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  + Comments are due by April 28, 2023

This Appendix contains instructions and hyperlinks to commonly used platforms and tools for developing a SWCP. The summary table below indicates the location of information in this appendix.

|  |  |  |
| --- | --- | --- |
| Table Number | Table Title | Notes |
| A-1 | Identifying MS4 Area Boundaries and Watershed Management Zone | Step by step instructions for digital mapping tools to identify MS4 boundaries and WMZs in San Luis Obispo County. |
| A-2 | Web resources and reference hyperlinks | Descriptions and hyperlinks to web resources commonly used in formulating Stormwater Control Plans. |

*Please email* [*stormwater@co.slo.ca.us*](mailto:stormwater@co.slo.ca.us) *if any links are discovered to be non-functional. This resource was most recently updated in January 2023.*

Table A-1: Identifying MS4 Area Boundaries and Watershed Management Zones

| Instructions for utilizing Land Use View online mapping tools | |
| --- | --- |
| Step 1: Navigate to the County of San Luis Obispo Planning & Building Department web page. <https://www.slocounty.ca.gov/Departments/Planning-Building.aspx> | |
| Step 2: Select the icon for “Interactive Map” shown on the main page to load the Land Use View application. | Logo, icon  Description automatically generated with medium confidence |
| Step 3: Select ‘Layers’ in the lower left menu bar. | Text  Description automatically generated |
| Step 4: Expand the Layers group named “Planning” | Graphical user interface, text, application, email  Description automatically generated |
| Step 5: Expand the Layer named “Stormwater Management Areas” Turn on the Layer named “MS4 Coverage Areas” | Graphical user interface, application  Description automatically generated |
| Step 6: Expand the Layer named “Environment” and expand the group named “Water” | Graphical user interface, text, application, email  Description automatically generated |
| Step 7: Turn on the Layer named “PW-Watershed Management Zones” | 4Graphical user interface, application  Description automatically generated |
| Step 7: Use the map to navigate to your project location or enter the APN in the ‘Search’ box to determine whether it is in a MS4 Coverage Area and the applicable Watershed Management Zone. | |

Table A-2: Web resources and reference hyperlinks

| Page Hosting Agency | Site Title | Description | Link: |
| --- | --- | --- | --- |
| Central Coast Regional Water Quality Control Board. | Central Coast Region Post-Construction Stormwater Requirements | Resources and documents related to Resolution R3-2013-0032. | [https://www.waterboards.ca.gov/centralcoast/water\_issues/programs/stormwater](https://www.waterboards.ca.gov/centralcoast/water_issues/programs/stormwater/docs/lid/lid_hydromod_charette_index.html) |
| County of San Luis Obispo, Public Works Department | Stormwater Requirements for New Construction | Resources page with instructions and forms for construction permit applications.  Includes County PCR Waiver Request form, SWCP App, SWCP Template. | <https://www.slocounty.ca.gov/Departments/Public-Works/Services/Programs-Outreach/Stormwater-Requirements-for-New-Construction.aspx> |
| County of San Luis Obispo, Planning & Building Department | Post-Construction Stormwater Management | Resources page with forms and instructions for County long-term operations and maintenance agreements.  Includes O&M Agreement forms and templates. | <https://www.slocounty.ca.gov/Departments/Planning-Building/Department-Services/Agriculture,-Water,-and-Energy/Stormwater/Post-Construction-Stormwater-Management.aspx> |
| County of Santa Barbara,  Public Works Department | New and Redevelopment | Stormwater control plan manual and design resources.  Includes Stormwater Control Measures Sizing Calculator and instructions. | <https://www.countyofsb.org/2324/New-Redevelopment> |
| Environmental Protection Agency, Southwest Region 9 | Underground Injection Well Registration | Resources page with instructions and links for registering dry wells and underground stormwater chamber systems. | <https://www.epa.gov/uic/forms/underground-injection-well-registration-epas-pacific-southwest-region-9> |
| State of Washington,  Department of Ecology | Emerging Stormwater Treatment Technologies (TAPE) | Stormwater treatment technologies reviewed and certified by the Washington state Technology Assessment Protocol – Ecology (the TAPE program). | <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies> |
| Central Coast Low Impact Development Initiative (LIDI) | LID Design and Construction | Resources to guide LID design and construction for the central coast region. | <https://www.centralcoastlidi.org/projects.php> |
| State Water Resources Control Board | GeoTracker | Water Board’s data management system for sites that impact or have the potential to impact ground water quality in California. | <https://geotracker.waterboards.ca.gov/> |
| County of San Luis Obispo, Planning & Building Department | Buildings and Construction Code, Title 19 | Current County code Title 19 detailing requirements for buildings and construction. Chapter 19.11 details stormwater management requirements. | <https://library.municode.com/ca/san_luis_obispo_county/codes/county_code?nodeId=TIT19BUCO> |
| County of San Luis Obispo, Public Works Department | Public Improvement Standards | Current County Public Improvement Standards, most recent version adopted in 2022. | <https://www.slocounty.ca.gov/Departments/Public-Works/Forms-Documents/Development-Services/Public-Improvements/Public-Improvement-Standards.aspx> |
| Central Coast Regional Water Quality Control Board. | Central Coast Region Post-Construction Stormwater Requirements | Resources and documents related to Resolution R3-2013-0032. | [https://www.waterboards.ca.gov/centralcoast/water\_issues/programs/stormwater](https://www.waterboards.ca.gov/centralcoast/water_issues/programs/stormwater/docs/lid/lid_hydromod_charette_index.html) |
| County of San Luis Obispo, Public Works Department | Stormwater Requirements for New Construction | Resources page with instructions and forms for construction permit applications.  Includes County PCR Waiver Request, SWCP App, SWCP Template. | <https://www.slocounty.ca.gov/Departments/Public-Works/Services/Programs-Outreach/Stormwater-Requirements-for-New-Construction.aspx> |

## Opportunities and Constraints Analysis

The suitability or infeasibility of a design strategy (or combination of design strategies) at a project site depends on the unique opportunities and constraints of the site. The objective of this assessment is to identify and preserve areas of the project site that favor PCR compliance (opportunities), while prioritizing development to those portions of the project site that do not (constraints). Ideally, the assessment of opportunities and constraints occurs prior to developing project concepts and site design, and identifies site-specific stormwater “opportunities” and “constraints” that can be utilized as a basis for creating a well-balanced project.

The County requires submittal of an opportunities and constraints checklist and demonstration map (per the PCRs) for projects that trigger PR#3 and above, and to demonstrate the criteria are met for a technical infeasibility finding. Applicants must complete the following pages and submit the analysis as an attachment to the SWCP if requesting a technical infeasibility finding. A separate opportunities and constraints site map reflecting the data in this appendix is also required.

Applicants are encouraged to thoroughly review the criteria associated with technical infeasibility in Resolution R3-2013-00032 when determining the applicability to their project.

# Opportunities & Constraints Checklist

## Existing Vegetation

Preserve or minimize disturbance to existing natural vegetated features. Designs that integrate natural features of the project site are better at mimicking pre-development runoff characteristics. Effective management of both existing and proposed site vegetation can reduce a development’s impact on stormwater runoff quality and quantity.

|  |  |
| --- | --- |
| Yes  No  N/A | *Existing, high-quality vegetation has been identified and noted on the Opportunity and Constraints Map. Access to these areas will be restricted during construction.* |
| Yes  No  N/A | *Existing trees have been identified and noted on the Opportunity and Constraints Map. The location of tree protection fencing is identified to restrict site disturbance and protect these locations during construction.* |
| Yes  No  N/A | *Notes have been included on the corresponding site plans in areas where highly visible temporary fencing shall be placed around vegetation and tree areas that are to be preserved during construction.* |

## Survey and Site Topography

Identify opportunities and constraints within site topography and natural drainage patterns that can be incorporated into the design. Integrating existing drainage patterns into the site plan can maintain a site’s predevelopment hydrologic function and will result in lower construction costs over sites that modify site topography and develop new drainage patterns.

|  |  |
| --- | --- |
| Yes  No  N/A | *The site has been surveyed and a topographic base file has been created to identify topography and natural drainage patterns.* |
| Yes  No  N/A | *Existing low-spots and sumps within the topography have been identified on the Opportunity and Constraints Map. These areas will be preserved and utilized as BMP locations where technically feasible.* |
| Yes  No  N/A | *Existing high-spots within the topography have been identified on the Opportunity and Constraints Map. These areas be preserved for placement of structures or hardscapes where feasible, allowing runoff to drain to low lying areas for treatment.* |
| Yes  No  N/A | *Areas within 50 feet from the top of slopes that are greater than 20% and over 10 feet of vertical relief have been identified on the Opportunity and Constraints Map. Notes on the map indicate that SCMs are not authorized within these areas.* |

## Soil Analysis

Native undisturbed soils have a complex matrix created by the growth and decay of plant roots, earthworms, and insect activity. Topsoil stripping and stockpiling destroys soil structure and diminishes natural biological activity. Avoid and limit unnecessary site disturbances during construction. Plan LID and SCM placement where soils support infiltration (Soil Groups A and B). To the extent feasible, plan buildings and structures and hardscapes placement where soils discourage infiltration (Soil Group C and D).

|  |  |
| --- | --- |
| Yes  No  N/A | *Locations where soils encourage infiltration (Soil Group A and B) have been identified on the Opportunity and Constraints Map. Where feasible, these areas have been preserved or dedicated to SCM locations.* |
| Yes  No  N/A | *Locations* *where soils discourage infiltration (Soil Group C and D) have been identified on the Opportunity and Constraints Map. Where feasible, these locations have been dedicated to the proposed project improvements such as structures and hardscapes, or contractor staging and equipment storage areas, etc.* |
| Yes  No  N/A | *Locations* *where existing structures and hardscapes will be removed during construction (exposing highly compacted soils) have been identified on the Opportunity and Constraints Map. Placement of SCMs has been avoided in these areas.* |

## Geotechnical Analysis

Data from the preliminary geotechnical analysis or soil borings should be evaluated to support identification of opportunities and constraints. These areas should be specifically identified with limits noted on the Opportunities and Constraints Map.

|  |  |
| --- | --- |
| Yes  No | *The site contains areas designated as an erosion hazard, or landslide hazard.* |
| Yes  No | *The site contains groundwater that drains into an erosion hazard, or landslide hazard area.* |
| Yes  No | *The geotechnical report identified contaminated soils:*  *These soils will be removed during construction.*  *These soils will remain in place during construction.* |
| Yes  No  N/A | *The groundwater table elevation (including seasonally high and historically high) has been determined.* |
| Yes  No | *The seasonally high groundwater table elevation is at least 10-feet below the proposed invert elevations of the proposed SCMs.* |
| Yes  No  N/A | *Fractured bedrock identified through geotechnical testing is at least 10-feet below the proposed invert elevations of the proposed SCMs.* |
| Yes  No | *Infiltration testing has been performed onsite at the proposed SCM locations and the geotechnical report has identified that the site is suitable for infiltration.* |

## Setbacks

Establish setbacks and buffer zones surrounding restricted and/or sensitive areas. Identify all areas where SCMs cannot be constructed due to setback requirements. Examples include existing and proposed building foundations, municipal water wells, private water wells, septic systems, easements, etc.

|  |  |
| --- | --- |
| Yes  No  N/A | *Private potable water wells in the vicinity have been identified (onsite and offsite) and a minimum offset radius has been established indicating where infiltration SCMs are not authorized.* |
| Yes  No  N/A | *Municipal potable water wells in the vicinity have been identified (onsite and offsite) and a minimum offset radius has been established indicating where infiltration based SCMs are not authorized.* |
| Yes  No  N/A | *Within the Coastal Zone, a setback of 100-feet has been established from the upland extent of riparian vegetation. The limits of these setbacks are indicated on the Opportunity and Constraints map.* |
| Yes  No  N/A | *Within the Urban Reserve Lines, a setback of 50-feet has been established from the upland extent of riparian vegetation. The limits of these setbacks are indicated on the Opportunity and Constraints map.* |
| Yes  No  N/A | *A setback of 10-ft has been established from all property lines to SCMs and the limits of these setbacks have been indicated on the Opportunity and Constraints Map.* |
| Yes  No  N/A | *A setback of 10-ft has been established from all existing and proposed building foundations with notes indicating infiltration SCMs are not authorized within these limits.* |

## Hydrology Features

Identify onsite and offsite downstream waterways, including creeks, wetlands, watercourse, seeps, riparian zones areas of 100-year flood inundation, potential stormwater run-on locations and depths to groundwater. All areas of hydrologic importance should be delineated at the earliest stage in the development planning process.

|  |  |
| --- | --- |
| Yes  No  N/A | *Hydrological features such as creeks, wetlands, riparian zones, etc. have been identified and incorporated into the Opportunity and Constraints Map.*  *Notes have been added to the Opportunity and Constraint Map indicating that these areas will be protected by exclusionary fencing during construction to prevent resource damage.* |
| Yes  No  N/A | *The pre-developed site drainage pathways have been identified and the limits of these features have been placed onto the Opportunities and Constraints Map.* |
| Yes  No  N/A | *Existing storm drain infrastructure, including potential points of connection have been identified and placed onto the Opportunities and Constraints Map.* |
| Yes  No  N/A | *Stormwater run-on locations have been identified and placed onto the Opportunities and Constraints Map.* |

## Hazardous Areas & Pollutants of Concern (POCs)

Identify locations where existing or future pollutants may occur onsite and identify features that may prevent these pollutants from being exposed to stormwater runoff. Examples include chemical storage locations, fueling stations, and industrial operation areas.

|  |  |
| --- | --- |
| Yes  No  N/A | *Existing hazardous storage areas and POC sources have been identified and* *placed onto the Opportunities and Constraints Map.* |
| Yes  No  N/A | *Proposed hazardous storage areas and POC sources have been identified and* *placed onto the Opportunities and Constraints Map.* |

# Class V Well Requirements

Dry wells and other sub-surface stormwater infiltration practices or technologies serving uses other than single-family homes are considered Class V wells, subject to US Environmental Protection Agency (US EPA) regulations. Typically, Class V wells are shallow wells used to place a variety of fluids directly below the land surface. By definition, a well is “any bored, drilled, driven shaft, or dug hole that is deeper than its widest surface dimension, or an improved sinkhole, or a subsurface fluid distribution system” and an “injection well” is a “well” into which “fluids” are being injected (40 CFR §144.3). Stormwater dry wells and other sub-surface stormwater infiltration practices/technologies may be authorized to operate as long as they are registered with the US EPA, and only inject uncontaminated stormwater.

Applicants that submit drainage plans to the County for review will be notified of the need to register if the plans include a Class V system. The County requires Class V Well registration as part of permitting new development and will include a condition on the construction permit requiring registration. A condition for *‘Public Works Inspection prior to Final’* will be added to the building permit with notes that the applicant must submit evidence to Public Works they have registered their Class V system with the US EPA’s Region 9 Office. There is no fee associated with registration, and there are no ongoing reporting requirements. Applicants can satisfy the building permit condition by providing evidence of system registration to Public Works. A confirmation email and registration number from the US EPA are sufficient evidence of registration.

### Local Requirements

There are no detailed State or Federal requirements for the design or approval of new Class V systems. However, the County is the local authority responsible for ensuring that new Class V wells do not endanger underground drinking water supplies. The County’s requirements are intended to ensure that new systems meet the minimum requirements set forth by the US EPA to and protect underground water supplies. The County reserves the right to reject site designs that include underground infiltration systems in settings deemed high risk by the County’s Environmental Health Department.

Per the County’s Public Improvement Standards, underground infiltration system and dry well designs must incorporate a stormwater pretreatment device or features to protect groundwater, remove solids, and ensure that particulate debris can be isolated from inflows.

The County requires that pretreatment for Class V systems meet one of the following two criteria:

1. Pretreatment proprietary devices certified by the Technology Assessment Protocol Ecology (TAPE) Program supported by the Washington State Department of Ecology. Devices certified in the Pretreatment or General Use Level Designation (GULD) technologies are acceptable.
2. The pretreatment requirements for PR#2 are met entirely upstream of the infiltration system through at-grade LID features such as bioretention or biofiltration features, and a settling vault or sump is installed.

Underground infiltration systems do not meet the standards to qualify as Low Impact Development. Accordingly, Designers should demonstrate that a minimum of 30% of the site’s post-construction runoff volume has been managed through at-grade LID strategies before proposing underground infiltration chambers or other Class V infrastructure.

Chapter 4 of the Post-Construction Stormwater Guidebook includes additional information about structural and groundwater setbacks for siting Class V infrastructure.

### Soil Report Data

A soils report will be required to demonstrate soil infiltration rates in the location and elevation of the proposed underground infiltration system and the minimum distance to seasonally high groundwater. See Chapter 4 of the Post-Construction Guidebook for additional information about required soils and infiltration testing and applicable factors of safety.

The soils report must include a statement indicating that the site soils at the proposed system location and elevation are suitable for an underground infiltration system and will not present a hazard to the site, adjoining properties, or the public right-of-way.

### Groundwater Setbacks

The minimum vertical groundwater setback for underground infiltration systems is 10 feet from the elevation of seasonally high groundwater. Soil types with high infiltration rates require additional setback distance to ensure adequate soil contact time in the vadose zone.

Table C-1:Groundwater setbacks for underground infiltration systems, Class V systems

|  |  |
| --- | --- |
| Infiltration Rate | Minimum setback to seasonally high groundwater |
| <1 minute per inch | 50 feet |
| 1-4 minutes per inch | 20 feet |
| >5 minutes per inch | 10 feet |

### Construction Requirements

Underground infiltration infrastructure is typically installed very early in the construction process. Protecting drain inlets to underground infiltration systems is of paramount importance during site construction.

Protective measures should be well documented in the erosion and sediment control plan or in the site’s Stormwater Pollution Prevention Plan. Protective BMPs and their required maintenance frequency should be noted on grading and drainage plans. Drain inlets should remain offline until site surfaces have been stabilized with permanent stabilization measures.

Construction managers should call for all milestone inspections noted on their issued permit. County inspectors will observe and inspect the infrastructure at each milestone involved with installation of the underground system.

### Inspection Ports

The County requires that an observation well or inspection port be installed in every other row of chambers where multiple rows are installed. Where practical, an additional observation well that extends into the foundation gravel bed should also be installed for each series of chambers. All inspection and maintenance access ports should also be labeled “STORM”, accessible for inspection and maintenance at all times.

Table C-2: Web resources and reference hyperlinks for underground infiltration systems and dry wells

|  |  |  |  |
| --- | --- | --- | --- |
| Page Hosting Agency | Site Title | Description | Link: |
| United States Environmental Protection Agency | Basic Information About Class V Injection Wells | Resources page with information about types, uses and requirements for Class V wells. | <https://www.epa.gov/uic/basic-information-about-class-v-injection-wells> |
| United States Environmental Protection Agency | Federal Requirements for Class V Wells | Resources page with information about submitting inventory information. | <https://www.epa.gov/uic/federal-requirements-class-v-wells> |
| Environmental Protection Agency, Southwest Region 9 | Class V Underground Injection Well Registration | Resources page with instructions and links for registering dry wells and underground stormwater chamber systems. | <https://www.epa.gov/uic/forms/underground-injection-well-registration-epas-pacific-southwest-region-9> |
| State of Washington,  Department of Ecology | Emerging Stormwater Treatment Technologies (TAPE) | Stormwater treatment technologies reviewed and certified by the Washington state Technology Assessment Protocol – Ecology (the TAPE program). | <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies> |
| County of San Luis Obispo, Public Works Department | Public Improvement Standards | Current County Public Improvement Standards, most recent version adopted in 2022. | <https://www.slocounty.ca.gov/Departments/Public-Works/Forms-Documents/Development-Services/Public-Improvements/Public-Improvement-Standards.aspx> |

Guide to Plant Palette Tables

The plant palettes provided in tables D-1 through D-10 of this appendix provide shortened lists of species known to be successful in vegetated stormwater features throughout San Luis Obispo County. The palettes include descriptions of species, recommended planting zones, and recommended planting sizes.

|  |  |  |
| --- | --- | --- |
| Table Number | Table Title | Notes |
| D-1 | Roadside Plant Palette (without trees) | Palette suggested for roadside stormwater features. Designed to ensure low vegetation height, without long-term irrigation. |
| D-2 | Approved Roadside Trees for Stormwater Features | Subset of the approved tree list included in County of San Luis Obispo 2022 Public Improvement Standards. |
| D-3 | Basic Commercial Palette, Coastal | Palette suggested for coastal commercial developments where heavy foot and vehicle traffic may be present. |
| D-4 | Basic Commercial Palette, Inland | Palette suggested for inland commercial developments where heavy foot and vehicle traffic may be present. |
| D-5 | Flowering Commercial Palette, Coastal | Palette suggested for coastal commercial developments. Features species with more prominent flowers than the basic palette. |
| D-6 | Flowering Commercial Palette, Inland | Palette suggested for inland commercial developments. Features species with more prominent flowers than the basic palette. |
| D-7 | Basic Residential Palette, Coastal | Low maintenance palette of native species with modest color variation. Species adapted for success in cooler coastal climates. |
| D-8 | Basic Residential Palette, Inland | Low maintenance palette of native species with modest color variation. Species adapted for success in warmer and dryer inland climates. |
| D-9 | Flowering Residential Palette Coastal | Moderate maintenance palette of native species with showy seasonal flowers. Palette thrives with supplemental irrigation during dry months. |
| D-10 | Flowering Residential Palette, Inland | Moderate maintenance palette of native species with showy seasonal flowers. Palette thrives with supplemental irrigation during dry months. |

Table D-1: Roadside Plant Palette (without trees)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Common Name | Scientific Name | Native | Zone | Description | Type | Size |
| California Grey Rush | *Juncus patens* | Yes | A | Tolerates poor drainage, drought, shade, and resists deer. | Grass-like | 1-gallon |
| Clustered field sedge | *Carex praegracilis* | Yes | A | Tolerates wide range of growing conditions, foot traffic. | Grass | Plugs |
| Deer Grass | *Muhlenbergia rigens* | Yes | A | Highly drought tolerant but can tolerate regular water. Large bunch grass. | Grass | 1-gallon |
| Common yarrow | *Achillea millefolium* | Yes | A, B | Tolerates regular watering, occasional summer watering required inland. Can be mowed, handles foot traffic. | Perennial, Upright herb | 1-gallon or Seed |
| Coffeeberry | *Rhamnus californica* | Yes | B | Deer resistant. Fire resistant when watered regularly. | Shrub | 5-gallon |
| Toyon | *Heteromeles arbutifolia* | Yes | B | Tolerates sand, clay and serpentine soils, seasonal water with good drainage. | Shrub | 5-gallon |
| Sky Lupine | *Lupinus nanus* | Yes | B | Annual spring wildflower which prefers lean soil and will self-sow. | Annual herb | Seed |
| California Poppy | *Eschscholzia californica* | Yes | B | Orange flowering perennial in spring-late spring, self-seeds, can tolerate periodic inundation. | Perennial | Seed |

Table D-2: Approved Roadside Trees for Stormwater Features  
This table includes a subset of roadside trees approved in the County’s 2022 Public Improvement Standards.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Common Name | Scientific Name | Drought Tolerant | Native | Water Use | Region |
| California Bay Laurel | *Umbellularia californica* | Yes | Yes | Moderate | Coastal |
| Coast Live Oak | *Quercus agrifolia* | Yes | Yes | Very Low | Coastal & Inland |
| Cork Oak | *Quercus suber* | Yes | Yes | Low | Coastal |
| Goldenrain Tree | *Koelreuteria paniculata* | Yes | No | Moderate | Inland |
| Interior Live Oak | *Quercus wislizenii* | Yes | Yes | Very Low | Inland |
| London Plane Tree | *Platanus acerifolia* | No | No | Moderate | Coastal & Inland |
| Maidenhair Tree | *Gingko biloba ‘Fairmont’* | No | No | Moderate | Coastal & Inland |

Table D-3: Basic Commercial Palette (Coastal)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Common Name | Scientific Name | Exposure | Native | Zone | Description | Type | Size |
| Small Cape Rush | *Chondropetalum tectorum* | Full Sun-Part Sun | No | A, B | Tough, reed-like plant, tolerates boggy or clay soils. Evergreen. Drought tolerant once established. | Grass-like | 1-gallon |
| California Field Sedge | *Carex praegracilis* | Sun or Shade | Yes | A | Tolerates wide range of growing conditions, foot traffic. | Grass | plugs |
| California Grey Rush | *Juncus patens* | Sun-Part Sun | Yes | A | Tolerates poor drainage, drought, shade. Forms clumps from short rhizomes. | Grass-like | 1-gallon |
| California Sycamore | *Platanus racemosa* | Sun | Yes | B | Tolerates sand and clay soils, seasonal flooding, drought tolerant once established along coast. Likes sun and moderate water. | Tree | 15-gallon |
| Coast Live Oak | *Quercus agrifolia* | Sun-Shade | Yes | B | Tolerates drought, coastal fog, and winter wet. Evergreen, produces significant leaf duff. | Tree | 15-gallon |

Table D-4: Basic Commercial Palette (Inland)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Common Name | Scientific Name | Exposure | Native | Zone | Description | Type | Size |
| Small Cape Rush | *Chondropetal-um tectorum* | Full Sun-Part Sun | No | A, B | Tough, reed-like plant tolerates boggy or clay soils. Evergreen. Drought tolerant once established. | Grass-like | 1-gallon |
| Berkeley Sedge | *Carex divulsa* | Sun - Part Shade | Yes | A, B | Tolerates foot traffic. Best planted with regular to occasional irrigation. Fairly drought tolerant once established. Can be mowed to 4" for clean look. | Grass | plugs |
| California Grey Rush | *Juncus patens* | Sun-Part Sun | Yes | A | Tolerates poor drainage, drought, shade. | Grass-like | 1-gallon |
| California Sycamore | *Platanus racemosa* | Sun | Yes | B | Tolerates sand and clay soils, seasonal flooding, drought tolerant once established along coast. | Tree | 15-gallon |
| Coast Live Oak | *Quercus agrifolia* | Sun-Shade | Yes | B | Tolerates drought, coastal fog, and winter wet. Evergreen, produces significant leaf duff. | Tree | 15-gallon |

Table D-5: Flowering Commercial Palette (Coastal)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Common Name | Scientific Name | Exposure | Native | Zone | Description | Type | Size |
| Douglas Iris | *Iris douglasiana* | Sun-Full Shade | Yes | B | Fast growing. Full sun near coast, afternoon shade inland. Prefers richer soils. Tolerates sand, clay and serpentine soils and seasonal wet. Needs summer water. | Perennial | 1-gallon |
| Yarrow | *Achillea millefolium* | Sun-Part Shade | Yes | A, B | Tolerates regular watering, occasional summer watering required inland. Can be mowed, handles foot traffic. | Perennial, Upright herb | 1-gallon or Seed |
| California Goldenrod | *Solidago californica* | Sun-Part Shade | Yes | A, B | Late summer/fall yellow flowering perennial. Spreads by underground runners. Winter dormant. | Perennial | 1-gallon |
| Western Redbud | *Cercis occidentalis* | Sun | Yes | B | Small tree or large shrub. Tolerates clay, winter wet, drought. Pink/red blooms in spring prior to leaf bud out. | Tree | 15-gallon |

Table D-6: Flowering Commercial Palette (Inland)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Common Name | Scientific Name | Exposure | Native | Zone | Description | Type | Size |
| Sky Lupine | *Lupinus nanus* | Full Sun | Yes | B | Small purple flowers. Annual spring wildflower which prefers lean soil and will self-sow. | Annual herb | Seed |
| Yarrow | *Achillea millefolium* | Sun-Part Shade | Yes | A, B | Tolerates regular watering, occasional summer watering required inland. Can be mowed, handles foot traffic. | Perennial, Upright herb | 1-gallon or Seed |
| California Wild Rose | *Rosa californica* | Part Shade | Yes | A, B | Small pink flowers. Tolerates wide variety of soils, seasonal flooding, some drought but likes some moisture. | Shrub | 5-gallon |
| Western Redbud | *Cercis occidentalis* | Sun | Yes | B | Pink/red blooms in spring prior to leaf bud out. Small tree or large shrub. Tolerates clay, winter wet, drought. | Tree | 15-gallon |

Table D-7: Basic Residential Palette (Coastal)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Common Name | Scientific Name | Exposure | Native | Zone | Description | Type | Size |
| California Gray Rush | *Juncus patens* | Sun, shade | Yes | A | Tolerates poor drainage, drought, shade. Forms clumps from short rhizomes. | Grass-like | 1-gallon |
| Elk Blue California Grey Rush | *Juncus patens*  *'Elk Blue'* | Sun, shade | Yes | A | Tolerates poor drainage, drought, shade, and resists deer. Forms clumps from short rhizomes. | Grass-like | 1-gallon |
| San Diego Sedge | *Carex spissa* | Full Sun-Part Shade | Yes | A, B | Large clumping grass, tolerates alkaline, clay, serpentine soils, in or out of water, drought (once established) and resists deer. | Grass | 1-gallon |
| Toyon | *Heteromeles arbutifolia* | Sun-Part Sun | Yes | B | Tolerates sand, clay and serpentine soils, seasonal water with good drainage. No summer water after first year. | Shrub | 5-gallon |
| Pacific Wax Myrtle | *Myrica californica* | Sun-Part Sun | Yes | B | Large shrub/small tree. Tolerates seaside conditions, sand, clay & seasonal inundation. | Shrub | 5-gallon |
| Western Redbud | *Cercis occidentalis* | Sun | Yes | B | Small tree or large shrub. Tolerates clay, winter wet, drought. Pink/red blooms in spring prior to leaf bud out. | Tree | 15-gallon |

Table D-8: Basic Residential Palette (Inland)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Common Name | Scientific Name | Exposure | Native | Zone | Description | Type | Size |
| Deer Grass | *Muhlenbergia rigens* | Sun or Shade | Yes | B | Tolerates poor drainage, drought, shade. Forms clumps from short rhizomes. | Grass | 1-gallon |
| Small Cape Rush | *Chondropetal-um tectorum* | Full Sun-Part Sun | No | A, B | Tough, reed-like plant tolerates boggy or clay soils. Evergreen. Drought tolerant once established. | Grass-like | 1-gallon |
| San Diego Sedge | *Carex spissa* | Full Sun-Part Shade | Yes | A, B | Large clumping grass, tolerates alkaline, clay, serpentine soils, in or out of water. Drought tolerant (once established) and resists deer. | Grass | 1-gallon |
| Toyon | *Heteromeles arbutifolia* | Sun-Part Sun | Yes | B | Tolerates sand, serpentine and clay soils, seasonal water with good drainage. No summer water after first year. | Shrub | 5-gallon |
| California Goldenrod | *Solidago californica* | Sun-Part Shade | Yes | A, B | Late summer/fall yellow flowering perennial, spreads by underground runners. Winter dormant. | Shrub | 1-gallon |
| Coast Live Oak | *Quercus agrifolia* | Sun, Shade | Yes | B | Tolerates drought, coastal fog, and winter wet. Evergreen, produce significant leaf duff. | Tree | 15-gallon |

Table D-9: Flowering Residential Palette (Coastal)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Common Name | Scientific Name | Exposure | Native | Zone | Description | Type | Size |
| Deer Grass | *Muhlenbergia rigens* | Sun or Shade | Yes | B | Tolerates poor drainage, drought, shade. Forms clumps from short rhizomes. | Grass | 1-gallon |
| Small Cape Rush | *Chondropetal-um tectorum* | Full Sun-Part Sun | No | A, B | Tough, reed-like plant tolerates boggy or clay soils. Evergreen. Drought tolerant once established. | Grass-like | 1-gallon |
| San Diego Sedge | *Carex spissa* | Full Sun-Part Shade | Yes | A, B | Large clumping grass, tolerates alkaline, clay, serpentine soils, in or out of water. Drought tolerant (once established) and resists deer. | Grass | 1-gallon |
| Toyon | *Heteromeles arbutifolia* | Sun-Part Sun | Yes | B | Tolerates sand, serpentine and clay soils, seasonal water with good drainage. No summer water after first year. | Shrub | 5-gallon |
| California Goldenrod | *Solidago californica* | Sun-Part Shade | Yes | A, B | Late summer/fall yellow flowering perennial, spreads by underground runners. Winter dormant. | Shrub | 1-gallon |
| Coast Live Oak | *Quercus agrifolia* | Sun, Shade | Yes | B | Tolerates drought, coastal fog, and winter wet. Evergreen, produce significant leaf duff. | Tree | 15-gallon |

Table D-10: Flowering Residential Palette (Inland)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Common Name | Scientific Name | Exposure | Native | Zone | Description | Type | Size |
| Yarrow | *Achillea millefolium* | Sun-Part Shade | Yes | A, B | White or light pink flowers. Tolerates regular watering, occasional summer watering required inland. Can be mowed. | Perennial, Upright herb | 1-gallon or seed |
| California Poppy | *Eschscholzia californica* | Full Sun | Yes | B | Orange flowering perennial in spring-late spring. Self-seeds, can tolerate periodic inundation. | Perennial | Seed |
| California Wild Rose | *Rosa californica* | Part Shade | Yes | A, B | Small pink flowers. Tolerates wide variety of soils, seasonal flooding, some drought. | Shrub | 5-gallon |
| Coffeeberry | *Rhamnus californica (Frangula)* | Sun to Part Shade | Yes | B | Deer resistant. Fire resistant when watered regularly. | Shrub | 5-gallon |
| Elk Blue California Grey Rush | *Juncus patens 'Elk Blue'* | Sun, shade | Yes | A | Tolerates poor drainage, drought, shade, and resists deer. | Grass-like | 1-gallon |
| Western Redbud | *Cercis occidentalis* | Sun | Yes | B | Pink/red blooms in spring prior to leaf bud out. Small tree or large shrub. Tolerates clay, winter wet, drought. | Tree | 15-gallon |

Guide to Extended LID Plant Lists

The plant information provided in tables D-11 and D-12 of this appendix include a more extensive variety of species known to grow successfully in vegetated stormwater features throughout San Luis Obispo County. Species from these lists can be used to augment or modify any of the palettes suggested in tables D-1 through D-10.

|  |  |  |
| --- | --- | --- |
| Table Number | Table Title | Notes |
| D-11 | Extended Coastal Low Impact Development Plant List | Comprehensive table of ground cover, shrubs, and tree species adapted to succeed in coastal vegetated stormwater features. |
| D-12 | Extended Inland Low Impact Development Plant list | Comprehensive table of ground cover, shrubs, and tree species adapted to succeed in warmer inland climates. |

Table D-11: Extended Coastal Low Impact Development Plant List

| Common Name | Scientific Name | Height | Spread | Exposure | Type | Planting Zone | Tolerates Periodic Inundation | Erosion Control | Native | Notes |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Yarrow | *Achillea millefolium* | 1'-3' | 2' | Sun-Part Shade | Perennial | A, B | X | X | X | Tolerates regular watering to no watering, occasional summer watering helps keep plants attractive. Can be mowed, handles foot traffic. |
| Yerba Mansa | *Anemopsis californica* | 1' | 2' | Part Sun-Shade | Perennial | A, B |  |  | X | Prefers moist soil, does best in damp areas. Goes dormant from late summer to early winter. |
| Berkeley Sedge | *Carex divulsa* | 1' | Spreading | Sun - Part Shade | Grass | A, B | X |  |  | Good lawn substitute, can be planted in light shade. Tolerates foot traffic, dry to moist conditions. Blue-grey leaves. Can be mowed to 4" for clean look. |
| California Meadow Sedge | *Carex pansa* | 6"-8" | Spreading | Sun - Part Shade | Grass | A, B | X |  | X | Good lawn substitute. Tolerates wide range of growing conditions, foot traffic. Drought tolerant once established. Can be mowed occasionally (2-3 times per year) to 4" for clean look. |
| California Field Sedge | *Carex praegracilis* | <1' | Spreading | Sun or Shade | Grass | A, B | X | X | X | Good lawn substitute. Tolerates wide range of growing conditions, foot traffic. Bank stabilizer. |
| San Diego Sedge | *Carex spissa* | 3'-4' | 2'-3' | Full Sun-Part Shade | Grass | A, B | X | X | X | Large clumping grass, tolerates alkaline, clay, serpentine soils, in or out of water, drought (once established) and resists deer. |
| Small Cape Rush | *Chondropetalum tectorum* | 2'-3' | 3'-4' | Full Sun-Part Sun | Grass-like | A, B | X |  |  | Tough, reed-like plant, tolerates boggy or clay soils. Evergreen. Drought tolerant once established. |
| California Fuchsia | *Epilobium canum* | 1'-3' | 1'-3' | Full Sun | Perennial | B |  | X | X | No supplemental water after established. Hot dry areas require periodic summer water. Orange/red flowers, fire resistant. |
| California Poppy | *Eschscholzia californica* | 1'-3' | 1'-3' | Full Sun | Perennial | B | X |  | X | Orange flowering perennial in spring-late spring, self-seeds, can tolerate periodic inundation. |
| Douglas Iris | *Iris douglasiana* | 6" - 2'-6" | 2'-4' | Sun - Full Shade | Perennial | B | X | X | X | Fast growing. Full sun near coast, afternoon shade inland. Prefers richer soils. Tolerates sand, clay and serpentine soils and seasonal wet. Needs summer water. |
| Soft Rush | *Juncus effusus* | 1'-2' | 1'-2' | Full Sun-Part Shade | Grass-like | A,B | X | X | X | Tolerates heavy soils, poor drainage, seasonal flooding. Needs more supplemental water than *Juncus patens.* |
| California Grey Rush | *Juncus patens* | 1'-2' | 1'-2' | Sun-Shade | Grass-like | A,B | X | X | X | Tolerates poor drainage, drought, shade. Forms clumps from short rhizomes. |
| Elk Blue California Grey Rush | *Juncus patens 'Elk Blue'* | 1'-2' | 1'-2' | Sun-Shade | Grass-like | A,B | X | X | X | Tolerates poor drainage, drought, shade, and resists deer. Forms clumps from short rhizomes. |

Table D-11 (continued): Extended Coastal Low Impact Development Plant List

| Common Name | Scientific Name | Height | Spread | Exposure | Type | Planting Zone | Tolerates Periodic Inundation | Erosion Control | Native | Notes |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Giant Wild Rye | *Leymus condensatus* | 4-6' | 3' | Full Sun | Grass | B | X | X | X | Evergreen bunching grass, highly drought tolerant. Tolerates sand, clay, serpentine soil. Does not like to be over watered. |
| Canyon Prince Wild Rye | *Leymus condensatus 'Canyon Prince'* | 3' | Running | Full Sun | Grass | B | X | X | X | Tolerates wet, not soggy soils. Drought resistant but looks better with occasional supplemental irrigation. Can grow 5' tall with regular watering. Spreads by rhizomes. |
| Sky Lupine | *Lupinus nanus* | 4"-18" | 1' | Full Sun |  | B |  |  | X | Annual spring wildflower which prefers lean soil and will self-sow. |
| Deer Grass | *Muhlenbergia rigens* | 4'-5' | 4'-6' | Sun or Shade | Grass | B | X | X | X | Highly drought tolerant but can tolerate regular water. Large warm season bunch grass. Best cut back in late winter/early spring. |
| Blue Eyed Grass | *Sisyrinchium bellum* | 1'-2' | 6" | Full Sun | Perennial | B | X |  | X | Small purple/blue flowers in early/late spring. Summer dormant and drought tolerant, requires occasional summer water in hot dry areas. Tolerates seaside conditions, clay, sand, and resists deer. Fire resistant. |
| Coyote Brush | *Baccharis pilularis* | 3'-6' | 5' | Sun | Evergreen | B | X | X | X | Adaptable, provides quick cover and bank stabilization, tolerant of coastal conditions, alkaline soil, sand, clay and seasonal wet. Deer resistant. |
| Toyon | *Heteromeles arbutifolia* | 8'-12' | 8'-15' | Sun-Part Sun | Evergreen | B | X | X | X | Tolerates sand, clay and serpentine soils, seasonal water with good drainage. Should not receive summer water after first year. Some fire resistance. Good food source for birds. |
| Pacific Wax Myrtle | *Myrica californica* | 15' | 15' | Sun-Part Sun | Evergreen | B | X |  | X | Large shrub/small tree. Tolerates seaside conditions, sand, clay and seasonal inundation. Can be used as a formal hedge. Drought tolerant in coastal plantings. |
| Coffeeberry | *Rhamnus californica (Frangula)* | 6'-10' | 6'-10' | Sun to Part Shade | Evergreen | B |  |  | X | Deer resistant. Fire resistant when watered regularly. Good as a hedge, screen, and wildland interface. |
| Pacific Blackberry | *Rubrus ursinus* | 3' | 20' | Sun to Shade | Semi -deciduous | B |  | X | X | Prickly branches, edible fruit. Vigorous spreader. Needs cool temperatures and moisture to set large fruit. |
| Western Elderberry | *Sambucus mexicana* | 10-20' | 8'-20' | Sun-Part Shade | Deciduous | A,B | X |  | X | Large shrub/small tree. Tolerates clay, seasonal flooding, and extreme drought once established. |
| California Goldenrod | *Solidago californica* | 1-3' | 1-3' | Sun-Part Shade | Perennial | A,B | X | X | X | Late summer/fall yellow flowering perennial. Spreads by underground runners. Winter dormant. |

Table D-11 (continued): Extended Coastal Low Impact Development Plant List

| Common Name | Scientific Name | Height | Spread | Exposure | Type | Planting Zone | Tolerates Periodic Inundation | Erosion Control | Native | Notes |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| California Sycamore | *Platanus racemosa* | 40'-80' | 40'-70' | Sun | Deciduous | B |  |  | X | Fast growing tree found along creeks. Tolerates sand and clay soils, seasonal flooding, drought tolerant once established along coast. Likes sun and moderate water. |
| Coast Live Oak | *Quercus agrifolia* | 25'-60' | 40'-70' | Sun-Shade | Evergreen | B |  |  | X | Tolerates drought, coastal fog, and winter wet. Mature trees produce significant leaf duff. |

Table D-12: Extended Inland Low Impact Development Plant List

| Common Name | Scientific Name | Height | Spread | Exposure | Type | Planting Zone | Tolerates Periodic Inundation | Erosion Control | Native | Notes |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Yarrow | *Achillea millefolium* | 1'-3' | 2' | Sun-Part Shade | Perennial | A,B | X | X | X | Tolerates regular watering, occasional summer watering required inland. Can be mowed, handles foot traffic. |
| Yerba Mansa | *Anemopsis californica* | 1' | 2' | Part Sun-Shade | Perennial | A |  |  | X | Prefers moist soil and damp areas. Goes dormant from late summer to early winter. |
| Berkeley Sedge | *Carex divulsa* | 1' | Spreading | Sun - Part Shade | Grass | A,B | X |  |  | Tolerates foot traffic. Best planted in light shade with regular to occasional irrigation. Fairly drought tolerant once established. Blue-grey leaves. Can be mowed to 4" for clean look. |
| California Meadow Sedge | *Carex pansa* | 6"-8" | Spreading | Sun - Part Shade | Grass | A,B | X |  | X | Lawn substitute, edge of meadows. Moderate water requirements. Tolerates wide range of growing conditions, some foot traffic. Has period of summer dormancy in warm, dry weather. Can be mowed to 4" for clean look. |
| California Field Sedge | *Carex praegracilis* | <1' | Spreading | Sun or Shade | Grass | A | X | X | X | Tolerates wide range of growing conditions, foot traffic. Has period of summer dormancy in warm, dry weather. |
| San Diego Sedge | *Carex spissa* | 3'-4' | 2'-3' | Full Sun-Part Shade | Grass | A,B | X | X | X | Large clumping grass, tolerates alkaline, clay, serpentine soils, in or out of water, drought (once established) and resists deer. Best in wet native garden. |
| Small Cape Rush | *Chondropetalum tectorum* | 2'-3' | 3'-4' | Full Sun-Part Sun | Grass-like | A,B | X |  |  | Tough, reed-like plant, tolerates boggy or clay soils. Evergreen. Drought tolerant once established. |
| California Fuchsia | *Epilobium canum* | 1'-3' | 1'-3' | Full Sun | Perennial | B |  | X | X | Requires periodic summer water. Orange/red flowers, fire resistant. |
| California Poppy | *Eschscholzia californica* | 1'-3' | 1'-3' | Full Sun | Perennial | B | X |  | X | Orange flowering perennial in spring-late spring, self seeds. |
| Soft Rush | *Juncus effusus* | 1'-2' | 1'-2' | Full Sun-Part Shade | Grass-like | A | X | X | X | Tolerates heavy soils, poor drainage, seasonal flooding. Needs more supplemental water than Juncus patens. |

Table D-12 (continued): Extended Inland Low Impact Development Plant List

| Common Name | Scientific Name | Height | Spread | Exposure | Type | Planting Zone | Tolerates Periodic Inundation | Erosion Control | Native | Notes |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| California Grey Rush | *Juncus patens* | 1'-2' | 1'-2' | Sun-Shade | Grass-like | A | X | X | X | Tolerates poor drainage, drought, shade. Forms clumps from short rhizomes. |
| Elk Blue California Grey Rush | *Juncus patens 'Elk Blue'* | 1'-2' | 1'-2' | Sun-Shade | Grass-like | A | X | X | X | Excellent in bioretention areas. Tolerates poor drainage, drought, shade, and resists deer. Forms clumps from short rhizomes. Occasional summer irrigation in full sun. |
| Giant Wild Rye | *Leymus condensatus* | 4-6' | 3' | Full Sun | Grass | B | X | X | X | Evergreen bunching grass, highly drought tolerant. Tolerates sand, clay, serpentine soil. Does not like to be over watered. |
| Canyon Prince Wild Rye | *Leymus condensatus 'Canyon Prince'* | 2'-3' | Running | Full Sun | Grass | B | X | X | X | Very hardy evergreen grass. Tolerates wet, not soggy soils. Drought resistant but requires supplemental irrigation in summer. Grows 2-3' tall in drier locations. Spreads by rhizomes. |
| Sky Lupine | *Lupinus nanus* | 4"-18" | 1' | Full Sun |  | B |  |  | X | Annual spring wildflower which prefers lean soil and will self-sow. |
| Deer Grass | *Muhlenbergia rigens* | 4'-5' | 4'-6' | Sun or Shade | Grass | B | X | X | X | Highly drought tolerant but can tolerate regular water. Large warm season bunch grass. Best cut back in early spring. |
| Blue Eyed Grass | *Sisyrinchium bellum* | 1'-2' | 6" | Full Sun | Perennial | B | X | X | X | Small purple/blue flowers in early/late spring. Summer dormant and drought tolerant with occasional summer water. Tolerates clay, sand, and resists deer. Fire resistant. |
| Coyote Brush | *Baccharis pilularis* | 3'-6' | 5' | Sun | Evergreen | B | X | X | X | Adaptable, provides quick cover and stabilization, tolerant of alkaline soil, sand, clay and seasonal wet. Deer resistant. |
| Toyon | *Heteromeles arbutifolia* | 8'-12' | 8'-15' | Sun-Part Sun-Shade | Evergreen | B | X | X | X | Tolerates sand, clay and serpentine soils, regular & seasonal water with good drainage. Prefers part sun and supplemental summer water inland. Some fire resistant. |

Table D-12 (continued): Extended Inland Low Impact Development Plant List

| Common Name | Scientific Name | Height | Spread | Exposure | Type | Planting Zone | Tolerates Periodic Inundation | Erosion Control | Native | Notes |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pacific Wax Myrtle | *Myrica californica* | 15' | 15' | Part Sun | Evergreen | B | X |  | X | Large shrub/small tree. Does best in afternoon shade with summer watering. Tolerates sand, clay and seasonal inundation. Cold tolerant to 20 degrees. |
| Coffeeberry | *Rhamnus californica (Frangula)* | 6'-10' | 6'-10' | Sun to Part Shade | Evergreen | B |  |  | X | Deer resistant. Fire resistant when watered regularly. Good as a hedge, screen, and wildland interface. |
| California Wild Rose | *Rosa californica* | 3'-6' | 3'-6' | Part Shade | Deciduous | A, B | X |  | X | Tolerates wide variety of soils, seasonal flooding, likes some moisture. |
| Pacific Blackberry | *Rubrus ursinus* | 3' | 20' | Part Sun to Shade | Semi -deciduous | B |  | X | X | Prickly branches, edible fruit. Vigorous spreader. Needs cool temperatures and moisture to set large fruit. |
| California Goldenrod | *Solidago californica* | 1-3' | 1-3' | Sun-Part Shade | Perennial | A, B | X | X | X | Late summer/fall yellow flowering perennial. Spreads by underground runners. Likes non-reflective sun to part shade. Winter dormant. |
| Western Redbud | *Cercis occidentalis* | 20' | 15-20' | Sun | Deciduous | B | X | X | X | Small tree or large shrub. Tolerates clay, winter wet, drought. Pink/red blooms in spring prior to leaf bud out. Needs winter chill for flowers to set properly. Hardy to 10 degrees, protect young plants below 20 degrees. Some summer water for faster growth. |
| Desert Willow | *Chilopsis linearis* | 25' | 20-25' | Sun | Deciduous | B | X |  | X | Fragrant pink flowers in spring/summer. Tolerates alkaline, sand, clay soils, seasonal flooding, and drought. |
| California Sycamore | *Platanus racemosa* | 40'-80' | 40'-70' | Sun | Deciduous | B |  |  | X | Fast growing tree , tolerates sand and clay soils, and seasonal flooding. Drought tolerant once established where there is a high water table. Likes sun and moderate water. |
| Coast Live Oak | *Quercus agrifolia* | 25'-60' | 40'-70' | Sun-Shade | Evergreen | B |  |  | X | Tolerates drought, winter wet. Mature trees produce significant leaf duff. |

**PLACEHOLDER FOR TWO EXAMPLE PROJECTS**

**TO BE INCLUDED ONCE SWCP APP AND TEMPLATE ARE FINALIZED.**

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| **COUNTY OF SAN LUIS OBISPO**  **STORMWATER PROGRAM** |  |
| Detention Stormwater Feature Inspection Form | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Inspection Details | Inspection Date: | | | Inspector Name: | |
| PW Permit  P&B Permit | | | Permit Number: | |
| CCM Case #: | | | SCM #s: | |
| SCM Type:  Detention Basin  Infiltration/retention Feature  Media Filter Treatment Vault | | | | |
| Inspection Type:  Construction Active (Interim)  Construction Complete (Final) Post Construction – Annual Inspection | | | | |
| Excavation In progress Complete *N/A* | Soil subgrade visible: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* | | Depth to top of soil:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Subgrade soils uncompacted:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Geotextile Fabric In progress Complete *N/A* | Types used:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Field Material slips verified:\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Depth to fabric:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Placement locations: Bottom\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Sidewall\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Structures In progress Complete *N/A* | Inlet Structure:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Outlet Structure:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Overflow Structure:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Vegetation In progress Complete *N/A* | Plant palette types:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Bioretention Soil Media:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Percent of vegetation cover/establishment: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Protection from constructionimpacts Yes  No | Comments: | | | | Fencing Cover: Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ None: |
| Vegetation Cover Condition: | Vegetation healthy (if present). No potential flood or fire hazards from dead vegetation, noxious weeds or overgrowth. | | Moderate overgrowth or vegetation death. Mowing, trimming, or removal necessary to maintain capacity and flow paths. | | Vegetation overgrowth presents hazards to inflows, outflows, and retention. Maintenance required immediately. |
| Visual assessment of inlets and outlets: | Inlets and outlets fully stabilized, no signs of surface erosion or scour. No repair necessary. | | Inlets/outlets require minor repair or retrofit to control surface erosion or scour. | | Inlets/outlets show signs of erosion or scour more than 2”. Repairs required immediately. |
| Sediment or particle accumulation: | No evidence of particle accumulation at base, inlets, or outlets. No impacts to outflow. | | Sediment/particulate accumulation less than 15% of basin depth or partially obstructing inlets/outlets. No significant impacts to outflow. | | Sediment/particulate accumulation greater than 25% of basin depth. Basin requires maintenance to remove accumulated sediment. |
| Sidewalls condition: | No evidence of erosion, rodent holes or compromise. | | Minor damage due to erosion or rodent holes. Sidewalls require repair or soil stabilization. | | Evidence of piping through sidewalls due to rodent holes or erosion damage. Immediate repair required. |
| Presence of debris or illicit activity: | No debris, litter, or evidence of illicit dumping. Perimeter fence or control is secure (if present). | | Small amount of debris, litter. Perimeter fence or control is secure (if present). Debris and litter removed at time of inspection. | | Debris and litter present in significant quantities. Evidence of illicit dumping. Perimeter fence or control needed or requires repair. |
| Deficient Items & Proposed Resolution: | | | | | |
| Additional Notes: | | | | | |
| Photographs taken?  Yes  No | | Photo File storage:  Energov  PermitTrax  Server | | | |
| Follow up inspection necessary based on findings?  Yes  No | | | | | |

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| **http://myslo.intra/Assets/AD/County+Standards/County+Identity+Marks/CoSLO+Popular+Mark+CMYK+(web).png** |  |  |
| **COUNTY OF SAN LUIS OBISPO**  **STORMWATER PROGRAM** |  |
| Bioretention or Filtration Stormwater Feature Inspection Form | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Inspection Details | Inspection Date: | | | Inspector Name: | | |
| PW Permit  P&B Permit | | | Permit Number: | | |
| CCM Case #: | | | SCM #s: | | |
| SCM Type:  Biofiltration Feature  Bioretention Feature  Bioswale | | | | | |
| Inspection Type:  Construction Active (Interim)  Construction Complete (Final) Post Construction – Annual Inspection | | | | | |
| Excavation In progress Complete *N/A* | Soil subgrade visible:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Depth to top of soil:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | Subgrade soils uncompacted:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Geotextile Fabric In progress Complete *N/A* | Types used:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Field Material slips verified:\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Depth to fabric:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | Placement locations: Bottom\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Sidewall\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Gravel Bed In progress Complete *N/A* | Gravel Type:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Field Material slips verified:\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Gravel Thickness:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | Depth to top of gravel:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Underdrain:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Bioretention Soil Media In progress Complete *N/A* | Typical Mixture –70% sand/30% compost \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Thickness:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Field Material slips verified:\_\_\_\_\_\_\_\_\_\_\_ | | | Soil media contaminated or impacted. Erosion or spilled material evident in SCM. Repair required. |
| Structures In progress Complete *N/A* | Inlet Structure:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Overflow Structure:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | Underdrain: Pipe Size\_\_\_\_\_\_\_\_\_\_\_\_\_ Elevation\_\_\_\_\_\_\_\_\_\_\_\_\_ Cleanout\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Vegetation Cover In progress Complete *N/A* | Plant palette types:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Zone A Noted:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Surface Bark/Mulch:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | Zone B Noted:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Protection from constructionImpacts: Yes  No | Comments: | | | | Fencing/flagging Covered Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ None | |
| Drainage performance: | No standing water present 24-hours following 0.50” storm event. | | No standing water present 72 hours following 0.50” storm event. | | | Standing water present longer than 72 hours following 0.50” storm event. |
| Sediment/particle accumulation: | Sediment accumulation less than 1.0” throughout feature | | Sediment accumulation 1.0-3.0” throughout feature. Functionality is not impaired. | | | Sediment covers vegetation greater than 3.0” in any location. Maintenance required. |
| Evidence of erosion: | No visible loss of soil media or mulch. No rill erosion or scour observed. | | Soil media or mulch requires infill/repair. Minor erosion visible. | | | Soil media significantly impacted. Rill erosion evident in SCM. Maintenance required. |
| Deficient Items & Proposed Resolution: | | | | | | |
| Additional Notes: | | | | | | |
| Photographs taken?  Yes  No | | Photo File storage:  Energov  PermitTrax  Server | | | | |
| Follow up inspection necessary based on findings?  Yes  No | | | | | | |