Attachment 1
High Priority Subwatershed Characteristics

Table 1: Distributed BMP Prioritization for Westlake Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
Residential areas • Primarily located south of US 101, and in the northern portion of the watershed in the City of Thousand Oaks • Total area = 1,287 acres • Percentage of watershed area: SFR = 20% HDR = 5.7% **Total = 26%**	Local Detention (cisterns)	H	• Effective volume and load reduction for high proportion of watershed development • Low cost • Likely implemented as an institutional-structural BMP
	Bioretention	H	• 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	M	• Moderate performance and costs • Can be placed in ROW • No volume reduction
	Drop Inlet Inserts	M/L	• Moderate performance and cost • Poor performance for bacteria • No volume reduction
	Porous pavements, infiltration pits	L	• Pavements & pits: poor soils • Porous pavement generally implemented in parking areas and private access roads
Commercial areas • Primarily adjacent to US 101, Westlake Blvd and Lindero Cyn Rd. • Total area = 627 acres • Percentage of watershed area: **13%**	Parking Bioretention / retention grading/ planter boxes	H	• 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	• Large parking lots, but small fraction of watershed impervious area and mostly private • Low cost • Some volume reduction
	Local Detention (cisterns)	M	• Effective volume and load reduction; moderate proportion of watershed imperviousness • May not be sufficient head to fill cisterns other than rooftop runoff • Moderate cost
	Media filtration	M	• Moderate performance and costs • Can be placed in ROW • No volume reduction
	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
Major Roads • Area = 113 acres • Percentage of watershed area: **2.3%** • US 101 - Area adjacent to on-ramps and off-ramps at Overfall Dr, Lindero Canyon Rd and N Westlake Blvd. • Median and or perimeter areas along major roads: e.g. Agoura Rd, Lindero Canyon Rd N Westlake Blvd	Bioretention	H	• US 101 has some open space available near on- and off-ramps • Other major roads have perimeter areas and most roads have median areas • Good performance and volume reduction • Moderate costs
	Street Swales	H/M	• US 101 has some open space available near on- and off-ramps • Other major roads have perimeter areas and most roads have median areas • Moderate performance and low costs
	Media Filtration	M	• Moderate performance and costs • Can be placed in ROW
	Hydrodynamic separation	M/L	• Good for trash and low/moderate costs • Can be placed in ROW
	Drop Inlet Inserts	L	• Low performance for bacteria • No volume reduction

H - High M - Medium L – Low

Table 2: Regional 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	M	• 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 interchange area. Could potentially be used to treat roadway runoff and runoff from nearby development.	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, 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 interchange area. Could potentially be used to treat roadway runoff	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, 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 in Ventura County.	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
	Detention Basin	M	• 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

H - High M - Medium L – Low

Table 3: Distributed BMP Prioritization for Lower Lindero Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
Residential areas • Primarily located north of US 101 • Area = 480 acres • Percentage of watershed area: SFR = 24% HDR = 4.4% **Total = 28%**	Local Detention (cisterns)	H	• Effective volume and load reduction for high proportion of watershed • Low cost • Likely implemented as an institutional-structural BMP
	Bioretention	H	• 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
	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	M	• 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 • Primarily adjacent to US 101 • Area = 127 acres • Percentage of watershed area: **= 7.5%**	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
	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	M	• 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 • Moderate cost
	Drop Inlet Inserts, porous pavements	L	• Inlets: low performance for bacteria; no volume reduction • Pavement: poor soils, large parking lot areas, but small proportion of watershed and mostly private
Major Roads • Area = 71 acres • Percentage of watershed area: **4.2%** • 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 - Median and perimeter areas • Kanan Rd south of Agoura Rd - Median and perimeter areas	Bioretention	H	• 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
	Street Swales	M/H	• US 101 has open space available near on- and off-ramps • Other major roads have medians and perimeter areas • Moderate performance and low costs
	Media Filtration	M	• Moderate performance and costs • Can be placed in ROW
	Hydrodynamic separation	M/L	• Good for trash and low/moderate costs • Can be placed in ROW
	Drop Inlet Inserts	L	• Low performance for bacteria • No volume reduction

High - High
Medium - Medium
Low - Low

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 truck (PD1377).	Wetlands – Surface or subsurface	H/M	• High treatment effectiveness. • Available areas limit treatment capacity. • Could be integrated into park
	Detention Basin	M	• 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 (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%** • 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 - Median and perimeter areas • Kanan Rd south of Agoura Rd - Median and perimeter areas	Bioretention	H	• 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
	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
	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	M	• Moderate performance and costs • Can be placed in ROW • No 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

High - High
Medium - Medium
Low - Low

Table 5: Distributed BMP Prioritization for the Upper Lindero Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
Residential areas • Total area = 987 acres • Percentage of watershed area: SFR = 32% HDR = 5.7% **Total = 38%**	Local Detention (cisterns)	H	• Effective volume and load reduction for high proportion of watershed development • Low cost • Likely implemented as an institutional-structural BMP
	Bioretention	H	• 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	M	• 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 • 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	M	• 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 area: **0.2%** • Available open space along major roads is limited in this sub-watershed	Street Swales	H/M	• Some median and shoulder space along Thousand Oaks Blvd • Moderate performance and low costs
	Media Filtration	M	• Moderate performance and costs • Can be placed in ROW
	Hydrodynamic separation	M/L	• Good for trash and low/moderate costs • Can 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 bacteria • No volume reduction

H - High M - Medium L - Low

Table 6: Regional 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	M	• 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 County Line	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	M	• 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

H - High

M - Medium

L – Low

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

Site/ Land Use	BMPs	Rank	Rationale/Comments
Residential areas • Primarily located north of US 101 • Total area = 1,470 acres • Percentage of watershed area: SFR = 32% HDR = 5.3% **Total = 38%**	Local Detention (cisterns)	H	• Effective volume and load reduction for high proportion of watershed development • Low cost • Likely implemented as an institutional-structural BMP
	Bioretention	H	• 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	M	• 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 • 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	M	• 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 = 7.5 acres • Percentage of watershed area: **0.2%** • Available open space along major roads is limited in this sub-watershed	Street Swales	H/M	• Some median and shoulder space along Thousand Oaks Blvd • Moderate performance and low costs
	Media Filtration	M	• Moderate performance and costs • Can be placed in ROW
	Hydrodynamic separation	M/L	• Good for trash and low/moderate costs • Can 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 bacteria • No volume reduction

High - High
Medium - Medium
Low - Low

Table 8: Regional 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) Site 2 – Sumac Park Residential park near storm drain truck (PD1379). Site 3 – Mae Boyar Park, Ventura County	Wetlands – Surface Or Subsurface	H/M	• High treatment effectiveness. • Available areas limit treatment capacity. • Could be integrated into park
	Detention Basin	M	• Low cost • Average effectiveness
	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 Site 5 – Large public parcel adjacent to Creek and residential areas in Ventura County	Wetlands – Surface Or Subsurface, Stream Restoration	H/M	• High treatment effectiveness. • Available areas limit treatment capacity. • Could be integrated into park
	Detention Basin	M	• Low cost • Average effectiveness • Good volume reduction
	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

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 • Primarily located south of US 101 • Total area = 472 acres • Percentage of watershed area: SFR = 7.8% HDR = 1.8% **Total = 9.6%**	Local Detention (Cisterns)	H	• Effective volume and load reduction for high proportion of watershed development • Low cost • Likely implemented as an institutional-structural BMP
	Bioretention	H	• 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	M	• 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 • Primarily south of and adjacent to US 101 • Total area = 129 acres • Percentage of watershed area: **2.6%**	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 • 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	M	• 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
Major Roads • Total area = 78 acres • Percentage of watershed area: **1.6%** • US 101 - Area adjacent to on-ramps and off-ramps at Liberty Canyon, Lost Hills and Los Virgenes Roads • Agoura Rd - Median and perimeter area • Lost Hills Rd - Median and perimeter areas • Las Virgenes Rd - Perimeter areas	Bioretention	H	• US 101 has some open space available near on- and off-ramps • Other major roads have perimeter areas and most roads have median areas • Good performance and volume reduction • Moderate costs
	Street Swales	M/H	• US 101 has some open space available near on- and off-ramps • Other major roads have perimeter areas and most roads have median areas • Moderate performance and low costs
	Media Filtration	M	• Moderate performance and costs • Can be placed in ROW
	Hydrodynamic Separation	M/L	• Good for trash and low/moderate costs • Can be placed in ROW
	Drop Inlet Inserts	L	• Low performance for bacteria • No volume reduction

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)	H	• 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	H	• Moderate area requirements • Good performance and moderate cost
	Designated Horse Wash Area	H	• 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	M	• 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

High - High
Medium - Medium
Low – Low

Table 11: Distributed BMP Prioritization for the 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 • Percentage of watershed area: SFR = 25% HDR = 1.0% **Total = 26%**	Local Detention (Cisterns)	H	• Effective volume and load reduction for high proportion of watershed development • Low cost • Likely implemented as an institutional-structural BMP
	Bioretention	H	• 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	M	• 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	M	• 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)	H	• 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	H	• Moderate area requirements • Good performance and moderate cost
	Designated Horse Wash Area	H	• 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 12: Regional BMP Prioritization for the Portrero Canyon Creek Subwatershed

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	M	• 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

High - High
Medium - Medium
Low – Low

Table 13: Distributed BMP Prioritization for the Hidden Valley 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)	H	• Effective volume and load reduction for high proportion of watershed development • Low cost • Likely implemented as an institutional-structural BMP
	Bioretention	H	• 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	M	• 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. • Total area = 21 acres • Percentage of watershed area: **0.2%**	Media Filtration	H/M	• Moderate performance and costs • Can be placed in ROW • No volume reduction
	Local Detention (Cisterns)	M	• 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)	H	• 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	H	• Moderate area requirements • Effective waste management at moderate cost
	Designated Horse Wash Area	H	• Preferably direct wash-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

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

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 Basin	M	• 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

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 • Percentage of watershed area: SFR = 3.5% HDR = 0% **Total = 3.5%**	Local Detention (Cisterns)	H	• Effective volume and load reduction for high proportion of watershed development • Low cost • Likely implemented as an institutional-structural BMP
	Bioretention	H	• 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	M	• 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	M	• 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)	H	• 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	H	• Moderate area requirements • Good performance and moderate cost
	Designated Horse Wash Area	H	• 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

Table 16: Regional BMP Prioritization for the Stokes Creek Subwatershed

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	M	• 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

H - High
M - Medium
L - Low

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

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)	H	• Effective volume and load reduction for high proportion of watershed development • Low cost • Likely implemented as an institutional-structural BMP
	Bioretention	H	• 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	M	• 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)	H	• 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	H	• Moderate area requirements • Good performance and moderate cost
	Designated Horse wash area	H	• 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

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	M	• 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

H - High
M - Medium
L – Low

Table 19: Distributed BMP Prioritization for Malibu Lagoon Subwatershed

Site/ Land Use	BMPs	Rank	Rationale/Comments
Residential areas Distributed throughout the drainage area Total area = 164 acres Percentage of watershed area: SFR = 23% HDR = 0.7% **Total = 24%**	Local Detention (cisterns)	H	Effective volume and load reduction for high proportion of watershed development Low cost Likely implemented as an institutional-structural BMP
	Bioretention	H	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	M	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 Primarily in the central and southern portions of the drainage area Total area = 43 acres Percentage of watershed area: **6.2%**	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	M	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
	Local Infiltration (Pavers)	M	Effective volume and load reduction for commercial areas with good soils, but small proportion of watershed
Horse Ranches Total area = 14 acres Percentage of watershed area: **2.0%**	Bioretention (Buffers And Filter Strips)	H	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	H	Moderate area requirements Good performance and moderate cost
	Designated Horse Wash Area	H	Preferably direct wastewater to sanitary sewer or OWTS

H - High
M- Medium
L- Low

Attachment 2
High Priority Subwatershed Maps

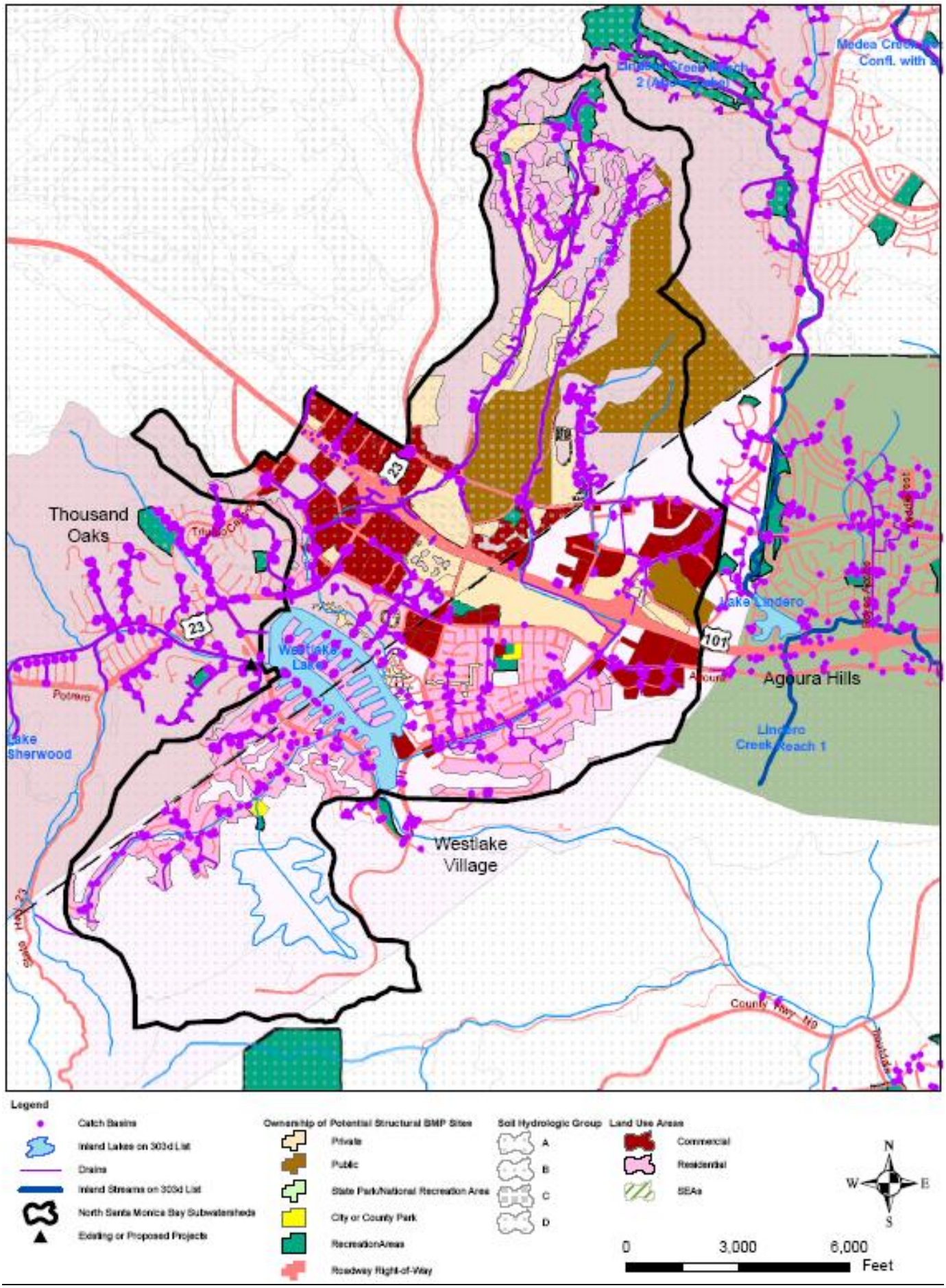

Figure 1. Westlake Subwatershed

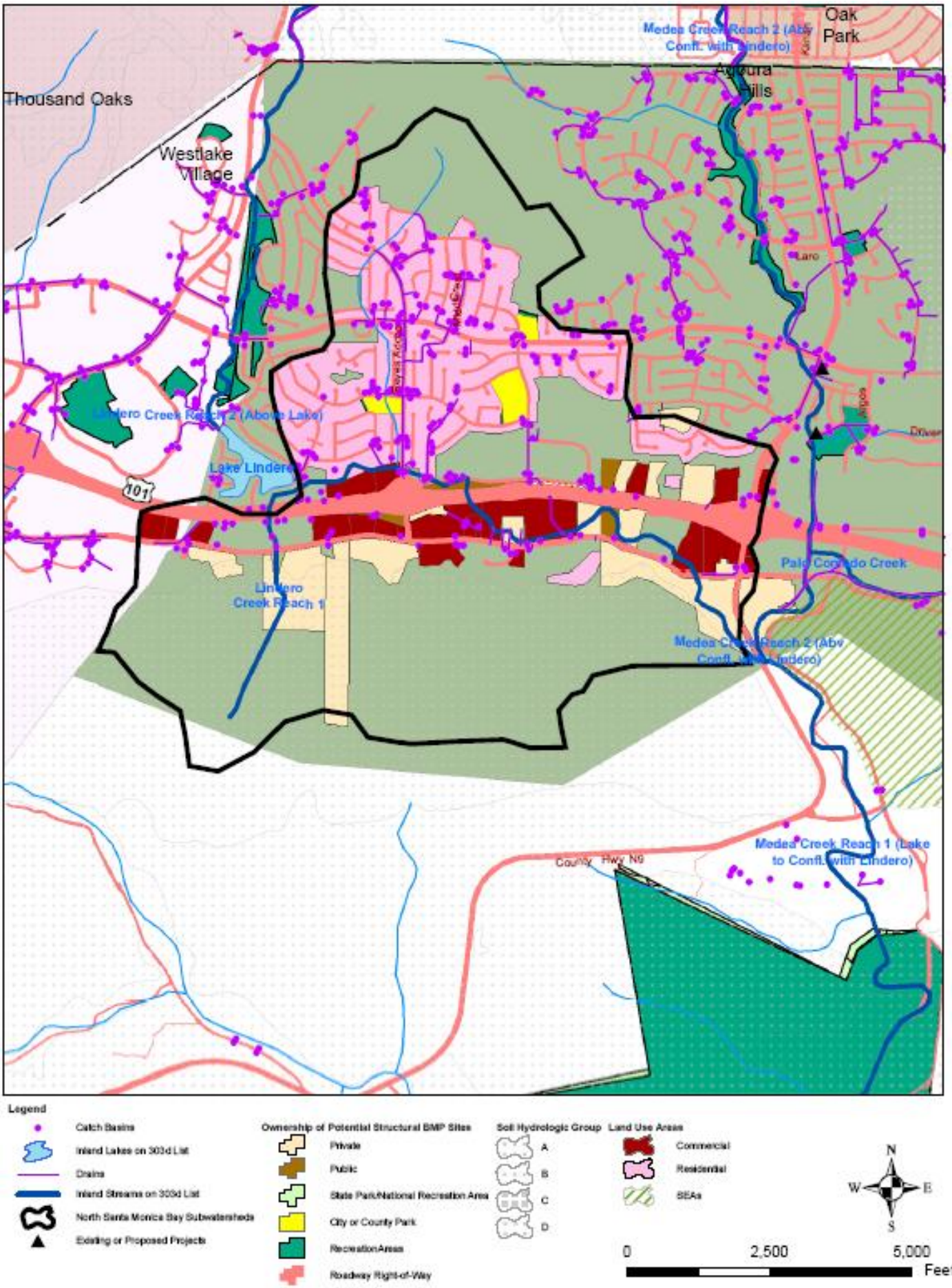

Figure 2. Lower Lindero Creek Subwatershed.

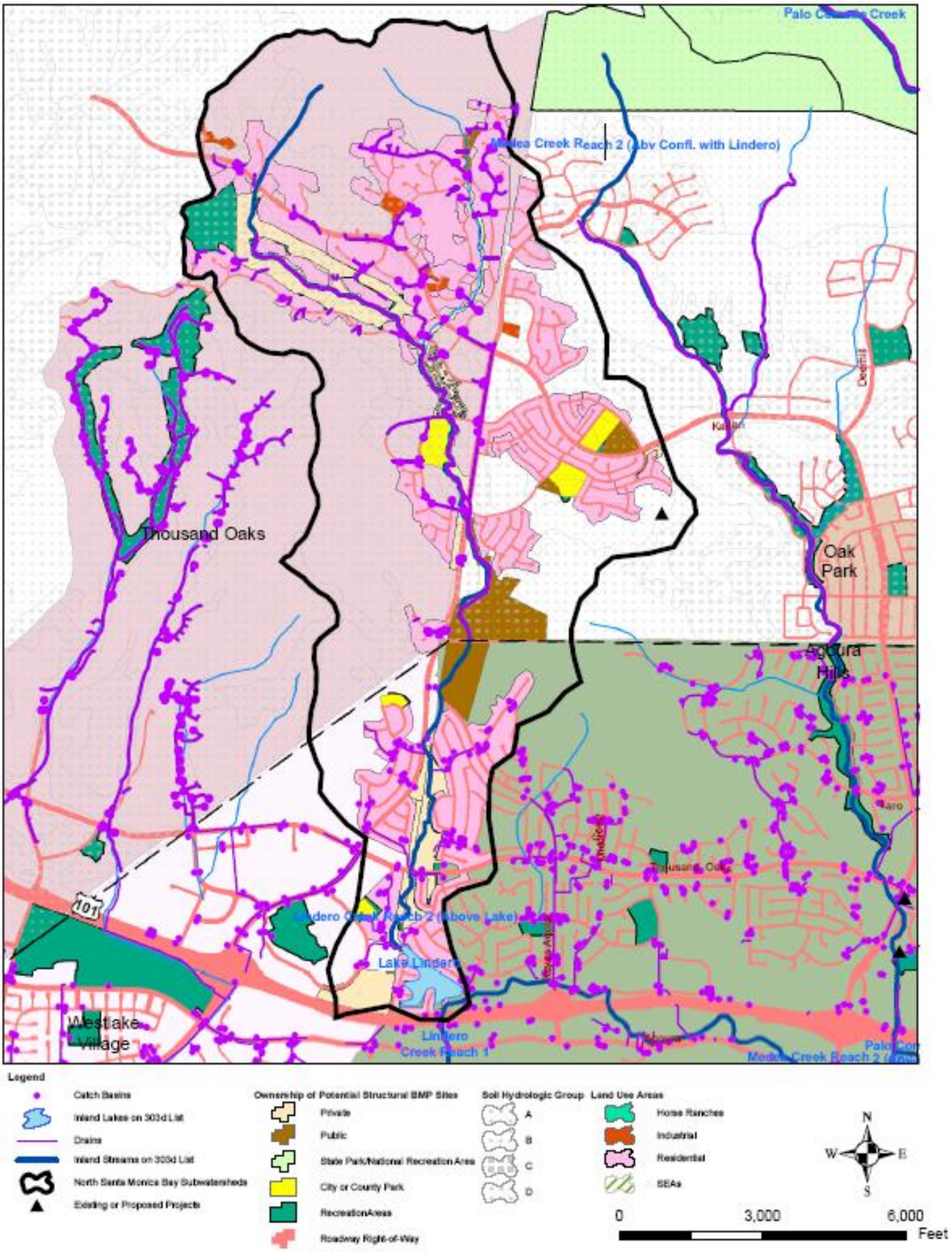

Figure 3. Upper Lindero Creek Subwatershed.

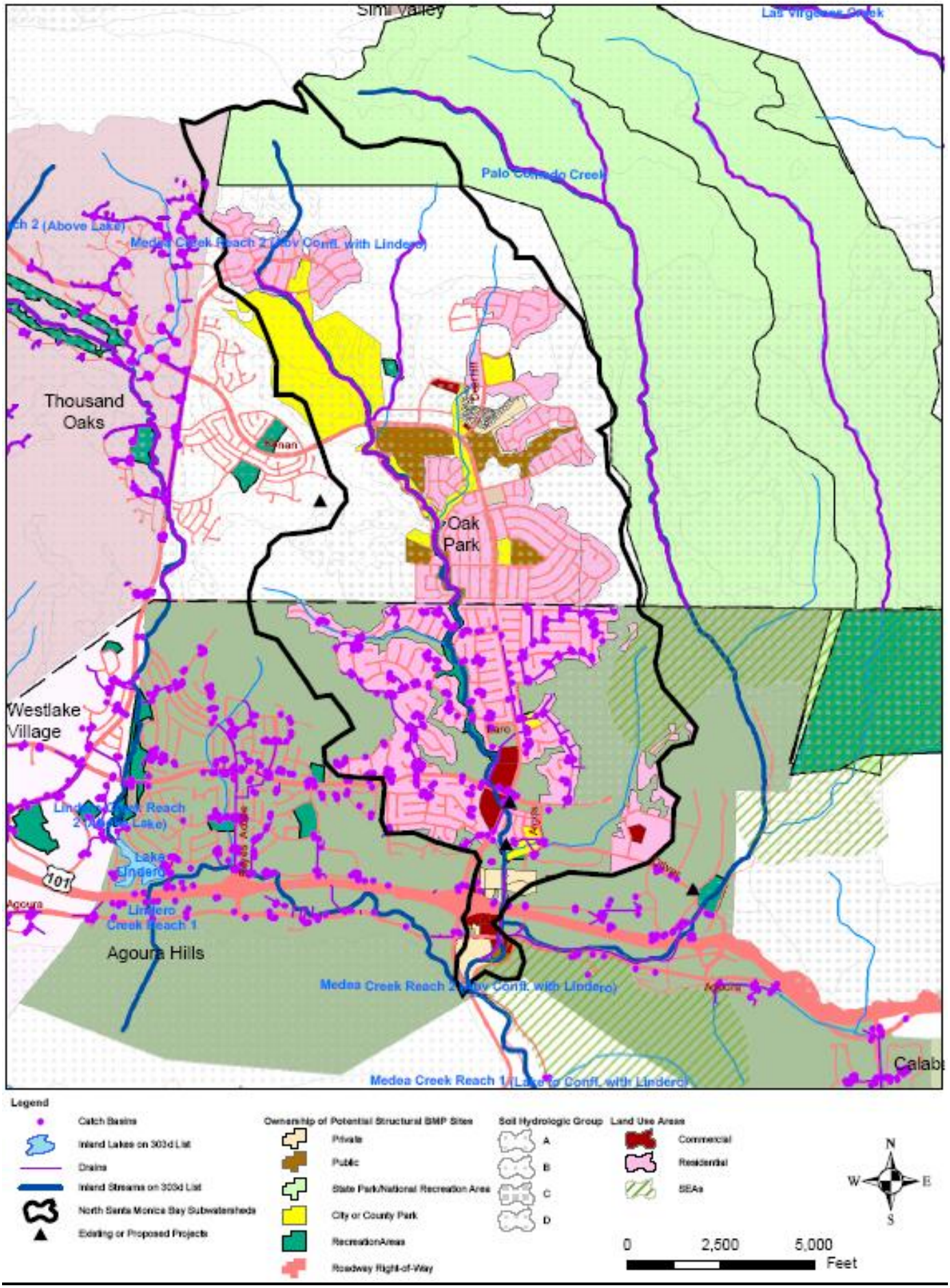

Figure 4. Upper Medea Creek Subwatershed.

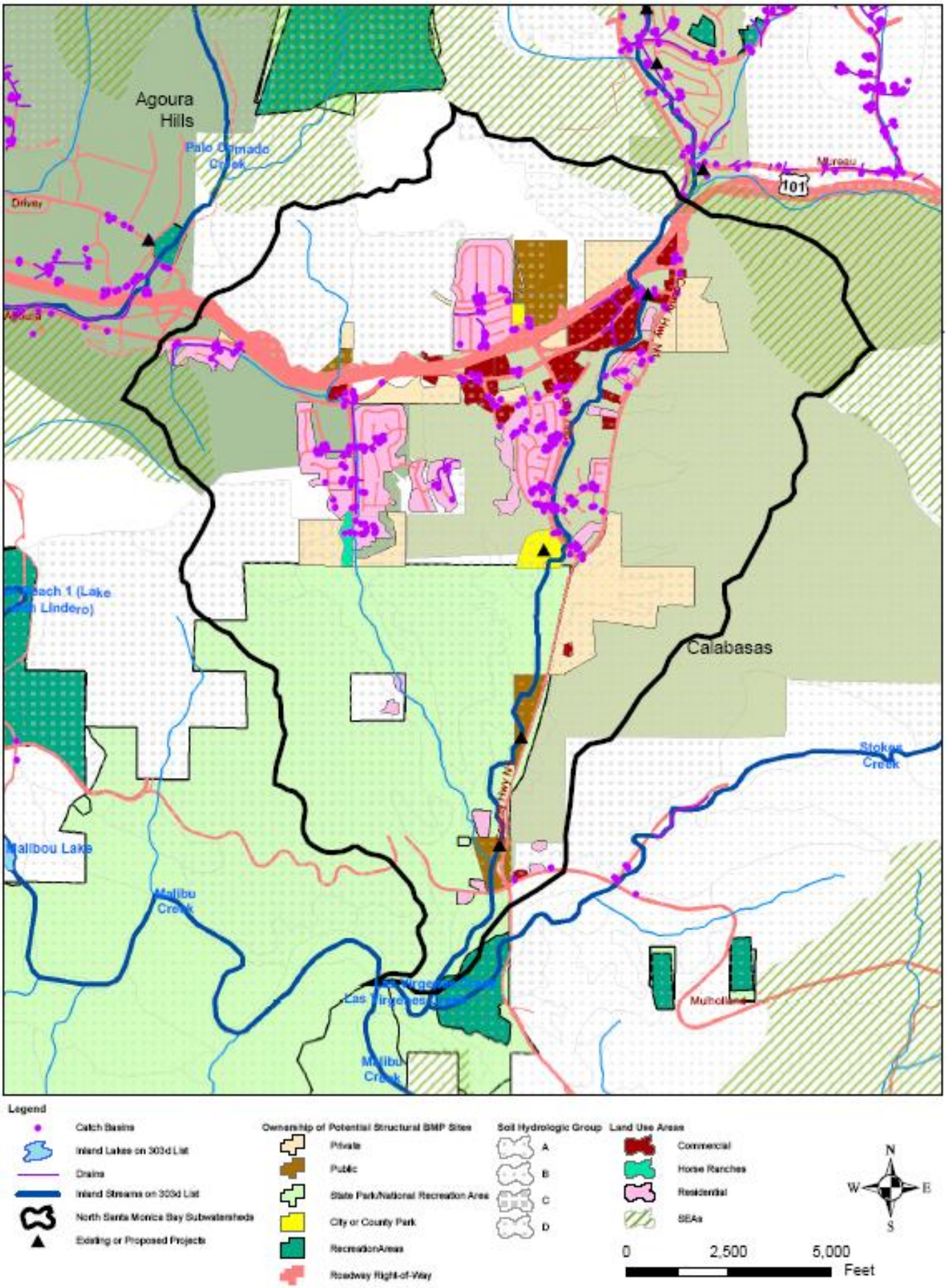

Figure 5. Lower Las Virgenes Creek Subwatershed

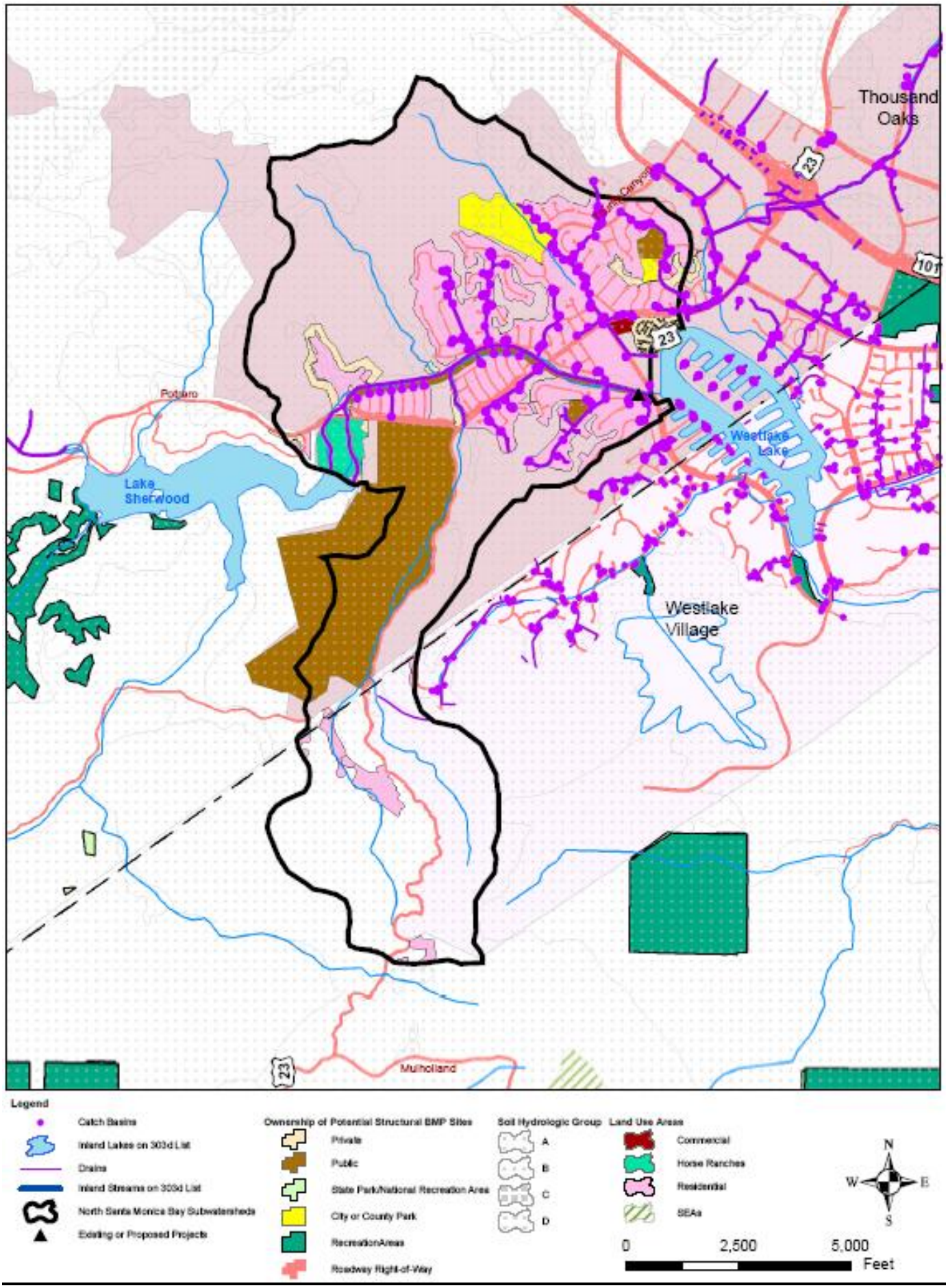

Figure 6. Potrero Canyon Creek Subwatershed

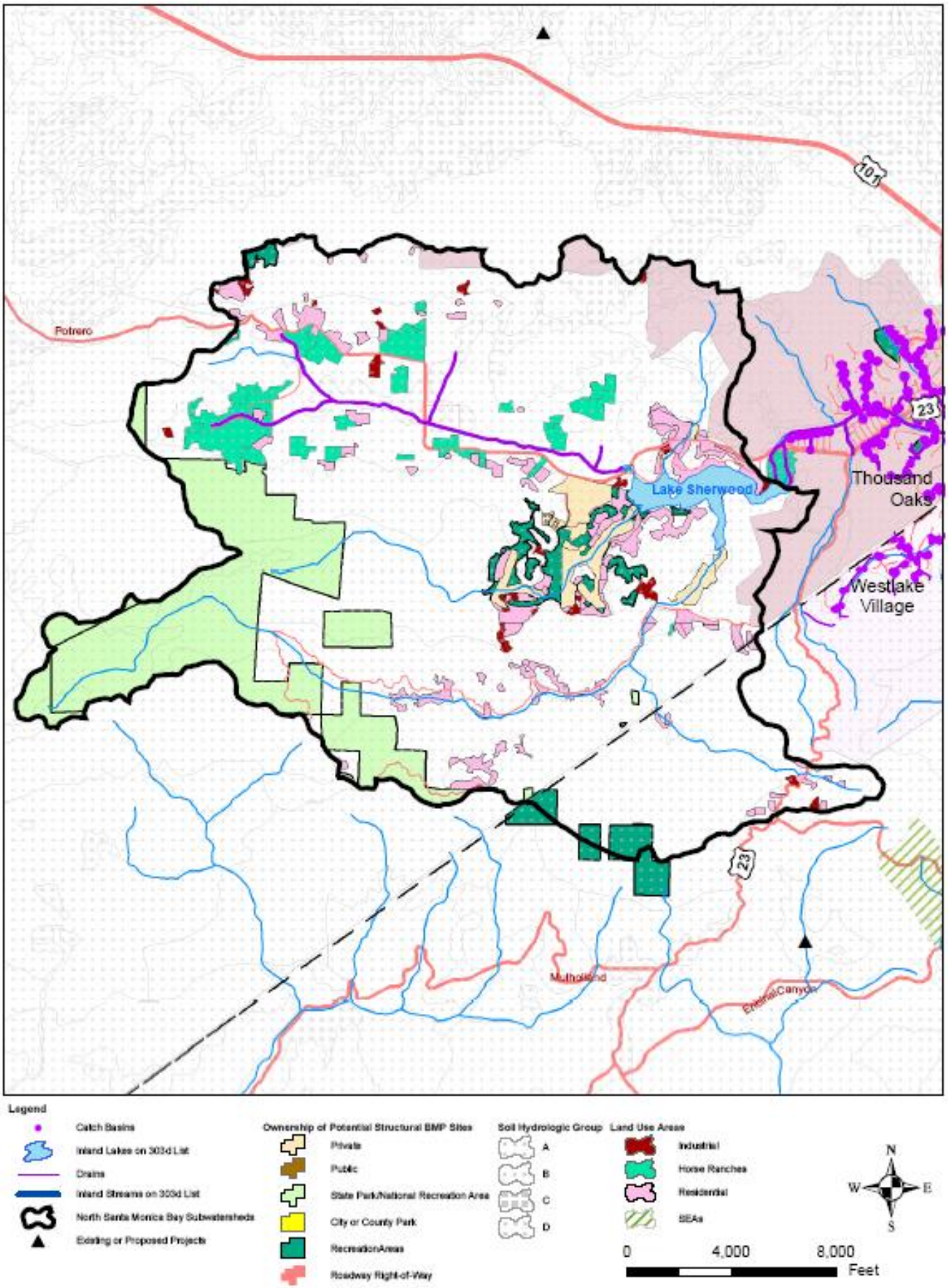

Figure 7. Hidden Valley Creek Subwatershed.

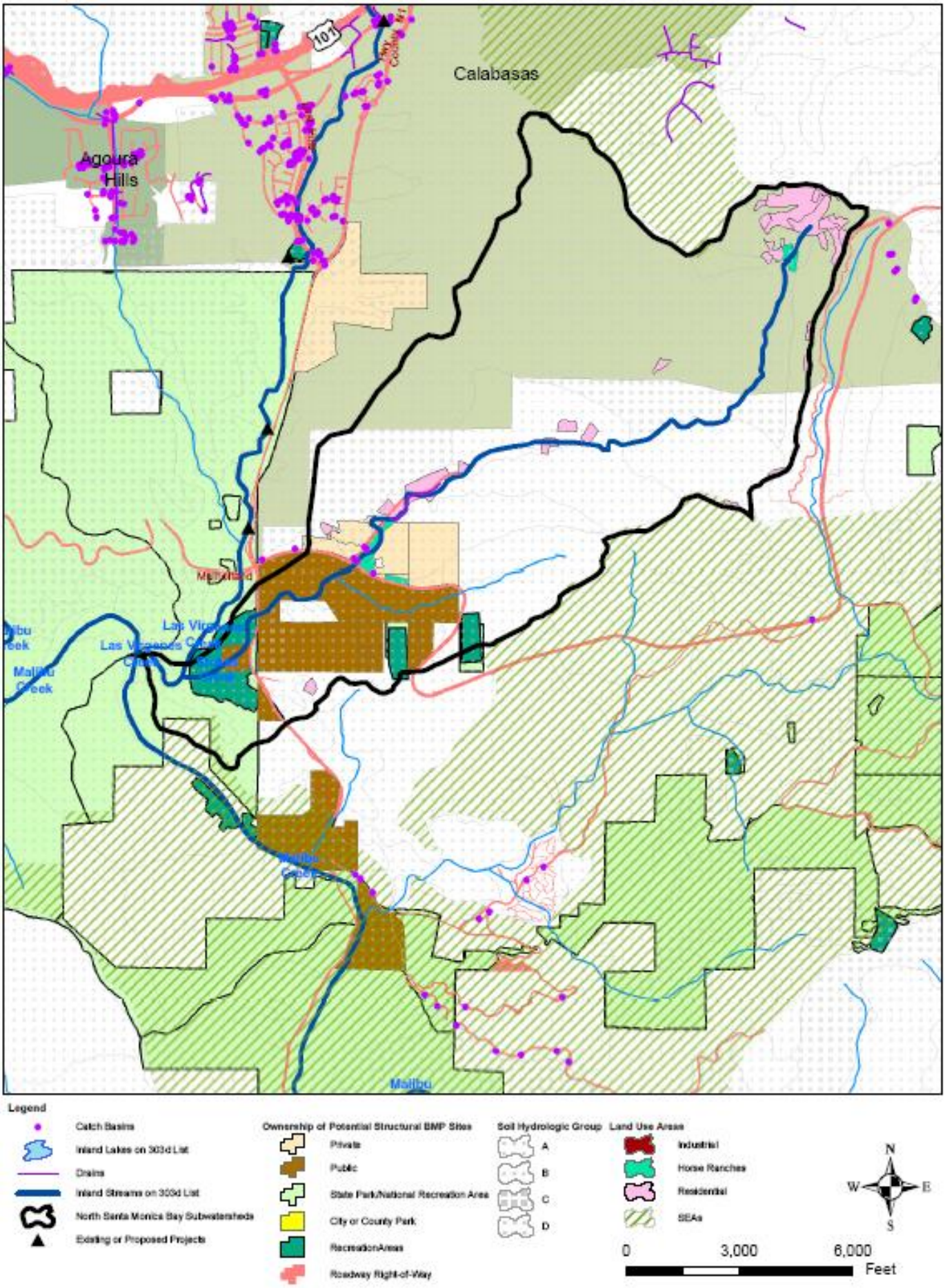

Figure 8. Stokes Creek Subwatershed.

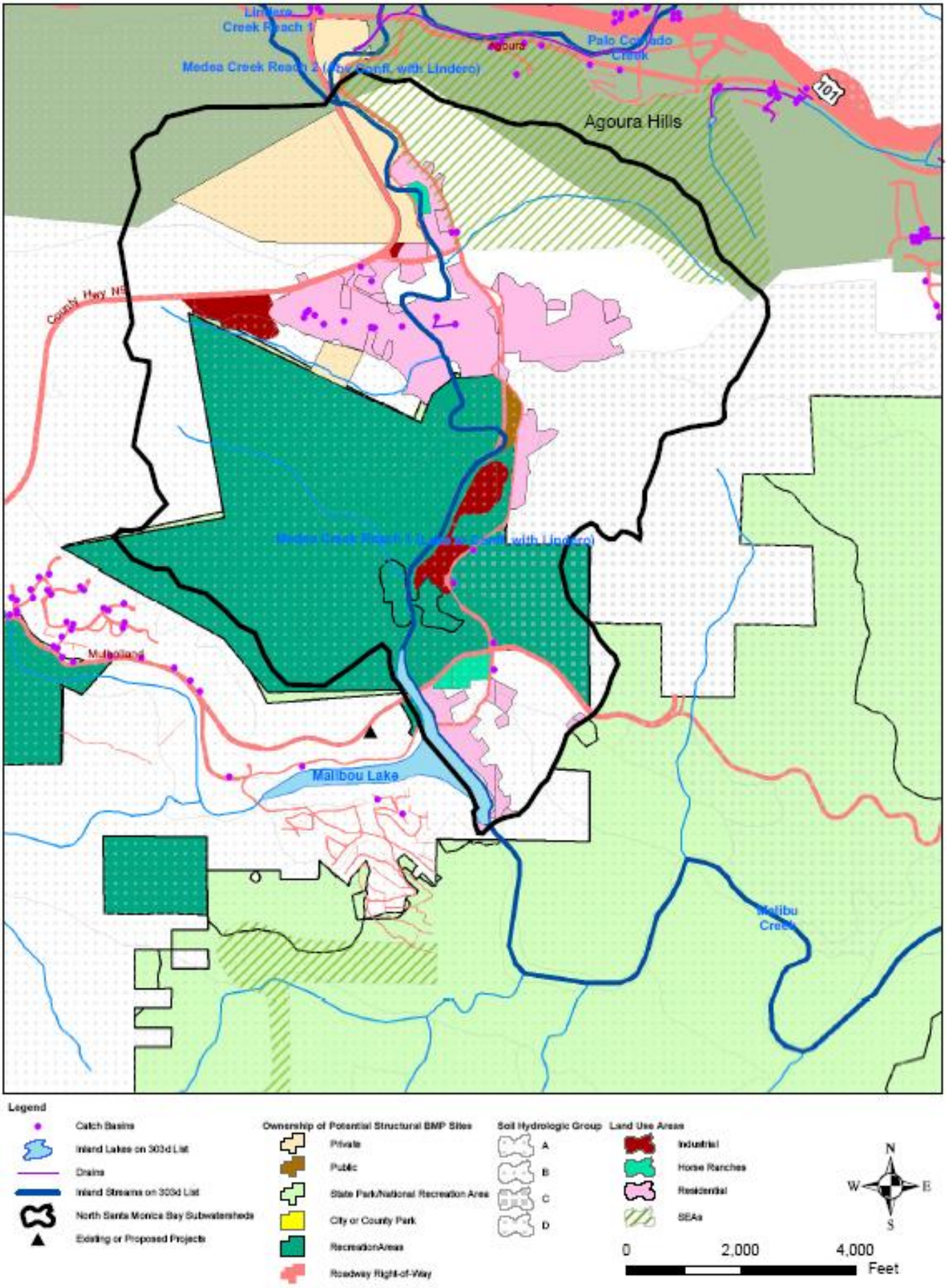

Figure 9. Lower Medea Creek Subwatershed.

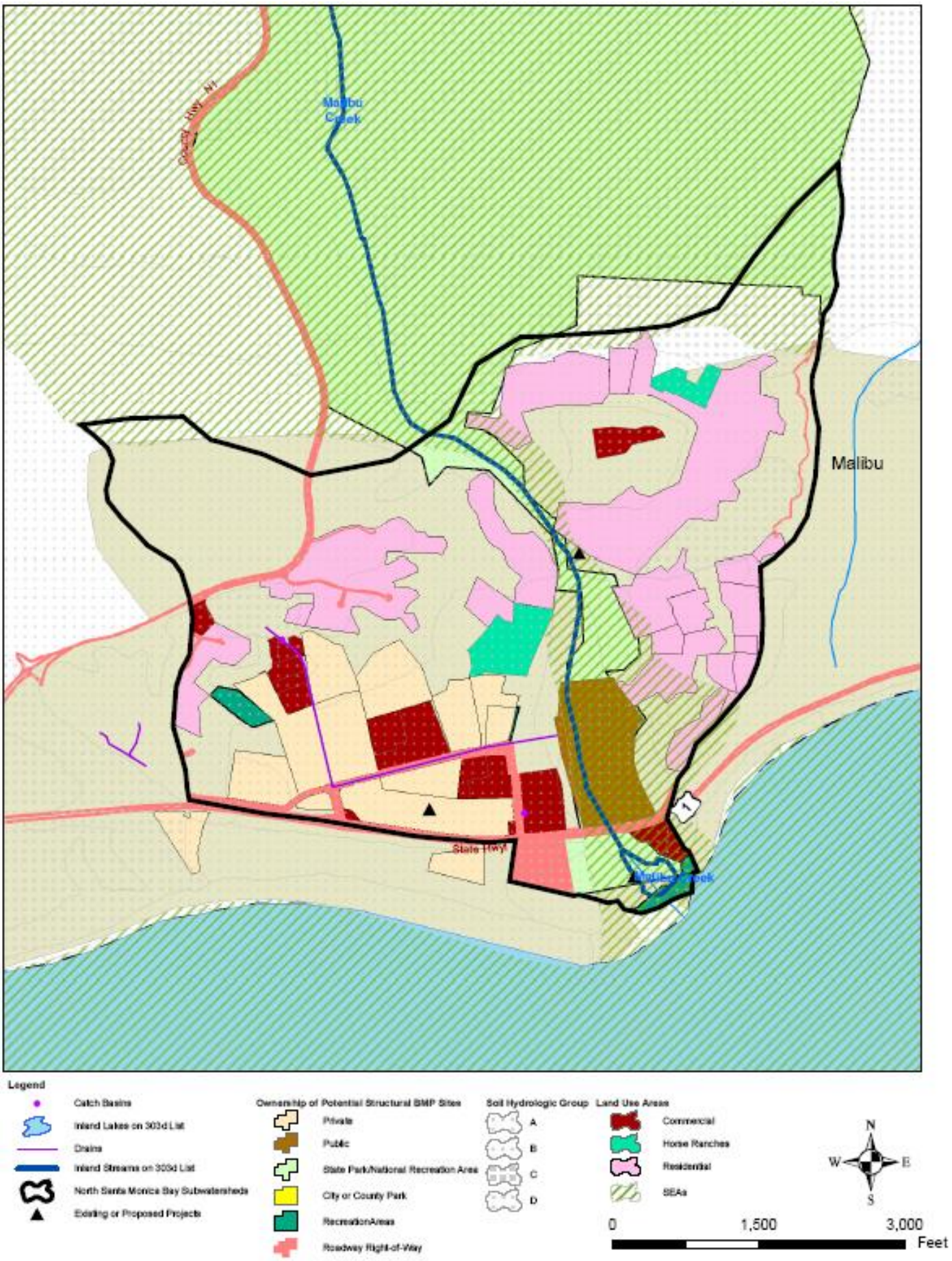

Figure 10. Malibu Lagoon Subwatershed.