Attachment 1 High Priority Subwatershed Characteristics

Sit	te/ Land Use	BMPs	Rank	Rationale/Comments
Re	esidential areas	Local		• Effective volume and load reduction for high proportion of watershed
٠	Primarily located	Detention	ц	development
	south of US 101,	(cisterns)	п	• Low cost
	and in the northern	(eisterns)		 Likely implemented as an institutional-structural BMP
	portion of the			Amenable to retrofit in residential areas
	watershed in the	Bioretention	ц	• Effective volume and load reduction for high proportion of watershed
	City of Thousand	Diorecention	11	development
	Uaks			Implemented either as an institutional-structural BMP or street retrofit BMP
•	1 otal area = 1,287	Vagatated		Amenable to retrofit in residential areas
	Dercentage of	Street	H/M	• Effective volume and load reduction for high proportion of watershed
•	watershed area	Swales	11/1/1	• Implemented either as an institutional-structural BMP or street retrofit BMP
	SFR = 20%	2		Lower costs than bioretention
	HDR = 5.7%	Media		Moderate performance and costs
	Total = 26%	filtration	М	• Can be placed in ROW
				No volume reduction
		Drop Inlet		Moderate performance and cost
		Inserts	M/L	Poor performance for bacteria
		moores		No volume reduction
		Porous		• Pavements & pits: poor soils
		pavements,	L	• Porous pavement generally implemented in parking areas and private access
		infiltration		roads
C		pits Daulain a		
	Drimonily adiagant	Parking		• Large parking lots, but small fraction of watersned impervious area and mostly
•	to US 101	/ retention		• Implemented either as an institutional structural PMD or struct ratrofit PMD
	Westlake Blyd and	grading/	Н	Implemented entier as an institutional-structural DMP of street reform DMP Stormwater planters can be used to treat roof runoff
	Lindero Cyn Rd	planter		Stoffilwater planets can be used to treat fool fution
•	Total area = 627	boxes		• Effective treatment and large volume reduction
	acres			• Large parking lots, but small fraction of watershed impervious area and mostly
•	Percentage of	Vegetated		private
	watershed area:	Swales/	Н	• Low cost
	13%	Filter strips		Some volume reduction
		T 1		• Effective volume and load reduction; moderate proportion of watershed
		Local	м	imperviousness
		(cisterns)	IVI	• May not be sufficient head to fill cisterns other than rooftop runoff
		(cisteriis)		Moderate cost
				Moderate performance and costs
		Media	М	• Can be placed in ROW
		filtration		No volume reduction
		Dron Inlat		• Inlate I are not for heatering no values reduction
		Inserts &		 Infects: Low performance for bacteria, no volume reduction Devement: low permeability soils: appropriate for parking areas and access roads
		norous	L	• Pavement: low permeability sons; appropriate for parking areas and access roads
		pavement		
M	ajor Roads	1		• US 101 has some open space available near on- and off-ramps
•	Area = 113 acres	D		• Other major roads have perimeter areas and most roads have median areas
•	Percentage of	Bioretention	Н	• Good performance and volume reduction
	watershed area:			Moderate costs
1	2.3%			• US 101 has some open space available near on- and off-ramps
•	US 101 - Area	Street	H/M	• Other major roads have perimeter areas and most roads have median areas
1	adjacent to on-	Swales		Moderate performance and low costs
	ramps and off-	Media	м	Moderate performance and costs
1	ramps at Overfall	Filtration	IVI	• Can be placed in ROW
1	Dr, Lindero	Hydrodyna		Good for trash and low/moderate costs
1	Canyon Ku anu N Westlake Rhyd	mic	M/L	• Can be placed in ROW
	Median and or	separation		-
	nerimeter areas			Low performance for bacteria
	along major roads.	Dron Inlat		No volume reduction
1	e.g. Agoura Rd.	Inserts	L	
1	Lindero Canyon Rd	msents		
1	N Westlake Blvd			
	H - High M - M	Iedium	L – Low	

Table 1: Distributed BMP Prioritization for Westlake Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
Site 1 – Diversion of local storm drains to treatment area located in Bennett Park	Wetlands – Surface or subsurface	H/M	High treatment effectiveness.Available areas limit treatment capacity.Could be integrated into park
	Detention Basin	М	 Low cost Likely implemented as an institutional-structural BMP
	Infiltration Basin, treatment facility, hydrodynamic devices	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area Hydro: poor effectiveness for bacteria
Site 2 – Interchange of S Westlake Blvd and 101, interior of	Detention Basin	H/M	 Moderate cost, low maintenance Effective volume and load reduction, but small proportion of watershed
interchange area. Could potentially be used to treat roadway runoff and runoff from	Wetlands – Surface or subsurface	M/L	 High treatment effectiveness Moderate maintenance, difficult area to access for maintenance Available areas limit treatment capacity.
nearby development.	Infiltration Basin, treatment facility, hydrodynamic devices	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area Hydro: poor effectiveness for bacteria
Site 3 – Interchange of Lindero Canyon Rd and 101, interior of	Detention Basin	H/M	 Moderate cost, low maintenance Effective volume and load reduction, but small proportion of watershed
Could potentially be used to treat roadway runoff	Wetlands – Surface or subsurface	M/L	 High treatment effectiveness Moderate maintenance, difficult area to access for maintenance Available areas limit treatment capacity.
	Infiltration Basin, treatment facility, hydrodynamic devices	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area Hydro: poor effectiveness for bacteria
Site 4 – Large public parcel adjacent to streams north of Thousand Oaks Blvd	Wetlands – Surface or subsurface	H/M	 High treatment effectiveness. Sufficient area for large treatment volume. Could be integrated into open space area in aesthetically pleasing way
in Ventura County.	Detention Basin	М	Low costLikely implemented as an institutional-structural BMP
	Infiltration Basin, treatment facility, hydrodynamic devices	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area Hydro: poor effectiveness for bacteria

Table 2: Regional BMP Prioritization for Westlake Subwatershed

H - High M - Medium L – Low

Table 3: Distributed BMP Prioritization for Lower Lindero Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
Residential areas			• Effective volume and load reduction for high proportion of
• Primarily located north of US	Local Detention	11	watershed
101	(cisterns)	Н	• Low cost
• Area = 480 acres			• Likely implemented as an institutional-structural BMP
• Percentage of watershed area:			Amenable to retrofit in residential areas
SFR = 24%			• Effective volume and load reduction for high proportion of
HDR = 4.4%	Bioretention	Н	watershed
Total = 28%			• Implemented either as an institutional-structural BMP or street
			retrofit BMP
			Amenable to retrofit in residential areas
			• Effective volume and load reduction for high proportion of
	Vegetated Street	11/1/	watershed
	Swales	H/M	• Implemented either as an institutional-structural BMP or street
			retrofit BMP
			• Lower costs than bioretention
			Moderate performance and costs
	Media filtration	М	• Can be placed in ROW
			No volume reduction
	Drop Inlet		• Inlets: poor performance for bacteria: no volume reduction
	Inserts, porous		Pavements & pits: Poor soils
	pavements,	L	• Porous payement generally implemented in parking areas and
	infiltration pits		private access roads
Commercial			• Large parking lot areas with existing planter boxes, but small
• Primarily adjacent to US 101	Parking		proportion of watershed and mostly private
• Area = 127 acres	Bioretention/		• Implemented either as an institutional-structural BMP or street
• Percentage of watershed area:	retention	H/M	retrofit BMP
= 7.5%	grading/ planter		• Stormwater planters can be used to treat roof runoff
	boxes		• Effective treatment and volume reduction
	37 1		• Large parking lot areas with existing planter boxes, but small
	Vegetated	II/M	proportion of watershed and mostly private
	Swales/ Filter	H/M	• Low cost
	suips		Some volume reduction
			Moderate performance and costs
	Media filtration	М	• Can be placed in ROW
			• No volume reduction
	Local Detention		• Effective volume and load reduction, but small proportion of
	(cisterns)	M/L	watershed
	(cisteriis)		Moderate cost
	Drop Inlet		• Inlets: low performance for bacteria; no volume reduction
	Inserts, porous	L	• Pavement: poor soils, large parking lot areas, but small proportion
	pavements		of watershed and mostly private
Major Roads			• US 101 has open space available near on- and off-ramps
• Area = 71 acres	Bioretention	ц	 Other major roads have medians and perimeter areas
• Percentage of watershed area:	Dioretention	11	 Good performance and volume reduction
4.2%			Moderate costs
• US 101 - Area adjacent to on-			• US 101 has open space available near on- and off-ramps
ramps and off-ramps at	Street Swales	M/H	• Other major roads have medians and perimeter areas
Kanan Rd. and at Adobe Rd.			• Moderate performance and low costs
• Agoura Rd - Median and	M I FIL /	м	Moderate performance and costs
perimeter area	Media Filtration	M	• Can be placed in ROW
• Thousand Oaks Blvd -	Uudro dura arri-		Good for trash and low/moderate costs
Niedian and perimeter areas	separation	M/L	• Can be placed in ROW
• Kanan Ka south of Agoura	sepuration		
Ku - Median and perimeter	Drop Inlet	L.	Low performance for bacteria
areas	Inserts	Ľ	No volume reduction

Table 4: Regional BMP Prioritization for Lower Lindero Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
Site 1 - Reyes Adobe Park (See Figure)Centrally located residential park adjacent to storm drain	Wetlands – Surface or subsurface	H/M	High treatment effectiveness.Available areas limit treatment capacity.Could be integrated into park
truck (PD1377).	Detention Basin	М	Low costLikely implemented as an institutional-structural BMP
	Infiltration Basin, treatment facility, hydrodynamic devices	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area Hydro: poor effectiveness for bacteria
 Site 2 – Public Parcel (See Figure) Linear shaped Public Parcel adjacent to Lindero Creek and US 101 Residential Park adjacent to storm drain truck (PD1377) 	Detention Basin	M/L	 Effective volume and load reduction, but small proportion of watershed Moderate cost
 Major Roads Total area = 71 acres Percentage of watershed area: 4.2% 	Bioretention	Н	 US 101 has open space available near on- and off-ramps Other major roads have medians and perimeter areas Good performance and volume reduction Moderate costs
 US 101 - Area adjacent to on-ramps and off-ramps at Kanan Rd. and at Adobe Rd. Agoura Rd - Median and perimeter area Thousand Oaks Blvd - 	Parking Bioretention/ retention grading/ planter boxes	H/M	 Large parking lot areas with existing planter boxes, but small proportion of watershed and mostly private Implemented either as an institutional-structural BMP or street retrofit BMP Stormwater planters can be used to treat roof runoff Effective treatment and volume reduction
 Median and perimeter areas Kanan Rd south of Agoura Rd - Median and perimeter areas 	Vegetated Swales/ Filter strips	H/M	 Large parking lot areas with existing planter boxes, but small proportion of watershed and mostly private Low cost Some volume reduction
	Media filtration	М	Moderate performance and costsCan be placed in ROWNo volume reduction
	Drop Inlet Inserts, porous pavements	L	 Inlets: Low performance for bacteria; no volume reduction Pavements: Large parking lot areas, but small proportion of watershed and mostly private; poor soils

Site/ Land Use	BMPs	Rank	Rationale/Comments
 Residential areas Total area = 987 acres Percentage of watershed area: SFR = 32% 	Local Detention (cisterns)	Н	 Effective volume and load reduction for high proportion of watershed development Low cost Likely implemented as an institutional-structural BMP
HDR = 5.7% Total = 38%	Bioretention	Н	 Amenable to retrofit in residential areas Effective volume and load reduction for high proportion of watershed development Implemented either as an institutional-structural BMP or street retrofit BMP
	Vegetated Street Swales	H/M	 Amenable to retrofit in residential areas Effective volume and load reduction for high proportion of watershed Implemented either as an institutional-structural BMP or street retrofit BMP Lower costs than bioretention
	Media filtration	М	 Moderate performance and costs Can be placed in ROW No volume reduction
	Drop Inlet Inserts, porous pavements, infiltration pits	L	 Inlets: poor performance for bacteria; no volume reduction Pavements & pits: Poor soils Porous pavement generally implemented in parking areas and private access roads
 Commercial areas Total area = 94 acres Percentage of watershed area: 3.6% 	Parking Bioretention/ retention grading/ planter boxes	H/M	 Large parking lots, but small fraction of watershed impervious area and mostly private Implemented either as an institutional-structural BMP or street retrofit BMP Stormwater planters can be used to treat roof runoff
	Vegetated Swales/ Filter strips	H/M	 Effective freatment and rarge volume reduction Large parking lots, but small fraction of watershed impervious area and mostly private Low cost Some volume reduction
	Media filtration	М	 Moderate performance and costs Can be placed in ROW No volume reduction
	Local Detention (cisterns)	M/L	 Effective volume and load reduction, but small proportion of watershed May not be sufficient head to fill cisterns Moderate cost
	Drop Inlet Inserts & porous pavement	L	 Low performance for bacteria No volume reduction Appropriate for parking areas and access roads Low permeability soils
 Major Roads Total area = 5 acres Percentage of watershed 	Street Swales	H/M	 Some median and shoulder space along Thousand Oaks Blvd Moderate performance and low costs
area: 0.2%Available open space along	Media Filtration	М	Moderate performance and costsCan be placed in ROW
major roads is limited in this sub-watershed	Hydrodynamic separation	M/L	Good for trash and low/moderate costsCan be placed in ROW
	Bioretention	L	 Good performance and volume reduction Moderate costs Does not appear sufficient space available for this type of BMP
	Drop Inlet Inserts	L	Low performance for bacteriaNo volume reduction
H - High M - Med	ium	L - Low	

Table 5: Distributed BMP Prioritization for the Upper Lindero Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
 Site 1 – Russell Ranch Park Residential park near commercial and residential land uses. 	Wetlands – Surface or subsurface	H/M	High treatment effectiveness.Available areas limit treatment capacity.Could be integrated into park
	Detention Basin	М	 Low cost Likely implemented as an institutional-structural BMP
	Infiltration Basin, treatment facility, hydrodynamic devices	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area Hydro: poor effectiveness for bacteria
Site 2 – Public Parcel east of Lindero Canyon Rd that straddles LA/Ventura	Detention Basin	H/M	 Moderate cost, low maintenance Effective volume and load reduction, but small proportion of watershed
	Wetlands – Surface or subsurface	M/L	 High treatment effectiveness Moderate maintenance, difficult area to access for maintenance Available areas limit treatment capacity.
	Infiltration Basin, treatment facility	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area
Site 3 – North Ranch Play Field Adjacent to Linda Creek in Thousand Oaks.	Wetlands – Surface or subsurface	H/M	 High treatment effectiveness. Available areas limit treatment capacity. Could be integrated into park
	Detention Basin	М	 Low cost Likely implemented as an institutional-structural BMP
	Infiltration Basin, treatment facility	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area

Table 6: Regional BMP Prioritization for the Upper Lindero Subwatershed

H - High

M - Medium

L – Low

Site/ Land Use	BMPs	Rank	Rationale/Comments
 Residential areas Primarily located north of US 101 Total area = 1,470 	Local Detention (cisterns)	Н	 Effective volume and load reduction for high proportion of watershed development Low cost Likely implemented as an institutional-structural BMP
acres • Percentage of watershed area: SFR = 32% HDR = 5.3% That I = 289(Bioretention	Н	 Amenable to retrofit in residential areas Effective volume and load reduction for high proportion of watershed development Implemented either as an institutional-structural BMP or street retrofit BMP
1 otal = 38%	Vegetated Street Swales	H/M	 Amenable to retrofit in residential areas Effective volume and load reduction for high proportion of watershed Implemented either as an institutional-structural BMP or street retrofit BMP Lower costs than bioretention
	Media filtration	М	Moderate performance and costsCan be placed in ROWNo volume reduction
	Drop Inlet Inserts, porous pavements, infiltration pits	L	 Inlets: poor performance for bacteria; no volume reduction Pavements & pits: Poor soils Porous pavement generally implemented in parking areas and private access roads
 Commercial areas Primarily adjacent to US 101, some located along Kanan Rd and Calmfield Ave Total area = 61 acres Percentage of watershed area: 1.5% 	Parking Bioretention/ retention grading/ planter boxes	H/M	 Large parking lots, but small fraction of watershed impervious area and mostly private Implemented either as an institutional-structural BMP or street retrofit BMP Stormwater planters can be used to treat roof runoff Effective treatment and large volume reduction
	Vegetated Swales/ Filter strips	H/M	 Large parking lots, but small fraction of watershed impervious area and mostly private Low cost Some volume reduction
	Media filtration	М	 Moderate performance and costs Can be placed in ROW No volume reduction
	Local Detention (cisterns)	M/L	 Effective volume and load reduction, but small proportion of watershed May not be sufficient head to fill cisterns Moderate cost
	Drop Inlet Inserts & porous pavement	L	 Low performance for bacteria No volume reduction Appropriate for parking areas and access roads Low permeability soils
Major RoadsTotal area = 7.5 acres	Street Swales	H/M	 Some median and shoulder space along Thousand Oaks Blvd Moderate performance and low costs
• Percentage of watershed area: 0.2%	Media Filtration	М	Moderate performance and costsCan be placed in ROW
• Available open space along major roads is	Hydrodynamic separation	M/L	Good for trash and low/moderate costsCan be placed in ROW
limited in this sub- watershed	Bioretention	L	 Good performance and volume reduction Moderate costs Does not appear sufficient space available for this type of BMP
	Drop Inlet Inserts	L	Low performance for bacteriaNo volume reduction

Table 7: Distributed BMP Prioritization for the Upper Medea Creek Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
Public Parks: Site 1 – Chumash Park Residential park near storm drain truck (PD1025)	Wetlands – Surface Or Subsurface	H/M	High treatment effectiveness.Available areas limit treatment capacity.Could be integrated into park
Site 2 – Sumac Park	Detention Basin	М	Low costAverage effectiveness
Residential park near storm drain truck (PD1379). Site 3 – Mae Boyar Park, Ventura County	Infiltration Basin, Treatment Facility	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small are
Site 4 - Linear vacant buffer areas adjacent to Medea Creek in LA and Ventura Counties	Wetlands – Surface Or Subsurface, Stream Restoration	H/M	High treatment effectiveness.Available areas limit treatment capacity.Could be integrated into park
Site 5 – Large public parcel adjacent to Creek and residential areas in Ventura	Detention Basin	М	Low costAverage effectivenessGood volume reduction
County	Infiltration Basin, Treatment Facility	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area

Table 8: Regional BMP Prioritization for the Upper Medea Creek Subwatershed

High - High Medium - Medium

Low - Low

Table 9: Distributed BMP Prioritization for the Lower Las Virgenes Creek Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
Residential areas	T 1		Effective volume and load reduction for high proportion of
Primarily located	Detention	н	watershed development
south of US 101	(Cisterns)	11	Low cost
• Total area = 472 acres	(Cisterns)		Likely implemented as an institutional-structural BMP
• Percentage of			Amenable to retrofit in residential areas
watershed area:			• Effective volume and load reduction for high proportion of
SFR = 7.8%	Bioretention	Н	watershed development
HDR = 1.8% $Total = 0.69/$			• Implemented either as an institutional-structural BMP or street
10tal = 9.0%			retrofit BMP
			Amenable to retrofit in residential areas
			• Effective volume and load reduction for high proportion of
	Vegetated	H/M	watershed
	Street Swales		• Implemented either as an institutional-structural BMP or street
			retrofit BMP
			Lower costs than bioretention
	Media		Moderate performance and costs
	Filtration	М	Can be placed in KOw
			• No volume reduction
	Drop Inlet		• Inlets: poor performance for bacteria; no volume reduction
	Inserts, Porous	L	Pavements & pits: Poor soils
	Pavements,		• Porous pavement generally implemented in parking areas and
	Infiltration Pits		private access roads
Commercial areas	Parking		• Large parking lots, but small fraction of watershed impervious
Primarily south of	Bioretention/		area and mostly private
	Retention	H/M	• Implemented either as an institutional-structural BMP or street
• Total area $= 120$ acres	Grading/		Elioni DMP
 Fotal area = 129 acres Percentage of 	Planter Boxes		Storniwater planters can be used to freat fool funori
watershed area: 2.6%			Enective freatment and farge volume reduction
	Vegetated		area and mostly private
	Swales/ Filter	H/M	• Low cost
	Strips		Some volume reduction
			Moderate performance and costs
	Media	м	 Can be placed in ROW
	Filtration		No volume reduction
			Fffective volume and load reduction, but small proportion of
	Local Detention	M/L	watershed
			 May not be sufficient head to fill cisterns
	(Cisterns)		Moderate cost
	Drop Inlet		• Inlets: Low performance for bacteria: no volume reduction
	Inserts &	т	• Pavement: low permeability soils: appropriate for parking areas
	Porous	L	and access roads
	Pavement		
Major Roads			• US 101 has some open space available near on- and off-ramps
• Total area = 78 acres			Other major roads have perimeter areas and most roads have
• Percentage of	Bioretention	Н	median areas
watershed area: 1.6%			Good performance and volume reduction
• US 101 - Area			Moderate costs
adjacent to on-ramps			• US 101 has some open space available near on- and off-ramps
Liberty Canyon Lost	Street Swales	M/H	• Other major roads have perimeter areas and most roads have
Hills and Los			median areas
Virgenes Roads	M-J:		Noderate performance and low costs
Agoura Rd - Median	Niedia Filtration	М	• Wouerate performance and costs
and perimeter area	Filuation		Can be placed in KUW
Lost Hills Rd -	Hydrodynamic Separation	M/L	Good for trash and low/moderate costs Can be placed in POW
Median and perimeter	Separation		
areas	Drop Inlet	-	Low performance for bacteria
Las Virgenes Rd -	Inserts	Ĺ	No volume reduction
Perimeter areas			

Table 9: Distributed BMP Prioritization for the Lower Las Virgenes Creek Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments	
 Horse Ranches Total area = 8.2 acres Percentage of watershed area: 0.2% 	Bioretention (Buffers And Filter Strips)	Н	 Horse ranch should have adequate areas to incorporate bioretention BMPs Good performance and some volume reduction Low costs for these types of bioretention treatment 	
	Manure Storage	Н	Moderate area requirementsGood performance and moderate cost	
	Designated Horse Wash Area	Н	 Preferably direct was-water to sanitary sewer If sanitary sewer is not accessible use bioretention or another BMP to treat wash-water 	

High - High

Medium - Medium

Low - Low

Table 10: Regional BMP Prioritization for the Lower Las Virgenes Creek Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
 Site 1 – Grape Arbor Park Residential park near storm drain truck (PD679). 	Wetlands – Surface or subsurface	H/M	High treatment effectiveness.Available areas limit treatment capacity.Could be integrated into park
	Detention Basin	М	 Low cost Likely implemented as an institutional-structural BMP
	Infiltration Basin, treatment facility, hydrodynamic devices	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area Hydro: poor effectiveness for bacteria
 Site 2 – Public Parcels (See Figure) adjacent to (east) Grape Arbor Park Public parcels adjacent to US 101. 	Wetlands – Surface or subsurface	H/M	 High treatment effectiveness. Available areas limit treatment capacity. Could be integrated into park
	Detention Basin	M/L	 Moderate cost Effective volume and load reduction, but small proportion of watershed
	Infiltration Basin, treatment facility, hydrodynamic devices	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area Hydro: poor effectiveness for bacteria

Table 11: Distributed	BMP Prioritizati	ion for t	he Portrero Canyon Creek Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
Residential areas Primarily located along Potrero Rd and Portola Ln Total area = 589 acres	Local Detention (Cisterns)	Н	 Effective volume and load reduction for high proportion of watershed development Low cost Likely implemented as an institutional-structural BMP
 Percentage of watershed area: SFR = 25% HDR = 1.0% Total = 26% 	Bioretention	Н	 Amenable to retrofit in residential areas Effective volume and load reduction for high proportion of watershed development Implemented either as an institutional-structural BMP or street retrofit BMP
	Vegetated Street Swales	H/M	 Amenable to retrofit in residential areas Effective volume and load reduction for high proportion of watershed Implemented either as an institutional-structural BMP or street retrofit BMP Lower costs than bioretention
	Media Filtration	М	 Moderate performance and costs Can be placed in ROW No volume reduction
	Drop Inlet Inserts, Porous Pavements, Infiltration Pits	L	 Inlets: poor performance for bacteria; no volume reduction Pavements & pits: Poor soils Porous pavement generally implemented in parking areas and private access roads
 Commercial areas Appear to be located near the southern end of the watershed. Total area = 4.8 acres Percentage of watershed area: 0.21% 	Parking Bioretention/ Retention Grading/ Planter Boxes	H/M	 Large parking lots, but small fraction of watershed impervious area and mostly private Implemented either as an institutional-structural BMP or street retrofit BMP Stormwater planters can be used to treat roof runoff Effective treatment and large volume reduction
	Vegetated Swales/ Filter Strips	H/M	 Large parking lots, but small fraction of watershed impervious area and mostly private Low cost Some volume reduction
	Media Filtration	М	 Moderate performance and costs Can be placed in ROW No volume reduction
	Local Detention (Cisterns)	M/L	 Effective volume and load reduction, but small proportion of watershed May not be sufficient head to fill cisterns Moderate cost
	Drop Inlet Inserts & Porous Pavement	L	 Inlets: Low performance for bacteria; no volume reduction Pavement: low permeability soils; appropriate for parking areas and access roads
 Horse Ranches Total area = 28 acres Percentage of watershed area: 1.3% 	Bioretention (Buffers And Filter Strips)	Н	 Horse ranch should have adequate areas to incorporate bioretention BMPs Good performance and some volume reduction Low costs for these types of bioretention treatment
	Manure Storage	Н	Moderate area requirementsGood performance and moderate cost
	Designated Horse Wash Area	Н	 Preferably direct was-water to sanitary sewer If sanitary sewer is not accessible use bioretention or another BMP to treat wash-water

Site/ Land Use	BMPs	Rank	Rationale/Comments
Site 1 – Evenstar Park and adjacent public parcel. Site 2 – South Shore Hills Park	Wetlands – Surface Or Subsurface	H/M	High treatment effectiveness.Available areas limit treatment capacity.Could be integrated into park
	Detention Basin	М	Low costLikely implemented as an institutional-structural BMP
In Ba Tr Fa Hy De	Infiltration Basin, Treatment Facility, Hydrodynamic Devices	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area Hydro: poor effectiveness for bacteria

Table 12: Regional BMP Prioritization for the Portrero Canyon Creek Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
 Residential areas Primarily located around Lake Sherwood Total area = 553 acres Percentage of watershed area: SFR = 5.0% HDR = 0.1% Total = 5.1% 	Local Detention (Cisterns)	Н	 Effective volume and load reduction for high proportion of watershed development Low cost Likely implemented as an institutional-structural BMP
	Bioretention	Н	 Amenable to retrofit in residential areas Effective volume and load reduction for high proportion of watershed development Implemented either as an institutional-structural BMP or street retrofit BMP
	Vegetated Street Swales	H/M	 Amenable to retrofit in residential areas Effective volume and load reduction for high proportion of watershed Implemented either as an institutional-structural BMP or street retrofit BMP Lower costs than bioretention
	Media Filtration	М	 Moderate performance and costs Can be placed in ROW No volume reduction
	Drop Inlet Inserts, Porous Pavements, Infiltration Pits	L	 Inlets: poor performance for bacteria; no volume reduction Pavements & pits: Poor soils Porous pavement generally implemented in parking areas and private access roads
 Industrial areas Appear to be located in the northern part of the watershed. 	Media Filtration	H/M	 Moderate performance and costs Can be placed in ROW No volume reduction
 Total area = 21 acres Percentage of watershed area: 0.2% 	Local Detention (Cisterns)	М	 Effective volume and load reduction Appropriate for rooftop runoff, May not be sufficient head to fill cisterns Moderate cost
	Parking Bioretention & Vegetated Swales	M/L	 Not suitable for industrial areas with spill potential due to potential groundwater contamination Stormwater planters can be used to treat roof runoff Effective treatment and large volume reduction
	Drop Inlet Inserts & Porous Pavement	L	 Low performance for bacteria No volume reduction Appropriate for parking areas and access roads Low permeability soils
 Horse Ranches Total area = 1.5 acres Percentage of watershed area: 0.01% 	Bioretention (Buffers And Filter Strips)	Н	 Horse ranch should have adequate areas to incorporate bioretention BMPs Good performance and some volume reduction Low costs for these types of bioretention treatment
	Manure Storage	Н	Moderate area requirementsEffective waste management at moderate cost
	Designated Horse Wash Area	Н	 Preferably direct wash-water to sanitary sewer If sanitary sewer is not accessible use bioretention or another BMP to treat wash-water

Table 13: Distributed BMP Prioritization for the Hidden Valley Creek Subwatershed

H - High M - Medium L - Low

Site/ Land Use	BMPs	Rank	Rationale/Comments
Site 1 – Public parcels north of Lake Sherwood	Wetlands – Surface Or Subsurface	H/M	High treatment effectiveness.Available areas limit treatment capacity.Could be integrated into park
Detention Bas Infiltration Basin, Treatment Facility, Hydrodynam Devices	Detention Basin	М	Low costLikely implemented as an institutional-structural BMP
	Infiltration Basin, Treatment Facility, Hydrodynamic Devices	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area Hydro: poor effectiveness for bacteria

Table 14: Regional BMP Prioritization for the Hidden Valley Creek Subwatershed

H - High M - Medium

L - Low

Table 15: Distributed BMP Prioritization for the Stokes Creek Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
 Residential areas Primarily located south of US 101 Total area = 109 acres 	Local Detention (Cisterns)	Н	 Effective volume and load reduction for high proportion of watershed development Low cost Likely implemented as an institutional-structural BMP
 Percentage of watershed area: SFR = 3.5% HDR = 0% Total = 3.5% 	Bioretention	Н	 Amenable to retrofit in residential areas Effective volume and load reduction for high proportion of watershed development Implemented either as an institutional-structural BMP or street retrofit BMP
	Vegetated Street Swales	H/M	 Amenable to retrofit in residential areas Effective volume and load reduction for high proportion of watershed Implemented either as an institutional-structural BMP or street retrofit BMP Lower costs than bioretention
	Media Filtration	М	 Moderate performance and costs Can be placed in ROW No volume reduction
	Drop Inlet Inserts, Porous Pavements, Infiltration Pits	L	 Inlets: poor performance for bacteria; no volume reduction Pavements & pits: Poor soils Porous pavement generally implemented in parking areas and private access roads
 Commercial areas Appear to be along Stokes Canyon Rd. Total area = 8.1 acres Percentage of watershed area: 0.3% 	Parking Bioretention/ Retention Grading/ Planter Boxes	H/M	 Large parking lots, but small fraction of watershed impervious area and mostly private Implemented either as an institutional-structural BMP or street retrofit BMP Stormwater planters can be used to treat roof runoff Effective treatment and large volume reduction
	Vegetated Swales/ Filter Strips	H/M	 Large parking lots, but small fraction of watershed impervious area and mostly private Low cost Some volume reduction
	Media Filtration	М	 Moderate performance and costs Can be placed in ROW No volume reduction
	Local Detention (Cisterns)	M/L	 Effective volume and load reduction, but small proportion of watershed May not be sufficient head to fill cisterns Moderate cost
	Drop Inlet Inserts & Porous Pavement	L	 Low performance for bacteria No volume reduction Appropriate for parking areas and access roads Low permeability soils
 Horse Ranches Total area = 18 acres Percentage of watershed area: 0.6% 	Bioretention (Buffers And Filter Strips)	Н	 Horse ranch should have adequate areas to incorporate bioretention BMPs Good performance and some volume reduction Low costs for these types of bioretention treatment
	Manure Storage	Н	Moderate area requirementsGood performance and moderate cost
	Designated Horse Wash Area	Н	 Preferably direct was-water to sanitary sewer If sanitary sewer is not accessible use bioretention or another BMP to treat wash-water

H - High M - Medium

L - Low

Site/ Land Use	BMPs	Rank	Rationale/Comments
Site 1 – Recreations area near confluence of Stokes Creek and Las Virgenes Creek (PD043).	Wetlands – Surface Or Subsurface	H/M	High treatment effectiveness.Available areas limit treatment capacity.Could be integrated into park
	Detention Basin	М	Low costLikely implemented as an institutional-structural BMP
	Infiltration Basin, Treatment Facility, Hydrodynamic Devices		 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area Hydro: poor effectiveness for bacteria

Table 16: Regional BMP Prioritization for the Stokes Creek Subwatershed

H - High M - Medium L - Low

Site/ Land Use	BMPs	Rank	Rationale/Comments
 Residential areas Primarily located in the north end of the drainage area near Cornell Rd and Kanan Rd with some residences around Malibu Lake. Total area = 249 acres Percentage of watershed area: SFR = 12% HDR = 0% Total = 12% 	Local Detention (cisterns)	Н	 Effective volume and load reduction for high proportion of watershed development Low cost Likely implemented as an institutional-structural BMP
	Bioretention	Н	 Amenable to retrofit in residential areas Effective volume and load reduction for high proportion of watershed development Implemented either as an institutional-structural BMP or street retrofit BMP
	Vegetated Street Swales	H/M	 Amenable to retrofit in residential areas Effective volume and load reduction for high proportion of watershed Implemented either as an institutional-structural BMP or street retrofit BMP Lower costs than bioretention
	Media filtration	М	 Moderate performance and costs Can be placed in ROW No volume reduction
	Drop Inlet Inserts, porous pavements, infiltration pits	L	 Inlets: poor performance for bacteria; no volume reduction Pavements & pits: Poor soils Porous pavement generally implemented in parking areas and private access roads
 Horse Ranches Total area = 14 acres Percentage of watershed area: 0.7% 	Bioretention (Buffers and Filter Strips)	Н	 Horse ranch should have adequate areas to incorporate bioretention BMPs Good performance and some volume reduction Low costs for these types of bioretention treatment
	Manure Storage	Н	Moderate area requirementsGood performance and moderate cost
	Designated Horse wash area	Н	 Preferably direct was-water to sanitary sewer If sanitary sewer is not accessible use bioretention or another BMP to treat wash-water

Table 17: Distributed BMP Prioritization for the Lower Medea Creek Subwatershed

H - High M - Medium

L-Low

Table 18: Regional BMP Prioritization for the Lower Medea Creek Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
 Site 1 – Santa Monica Mountains National Recreation Area Use open space near storm drain trunk (PD1804 probably), where it enters Medea Creek. 	Wetlands – Surface or subsurface	H/M	High treatment effectiveness.Available areas limit treatment capacity.Could be integrated into park
	Detention Basin	М	Low costLikely implemented as an institutional-structural BMP
	Infiltration Basin, treatment facility, hydrodynamic devices	L	 Infiltration: poor soils; available areas limit treatment capacity. Treatment: most effective treatment option; high cost; package plant or sanitary diversion would serve only a small relatively small area Hydro: poor effectiveness for bacteria

H - High

M - Medium

L-Low

Table 19: Distributed BMP Prioritization for Malibu Lagoon Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
Residential areas	Local		Effective volume and load reduction for high proportion of watershed
Distributed	Detention	ц	development
throughout the	(cisterns)	п	Low cost
drainage area	(cisteriis)		Likely implemented as an institutional-structural BMP
Total area $= 164$			Amenable to retrofit in residential areas
acres			Effective volume and load reduction for high proportion of watershed
Percentage of	Bioretention	Н	development
watersned area: SED $= 23\%$			Implemented either as an institutional-structural BMP or street
SFR = 25% HDR = 0.7%			A manable to retrofit in regidential group
Total = 24%	Vegetated		Effective volume and load reduction for high proportion of watershed
10tul – 2470	Street	H/M	Implemented either as an institutional-structural BMP or street
	Swales	11/101	retrofit BMP
	5 Wales		Lower costs than bioretention
			Moderate performance and costs
	Media	М	Can be placed in ROW
	filtration	IVI	No volume reduction
	Duon Inlat		Inlater mean mentamon as for heatening no volume reduction
	Inserts		Payaments & pits: Poor soils
	Porous		Porous pavement generally implemented in parking areas and private
	Pavements	L	access roads
	Infiltration		
	Pits		
Commercial areas	Doulting		Large parking lots, but small fraction of watershed impervious area
Primarily in the	Parking Bioretention/		and mostly private
central and	Bioretention/		Implemented either as an institutional-structural BMP or street
southern portions	Grading/	H/M	retrofit BMP
of the drainage area	Planter		Stormwater planters can be used to treat roof runoff
Total area $= 43$	Boxes		Effective treatment and large volume reduction
acres			
watershed area:	Vegetated		Large parking lots, but small fraction of watershed impervious area
6 2%	Swales/	H/M	Low cost
0.270	Filter Strips		Some volume reduction
			Moderate performance and costs
	Media	М	Can be placed in ROW
	Filtration		No volume reduction
	Local	M/L	Effective volume and load reduction, but small proportion of
	Local		watershed
	(Cisterns)		May not be sufficient head to fill cisterns
	(Cisterns)		Moderate cost
	Drop Inlet		Low performance for bacteria
	Inserts &	L	No volume reduction
	Porous		Appropriate for parking areas and access roads
	Local		Effective volume and load reduction for commercial areas with good
	Infiltration		soils but small proportion of watershed
	(Pavers)	М	sons, but shall proportion of watershed
	(
Horse Ranches	Bioretention		Horse ranch should have adequate areas to incorporate bioretention
Total area = 14	(Buffers	и	BMPs
acres	And Filter	11	Good performance and some volume reduction
Percentage of	Strips)		Low costs for these types of bioretention treatment
watershed area:	Manure	Н	Moderate area requirements
2.0%	Storage		Good performance and moderate cost
	Designated		Preferably direct wastewater to sanitary sewer or OWTS
	Horse Wash	Н	
	Area		

H - High

M- Medium

L-Low

Attachment 2 High Priority Subwatershed Maps



Figure 1. Westlake Subwatershed



Figure 2. Lower Lindero Creek Subwatershed.



Figure 3. Upper Lindero Creek Subwatershed.



Figure 4. Upper Medea Creek Subwatershed.



Figure 5. Lower Las Virgenes Creek Subwatershed



Figure 6. Potrero Canyon Creek Subwatershed



Figure 7. Hidden Valley Creek Subwatershed.



Figure 8. Stokes Creek Subwatershed.



Figure 9. Lower Medea Creek Subwatershed.



Figure 10. Malibu Lagoon Subwatershed.