Ventura Countywide Municipal Stormwater Resource Plan (MSWRP)

Prepared for
Ventura Countywide
Stormwater Quality Management Program

Prepared by
Geosyntec Consultants, Inc.

September 2016

Geosyntec consultants
engineers | scientists | innovators

County of Ventura

Ventura County Watershed Protection District

CITIES of
Camarillo
Fillmore
Moorpark
Ojai
Oxnard
Port Hueneme
Santa Paula
Simi Valley
Thousand Oaks
Ventura

MSWRP Projects

MSWRP Modeled Projects:

- Project with concept design and stormwater treatment modeling done as a part of MSWRP development.

Identified Projects:

Group 1: projects identified previously (before MSWRP; for example TMDL IP)

- Some concept design, and/or
- Some stormwater treatment modeling or preliminary benefit quantification

Group 2: submitted by others

- No concept-level design, and/or
- No stormwater treatment modeling

Multibenefit Index

A combination of:

- **Quantitative** results from conceptual design and stormwater treatment modeling; and
- **Qualitative** assessments of multiple benefits

Table D-1. Multi-benefit Scoring Guidance

Benefit Category	Description	Scoring
Water Quality	Potential to address water quality priorities	Score will be calculated based on quantitative metric of benefit multiplied by a qualitative pollutant multiplier **Quantitative metric**: 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. **Qualitative pollutant priority weights**: 3=TMDL pollutants: 2=303(d) pollutants 1=All other pollutants

Benefit Category	Description	Scoring
Water Supply	Maximize infiltration, supplement groundwater, or reuse of captured stormwater or dry weather runoff	Score will be calculated based on quantitative metric of benefit multiplied by a qualitative multiplier describing the effectiveness of the project at meeting that metric. **Quantitative metric**: Potential Water Supply Volume (acre-ft/yr) **Qualitative score** 0=No infiltration or planned reuse 2.5=Improved water efficiency through implementation of drought tolerant vegetation and/or removal of high water need vegetation 5=Potential reuse of infiltrated water that is captured/treated or capture reuse project
Flood Management	Minimize runoff / discharge	Score will be calculated based on quantitative metric of benefit multiplied by a qualitative multiplier describing the effectiveness of the project at meeting that metric **Quantitative metric**: Runoff volume captured[11] (cu-ft/yr) **Qualitative score**: 0=No flooding problem known to occur locally 2.5=Minor flooding issues known to occur locally 5=Major flooding issues known to occur locally

Benefit Category	Description	Scoring
Environmental	Environmental benefits of project, listed in ***Table D-2***	Score will be calculated based on a quantitative metric of benefit multiplied by a qualitative score. **Quantitative metric**: Square feet of habitat/urban green space created (represented by BMP footprint) **Qualitative score**: A qualitative score will be determined by the number of benefits in ***Table D-2***, as follows. 0=No environmental benefit 2.5=Medium environmental benefit 5=High environmental benefit

Table D-2. List of potential environmental benefits

Project includes benefit? (Y/N)	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

Benefit Category	Description	Scoring
Community	Community benefits of project, listed in ***Table D-3***	A qualitative score will be determined by the number of benefits in ***Table D-3***, as follows. 0=No community benefit 2.5=Medium community benefit 5=High community benefit

Table D-3. List of potential community benefits

Project includes benefit? (Y/N)	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

Benefit Category Weights

- Water quality: 50%
- Water supply: 20%
- Flood management: 10%
- Environmental: 10%
- Community: 10%

Project Prioritization

Water Code 10562(b)(2)

High: multibenefit index > 0 and the project has a willing land owner/ O&M provider

Medium: multibenefit index > 3, but the project does not have (or undetermined) a willing land owner/O&M provider

Low: multibenefit index ≤ 3 and the project does not have (or undetermined) a willing land owner/ O&M provider

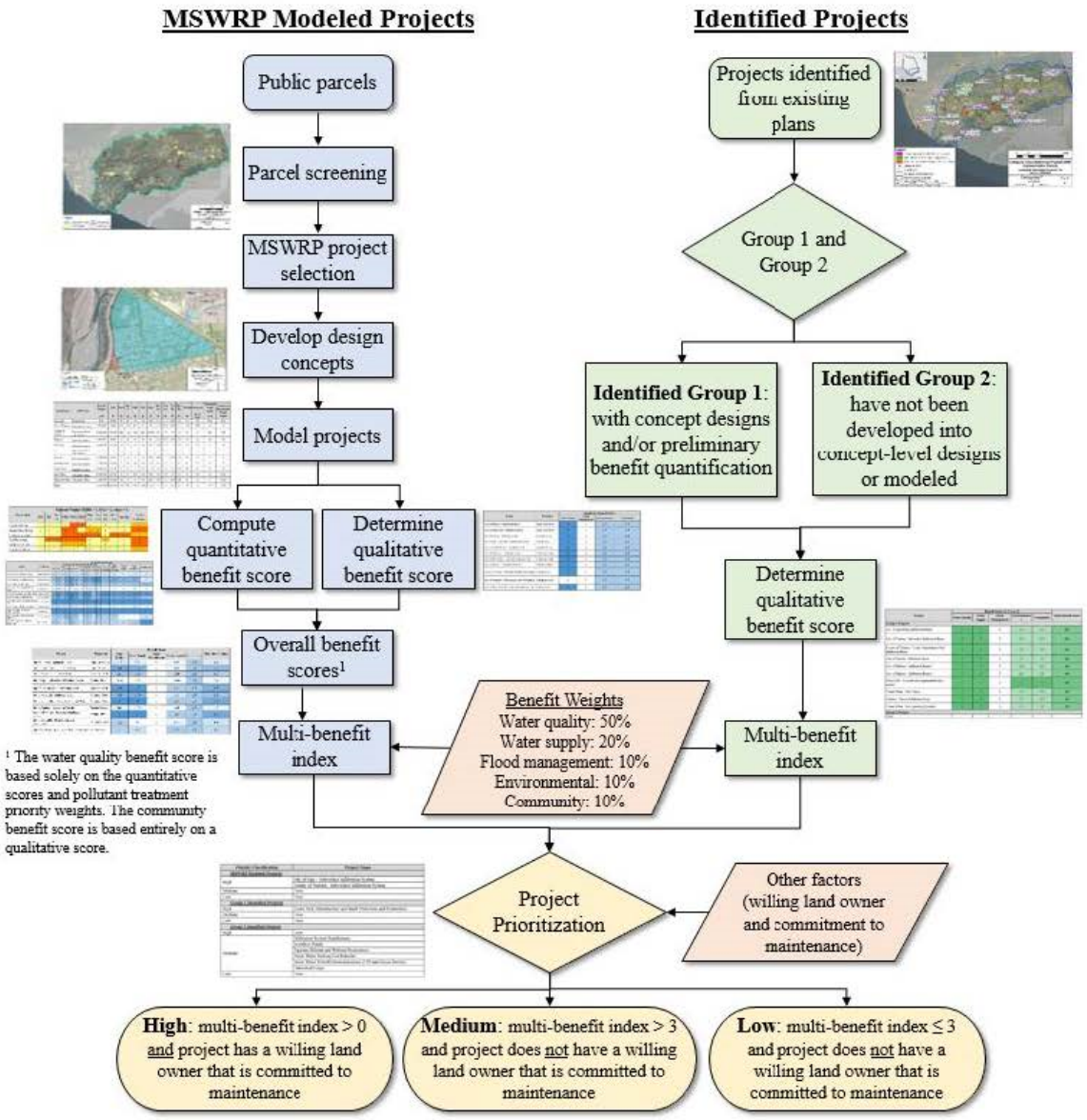

Figure ES-1. Project Development and Prioritization Process

EXAMPLES

Table 14. Project Prioritization – Ventura River Watershed

Project ID	Project Name	Priority Classification
MSWRP Modeled Projects		
M-VR01	City of Ojai - Subsurface Infiltration System	High
M-VR02	County of Ventura - Subsurface Infiltration System	
-	*None*	Medium
-	*None*	Low
Group 1 Identified Projects		
VR01	Foster Park Infrastructure and Bank Protection and Restoration	High
VR08	Ojai Unified School District Stormwater LID Project	
VR09	The Thacher Creek Equestrian Instream Flow and Water Quality Project	
-	*None*	Medium
-	*None*	Low
Group 2 Identified Projects		
VR10	Ventura Water San Jon/Prince Barranca Urban Stormwater/Flood Control Retrofit Pilot Project	High
VR02	Stormwater Retrofit Demonstrations (LID and Green Streets)	Medium
VR04	Riparian Habitat and Wetland Restoration	
VR06	Infiltration System Installations	
VR03	Stormwater Parking Lot Retrofits	Low
VR05	Watershed Corps	
VR07	Overflow Ponds	

Table 12. Project Prioritization – Santa Clara River Watershed

Project ID	Project Name	Priority Classification
MSWRP Modeled Projects		
M-SCR01	City of Fillmore - Infiltration Basin	High
M-SCR02	City of Santa Paula - Infiltration Basin	
M-SCR03	County of Ventura (Piru) Stormwater Capture for Groundwater Recharge	
-	*None*	Medium
-	*None*	Low
Group 1 Identified Projects		
SCR01	City of Santa Paula Infiltration Basin	High
SCR02	City of Ventura - Subsurface Infiltration Basin	
SCR03	County of Ventura - County Maintenance Yard Infiltration Basin	
SCR04	City of Oxnard - Infiltration Basin	
SCR05	City of Fillmore - Infiltration Basin 1	
SCR06	City of Fillmore - Infiltration Basin 2	
SCR07	Sierra Club - A stormwater management pilot project	
SCR08	United Water - Ferro Basin	
SCR09	Caltrans - Saticoy Infiltration basin	
-	*None*	Medium
-	*None*	Low
Group 2 Identified Projects		
-	*None*	High
-	*None*	Medium
-	*None*	Low