatic existing habitat • BMP concept creates a water feature that could create habitat (e.g. constructed wetland) • Parcel or BMP concept can be developed in a way that enhances or creates habitat or provides other environmental restoration (e.g. opportunity to plant native species)
Increased urban green space	• Parcel is located in an urban area • Undeveloped space on parcel could be converted to green space or BMP concept includes plantings (e.g. bioretention)
Additional Benefits	
Reduced energy use, greenhouse gas emissions, urban heat island effect, or provides carbon sink	• BMP concept increases water supply through infiltration or capture reuse and reduces energy used for importing water • Project creates green space
Reestablishment of natural hydrograph	• Project reduces runoff and helps restore stream flow to predevelopment conditions

Table F-6. List of potential community benefits

Benefit Description	Evaluation Criteria
Main Benefits	
Employment opportunities	• Project requires operation and maintenance
Public education	• Project includes signage or other opportunities to educate the public about stormwater and water quality, water supply, environmental protection or other aspects of the project.
Additional Benefits	
Community involvement	• Project implementation will engage community
Enhance or create recreational and public use areas	• Project is located in an existing public space or park • Project provides aesthetic benefits • Project includes recreational facilities (e.g. bike paths)
Socio-economic benefits	• Project is located in a residential area and may improve home property values • Project is located in a commercial area and may benefit local businesses • Project is located in a disadvantaged or low-income area
Health benefits	• Project will increase green space that will improve air quality • Project provides recreation opportunities that encourage physical exercise

Table F-7. Priority Pollutant Weight Scores

Watershed	Pollutant Weights											
	TSS	TP	Diss P	NH3	NO3	TKN	Diss Cu	Tot Cu	Tot Pb	Diss Zn	Tot Zn	Fecal Col.
Churn Creek-Sacramento River	2	1	2	1	1	1	2	1	1	2	1	2
Clear Creek	2	1	2	1	1	1	2	1	1	2	1	2
Stillwater Creek	2	1	2	1	1	1	2	1	1	2	1	2

Non-Modeled Projects

The multiple benefit scoring process developed for evaluating projects that are identified, developed (to a conceptual level), and modeled for the SWRP was adapted and will be applied to those identified projects that are not conceptually developed or modeled (i.e., non-modeled projects). Benefit scores for these projects are developed based on the same qualitative process used for conceptual projects, however quantitative metrics, such as the volume captured, are not available for all of these projects. Thus, the benefit scores for water quality, water supply, flood management, environmental, and community are represented by a score from zero to five based

on a qualitative assessment of a specific project type implemented in the identified parcel at achieving each benefit, independent of size or scale of the project. Table F-8 shows how the scoring process was adapted for non-modeled projects for which BMP concept designs have not been developed.

Table F-8. Multi-benefit Scoring Guidance for Non-modeled Projects

Benefit Category	Description	Scoring
Water Quality	Potential to address water quality priorities	0 = No pollutant removal 1 = Low pollutant removal in discharge 3 = Medium pollutant removal in discharge 5 = Full pollutant removal of captured/diverted flow
Water Supply	Maximize infiltration, supplement groundwater, or reuse of captured stormwater or dry weather runoff	0 = No infiltration or planned direct use 1 = Provides infiltration in a confined aquifer (not used for water supply) or direct use (in a parcel not currently using water) 2 = Improved water efficiency with drought tolerant vegetation or removal of high water use vegetation 3 = Provides groundwater recharge in an unconfined aquifer (not used for water supply) or direct use (in a parcel using recycled water) 4 = Provides infiltration in a confined aquifer (used for water supply) 5 = Provides groundwater recharge in an unconfined aquifer (used for water supply) or direct use (in a parcel using potable water)
Flood Management	Minimize runoff / discharge	0 = No alleviation of a local flooding problem 1 = Minor alleviation of a local flooding problem 3 = Medium alleviation of a local flooding problem 5 = Significant alleviation of a local flooding problem
Environmental	Environmental benefits of project, listed in ***Table F-5***	A qualitative score will be determined by the number of benefits in ***Table F-5***, as follows. 0 = No environmental benefit 1 = One (or more) additional environmental benefits and no main benefits 3 = One main environmental benefit 5 = Two (or more) main environmental benefit
Community	Community benefits of project, listed in ***Table F-6***	A qualitative score will be determined by the number of benefits in ***Table F-6***, as follows. **Qualitative metric**: 0 = No community benefit 1 = One (or more) additional community benefits and no main benefits 3 = One main community benefit 5 = Two (or more) main community benefit

5.2 Project Prioritization

After multi-benefit indices are determined for the projects, they are then prioritized (Water Code 10562(b)(2)) based on their multi-benefit indices and other factors related to feasibility of implementation and commitment to maintenance as shown below:

- High: multi-benefit index greater than zero and the project has a willing land owner that is also committed to performing necessary maintenance
- Medium: multi-benefit index greater than three, but the project does not have (or it is undetermined) a willing land owner also committed to maintenance
- Low: multi-benefit index less than or equal to three and the project does not have (or it is undetermined) a willing land owner also committed to maintenance

This approach for multiple benefit quantification and prioritization of projects was developed to fulfill requirements in the Water Code and Guidelines, and the methodology will serve as a useful tool for evaluating multiple benefits of projects. However, this methodology is not intended to serve as a basis for ranking projects or to imply that certain projects are more likely to be successful than others, but rather was intended to identify projects that will provide multiple benefits and are likely to succeed once implemented.

SECTION 6. REFERENCES

2NDNATURE, 2016. *Stormwater Tool to Estimate Load Reductions. Draft Final Technical Document V1.* August, 2016.

Aquacraft, 2011. California Single Family Water Use Efficiency Study. Sponsored by The California Department of Water Resources. June.

Beach Cities EWMP Group, 2015. *Draft Enhanced Watershed Management Program (EWMP) for the Beach Cities Watershed Management Area (Santa Monica Bay and Dominguez Channel Watersheds).* June 2015.

Central Coast Regional Water Quality Control Board, 2016. *Water Code Section 13267 Technical Report Order, Activities to Determine Stormwater Program Modifications, Phase II Municipal Stormwater Management Program.* June 2016.

City of Los Angeles. 2009. *Total Maximum Daily Load for Bacterial Indicator Densities in Ballona Creek, Ballona Estuary, and Sepulveda Channel Draft Implementation Plan*. November.

City of Los Angeles Bureau of Sanitation, 2012. Total Maximum Daily Load for Toxic Pollutants in Ballona Creek Estuary Implementation Plan. June 2012.

City of Los Angeles, Los Angeles County Flood Control District, County of Los Angeles, City of Santa Monica, City of El Segundo, 2015. *Draft Santa Monica Bay Jurisdictional Group 2 and 3 Enhanced Watershed Management Program.* June 2015.

City of Walnut, 2015. *Watershed Management Plan (WMP).* April 2015.

County of Ventura, 2015. *Indicator Bacteria Total Maximum Daily Load Draft Implementation Plan for the Lower Santa Clara River Watershed.* Prepared by Geosyntec Consultants. March 2015.

Geosyntec Consultants and Larry Walker Associates (LWA), 2011. Ventura County Technical Guidance Manual for Stormwater Quality Control Measures. Prepared for Ventura Countywide Stormwater Quality Management Program. July 2011.

Geosyntec Consultants and Wright Water Engineers, 2011. International Stormwater Best Management Practices (BMP) Database. Technical Summary: Volume Reduction. January 2011.

Geosyntec Consultants, 2012a. *A User's Guide for the Structural BMP Prioritization and Analysis Tool.* November 2012.

Geosyntec Consultants, 2012b. *San Luis Rey River Watershed Comprehensive Load Reduction Plan.* October.

Geosyntec Consultants, 2012c. *San Diego River Watershed Comprehensive Load Reduction Plan.* October.

Geosyntec Consultants and Wright Water Engineers, 2012. International Stormwater Best Management Practices (BMP) Database. Addendum 1 to Volume Reduction Technical Summary (January 2011). Expanded Analysis of Volume Reduction in Bioretention BMPs. May 2012.

Geosyntec Consultants, 2017. *Pollutant Load, Prioritization, and Reduction (LPR) Model Technical Report*. June 2017.

Los Angeles County Department of Public Works (LACDPW), 2000. *Los Angeles County 1994-2000 Integrated Receiving Water Impacts Report.* 2000.

Los Angeles County Department of Public Works (LACDPW), 2006. *Los Angeles County Department of Public Works Hydrology Manual.* January 2006.

Los Angeles Gateway Region, 2015. *Los Angeles River Upper Reach 2 Watershed Management Area Watershed Management Program (WMP) Plan.* June 2015.

Munévar, A. and M.A. Mariño, 1999. Modeling Analysis of Ground Water Recharge Potential on Alluvial Fans Using Limited Data. Groundwater, 37(5) 649-659.

North Santa Monica Bay Coastal Watersheds EWMP Group. *Draft Enhanced Watershed Management Program (EWMP) for North Santa Monica Bay Coastal Watersheds.* June 2015.Palos Verdes Peninsula Watershed Management Group, 2015. *Draft Enhanced Watershed Management Program (EWMP).*

NRCS, 2007. Chapter 7 - Hydrologic Soil Groups, part 630 - Hydrology. *National Engineering Handbook.* (Eds V Mockus, AT Hjelmfelt, HF Moody). US Department of Agriculture, Natural Resources Conservation Service: Washington, DC. May 2007.

SCCWRP, 2005. Personal communication with Eric Stein (SCCWRP). Phone. October 17, 2005.

SCCWRP, 2007. Technical Report 510 Sources, Patterns, and Mechanisms of Storm Water Pollutant Loading from Watersheds and Land Uses of the Greater Los Angeles Area, California, USA. Written by E.D. Stien, L.L. Tiefenthaler, and K.C. Schiff. March 2007.

State Water Resources Control Board (SWRCB), 2015. Storm Water Resource Plan Guidelines. December 15, 2015.

Torrent Resources, 2017. *MaxWell Plus Drainage System Product Information and Design Features.* http://www.torrentresources.com/wp-content/uploads/2014/06/MaxWell-Plus-Insert-8-2012_200.pdf. Accessed July 2017.

Ventura County Flood Control Department (VCFCD), 2003. Ventura Countywide Stormwater Monitoring Program: Annual Report for Permit Year 3, Reporting Year 9. October 2003.

Ventura County Watershed Protection District (VCWPD), 2010. *Design Hydrology Manual, Ventura County, California*. Updated December, 2010.

Ventura County Watershed Protection District, 2010. *Harbor Beaches of Ventura County (Kiddie Beach and Hobie Beach) Wet-Weather Bacteria Total Maximum Daily Load Implementation Plan for Unincorporated Ventura County.* Prepared by Geosyntec Consultants. June 2010.

Water Environment Federation (WEF) and the American Society of Civil Engineers (ASCE), 1998. *Urban Runoff Quality Management*, WEF Manual of Practice No. 23, ASCE Manual and Report on Engineering Practice No. 87. Pg. 176.

Prepared for

City of Redding

Stormwater Resource Plan

Appendix G – Project Design, Analysis, and Prioritization Results Technical Report

Redding, CA

Prepared by

Geosyntec consultants

engineers | scientists | innovators

924 Anacapa Street, Suite 4A
Santa Barbara, CA 93101

Geosyntec Project #: LA0443

October 2018

TABLE OF CONTENTS

SECTION 1 . Introduction G-1

SECTION 2 . Conceptual Project Designs G-1

SECTION 4 . Conceptual Project LPR Model Inputs G-5

SECTION 5 . Summary of Quantified Project Benefits G-9

SECTION 6 . Project Multiple Benefit Prioritization G-14

6.1 Project Multi-Benefit Indices and Prioritization Results G-14

6.1.1 Conceptual Projects G-14

6.1.2 Non-Modeled Projects G-17

SECTION 7 . References G-20

LIST OF TABLES

Table G-1. Projects Selected for Conceptual Development G-2

Table G-2. Conceptual Project Drainage Areas and Imperviousness G-4

Table G-3. Conceptual Projects Drainage Area Inputs to the LPR Model G-6

Table G-4. Conceptual Projects Design Inputs to the LPR Model G-8

Table G-5. Quantified Average Annual Benefits of Conceptual Projects G-10

Table G-6. Individual Quantitative Water Quality Benefit Scores for Conceptual Projects G-15

Table G-7. Quantitative Benefit Scores for Conceptual Projects G-15

Table G-8. Qualitative Benefit Weights for Conceptual Projects G-16

Table G-9. Overall Benefits Scores and Multi-Benefit Indices for Conceptual Projects G-16

Table G-10. Prioritization for Conceptual Projects G-17

Table G-11. Multiple Benefits and Prioritization for Non-modeled projects G-18

LIST OF FIGURES

Figure G-1. Project Locations in Relation to Water Quality Priorities..... G-3

Figure G-2. Project Water Quality Benefits – Average Annual Pollutant Load Reductions ... G-11

Figure G-3. Project Water Supply Benefits – Average Annual Groundwater Recharge Volume G-12

Figure G-4. Project Flood Management Benefits – Average Annual Runoff Volume Controlled G-13

SECTION 1. INTRODUCTION

Various project opportunities for stormwater and dry weather capture were identified in the City of Redding (City) that meet one or more of the criteria established for project selection included in the Water Code and the SWRP Guidelines (Guidelines) (SWRCB, 2015). These identified projects were then evaluated by the condition of the parcel, the potential benefits of the project, and barriers to implementation to establish a ranked list of projects for each BMP type. The City reviewed the ranked projects and the projects identified by the Technical Advisory Committee (TAC) and stakeholders, and projects were selected for conceptual development. The conceptual designs and project benefits (water quality, water supply, flood management, and environmental) are described and quantified in this document as required by the Water Code and Guidelines. This document contains the resulting conceptual designs, quantified benefits, and prioritization using the methods outlined in Appendix F.

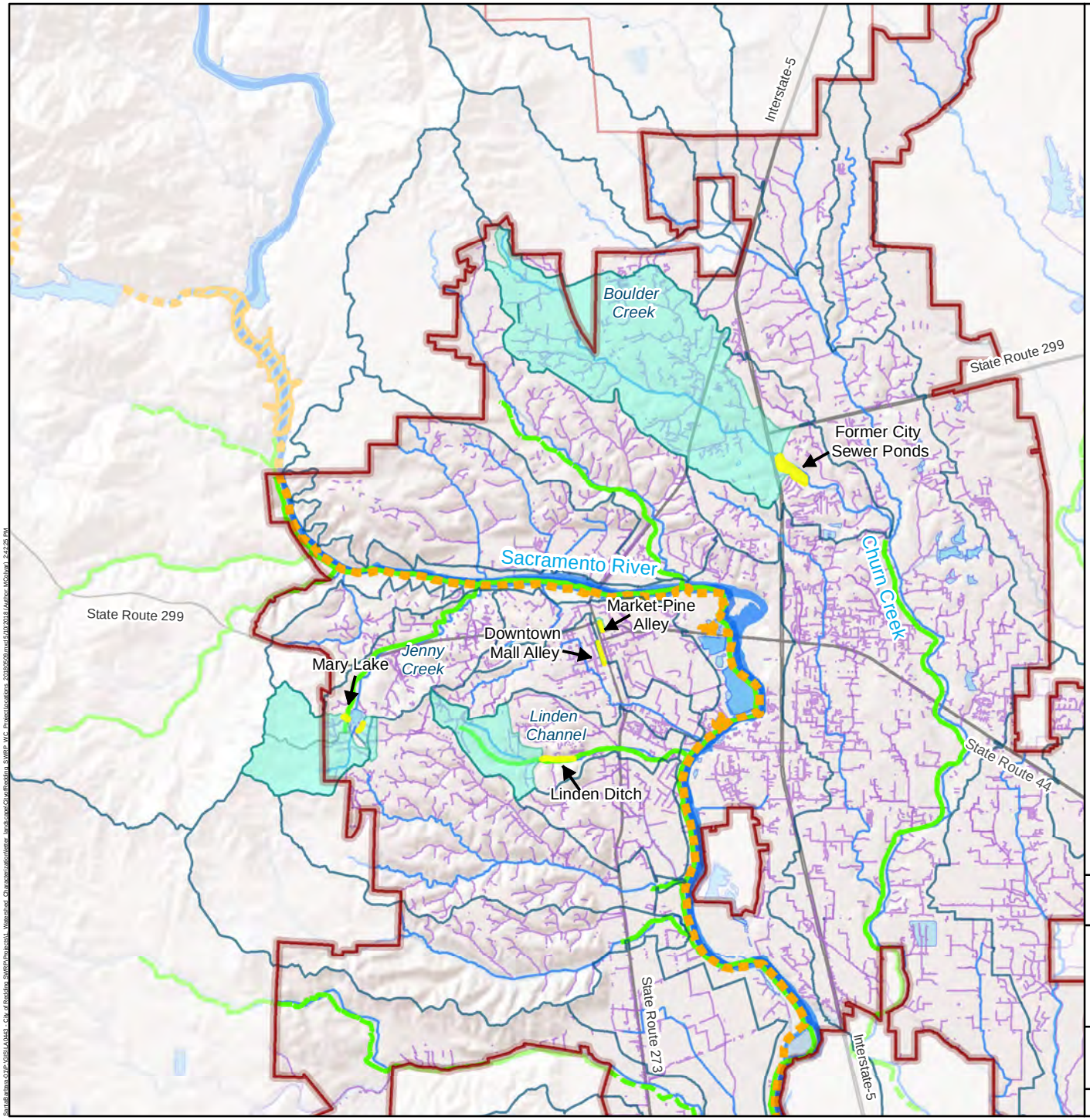
SECTION 2. CONCEPTUAL PROJECT DESIGNS

The project identification and ranking process was executed for each of the SWRP project types (natural treatment systems, green streets, and direct use), as described in Appendix E. The City reviewed their list of ranked projects (by SWRP project type) and potential projects identified by the TAC and stakeholder and currently selected projects for design concept development are included in Table G-1. Development of conceptual designs for the projects required delineating the upstream drainage area and determining appropriate conceptual design parameters. These processes, including the necessary spatial files, are described in Appendix F. Table G-2 shows the drainage area and average imperviousness for each conceptual project. Additionally, the location and drainage area of the conceptual projects, in relation to water quality priorities, are shown in Figure G-1.

Table G-1. Projects Selected for Conceptual Development

Project Name	Parcel/Street	Project Type	Short Description
Former City Sewer Ponds	116180006000, 117070028000	Natural Treatment System	Utilize existing abandoned sewer ponds to treat, retain, and infiltrate flows from Boulder Creek through natural treatment systems. The upper basin will be expanded, while the lower basin will retain the current footprint.
Linden Ditch	Series of 26 city-owned parcels along Linden Avenue at West Street	Infiltration System	Offline linear infiltration basin adjacent to the current flow path to improve water quality and reduce flows in Linden Ditch.
Mary Lake Pond	204350040000, 204560040000, 204330030000	Lake Restoration	Enhance the existing wet detention basin above Mary Lake and construct natural treatment systems at the western and eastern sides of Mary Lake to capture and treat surrounding runoff. Also includes a storage tank to capture peak flows in the winter to later release during dry months.
Market-Pine Alley	Market-Pine Alley at Eureka Way	Green Street	Convert the alley between Market and Pine Street in downtown Redding into a green pedestrian corridor by replacing the existing alley surface with permeable pavement and rain gardens with an underdrain system.
Downtown Mall Alley[a]	California-Market Alley	Green Street	Create green streets with rain gardens in the alley and walkway between the parking lot and mall for water treatment, infiltration, and education.

[a.] This project was previously designed by Corri Vandiver (City of Redding) but included here for project benefit modeling.



Legend

- SWRP Planning Area
- Major Road
- Storm Drain System
- Streams
- Sacramento River
- Waterbody
- City
- Critical Stream Habitat
- 303(d) Listed Stream
- 303(d) Listed Waterbody
- Project BMP Footprint
- Project Drainage Area
- Subwatershed

N

0 1.5 3 Miles

Project Locations in Relation to Water Quality Priorities

City of Redding
Stormwater Resource Plan

Geosyntec consultants

Santa Barbara | May 2018

Figure 1

Table G-2. Conceptual Project Drainage Areas and Imperviousness

Project Name	Project Type	Drainage Area (acre)	Imperviousness
Former City Sewer Ponds	Natural treatment system	1,836	37%
Linden Ditch	Infiltration system	258	23%
Mary Lake Pond	Lake restoration	456	8.7%
Market-Pine Alley	Green street	3.5	82%
Downtown Mall Alley	Green street	3.9	83%

SECTION 4. CONCEPTUAL PROJECT LPR MODEL INPUTS

Section VI.C of the Guidelines state that quantitative metric-based analysis should be employed to evaluate the multiple benefits (i.e., water quality, water supply, flood management, environmental, and community) associated with projects. To meet this requirement, water quality, water supply, and flood management benefits were quantified (i.e., modeled) for each conceptual project using the Load, Prioritization, and Reduction (LPR) Model, developed by Geosyntec Consultants. The LPR Model quantifies anticipated project benefits by estimating average annual stormwater runoff volumes[1] and associated pollutant loads that would be captured and infiltrated or treated by the proposed projects.

The LPR Model requires two sets of project details to estimate performance: (1) project drainage area details and (2) project design details. As described in Appendix F, the drainage areas were delineated using GIS and desktop visual observations for each conceptual project. These conceptual project drainage areas were then characterized utilizing GIS tools, such that each conceptual project drainage area was described by unique combinations of catchment (i.e., catchment for areas within the City or subwatershed for areas outside of the City) and land use. Table G-3 summarizes conceptual project LPR Model input data related to drainage area. The necessary LPR Model design input details for each conceptual project were developed based on the available project area, the SQDV, and the standard design parameters as discussed in Appendix F. Table G-4 shows the conceptual project design details used in the LPR Model.

[1] Dry weather water quality benefits may also be expected, but are not estimated here.

Table G-3. Conceptual Projects Drainage Area Inputs to the LPR Model

Project Name	Project Type (LPR Model name)	Drainage Area Characteristics										
		Size (acre)	Juris-dictions	Catchments	Land Uses (% of total drainage area)							
					Agriculture	Commercial	Education	Industrial	Multi-family Residential	Open Space	Single-family Residential	Transpor-tation
Former City Sewer Ponds	Natural Treatment System (Wet basin [extended detention])	1,836	Redding, Non-MS4	BOULDER CREEK-2500, 2506, 2514, 2520, 2530, 2546, 2550, 2558, 2566, 2574, 2578, 2584, 2586, 2592, 2596, 2600, 2606, 2614, 2617, 2621, 2628, 2636, 2640, 2646, 2650, 2657, 2660, 2666, 2672, 2680, 2684, 2688, 2694, 2696, 2704, 2708, 2716, 2724, 2736, 2740, 2750, 2756, 2760, 2766, 2770, 2772, 2778, 2786, 2794, 2798, 2806, 2814, 2820, 2828, 2832, 2838, 2842, 2846, 2850, 2854, 2860, 2876, 2876-2, 2890, 2896, 2904, 2922, 2926, 2928, 2936, 2946, 2960, 2966, 2978, 2984, 2990, 2994, 2998, 3006, 3010, 3014, 371, 372, 423, 425, 431, 432, 434, 437, 527, 528, 529, 530, BUCKEYE CREEK-3688, SULPHUR CREEK-9686, 9768, 9776		7.7	1.6	14	11	21	32	13
Linden Ditch	Infiltration system	258	Redding	LINDEN CHANNEL-8336, 8340, 8346, 8366, 8370, 8387, 8389, 8393, 8394, 8398		7.7	0.47	2.8	0.20	70	14	4.7
Mary Lake Pond	Upper - Natural Treatment System (Wet basin [extended detention])	260	Redding, Non-MS4	JENNY CREEK-9004, 9014, 9020, 9022, 9030, 9034						44	56	
	West - Natural Treatment System (Wet basin [extended detention])	166	Redding, Non-MS4	JENNY CREEK-789, 9000, 9004, 9008, 9014, 9034		4.5				76	19	

Project Name	Project Type (LPR Model name)	Drainage Area Characteristics											
		Size (acre)	Juris-dictions	Catchments	Land Uses (% of total drainage area)							
					Agriculture	Commercial	Education	Industrial	Multi-family Residential	Open Space	Single-family Residential	Transpor-tation
	East - Natural Treatment System (Wet basin [extended detention])	29	Redding	CANYON HOLLOW-7884, 7982, JENNY CREEK-786, 9034, 9040, 9086						7.2	93	
Market-Pine Alley	Porous pavement	1.3	Redding	REDDING LOCAL-8622		74						26
	Rain garden (bioretention with underdrain)	2.2	Redding	REDDING LOCAL-8622		42						58
Downtown Mall Alley	Porous pavement	2.3	Redding	CALABOOSE CREEK-8530, REDDING LOCAL-8622		87				3.5		9.2
	Rain garden (bioretention with underdrain)	1.6	Redding	CALABOOSE CREEK-8526, 8530, REDDING LOCAL-8622						91		8.7

Table G-4. Conceptual Projects Design Inputs to the LPR Model

Project Name	Project Type (LPR Model name)	BMP Effective Depth (ft)	BMP Storage Capacity (cu ft)	BMP Footprint (not including pretreatment area) (sq ft)	Drawdown Time (hr)	Infiltration Rate (in/hr)
Former City Sewer Ponds	Natural Treatment System (Wet basin [extended detention])	3.7[1]	2,000,000	580,000[2]	165	0.32
Linden Ditch	Infiltration system	6	330,000	56,000	48	1.5
Mary Lake Pond	Upper - Natural Treatment System (Wet basin [extended detention])	3.8[1]	520,000	90,000[2]	166	0.32
	West - Natural Treatment System (Wet basin [extended detention])	3.4[1]	120,000	41,000[2]	147	0.32
	East - Natural Treatment System (Wet basin [extended detention])	3.2[1]	63,000	25,000[2]	142	0.32
Market-Pine Alley	Porous pavement	0.85	5,000	5,900	-[3]	5.5 cfs through underdrain
	Rain garden (bioretention with underdrain)	1.0	1,000	1,200	-[4]	0.32
Downtown Mall Alley	Porous pavement	0.85	17,000	20,000	-[3]	3.6 cfs through underdrain
	Rain garden (bioretention with underdrain)	1.0	1,600	1,850	-[4]	0.32

[1] Approximated as the volume-weighted depth of the deep zone (3-5 ft) and the shallow vegetated zone (2.0 ft).
[2] These natural treatment systems include a sedimentation forebay as part of the BMP footprint
[3] Drawdown time was not needed since percent capture is based on the flow rate through the underdrain and the BMP storage capacity.
[4] Percent capture was determined using the National Cooperative Highway Research Program (NCHRP) BMP Evaluation Tool Version 1.0 developed by Geosyntec Consultants based on a ponding depth of 4 in, planting media thickness of 7 in, stone reservoir thickness of 1.3 ft, mulch depth of 1 in, planting media filtration rate of 2 in/hr, stone freely drained storage of 0.35 in/in, and mulch porosity of 0.4 in/in (in addition to other default assumptions for bioretention with underdrains).

SECTION 5. SUMMARY OF QUANTIFIED PROJECT BENEFITS

Table 3 of the Guidelines lists examples of the appropriate benefit metrics to be used in project analysis. A description of the metrics for quantitative analysis included in this SWRP, including: pollutant load reductions (water quality benefit), groundwater recharge (water supply), runoff volume removal (flood management), and habitat restoration (environmental) are discussed in detail in Appendix F.

The modeled average annual benefits achieved by the conceptual projects are shown in Table G-5. These include the conceptual projects quantified results for pollutant load reductions, groundwater recharge volume, runoff volume removed, and habitat created.

Table G-5. Quantified Average Annual Benefits of Conceptual Projects

Project Name	Project Type	Percent Capture	Water Quality Benefits												Water Supply Benefits		Flood Management Benefits	Environmental Benefits
			Pollutant Load Reductions												Groundwater Recharged Volume	Equivalent Households Supplied	Runoff Volume Controlled	Environmental Enhancement Area
			TSS	Tot P	Diss P	NH3	NO3	TKN	Diss Cu	Tot Cu	Tot Pb	Diss Zn	Tot Zn	Fecal Col.				
			lb	lb	lb	lb	lb	lb	lb	lb	lb	lb	lb	10^{12} MPN	ac-ft		ac-ft	acres
Downtown Mall Alley	Green Street[1]	81%	2,600	6.9	5.1	17	15	52	0.22	0.66	0.88	2.5	2.9	0.34	3.4	8.5	7.7	0.042
Linden Ditch	Infiltration System	68%	77,000	110	87	170	440	800	2.9	9.2	11	38	45	9.4	110	270	170	1.7
Mary Lake Pond	Lake Restoration[2]	73%	80,000	150	110	190	440	990	2.9	7.8	4.0	14	31	25	62[3]	150[3]	190	4.1
Former City Sewer Ponds	Natural Treatment System	38%	280,000	900	660	1,300	2,100	5,000	29	63	120	370	380	120	260	640	920	13
Market-Pine Alley	Green Street[1]	64%	1,300	7.3	5.9	13	9.0	42	0.30	0.65	1.3	2.7	3.3	0.28	2.1	5.1	5.6	0.028

[1] The project benefits are those resulting from both the rain garden (bioretention with underdrains) and porous pavement.
[2] The project benefits are those resulting from the enhanced upper natural treatment system, east natural treatment system, and west natural treatment system.
[3] The water supply benefit represents the both the volume of groundwater recharged (54 acre-ft) and the quantity of water provided by the storage tank (4.0 acre-ft) and enhanced upper natural treatment system (approximately 4.0 acre-ft considering evaporation) that will offset potable water to maintain lake levels during the summer.

Figure G-2 shows the average annual pollutant loads for key parameters to each conceptual project and also illustrates the portion that would be reduced (i.e., through infiltration, evapotranspiration, or treatment) as a result of implementation of the conceptual project (as shown by the black hatching).

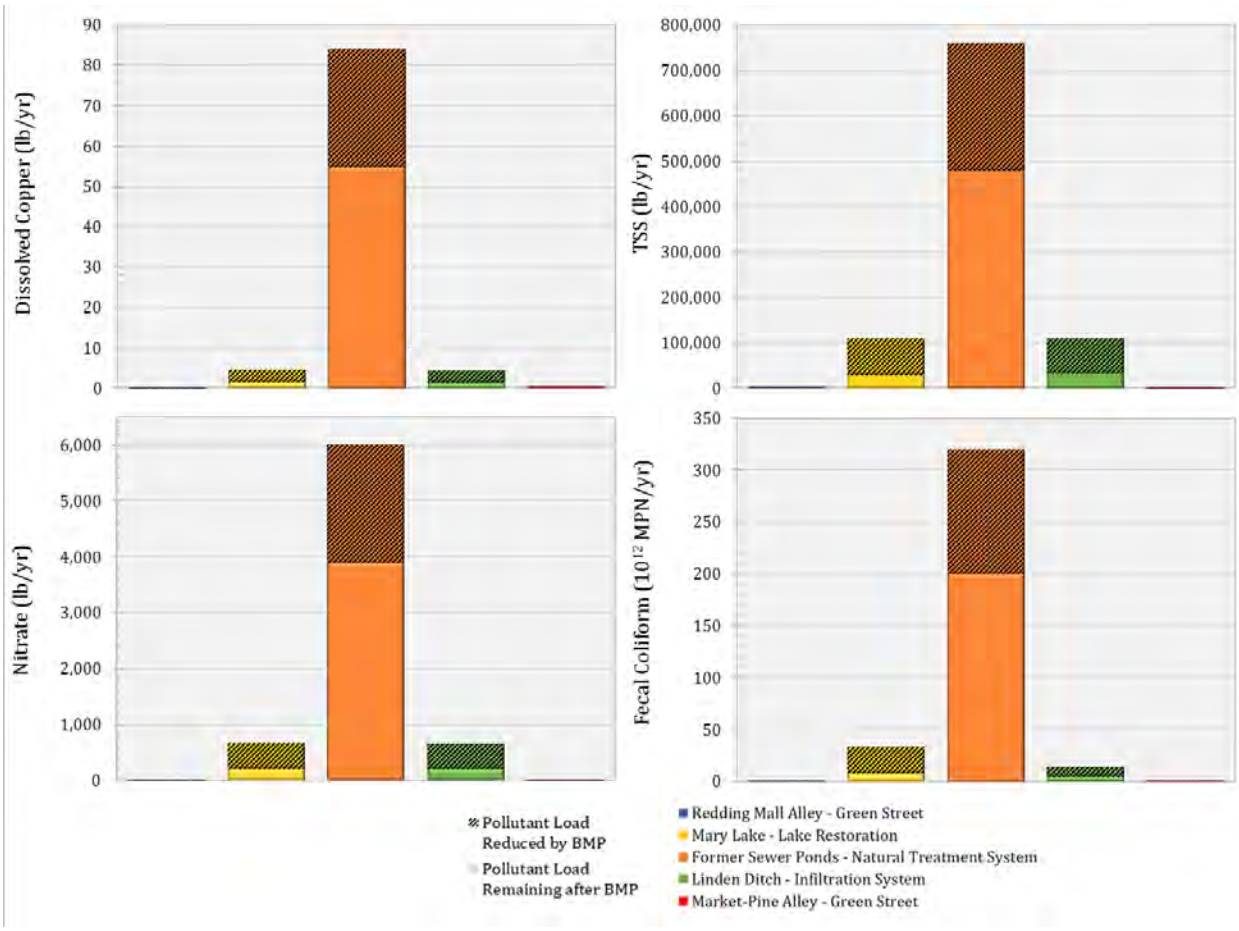


Figure G-2. Project Water Quality Benefits – Average Annual Pollutant Load Reductions

Figure G-3 shows the average annual groundwater recharge that is anticipated as a result of implementation of each conceptual project, which is based on the volume of runoff infiltrated by the project multiplied by an adjustment factor to compute a potential groundwater recharge volume (discussed further in Appendix F). The number of households that could be supplied with their entire yearly water demand due to the potential increase in water supply volume (household equivalents supplied) is also estimated, based on average annual household water use in California (362 gal/household/day) and the estimated groundwater recharge volumes.

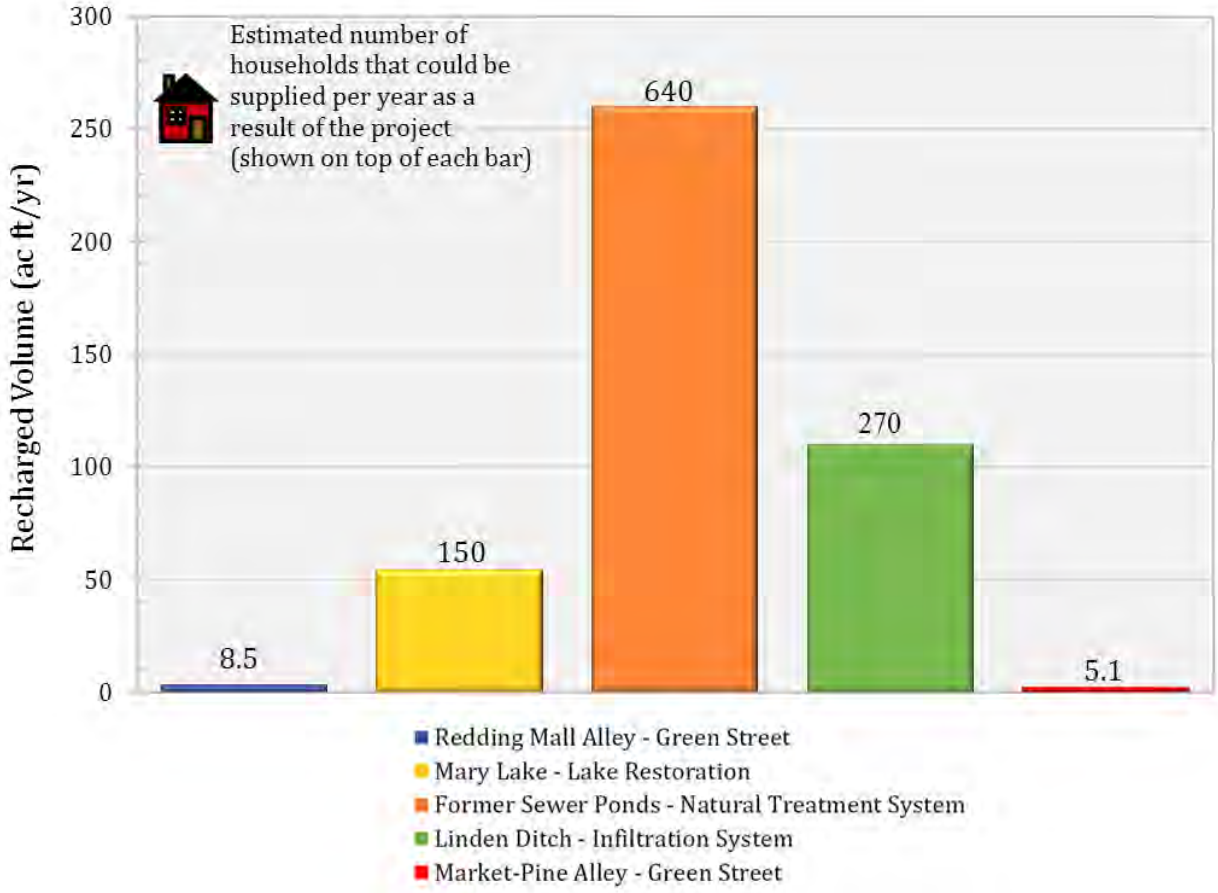


Figure G-3. Project Water Supply Benefits – Average Annual Groundwater Recharge Volume

Figure G-4 shows the average annual runoff volume to each conceptual project and also illustrates the portion that would be controlled (i.e., through infiltration; evapotranspiration; or detention, treatment, and release) as a result of implementation of the conceptual project (as shown by the black hatching). The runoff volume not controlled by the BMP (shown without the black hatching) bypasses the conceptual project and would not be controlled through infiltration, evapotranspiration, or detention, treatment, and release.

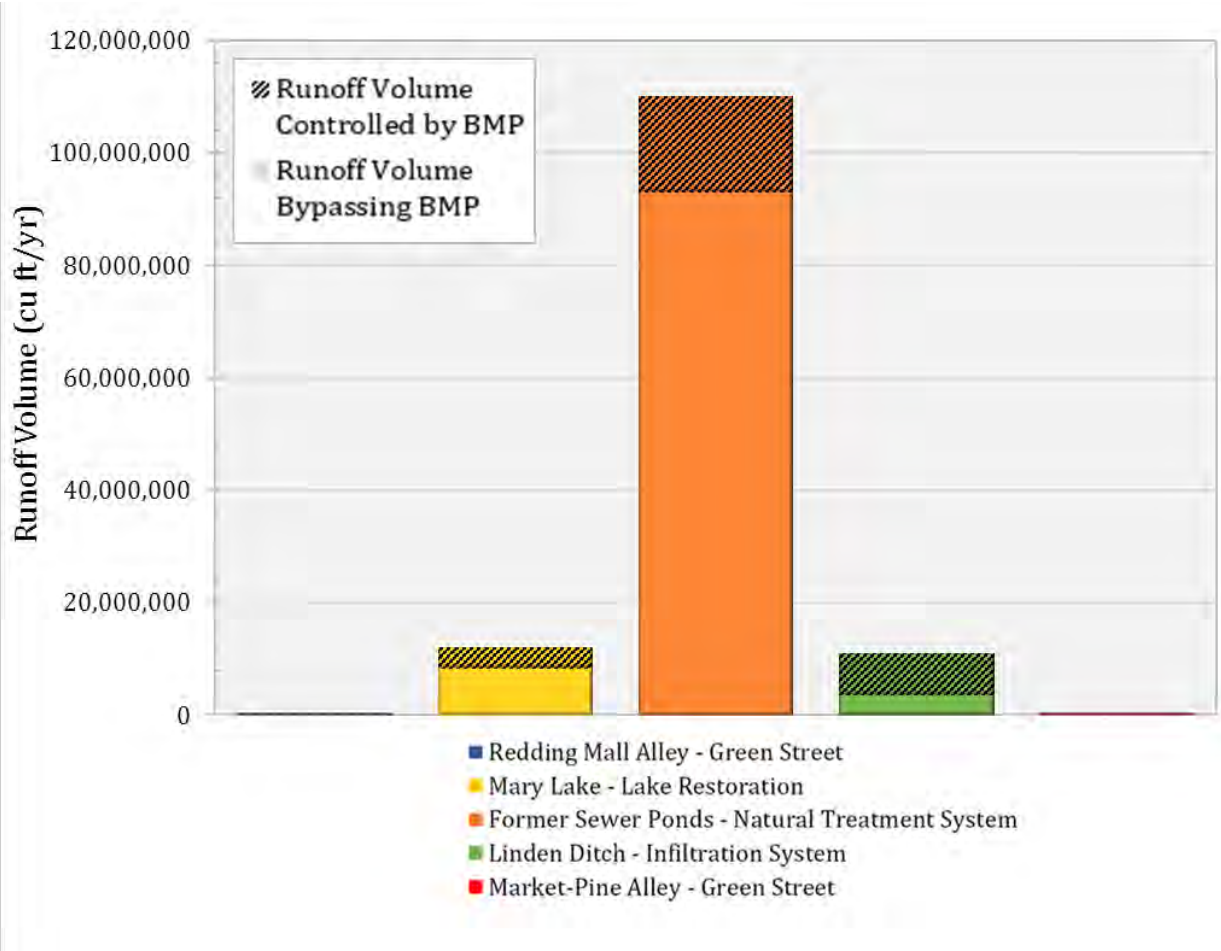


Figure G-4. Project Flood Management Benefits – Average Annual Runoff Volume Controlled

SECTION 6. PROJECT MULTIPLE BENEFIT PRIORITIZATION

As required by California Water Code Section 10562(e) and Section VI.D of the Guidelines, the SWRP must use measurable factors to prioritize projects. The approach for prioritizing the conceptual projects consists of two parts. Projects were first assigned multi-benefit indices based on their quantitative and qualitative potential to achieve multiple benefits in the five benefit categories identified by the Guidelines: water quality, water supply, flood control, community, and environmental Projects were then prioritized based on their multi-benefit indices and their potential to be implemented and maintained (i.e., with a committed landowner and operation and maintenance capabilities). The methodology for scoring multiple benefits to determine multi-benefit indices and prioritizing projects is described in Appendix F.

The results for scoring multiple benefits, including determination of the multi-benefit indices and prioritization of projects, are presented in Section 6.1.1 for conceptual projects and Section 6.1.2 for non-modeled projects. Additional a decision support tool created for the SWRP (described in detail in Section 5.4 of the SWRP), calculates and prioritizes the project multi-benefit indices for all projects whenever a new project is added to the SWRP.

6.1 Project Multi-Benefit Indices and Prioritization Results

6.1.1 Conceptual Projects

Multiple benefit indices for conceptual projects were developed using modeling results for estimated annual pollutant load reductions, runoff volume captured and potential water supply volume, in addition to other quantitative measurements like approximate BMP footprint and qualitative scores as well. The methodology for determination of the benefit scores was outlined in Section 5.1 of Appendix F (unique to conceptual projects), and the methodology for prioritization was described in Section 5.2 of Appendix F. The water quality benefits scores for each modeled pollutant (used to determine the overall water quality quantitative benefit score) are shown in Table G-6. The quantitative benefit scores and qualitative weights for each benefit category (as applicable) are shown in Table G-7 and Table G-8, respectively. The overall benefit scores for each benefit category (combining the qualitative and quantitative scores, as applicable) and the overall multi-benefit indices for each conceptual project are shown in Table G-9. For all tables presented below, shading from light blue to dark blue indicates low to high values.

Table G-6. Individual Quantitative Water Quality Benefit Scores for Conceptual Projects

Project Location	Project Type	Quantitative Water Quality Benefit Scores											
		TSS	TP	Diss P	NH3	NO3	TKN	Diss Cu	Tot Cu	Tot Pb	Diss Zn	Tot Zn	Fecal Coliform
Former City Sewer Ponds	Natural Treatment System	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Linden Ditch	Infiltration System	4.8	3.7	4.0	4.5	5.0	4.0	5.0	5.0	5.0	5.0	5.0	1.9
Mary Lake Pond	Lake Restoration	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.2	1.8	1.8	3.4	5
Market-Pine Alley	Green Street	0.081	0.24	0.27	0.34	0.10	0.21	0.52	0.35	0.59	0.36	0.37	0.056
Downtown Mall Alley	Green Street	0.16	0.23	0.23	0.45	0.17	0.26	0.38	0.36	0.40	0.33	0.32	0.068

Table G-7. Quantitative Benefit Scores for Conceptual Projects

Project Location	Project Type	Quantitative Benefit Scores			
		Water Quality (weighted)[1]	Water Supply	Flood Management	Environmental
Former City Sewer Ponds	Natural Treatment System	5.0	5.0	5.0	5.0
Linden Ditch	Infiltration System	4.3	5.0	4.3	2.1
Mary Lake Pond	Lake Restoration	4.3	2.8	5.0	5.0
Market-Pine Alley	Green Street	0.28	0.095	0.14	0.033
Downtown Mall Alley	Green Street	0.27	0.15	0.20	0.051

[1] Determined based on water quality quantitative scores shown in Table G-6 and water quality priority pollutant weights shown in Table F-7 in Appendix F

Table G-8. Qualitative Benefit Weights for Conceptual Projects

Project Location	Project Type	Qualitative Benefit Weights			
		Water Supply	Flood Management	Environmental	Community
Former City Sewer Ponds	Natural Treatment System	3	5	5	5
Linden Ditch	Infiltration System	3	5	5	5
Mary Lake Pond	Lake Restoration	5	1	5	5
Market-Pine Alley	Green Street	3	1	5	5
Downtown Mall Alley	Green Street	3	1	5	5

Table G-9. Overall Benefits Scores and Multi-Benefit Indices for Conceptual Projects

Project Location	Project Type	Overall Benefit Scores					Multi-Benefit Index
		Water Quality	Water Supply	Flood Management	Environmental	Community	
Former City Sewer Ponds	Natural Treatment System	5.0	3.0	5.0	5.0	5.0	4.6
Linden Ditch	Infiltration System	4.3	3	4.3	2.1	5.0	3.7
Mary Lake Pond	Lake Restoration	4.3	2.8	1.0	5	5.0	3.6
Market-Pine Alley	Green Street	0.28	0.057	0.029	0.033	5.0	0.61
Downtown Mall Alley	Green Street	0.27	0.093	0.040	0.051	5.0	0.62

The prioritization designations for the conceptual projects are shown in Table G-10. It was assumed that public parcels (i.e., owned by the City of Redding, County of Shasta, or the State of California) have potentially willing land owners, while all other parcels (i.e., agricultural parcels) do not currently have a willing land owner. If the City coordinates with non-public land owners, the prioritization may easily be updated based on land owner willingness and the guidelines outlined herein.

Table G-10. Prioritization for Conceptual Projects

Project Location	Project Type	Prioritization (low, medium, or high)
Former City Sewer Ponds	Natural Treatment System	High
Linden Ditch	Infiltration System	High
Mary Lake Pond	Lake Restoration	High
Market-Pine Alley	Green Street	High
Downtown Mall Alley	Green Street	High

6.1.2 Non-Modeled Projects

Table G-11 shows qualitative benefit scores for each non-modeled project for water quality, water supply, flood management, environmental, and community benefits. The calculated multi-benefit index and prioritization designation for each project is also shown in Table G-11. The methodology for determination of the benefit scores was outlined in Section 5.1 of Appendix F (unique to non-modeled projects), and the methodology for prioritization was described in Section 5.2 of Appendix F (identical to prioritization for conceptual projects).

Table G-11. Multiple Benefits and Prioritization for Non-modeled projects

Proposed by	Project Name	Project ID	Project Type	Watershed	Qualitative Benefit Score					Multi-Benefit Index	Prioritization (Low, Medium, or High)
					Water Quality	Water Supply	Flood Manage-ment	Environ-mental	Comm-unity		
J. Oldham	Allens Golf Course Project	Redding-Allens-Golf	Natural Treatment System	Olney Creek	5	1	5	5	5	4.2	High
J. Oldham	Enterprise Park	Redding-Enterprise-Park	Natural Treatment System	Churn Creek	5	1	5	5	5	4.2	High
J. Oldham	Canyon Hollow Cr Enhancement	Redding-Canyon-Hollow	Detention Basin	Canyon Hollow Creek	5	1	5	5	3	4	High
J. Oldham	Callaboose Cr at Oregon St	Redding-Callaboose-Creek	Bioswale	Calaboose Creek	5	1	3	3	5	3.4	High
J. Oldham	Caldwell Park	Redding-Caldwell-Park	Bioretention without underdrain	Sacramento River	5	1	1	3	5	3	High
Shasta Living Streets	Green Street 1	GS-AT1	Media Filter	Calaboose Creek	3	0	3	3	5	2.6	High
Shasta Living Streets	Green Street 2	GS-AT2	Media Filter	Calaboose Creek	3	0	3	3	5	2.6	High
Shasta Living Streets	Green Street 3	GS-AT3	Media Filter	Calaboose Creek	3	0	3	3	5	2.6	High
Amber Kelley	Henderson Ditch	Redding-Henderson	Natural Treatment System	Sacramento River	5	3	3	5	5	4.2	Medium
Amber Kelley	Hollow Lane	Redding-Hollow	Natural Treatment System	Churn Creek	5	3	3	5	5	4.2	Medium
Amy Pendergast	Redding-Mall	Redding-Mall	Green Street	Sacramento River	5	3	3	5	5	4.2	Medium
Amy Pendergast	SHHSA-Trail	SHHSA-Trail	Bioswale	Sacramento River	5	3	3	5	5	4.2	Medium
Amy Pendergast	SHHSA-Shasta	SHHSA-Shasta	Green Street	Clover Creek	5	3	3	5	5	4.2	Medium
Amy Pendergast	SHHSA-Collyer	SHHSA-Collyer	Green Street	Churn Creek	5	3	3	5	5	4.2	Medium
J. Oldham	Olney Cr Levee Enhancement	Redding-Olney-Creek	Detention Basin	Olney Creek	5	0	5	5	3	3.8	Medium

Proposed by	Project Name	Project ID	Project Type	Watershed	Qualitative Benefit Score					Multi-Benefit Index	Prioritization (Low, Medium, or High)
					Water Quality	Water Supply	Flood Manage-ment	Environ-mental	Comm-unity		
David Ledger	Oregon Gulch Restoration	SEA-Oregon-Gulch	Stream Restoration	Oregon Gulch	3	3	3	5	5	3.6	Medium
Marty Wayne	Trash-2	Redding-Trash-2	Trash Capture	Little Churn Creek	5	0	0	0	0	1.5	Low
Marty Wayne	Trash-1	Redding-Trash-1	Trash Capture	Little Churn Creek	5	0	0	0	0	1.5	Low

SECTION 7. REFERENCES

Geosyntec Consultants and Larry Walker Associates (LWA), 2011. Ventura County Technical Guidance Manual for Stormwater Quality Control Measures. Prepared for Ventura Countywide Stormwater Quality Management Program. July 2011.

Geosyntec Consultants, 2017. *Pollutant Load, Prioritization, and Reduction (LPR) Model Technical Report*. June 2017.

State Water Resources Control Board (SWRCB), 2015. Storm Water Resource Plan Guidelines. December 15, 2015.