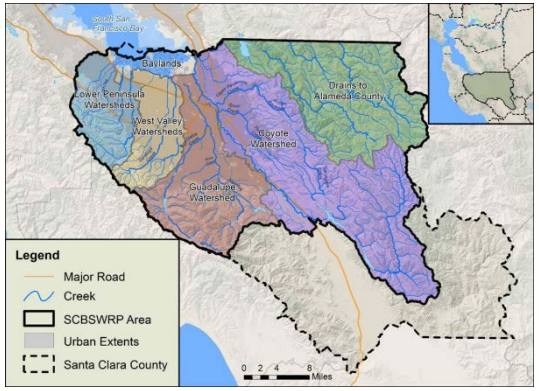
Santa Clara Basin
Stormwater Resource Plan

Stakeholder Meeting
#1



October 4, 2017

Jill Bicknell, P.E.
SCVURPPP

Presentation Overview

- Background
  - SCVURPPP
  - Green Infrastructure
- Stormwater Resource Plan (SWRP)
  - Purpose
  - Project Area Watersheds
  - Previous and Current Planning Efforts
  - Water Quantity and Water Quality Issues
- Project Approach
- Stakeholder Involvement

Santa Clara Valley Urban Runoff Pollution Prevention Program

- Fifteen Santa Clara Valley agencies work together through SCVURPPP to prevent stormwater pollution
- SCVURPPP agencies are part of the Municipal Regional Stormwater Permit (MRP) that covers urban Bay Area counties
- SCVURPPP and its member agencies implement regulatory, monitoring and outreach measures aimed at reducing pollution in urban runoff

Municipal Regional Permit

- Large urban areas covered by countywide stormwater permits since 1990
- Six countywide permits combined into Municipal Regional Permit, effective Dec. 2009, reissued Nov. 2015
- Permit contains low impact development (LID) and green infrastructure planning requirements for private and public development
- Other provisions contains requirements for reducing loads of certain pollutants in stormwater (e.g., mercury, PCBs, pesticides, trash)

Green Infrastructure

- Systems that use vegetation, soils, and natural processes to capture and treat stormwater
- Most urban green infrastructure involves retrofitting public streets, roofs and parking lots to divert runoff to:
  - Vegetated areas
  - Pervious pavements
  - Biotreatment & infiltration facilities
  - Cisterns and rain barrels

Examples of Green Infrastructure

Bioretention area in a curb bulb-out, Rosita Park Neighborhood, Los Altos

Pervious Pavers, Commodore Park, San Jose

Examples of Green Infrastructure

Green Roof
First Community Housing,
San Jose

Pervious Pavers over
Infiltration Trench,
Martha Gardens Green Alley,
San Jose

Green Infrastructure Requirements

- Develop a Green Infrastructure (GI) Plan
  - Prioritize and map planned and potential projects
  - Adopt GI guidelines, details, and specifications
  - Track progress toward pollutant reduction
- Conduct education and outreach
- Conduct “early implementation”
  - Construct planned and funded projects
  - Review public project lists and assess opportunity for incorporating GI elements

What is a Stormwater Resource Plan (SWRP)?

- A planning document that:
  - describes the local watershed
  - identifies water quality issues
  - uses a metrics-based approach to identify and prioritize local and regional GI projects.
- SB 985 (2014) requires a SWRP as a condition of receiving grant funds for stormwater capture projects from any bond approved by voters after January 2015.

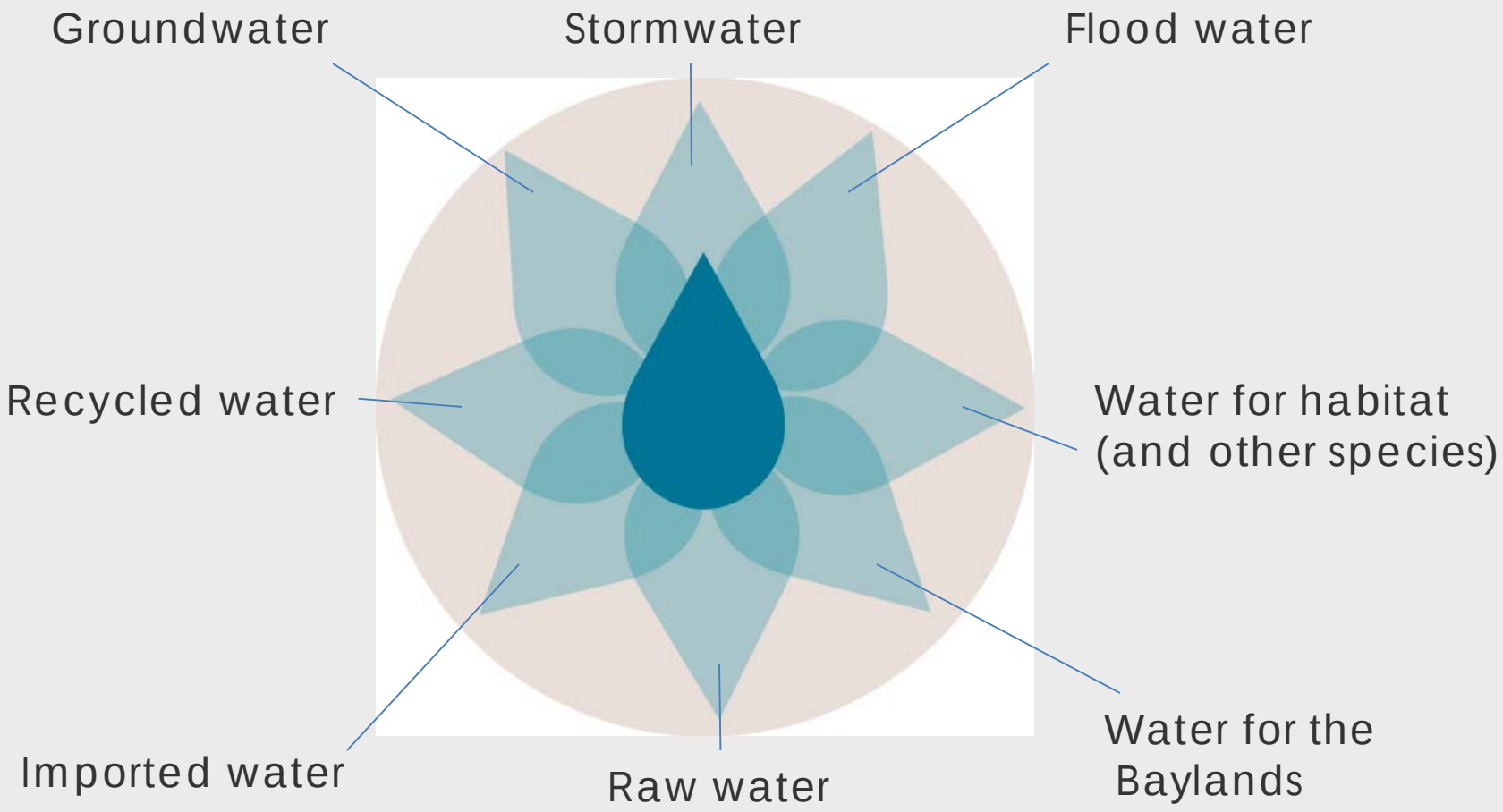
Santa Clara Basin SWRP Overview

- Prop 1 Stormwater Planning Grant
  - Awarded to District and the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) to prepare a Stormwater Resource Plan for the Santa Clara Basin in Santa Clara County
  - Total Project Budget: $940,000
    - Grant amount: ~$470,000
    - 50% match (~$470,000 in-kind + SCVURPPP tasks)
  - Start Date: February 2017
  - Completion Date: December 2018

SWRP Purpose

- Support development and implementation of Green Infrastructure (GI) Plans within the Santa Clara Basin
- Produce list of prioritized multi-benefit GI projects eligible for future State implementation grant funds
- Coordinate with District's One Water Plan, local and regional watershed plans, and municipal storm drain master plans

One Water: An Integrated Water Resources Master Plan



One Water - Integrated Goals

1. Valued and Respected Rain

Manage rainwater to improve flood protection, water supply, and ecosystem health

2. Healthful & Reliable Water

Enhance the quantity and quality of water to support beneficial uses

3. Ecologically Sustainable Streams & Watersheds

Protect, enhance and sustain healthy and resilient stream ecosystems

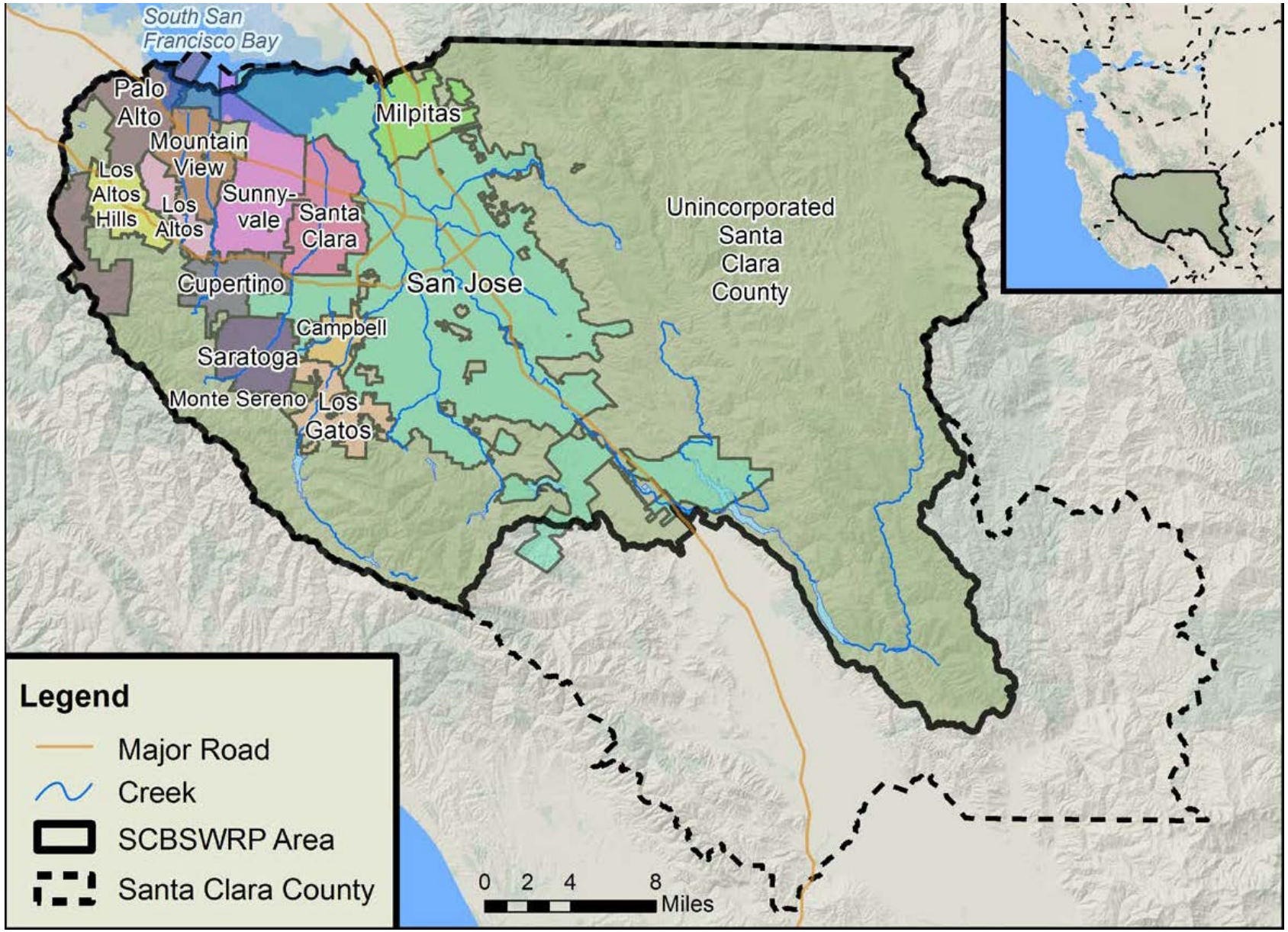
4. Resilient Baylands

Protect, enhance and sustain healthy and resilient baylands ecosystems and infrastructure

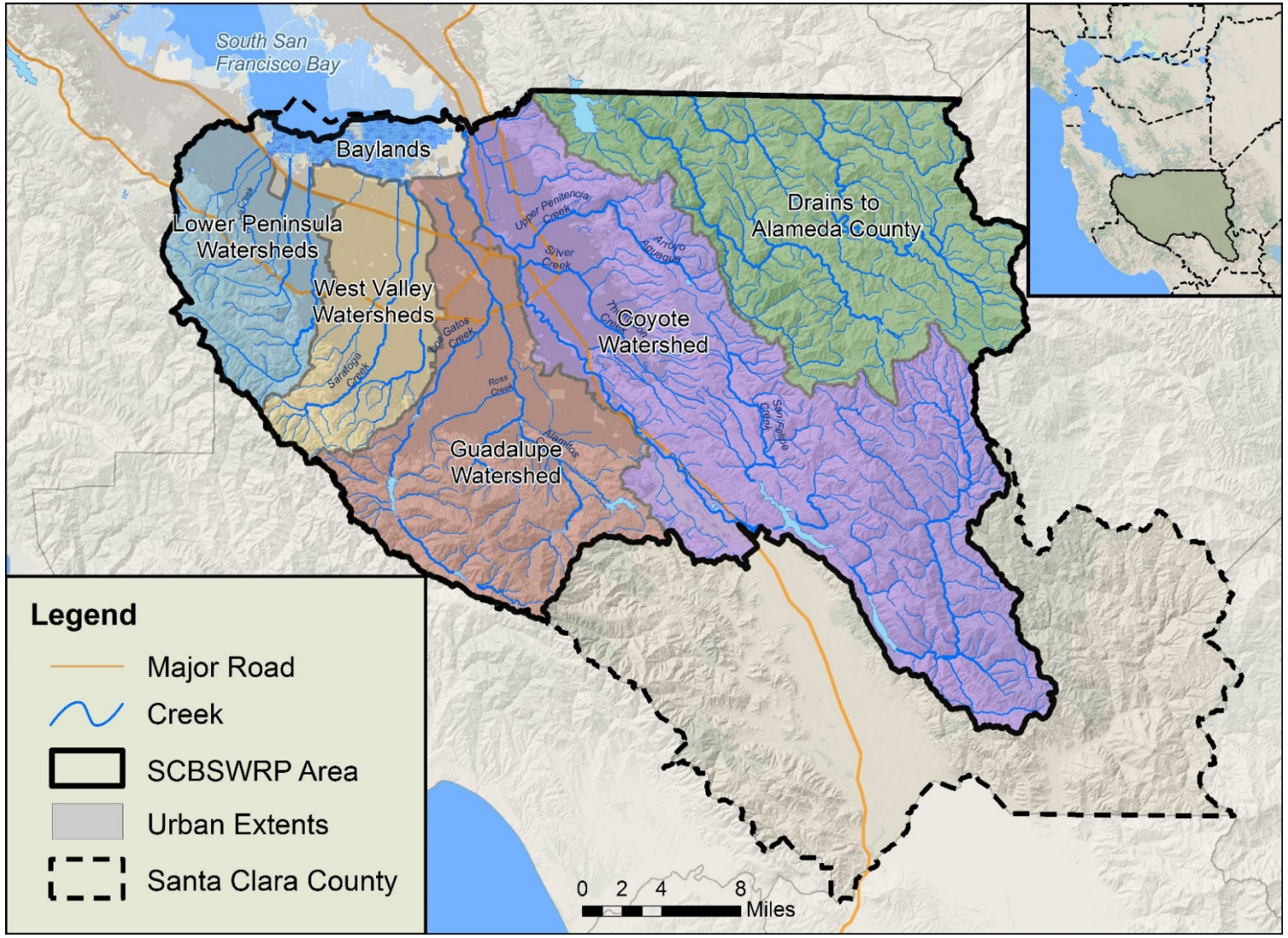
5. Community Collaboration

Work in partnership with an engaged community to champion wise decisions on water resources

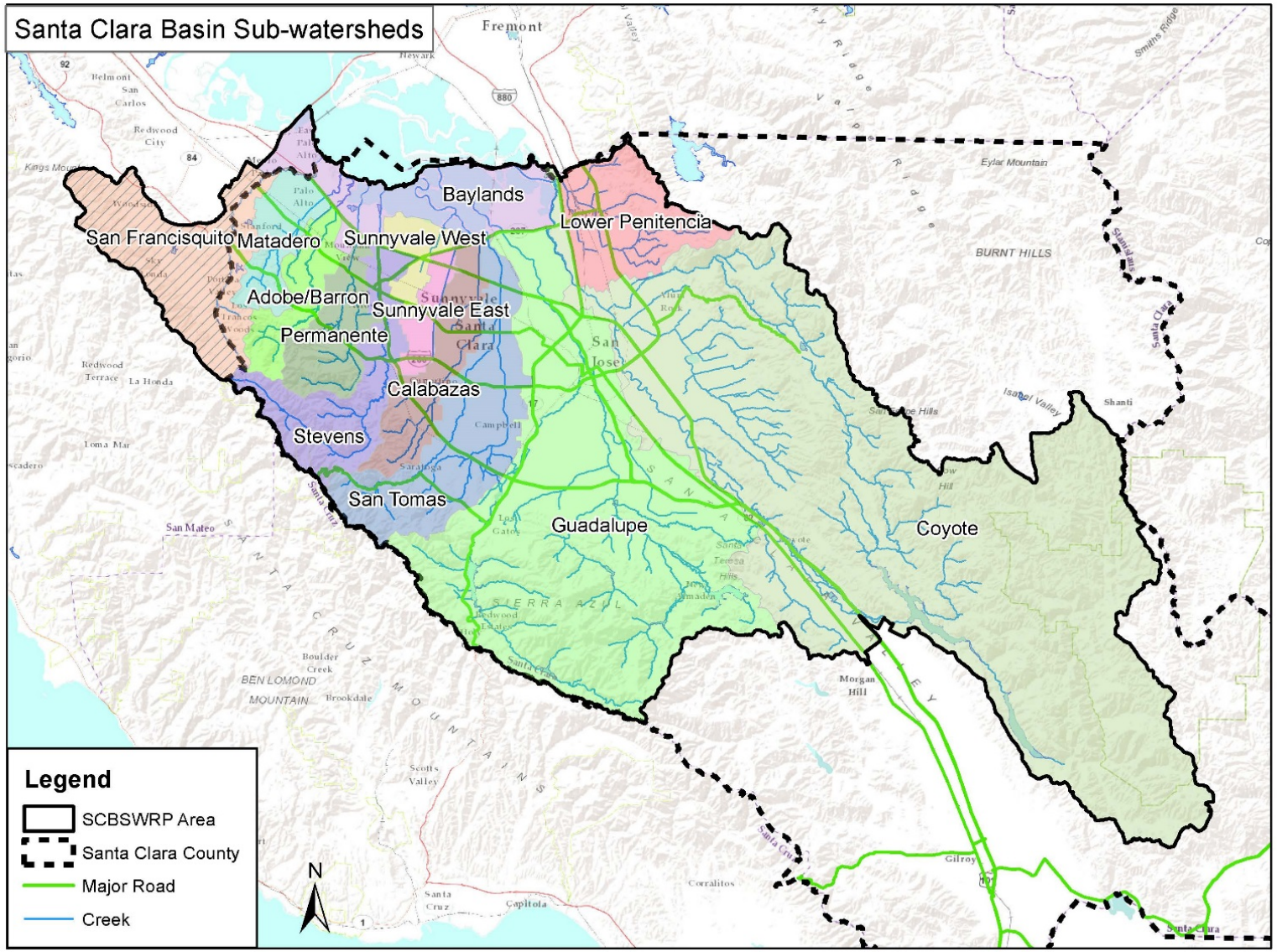
Cooperating Entities (SCVURPPP)



Stormwater Resource Plan Area and "One Water" Subwatersheds



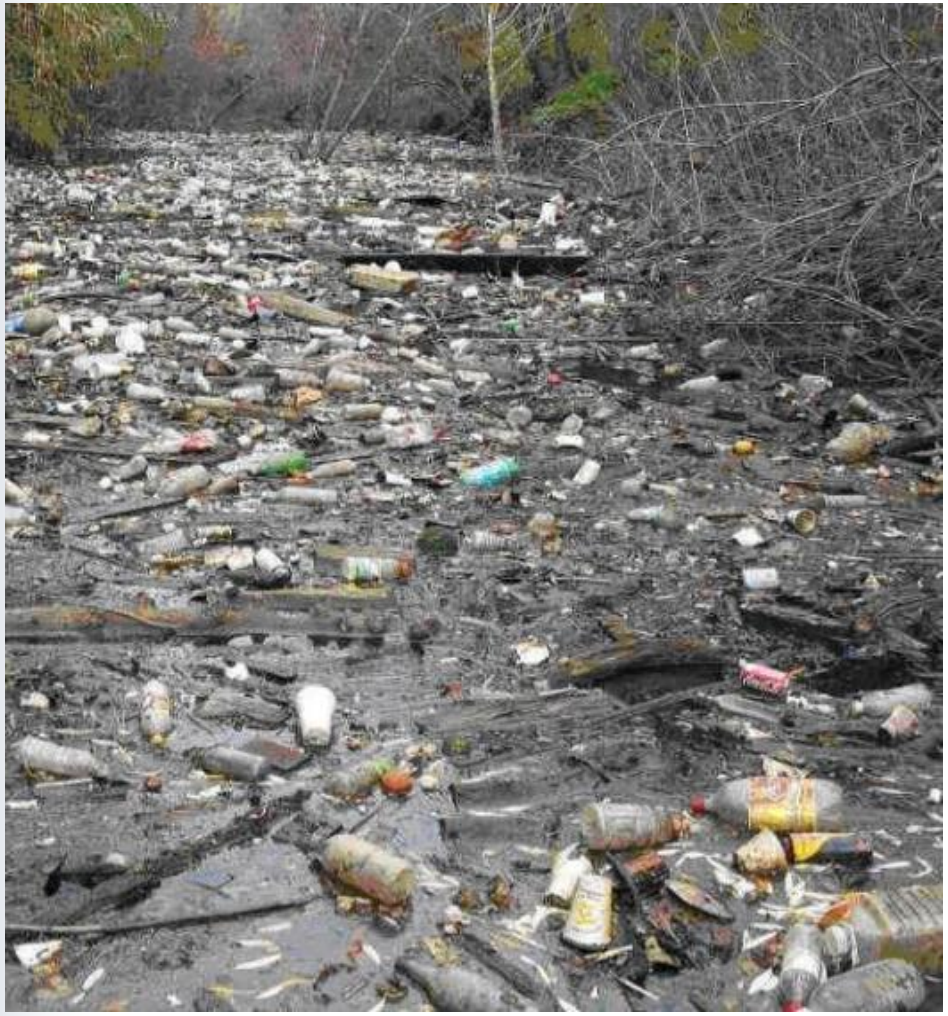
Santa Clara Basin Subwatersheds



Water Quantity Issues

- Challenges with drought and recent storms
- Urban portions of streams in poor condition
- Benefits of SWRP (GI) projects –
  - Manage stormwater as a resource
  - Help restore predevelopment hydrology by retaining and infiltrating stormwater
  - Help reduce peak flows and mitigate localized flooding

Water Quality Issues



- PCBs (TMDL)
- Mercury (TMDL)
- Pesticides (TMDL)
- Trash/Litter
- Copper
- Bacteria
- Sediment
- Temperature
- Nutrients

- SWRP will:
  - Identify projects that remove pollutants from stormwater
  - Include analysis of water quality metrics to prioritize projects
  - Support development of GI Plans to achieve load reduction goals

SWRP Approach

- Data Collection and Watershed Identification
- Project Identification and Prioritization
  - Define methodology for project identification and metrics for assessment of benefits
    - Water quality improvement
    - Water supply (including stormwater capture & use)
    - Flood management
    - Environmental
    - Community
  - Use GI tools and hydrologic models to identify project opportunities and quantify benefits
  - Develop list of prioritized projects
  - Prepare conceptual designs for 5-10 projects
- Plan Development
  - Prepare draft and final Plan and implementation strategy

SWRP Approach, continued

- SCVURPPP Tasks (match)
  - Guidance to municipalities on GI Plans
    - GI Scoping Plan and Framework Template
    - GI Education and Outreach Strategy
    - Model GI Language for Municipal Plans
    - Guidance on GI Implementation Mechanisms and Funding
    - GI Design Guidelines, Details and Specifications
    - Model GI Plan Template
  - Outreach to elected officials and municipal staff
    - Fact sheets, workshops and trainings
  - GI Webpage and Resource Library

Stakeholder Involvement

- Outreach Goals
  - Provide information on SWRP
  - Obtain input on methodology
  - Obtain feedback on prioritized list of projects
  - Obtain comments on the SWRP document
- Outreach Mechanisms
  - Meetings - October 2017, January/February 2018
  - Quarterly Updates
  - Website
  - Public Workshop - August 2018

Questions / Comments?

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Santa Clara Valley Stormwater Resource Plan

- Metrics and Methodologies for Identifying and Prioritizing Green Infrastructure Projects
- Evaluation and Selection of Models & Tools

PARADIGM ENVIRONMENTAL

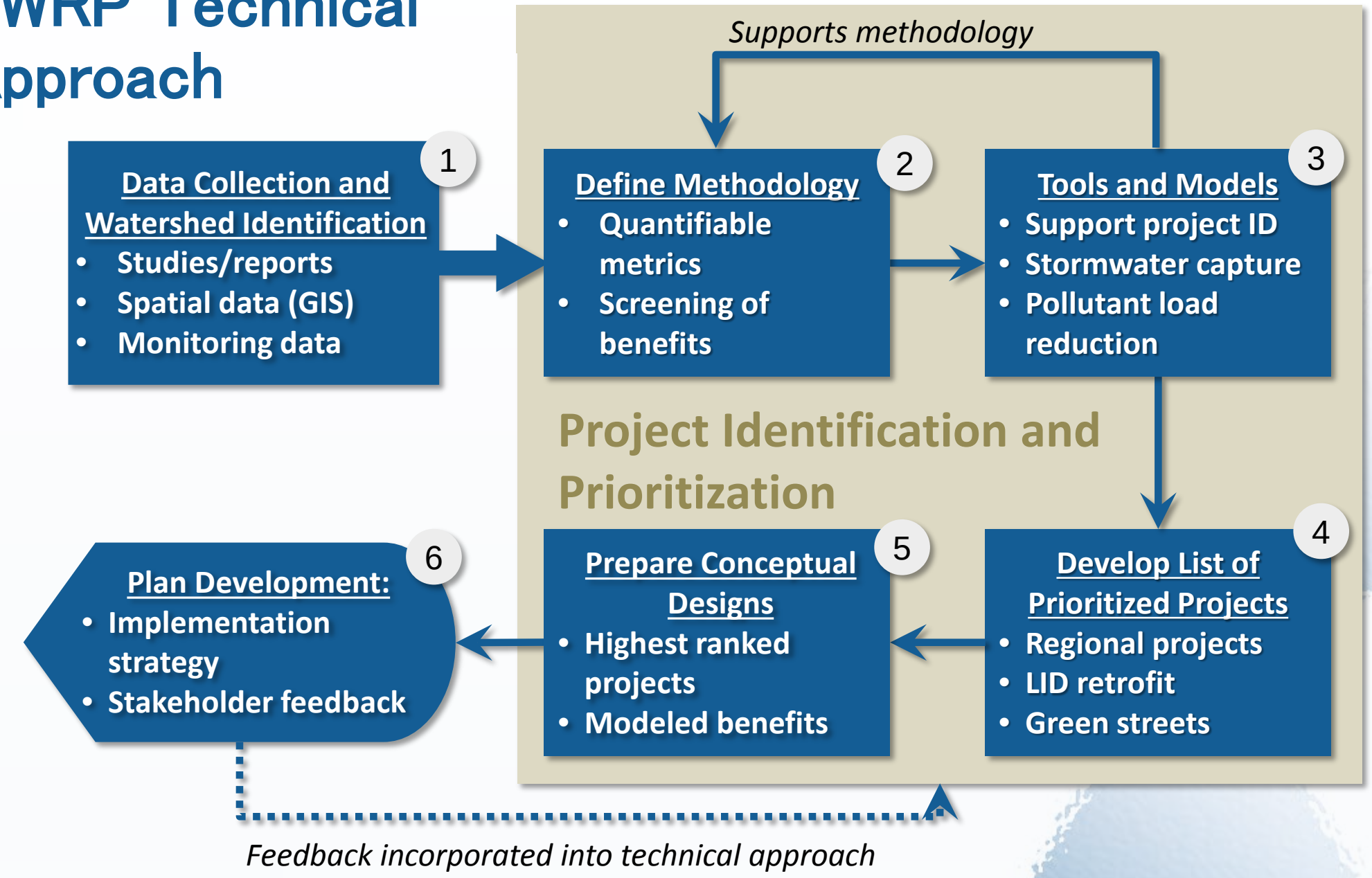
Project Types

Regional Projects

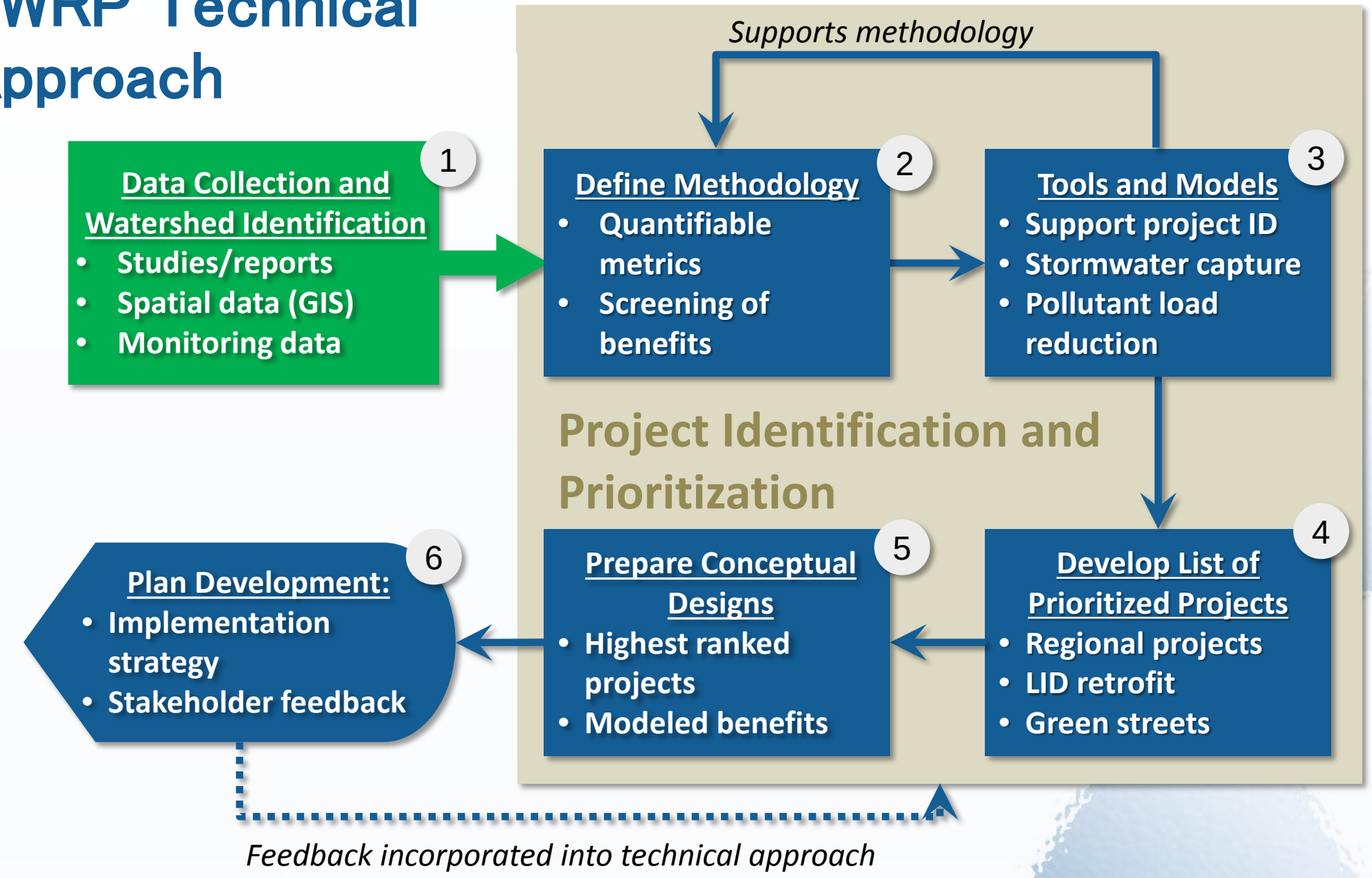
Green Streets

Low Impact Development

SWRP Technical Approach



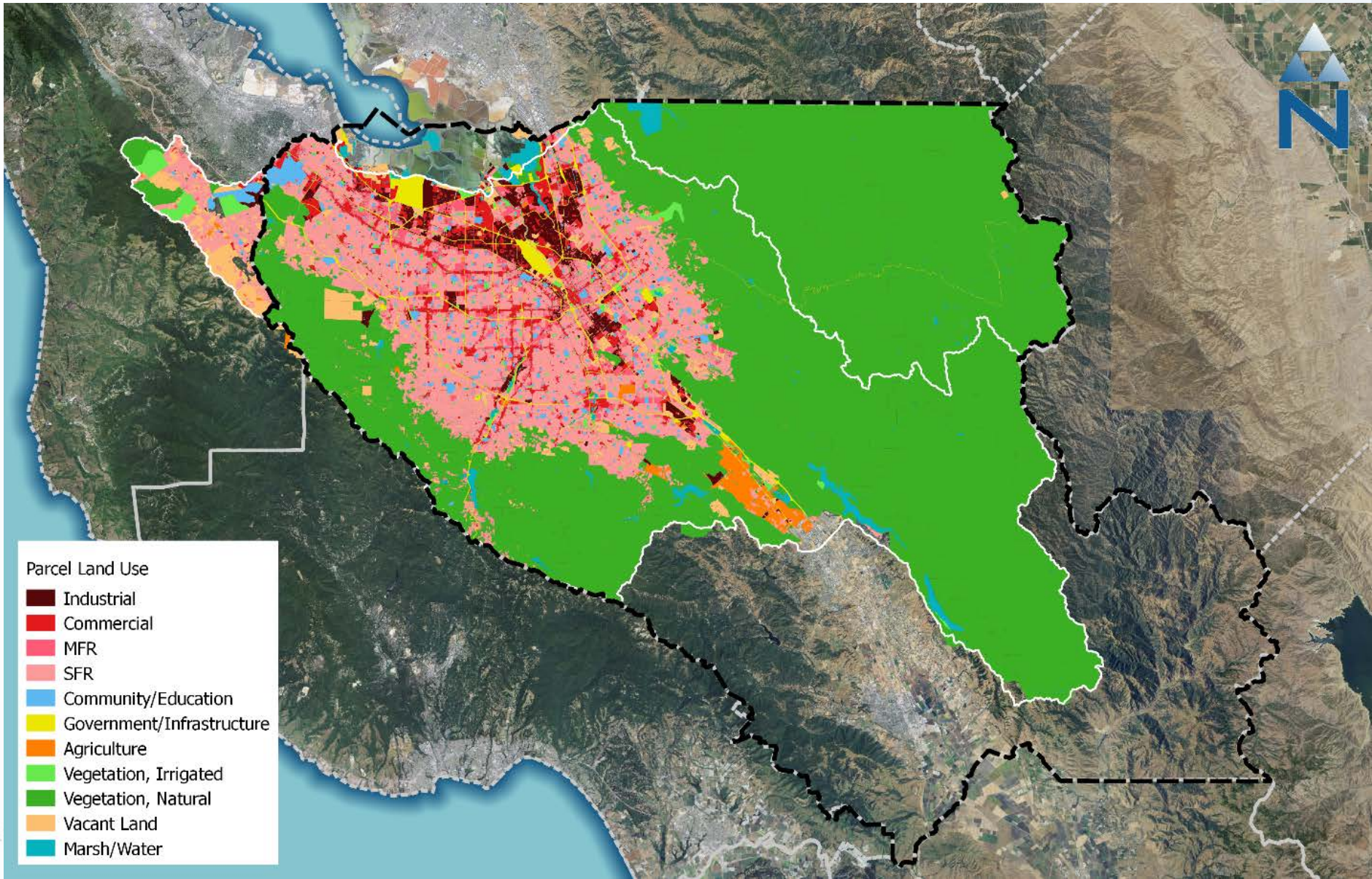
SWRP Technical Approach



Physical Characteristics

Parcel land use

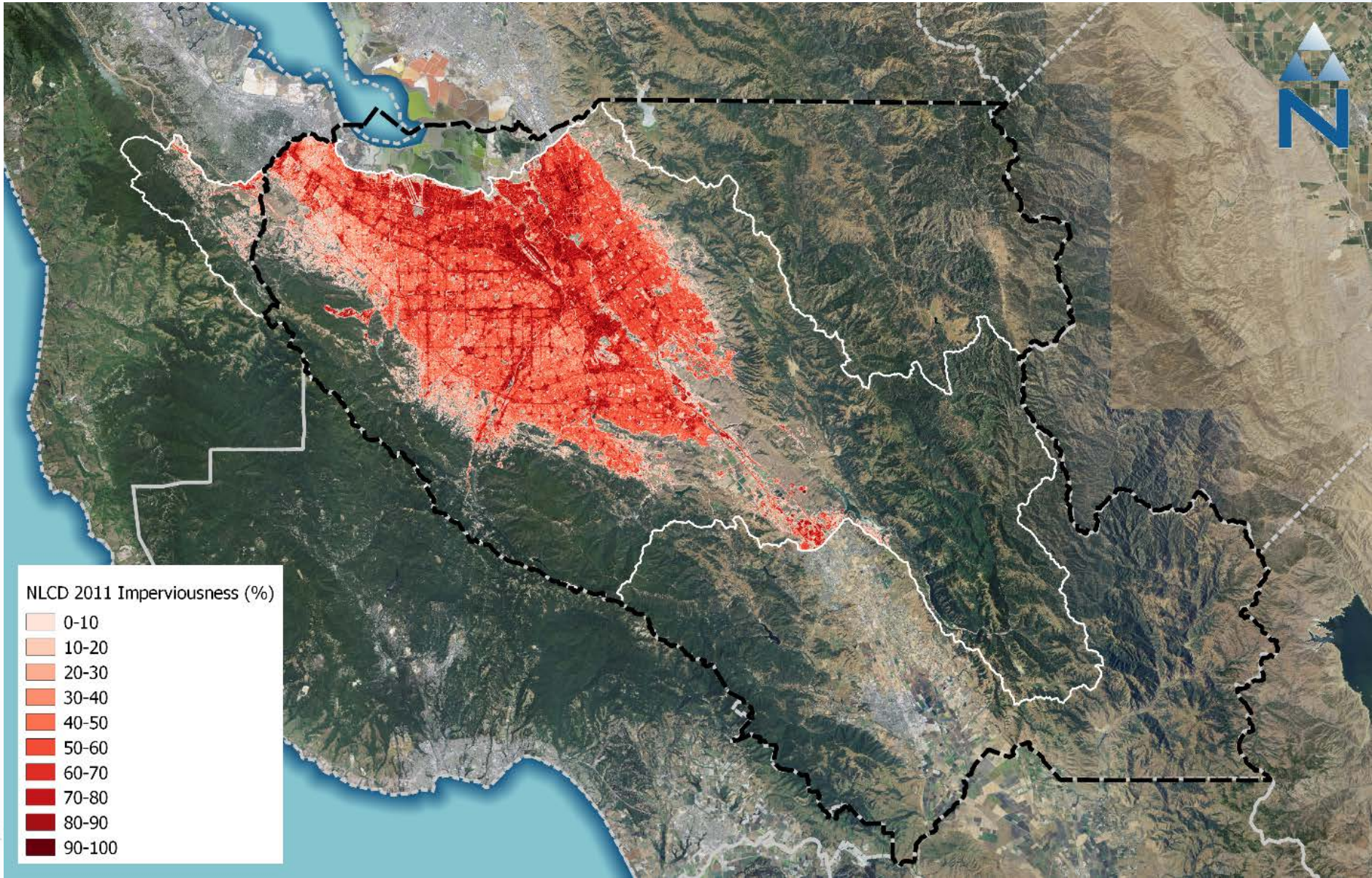
- Screen public parcels
- Prioritize land uses suitable for each project type



Physical Characteristics

Impervious area

- High impervious area is correlated to large runoff potential
- Priority given to sites with high imperviousness

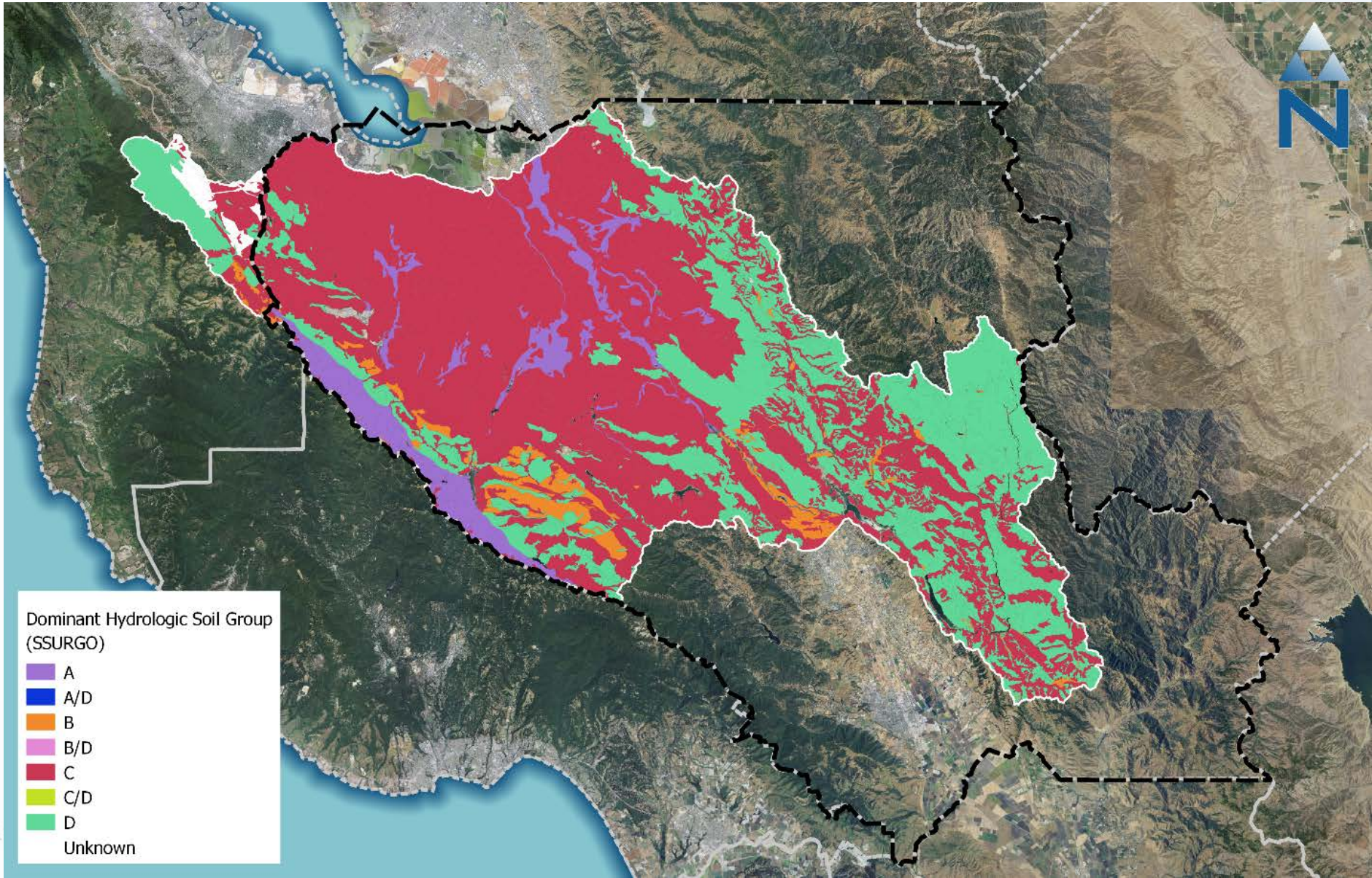


Physical Characteristics

Hydrologic Soil Group

Grouped based on drainage characteristics of soils

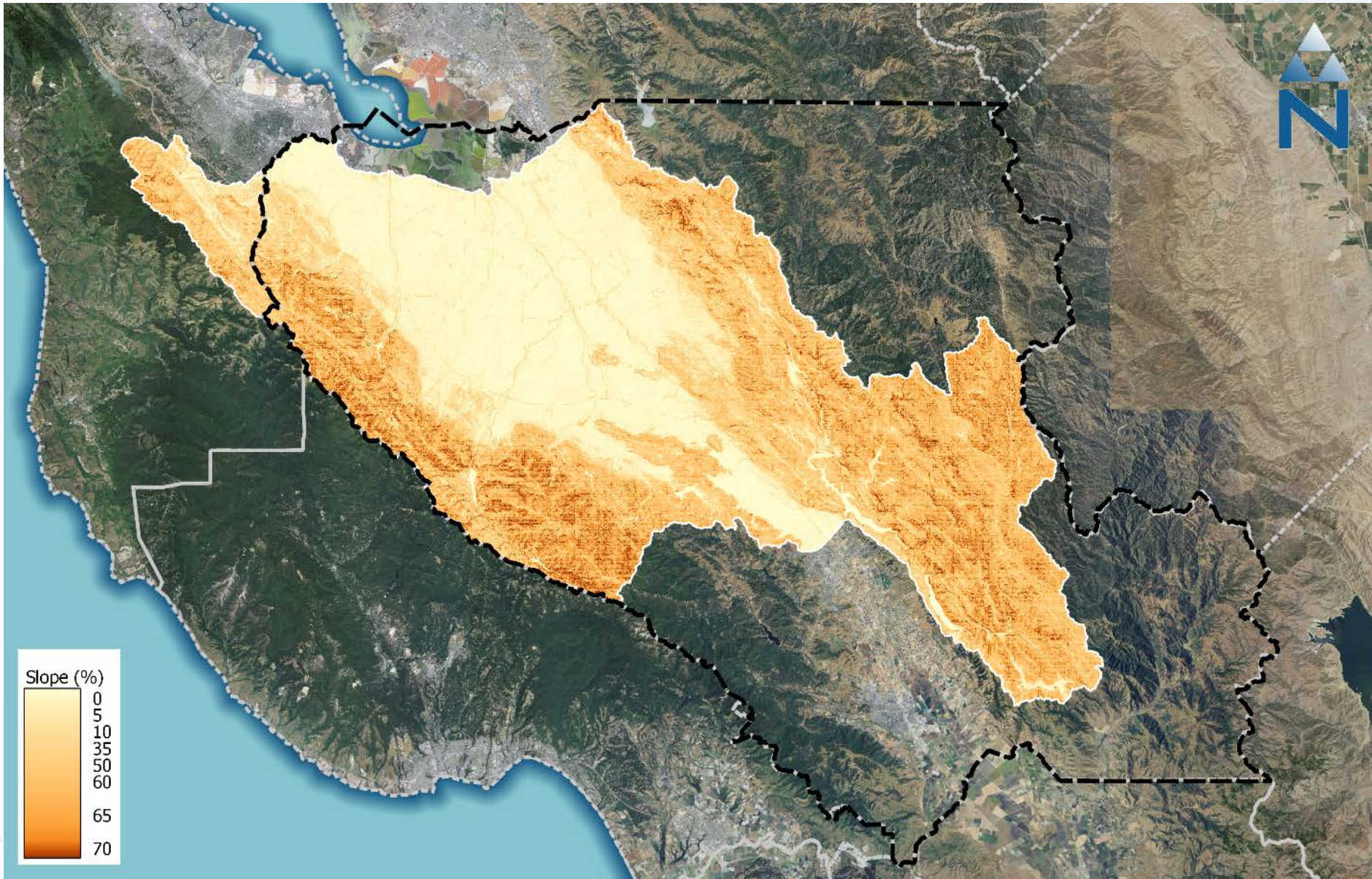
- **Group A** represents *well*-drained soils
- **Group D** represents *poorly*-drained soils.



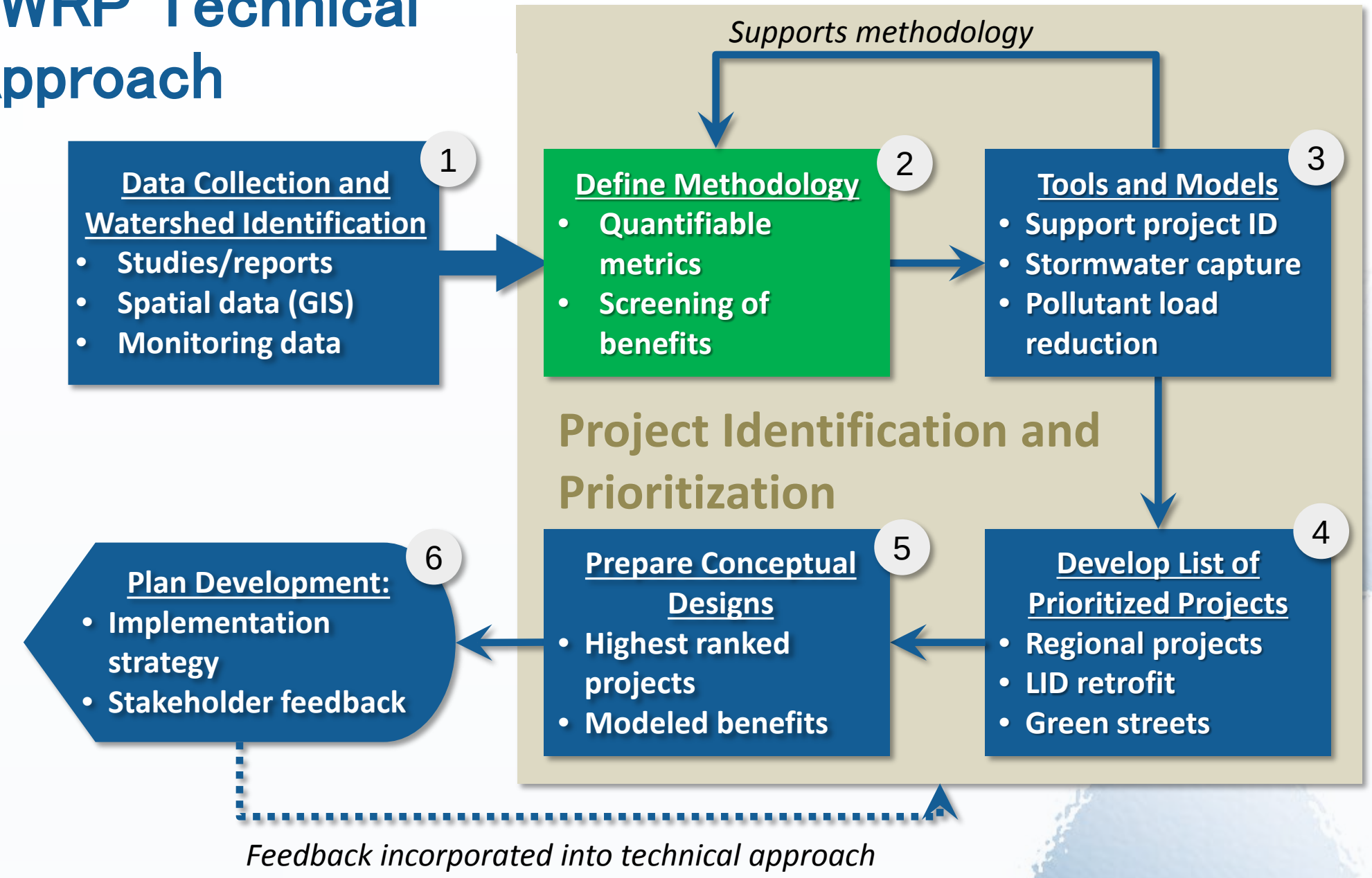
Physical Characteristics

Slope

- Mild slopes are more feasible for stormwater capture
- Steep slopes present difficulties with implementation & performance



SWRP Technical Approach



Screening of Parcels

Screening Factor	Parcel Characteristic	Criteria	Reason
Public Parcels	Ownership	County, City, Town, SCVWD, Open Space Organizations	Identify all public parcels for regional storm and dry weather runoff capture projects or onsite LID retrofits
	Land Use	Park, School, Other (e.g., Golf Course)	
	Protected Status	Not classified as “protected” in CPAD Database	
Suitability	Parcel Size	>0.25 acres	Adequate space for regional stormwater and dry weather runoff capture project
		<0.25 acres	Opportunity for onsite GI retrofit
	Site Slope	< 10 %	Steeper grades present additional design challenges

Screening of Rights-of-Way

Screening Factor	Street Section Characteristic	Criteria	Reason
Selection	Ownership	Public	Potential projects are focused on public and right-of-way opportunities
	Classification	Local Roads	Focus on lower speed, lower traffic, neighborhood. Excludes arterial roads, highways and ramps.
Suitability	Surface	Paved	Only roads with paved surfaces will be considering suitable. Dirt roads will be removed
	Slope	< 5%	Steep grades present additional design challenges; reduce capture opportunity due to increased runoff velocity
	Speed	<= 35mph	Lower speed roads

Prioritization Methodology

- Points assigned based on a variety of metrics for each site
- Metrics as proxies for GI effectiveness
- Sum of points determines rank among list of screened opportunities

Examples of Metrics Considered:

- Imperviousness (runoff-generating capability)
- Site Area (enough land available to locate a project)
- Hydrologic Soil Group (can the site infiltrate captured runoff?)
- Proximity to Hot Spot Areas (PCBs, Flood-prone watersheds)
- Ancillary Benefits (water supply, community enhancement, etc.)

Prioritization Metrics for Regional Projects

Metric	Points						Weight Factor
	0	1	2	3	4	5	
Parcel Land Use			Schools/Golf Courses	Public Buildings	Parking Lot	Park / Open Space	--
Impervious Area (%)	X < 40	40 ≤ X < 50	50 ≤ X < 60	60 ≤ X < 70	70 ≤ X < 80	80 ≤ X < 100	--
Parcel Size (acres)	0.25 ≤ X < 0.5	0.5 ≤ X < 1	1 ≤ X < 2	2 ≤ X < 3	3 ≤ X < 4	4 ≤ X	--
Hydrologic Soil Group		D	Unknown	C	B	A	--
Slope (%)	5 < X ≤ 10	4 < X ≤ 5	3 < X ≤ 4	2 < X ≤ 3	1 < X ≤ 2	0 < X ≤ 1	--
Proximity to Flood-prone Channels (miles)	Not in sub-basin	3 < X		1 < X ≤ 3		X ≤ 1	2
Contains PCB Interest Areas	None			Moderate		High	2
Within Priority Development Area	No					Yes	--
Currently planned by City or co-located with other City project	No					Yes	2
Above groundwater basin	No		Yes				--
Augments water supply	No	Yes					--
Water quality source control	No	Yes					--
Reestablishes natural hydrology	No	Yes					--
Creates or enhances habitat	No	Yes					--
Community enhancement	No	Yes					--

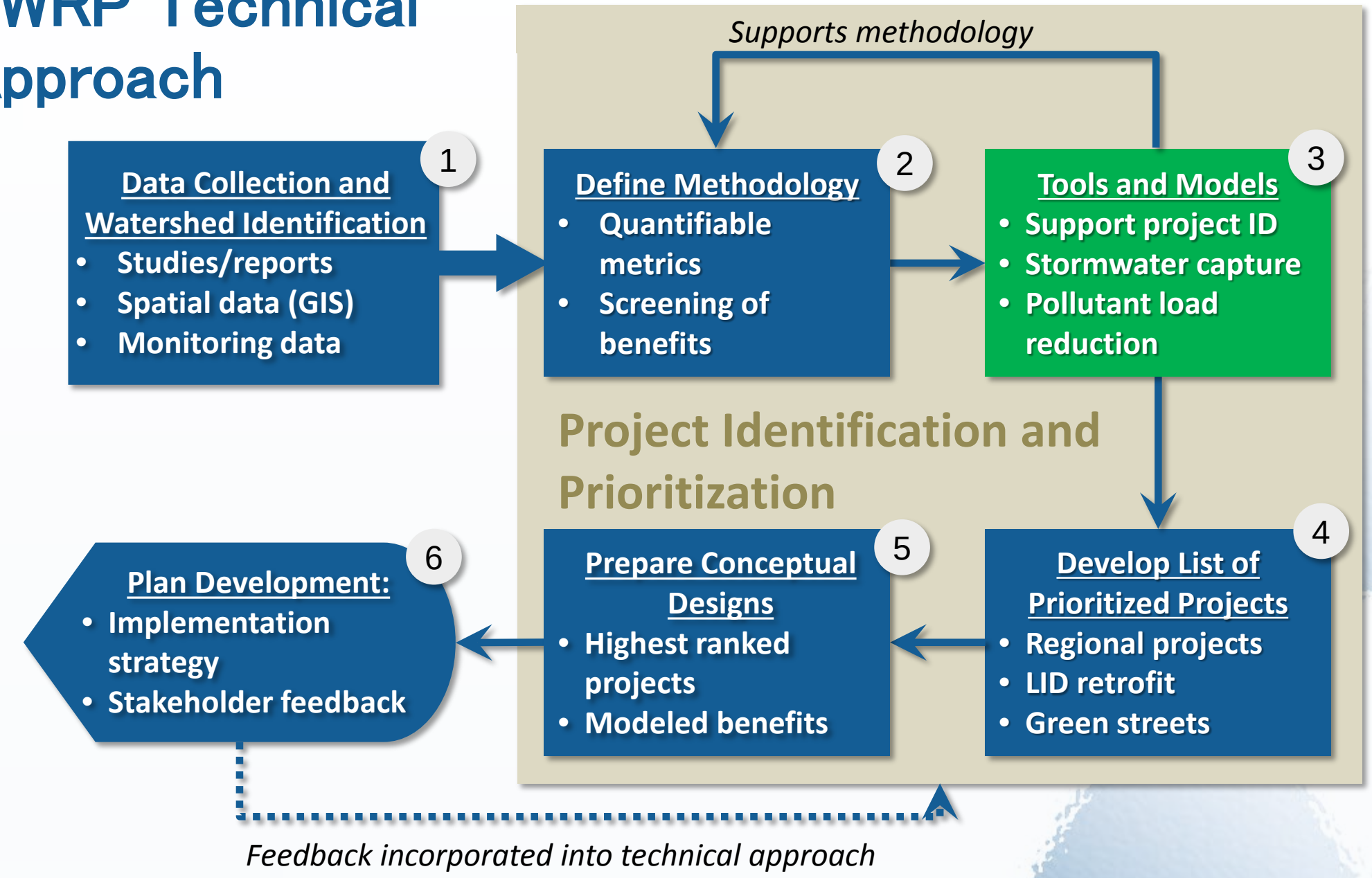
Prioritization Metrics for LID Retofit Projects

Metric	Points						Weight Factor
	0	1	2	3	4	5	
Parcel Land Use			Schools/Golf Courses	Park / Open Space	Parking Lot	Public Buildings	--
Impervious Area (%)	X < 40	40 ≤ X < 50	50 ≤ X < 60	60 ≤ X < 70	70 ≤ X < 80	80 ≤ X < 100	--
Hydrologic Soil Group		D	Unknown	C	B	A	--
Slope (%)	5 < X ≤ 10	4 < X ≤ 5	3 < X ≤ 4	2 < X ≤ 3	1 < X ≤ 2	0 < X ≤ 1	--
Proximity to Flood-prone Channels (miles)	Not in sub-basin	3 < X		1 < X ≤ 3		X ≤ 1	2
Contains PCB Interest Areas	None			Moderate		High	2
Within Priority Development Area	No					Yes	--
Currently planned by City or co-located with other City project	No					Yes	2
Above groundwater basin	No		Yes				--
Augments water supply	No	Yes					--
Water quality source control	No	Yes					--
Reestablishes natural hydrology	No	Yes					--
Creates or enhances habitat	No	Yes					--
Community enhancement	No	Yes					--

Prioritization Metrics for Green Street Projects

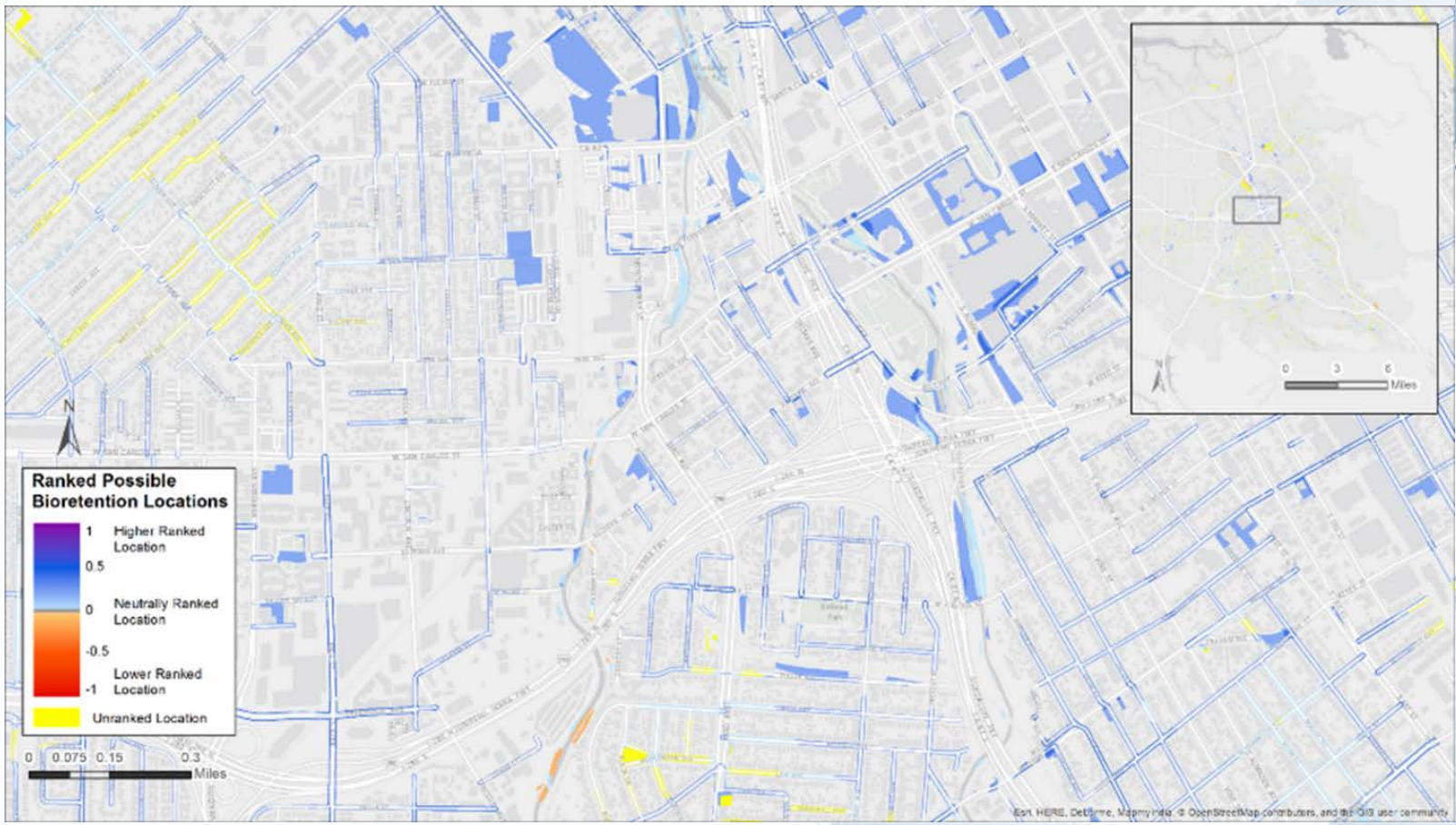
Metric	Points						Weight Factor
	0	1	2	3	4	5	
Street Type	Highway		Arterial	Collector	Alley	Local	--
Imperviousness (%)	X < 40	40 ≤ X < 50	50 ≤ X < 60	60 ≤ X < 70	70 ≤ X < 80	80 ≤ X < 100	--
Hydrologic Soil Group		D	Unknown	C	B	A	--
Slope (%)		4 < X ≤ 5	3 < X ≤ 4	2 < X ≤ 3	1 < X ≤ 2	0 < X ≤ 1	--
Proximity to Flood-prone Channels (miles)	Not in sub-basin	3 < X		1 < X ≤ 3		X ≤ 1	2
Contains PCB Interest Areas	None			Moderate		High	2
Within Priority Development Area	No					Yes	--
Currently planned by City or co-located with other City project	No					Yes	2
Above groundwater basin	No		Yes				--
Augments water supply	No	Yes					--
Water quality source control	No	Yes					--
Reestablishes natural hydrology	No	Yes					--
Creates or enhances habitat	No	Yes					--
Community enhancement	No	Yes					--

SWRP Technical Approach

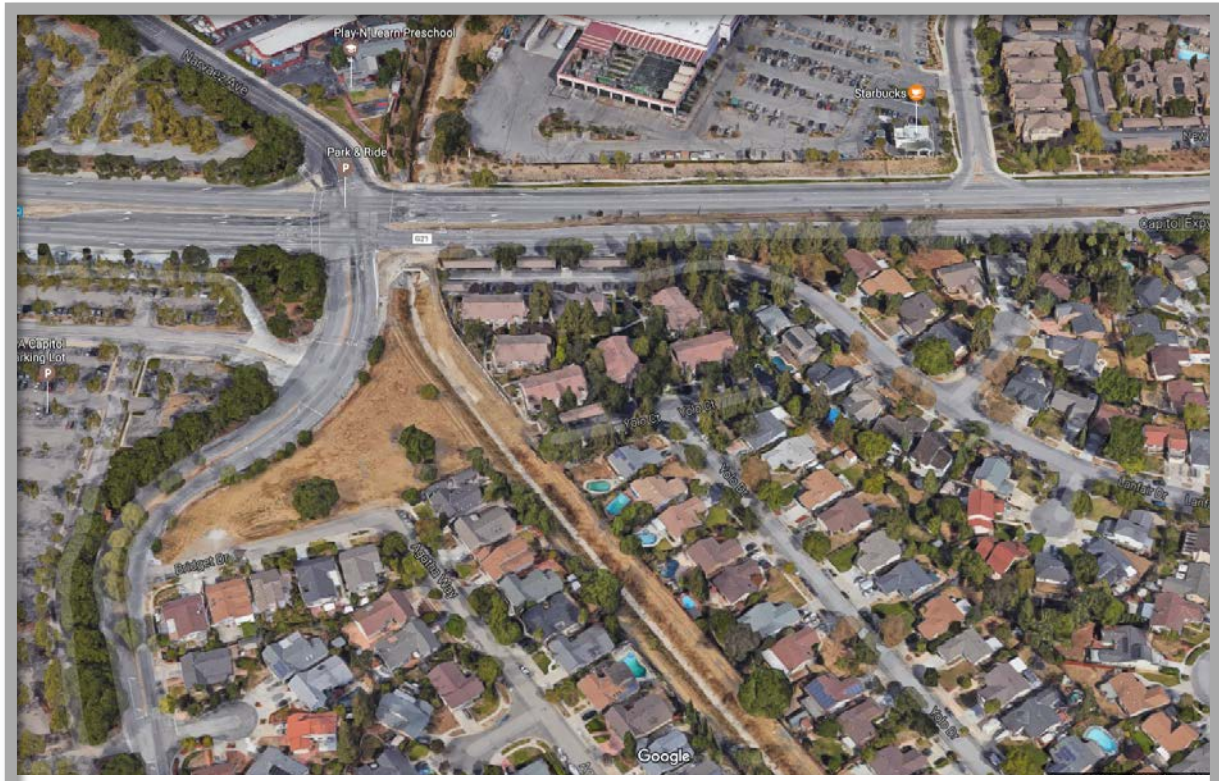


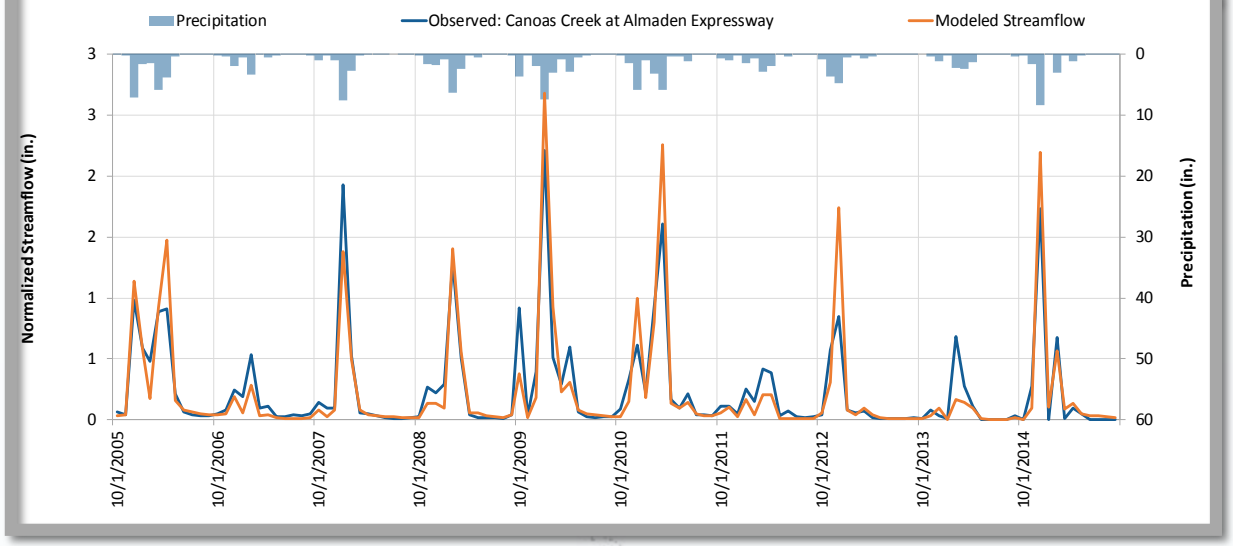
GreenPlan-IT GIS-Based Site Locator Tool

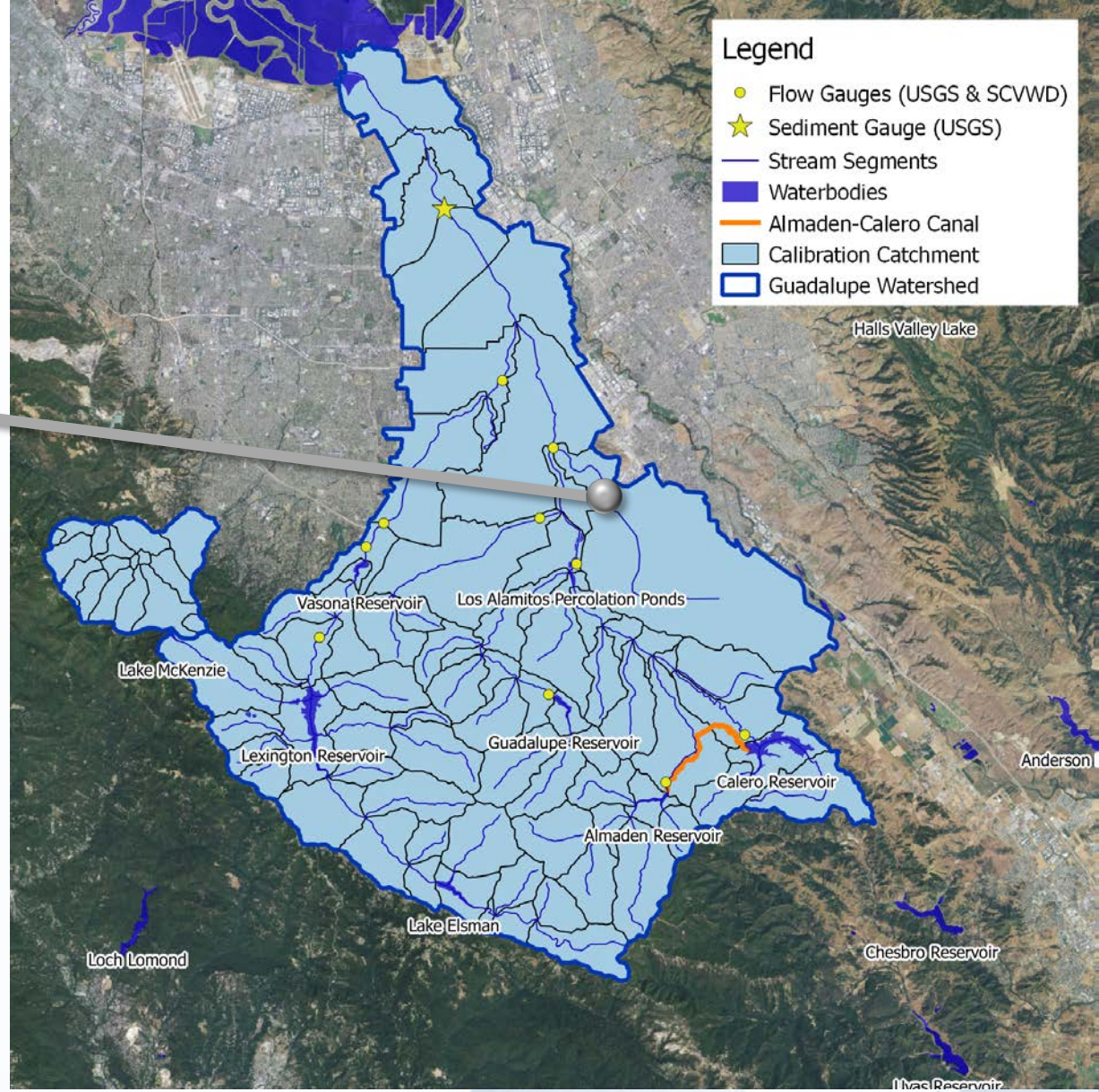
- Combines physical properties of GI types with watershed GIS information to identify project opportunities
- Use to verify GIS screening analysis to identify GI project opportunities



Developed Watershed

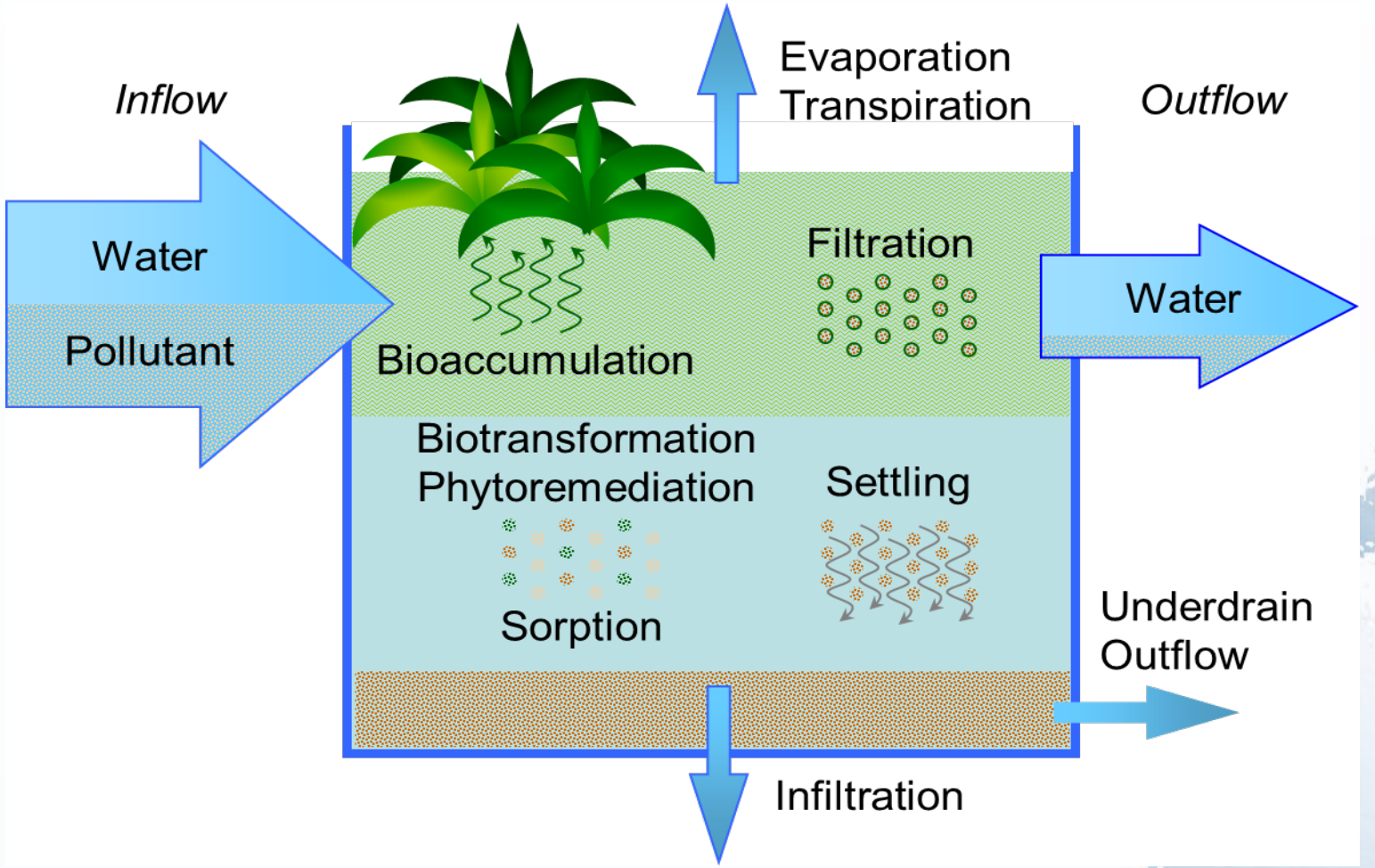




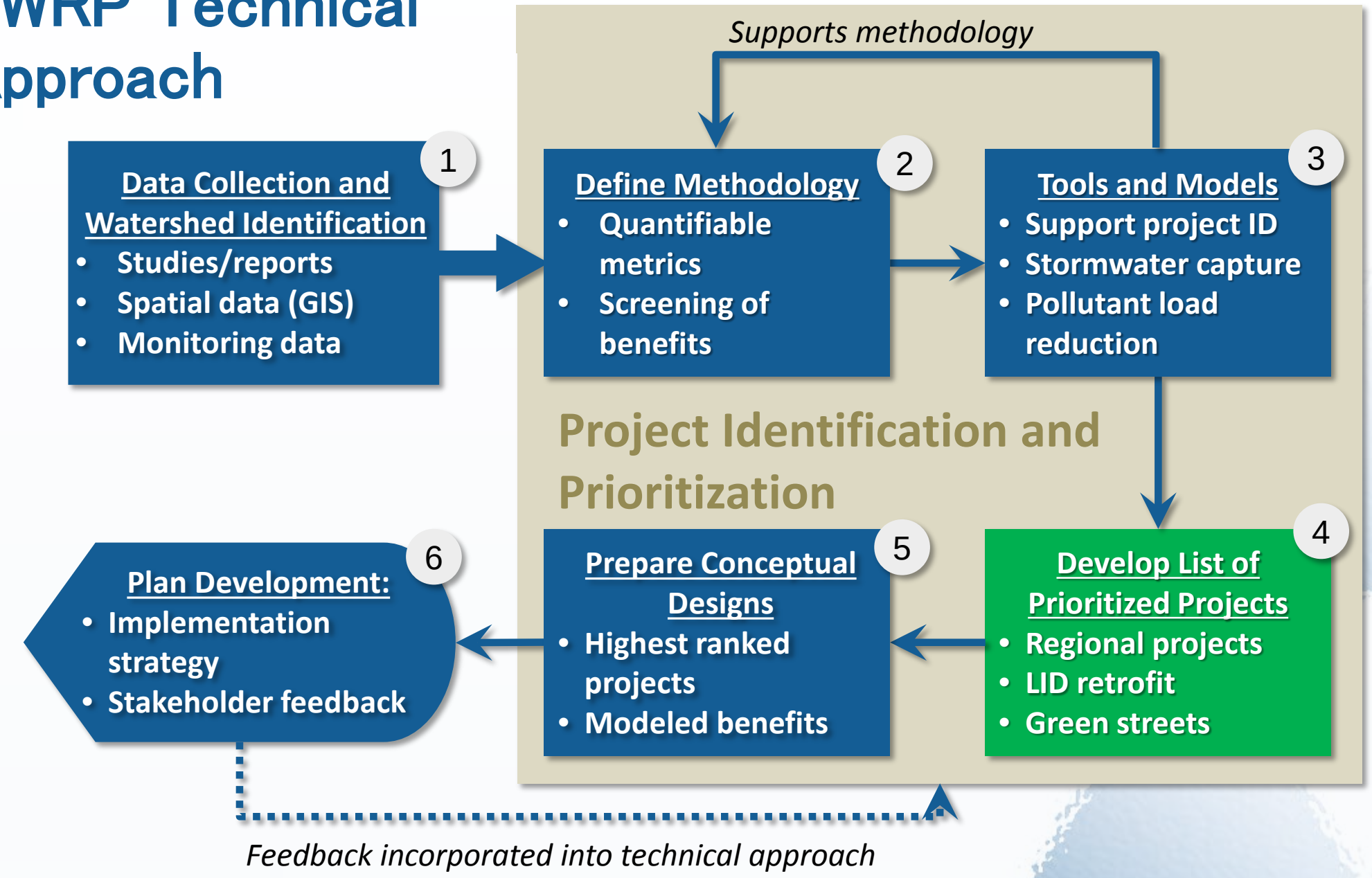


Canoas Creek Watershed

Green Infrastructure Modeling

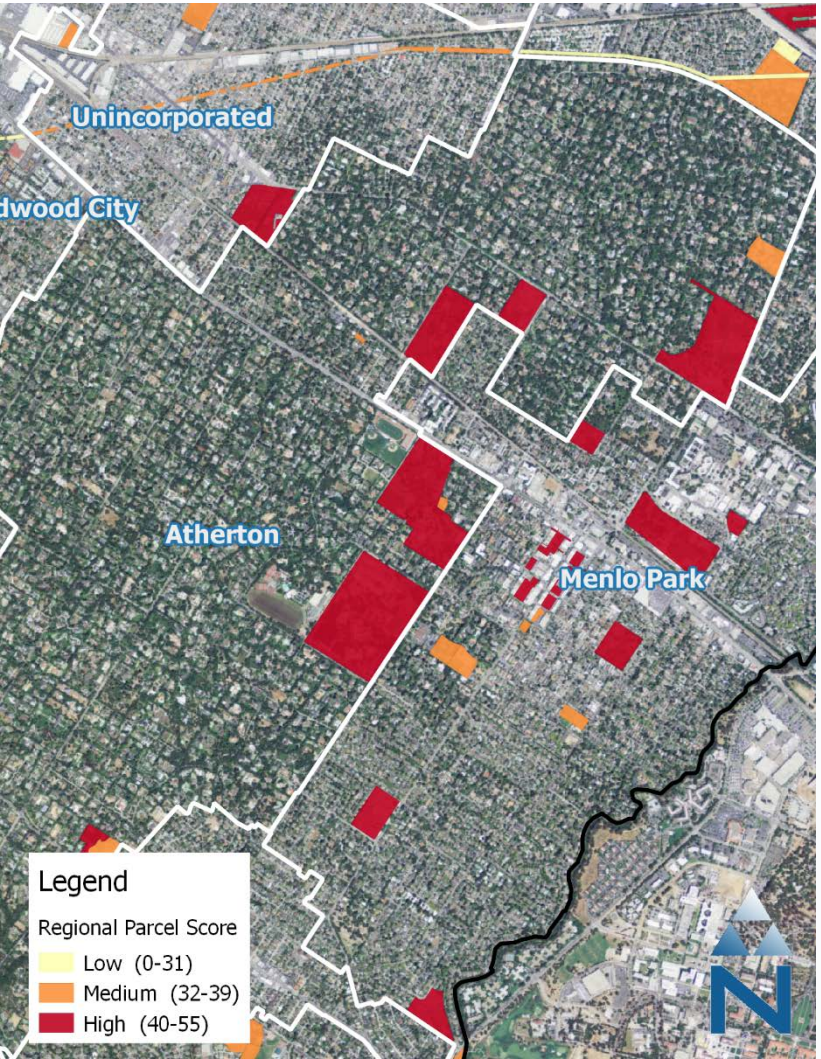


SWRP Technical Approach

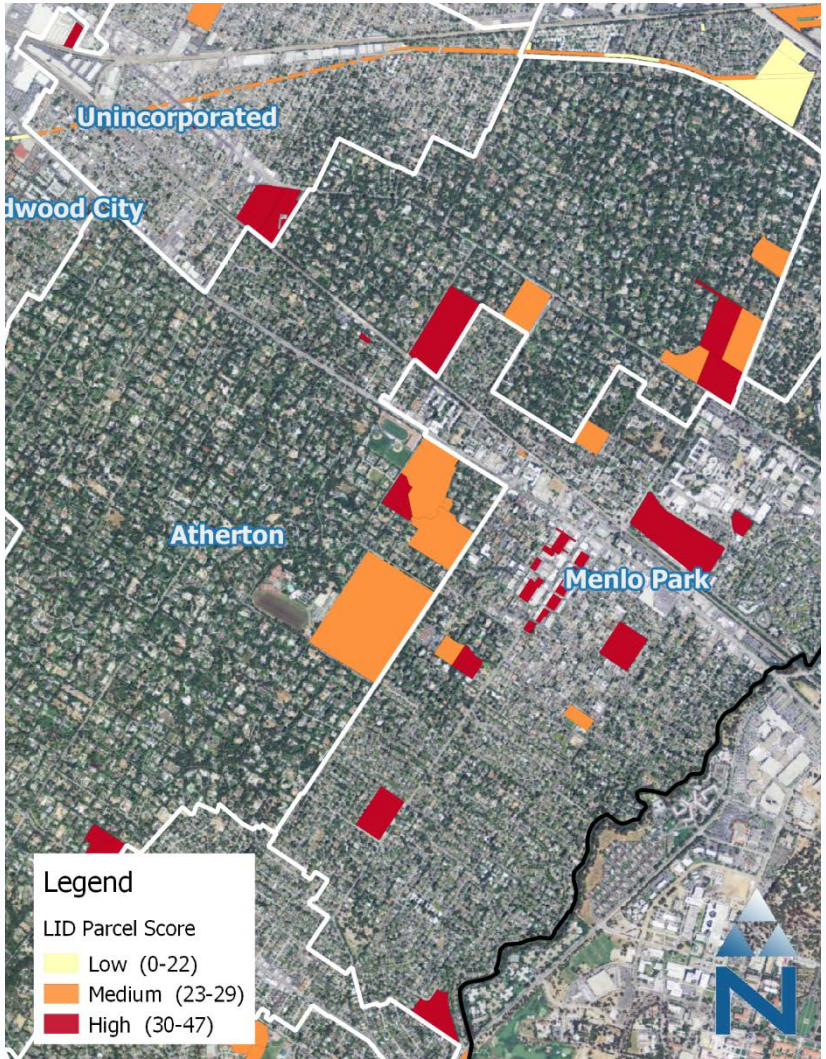


Example Results from Prioritization Method

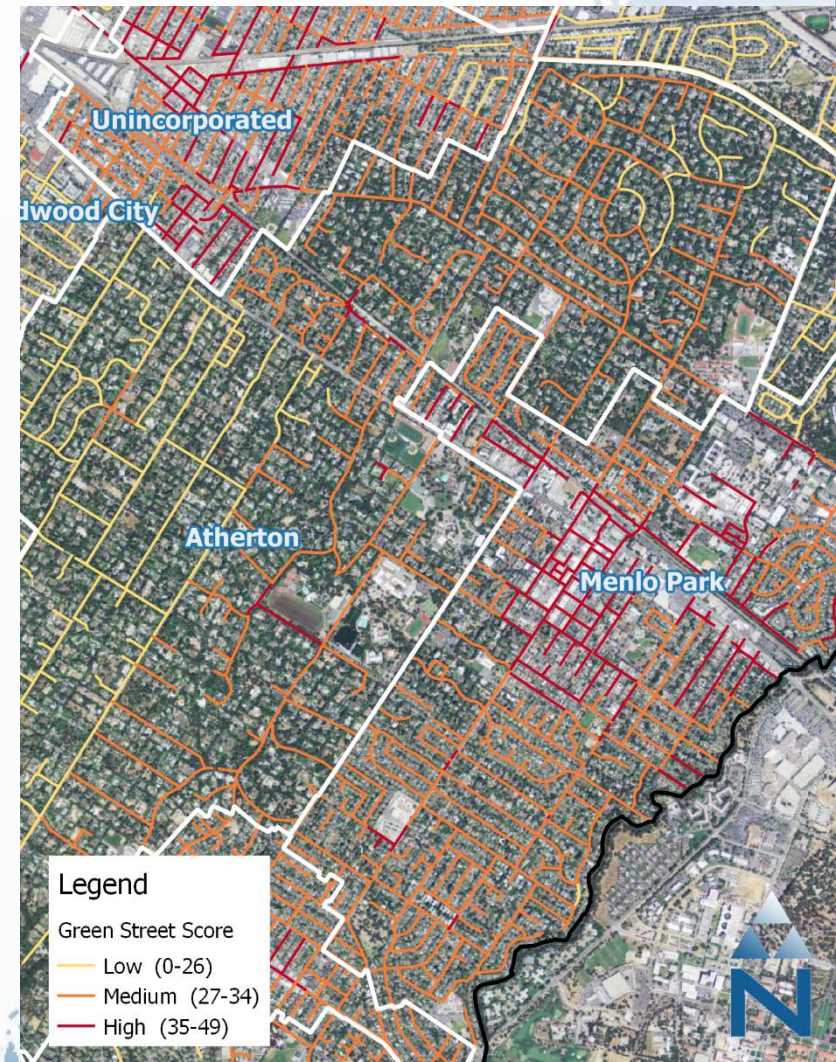
Regional



LID



Green Street



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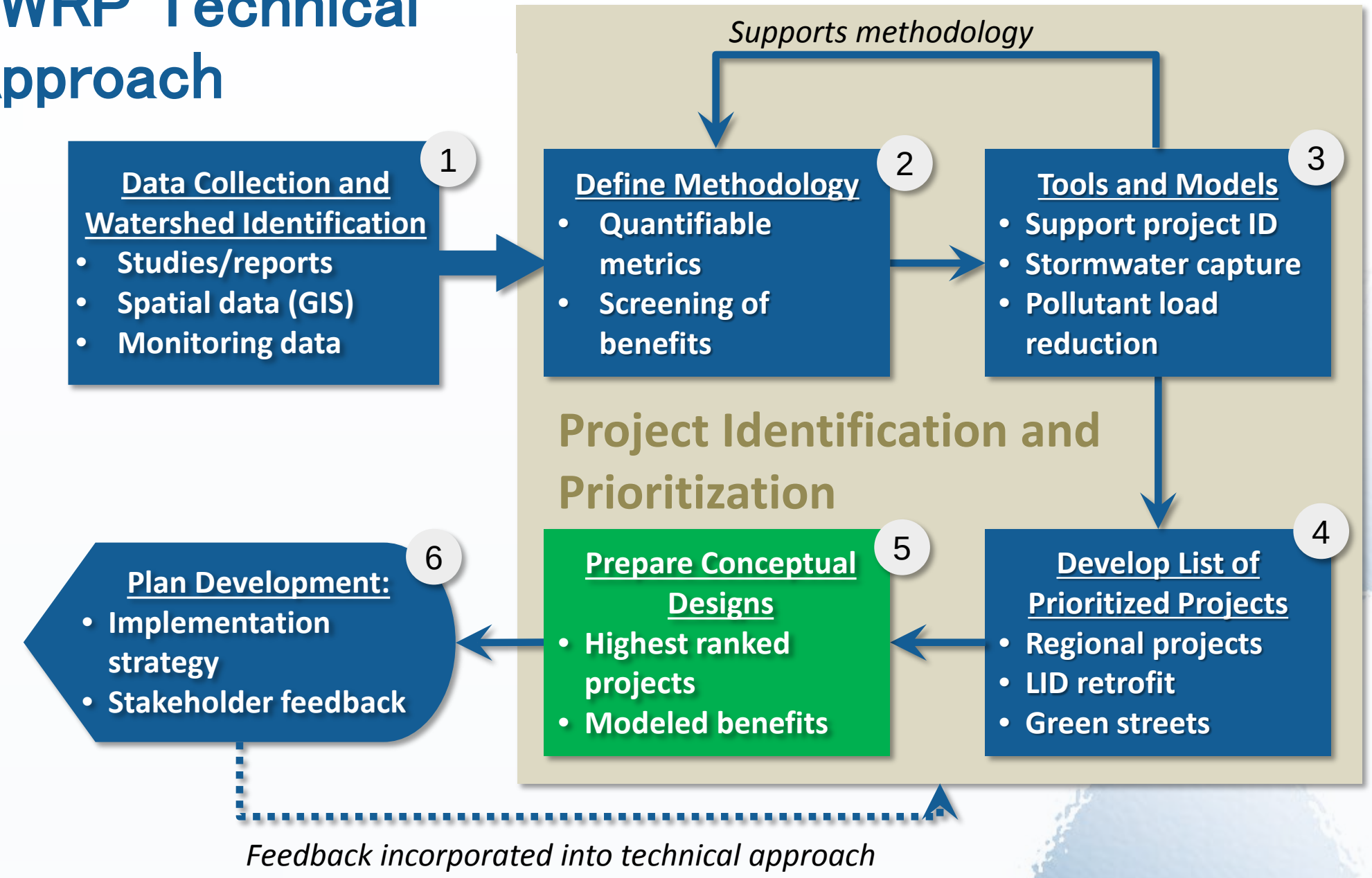

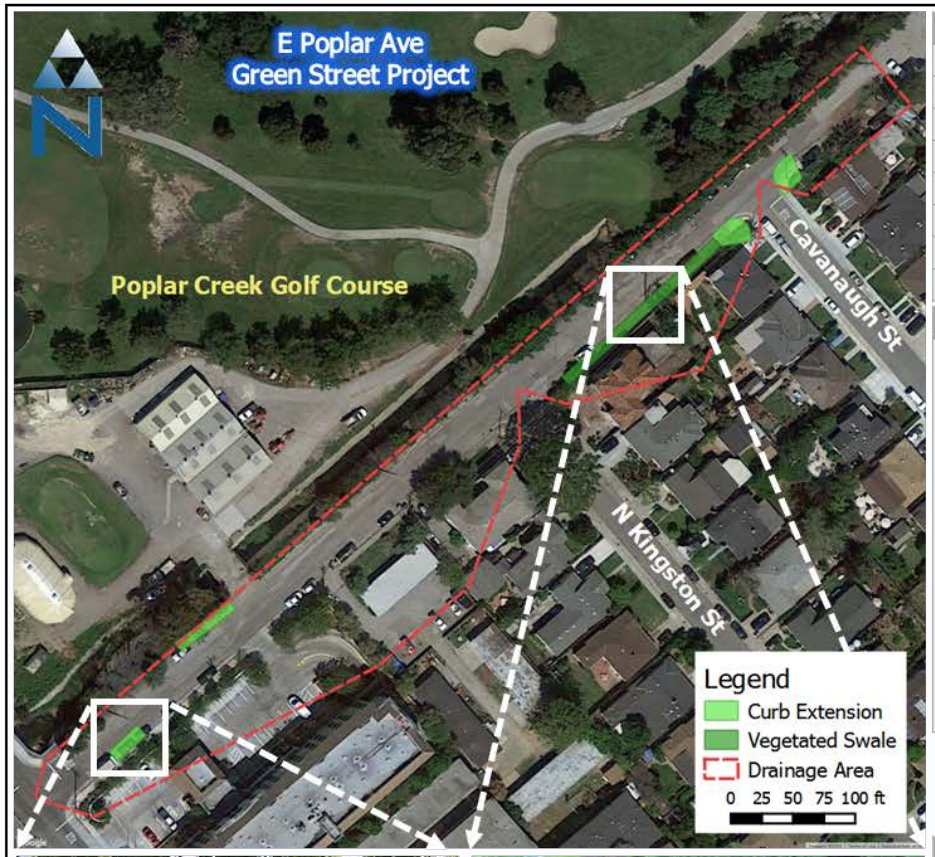

Site Information

Jurisdiction	City of San Mateo
Street Name	E Poplar Ave
Bounding Streets	N Bayshore Blvd / Cavanaugh St
Street Typology	Low-Density Residential
Capture Area (acres)	1.67
Impervious Area (%)	70
85th Percentile Rainfall (in)	0.85
Generated Runoff (ac-ft)	0.08

Site Description:

The proposed project consists of green street improvements along East Poplar Avenue, east of the Bayshore Freeway (US-101). The street segment is approximately 850 feet long. The street is considered low-density residential with development primarily on the south side of the street. Curb extensions are recommended as the primary treatment type and can be placed in such a way to maximize street parking. Curb extensions can occupy "no parking" zones that border lot entrances to perform the same function while also capturing stormwater. In addition to curb extensions, a vegetated swale can be considered between North Kingston Street and Cavanaugh Street, where there currently is no gutter. This would not provide stormwater capture but would provide the added benefits of slowing flows and increased infiltration.

The proposed improvements would capture 100% of the 85th percentile runoff volume (0.04 ac-ft) while providing flood risk mitigation, community enhancement, increased property values, and other multiple benefits.

DISCLAIMER: All elements of this conceptual design are planning-level. Locations of opportunities for placement of green infrastructure shown in the map are preliminary and subject to further site assessment and design. Percent imperviousness is based on best professional judgement. All design assumptions/parameters and cost estimates must be re-evaluated during the detailed design process.

Design Summary

Green Infrastructure Type	Design Width (ft)	Design Length (ft)	Capture Volume (ac-ft)
Bioretention (Curb Extension)	8	230	0.080
Vegetated Swale	3	175	-

Cost Estimate

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Excavation/Hauling	340	CY	$50.00	$17,000
Bioretention	1,840	SF	$25.00	$46,000
Vegetated Swale	525	SF	$18.50	$10,000
Curbs and Gutters	635	LF	$22.00	$14,000
			CONSTRUCTION SUBTOTAL	$87,000
Planning (20%), Mobilization (10%), Design (30%), Contingency (25%)				$74,000
			TOTAL COST	**$161,000**

Concept for a Green Street Retrofit for Stormwater Capture

Site: East Poplar Avenue (City of San Mateo)

San Mateo Countywide Water Pollution Prevention Program

PARADIGM ENVIRONMENTAL

Site Information

Jurisdiction	City of San Mateo
Address	2720 Alameda de las Pulgas, San Mateo, CA 94403
Co-Located Project	Beresford Park Parking Lot Resurfacing
Capture Area (acres)	1.42
Impervious Area (%)	90
85th Percentile Rainfall (in)	0.85
Generated Runoff (ac-ft)	0.09

Bioretention at a Parking Lot

Design Summary

Green Infrastructure Type	Design Width (ft)	Design Length (ft)	Capture Volume (ac-ft)
Bioretention (Rain Garden)	8	260	0.090

Cost Estimate

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Excavation/Hauling	385	CY	$50.00	$19,000
Bioretention	2,080	SF	$25.00	$52,000
Curbs and Gutters	520	LF	$17.25	$9,000
			CONSTRUCTION SUBTOTAL	$80,000
Planning (20%), Mobilization (10%), Design (30%), Contingency (25%)				$68,000
			TOTAL COST	**$148,000**

Site Description:

The proposed project consists of low impact development (LID) retrofits at the parking lot of Beresford Park along Alameda de las Pulgas. LID will be implemented to capture stormwater from on-site. Bioretention is recommended as the primary treatment type. Implementation of LID improvements will coincide with a resurfacing project for the parking lot. The parking lot layout depicted in the figure above is conceptual in order to show how a rain garden can be implemented in a typical parking lot. Actual traffic flow and available area for parking stalls must be evaluated separately during the actual design phase.

The proposed improvements would capture 100% of the 85th percentile runoff volume (0.09 ac-ft) while providing flood risk mitigation, community enhancement, increased property values, and other multiple benefits. Additionally, signage can be implemented to provide opportunities for public education on green infrastructure.

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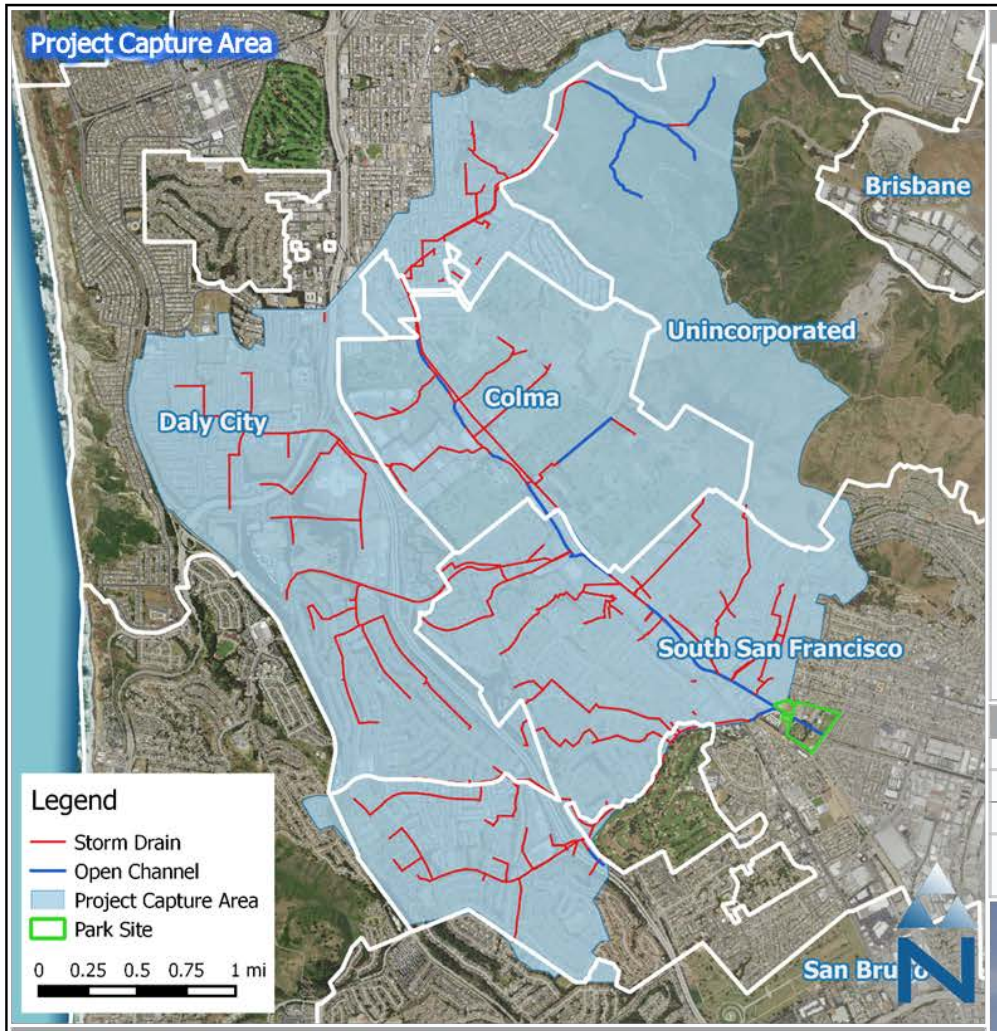
Concept for a Low Impact Development Retrofit for Stormwater Capture

Site: Beresford Park Parking Lot (City of San Mateo)

San Mateo Countywide Water Pollution Prevention Program

PARADIGM ENVIRONMENTAL



Site Description:

This project concept consists of two offline subsurface infiltration chambers at Orange Memorial Park. The park is a prime location to site a regional stormwater capture project and captures stormwater from large portion of the upper Colma Creek watershed and multiple city and county jurisdictions. The potential capture area of the project is roughly 6,300 acres that drains portions of the cities of South San Francisco, Colma, and Daly City and Unincorporated San Mateo County. A stormwater capture project at this location would aid these jurisdictions in meeting stormwater permit compliance and alleviate flooding in the lower reaches of Colma Creek. The project would also contribute to reductions of high-priority pollutants discharged to San Francisco Bay (including TMDLs that require reductions of mercury and PCB loads), augment water supply by recharging the Westside groundwater basin, and provide community enhancement through integration with the recreational facilities of the park. With the incorporation of a hydrodynamic separator for pretreatment of diverted water from the creek, the project also provides the reduction of trash transported through the creek to the San Francisco Bay. The Orange Memorial Park Master Plan (2007) was referenced in this design to ensure that the concept is consistent with the goals of future development for the park.

Although not specifically included within this project concept, the project also provides the opportunity for future integration of Low Impact Development (LID) within parking lots of the park to provide further community enhancement and opportunities for public education of LID and other project components.

Drainage Characteristics

Capture Area (acres)	6,300
Impervious Area (%)	38
Dominant Land Use	Residential
Jurisdictions	South San Francisco, Colma, Daly City, Unincorporated San Mateo County

Orange Memorial Park: street view facing upstream of Colma Creek from W Orange Ave

Site Information

Land Owner	City of South San Francisco
Street Address	Orange Ave, South San Francisco, CA 94080
Latitude/Longitude	37° 39' 13.1" N / 122° 25' 35.4" W
Watershed	Colma Creek

Concept for a Multi-jurisdictional Regional Stormwater Capture Project

Site: Orange Memorial Park (City of South San Francisco)

San Mateo Countywide Water Pollution Prevention Program

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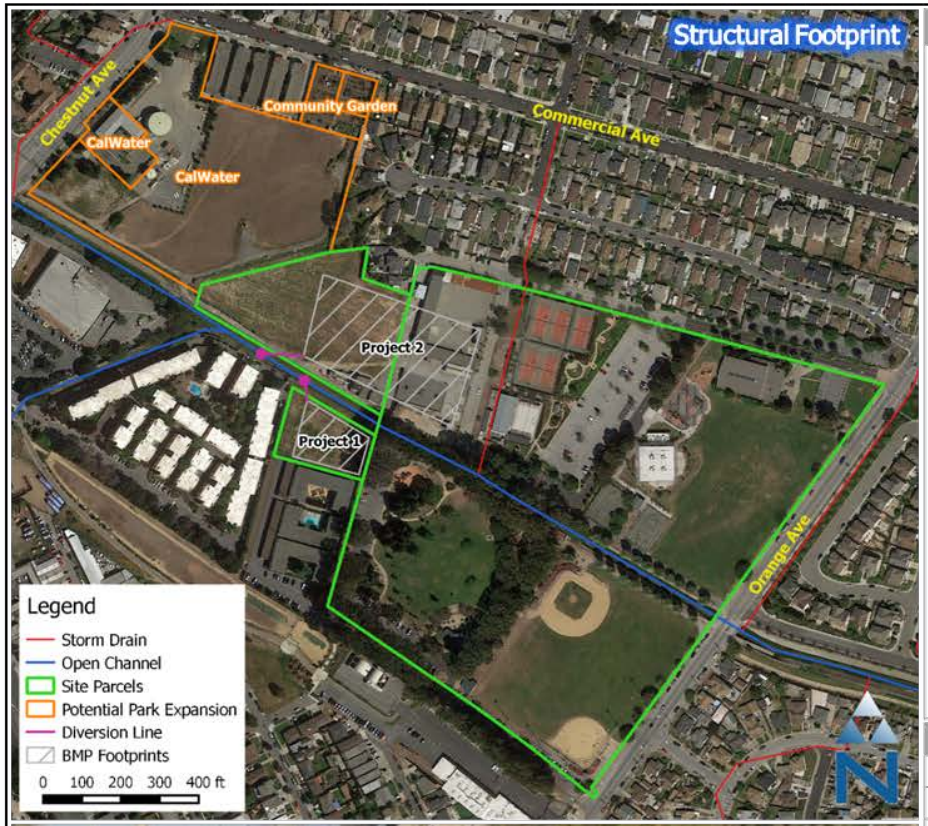

Example concrete infiltration chamber

Site Description:

Two subsurface infiltration chambers will be considered on parcels owned by the City of South San Francisco to the west of Orange Memorial Park. Both parcels were acquired by the City of South San Francisco in 1996 and, while vacant, are included in plans for future park expansion. The first chamber (Project 1) will be located in the vacant parcel to the south of the Colma Creek channel. The second chamber (Project 2) will be located in portions of the vacant parcel to the north of the channel and the current park parcel. The Project 2 site represents the location of the future little league baseball fields according to the Master Plan. Runoff would be diverted directly from Colma Creek and details of the diversion structures will be determined during the design phase through coordination with the San Mateo County Flood Control District. A pretreatment unit (e.g. hydrodynamic separator) will be implemented to provide trash and sediment capture. Two projects are proposed to maximize the amount of available space used for the design and to provide an option for the City of South San Francisco to implement the design in two separate phases. This would allow the City to move forward with each phase separately as funding is acquired. The Master Plan also accounts for the possible purchase of the CalWater parcels along Chestnut Avenue for future park expansion, which could be used to expand Project 2 if that land becomes available. The proposed design (both chambers) would allow for the treatment of 26% of the 85th percentile, 24-hour runoff volume (36.4 of 142.4 ac-ft) for the Colma Creek watershed. As these volumes are completely removed via storage and infiltration, this provides an equivalent 26% reduction of pollutant loads for the storm event.

DISCLAIMER: All elements of this conceptual design are planning-level, based on desktop analysis. All assumptions and parameters must be re-evaluated during the detailed design process. Costs estimates are based on available data. Actual costs will vary.

Design Criteria	
Precipitation, 85th percentile, 24-hr storm (in)	0.83
Colma Creek Runoff Volume, 85th percentile, 24-hr storm (ac-ft)	142.4
Colma Creek Peak Discharge, 85th percentile, 24-hr storm (cfs)	309
Infiltration Rate (in/hr)	0.5

Project Characteristics	Project 1	Project 2
Stormwater Capture Process	Subsurface Infiltration Chamber	
Footprint (acres)	0.5	2.3
Design Height (ft)	12	12
Depth of Excavation (ft)	15	15
Pumping Requirements	Dependent on Geotechnical Investigation	
Design Volume (ac-ft)	6	27.6
24-hr Infiltration Volume (ac-ft)	0.5	2.3
Total Treatment Volume (ac-ft) [1]	**6.5**	**29.9**
Percent Treated [2]	**5%**	**21%**

1 – sum of the Design Volume and 24-hr Infiltration Volume
2 – percentage the 85th percentile 24-hr storm Runoff Volume that is treated

Concept for a Multi-jurisdictional Regional Stormwater Capture Project

Site: Orange Memorial Park (City of South San Francisco)

Water Pollution Prevention Program

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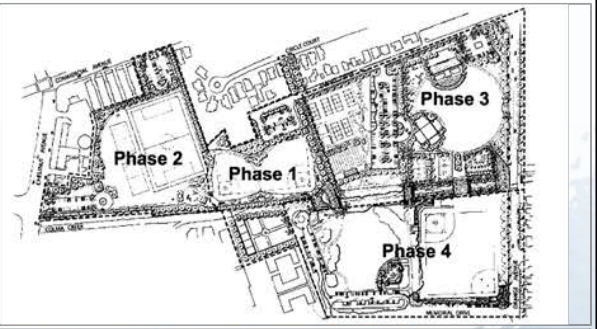
Project Implementation:

The figure to the left depicts the layout for the two subsurface infiltration chambers in relation to the planned improvements in the Orange Memorial Park Master Plan 2007. The figure below depicts the phased implementation of various areas of the park according to the Master Plan. The proposed infiltration chambers would coincide with Phase 1. Adding a stormwater component to the first phase of park improvements would likely garner enthusiasm for park enhancements and open avenues for funding. Phase 1 of the Master Plan can be further split into two sub-phases. The first sub-phase of park improvements would include Project 1 in the location of the future community gardens. The second sub-phase would include Project 2 at the little league baseball fields.



Cost Estimate for Infiltration Chamber south of Colma Creek (Project 1)

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Excavation/Removal	14,520	CY	$50.00	$726,000
Rubber Dam System	1	LS	$80,000.00	$80,000
Diversion Structure	1	LS	$100,000.00	$80,000
Hydrodynamic Separator Device	1	LS	$90,000.00	$100,000
Pump Structure	1	LS	$1,000,000.00	$1,000,000
Diversion Pipe (24" RCP)	100	LF	$200.00	$20,000
Infiltration Structure	9,680	CY	$300.00	$2,904,000
Restoration	21,780	SF	$2.00	$44,000
			CONSTRUCTION SUBTOTAL	$4,954,000
Mobilization (10% construction)				$495,000
Contingency (25% construction)				$1,239,000
Design (10% total)				$669,000
			TOTAL COST	**$7,357,000**

Cost Estimate for Infiltration Chamber north of Colma Creek (Project 2)

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Excavation/Removal	55,660	CY	$50.00	$2,783,000
Rubber Dam System (dam from Project 1 can be utilized by both projects)				N/A
Diversion Structure	1	LS	$150,000.00	$150,000
Hydrodynamic Separator	1	LS	$150,000.00	$150,000
Pump Structure	1	LS	$1,750,000.00	$1,750,000
Diversion Pipe (24" RCP)	150	LF	$200.00	$30,000
Infiltration Structure	44,528	CY	$300.00	$13,358,000
Restoration	100,188	SF	$2.00	$200,000
			CONSTRUCTION SUBTOTAL	$18,421,000
Mobilization (10% construction)				$1,842,000
Contingency (25% construction)				$4,605,000
Design (10% total)				$2,487,000
			TOTAL COST	**$27,355,000**

Concept for a Multi-jurisdictional Regional Stormwater Capture Project

Site: Orange Memorial Park (City of South San Francisco)

Water Pollution Prevention Program

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Next Steps

- Review/comment:
  - **Metrics and Methodologies for Identifying and Prioritizing GI projects**
  - **Evaluation and Selection of Appropriate Models and Tools for the SWRP**
- Obtain input on planned or potential projects
  - **Co-located projects**
  - **Green infrastructure projects**
- Begin the process!

Thank you for
your participation!

Next meeting ~ Jan/Feb 2018