APPENDIX D: NPS MANAGEMENT MEASURES—PRELIMINARY ASSESSMENT

The following tables identify the various management measures reflected in California's Plan for addressing nonpoint source pollution. The tables include a preliminary assessment of the LCP policies and ordinances that, in conjunction with other County ordinances implement each of the management measures. They also provide an initial identification of modifications, which, if incorporated in the County's LCP, are designed to better implement the various management measures and better protect water quality.

Table D-1: Management Measures to address Nonpoint Source Pollution from Agricultural Practices

Management Measure	Existing LCP Policy	Existing LCP Ordinance
1. Minimize delivery of sediment from agricultural lands to surface waters.	WS Policy 12: Minimize erosion and sedimentation from agricultural practices through accepted management measures.	
2. Use management and physical practices to settle solids and pollutants in runoff for storms of up to, and including, 10-year, 24 hr. frequency.	Ag Policy 8: Proper soil conservation techniques and grazing methods should be encouraged per 208 standards. Watershed Policy 14: Proper soil conservation techniques and grazing methods shall be employed in accordance with the 208 water quality standards adopted by the California Water Quality Control Board.	
3. Protect range, pasture, and other grazing lands including sensitive areas (such as streambanks, wetlands, estuaries, ponds, riparian zones).	Ag Policy 8: Proper soil conservation techniques and grazing methods should be encouraged per 208 standards. Watershed Policy 14: Proper soil conservation techniques and grazing methods shall be employed in accordance with the 208 water quality standards adopted by the California Water Quality Control Board.	Ordinance 23.08.046(4): cattle operations in ag, rural lands, and open space on parcels larger than 20 acres are not regulated, except for feedlots (see 23.08.052c).

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Management Measure	Existing LCP Policy	Existing LCP Ordinance
4. Limit discharge from confined animal facilities to surface waters by a) storing wastewater and runoff (up to and including 25 yr., 24 hr. storm), and b) managing runoff and accumulated solids from facility through appropriate waste utilization system.	WS Policy 12: Minimize erosion and sedimentation from agricultural practices through accepted management measures.	Ordinance 23.08.046: Where permit is required for animal keeping, application must include statement of measures proposed to avoid soil erosion and sedimentation caused by keeping of animals and plans for animal waste disposal. Operations shall not produce sedimentation on any public road, adjoining property, or in any drainage channel. Waste disposal for feedlots are required to have RWQCB review (23.06.102/23.08.052).
5. Develop, implement, and update nutrient management plan.		
6. Reduce contamination of surface and ground waters from pesticides.		
7. Reduce nonpoint source pollution of surface waters caused by irrigation by a) match timing and amount of irrigation water to crop needs and b) include backflow preventers for wells, minimize discharge of chemigated waters, and control deep percolation.		

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Table D-2a: Management Measures to address Nonpoint Source Pollution from the Siting and Location of Development

Management Measure	Existing LCP Policies	Existing Ordinances
1. Avoid conversion of areas susceptible to erosion and sediment loss.	Watershed Policy 7: Restricts grading on steep slopes, consistent with Ordinance 23.05.34. **North Coast**: Where feasible, restrict new development to less than 20% slopes in Monterey Pine Forest. No structures allowed on slopes over 20% in rural lands adjacent to Cambria (allowed in URL). No development over 20% on "The Ranch" if protective devices are necessary. Within Cambria, no development on slopes over 20% except for "crossing bridges", access roads, and bike paths where there is no feasible alternative. **Estero**: Building sites and driveways to be located on slopes less than 30%. No development on slopes over 30% in Morro Palisades. Has program to pursue land aggregation for small lots in subdivision on steep slopes in Cayucos. **San Luis Bay**: Program to prepare erosion/sedimentation plan of Arroyo Grande fringe area and monitor effect of land development/siltation within Pismo Creek drainage.	Ordinance 23.05.34 limits grading for creating a site for a structure or other development to slopes under 20%, unless 1) a residence cannot be sited on existing lot on slopes under 20%; 2) grading an access road or driveway is necessary to provide access to a building site with than 20% slope and there is no less environmentally damaging alternative; 3) grading on slopes between 20-30% can occur with specific findings and submittal of erosion and grading plans, and where there is no other feasible method of establishing an allowable use without grading on 20-30% slopes.
2. Preserve areas that provide important water quality benefits and/or are necessary to maintain riparian/ aquatic biota.	Coastal Watershed Policy 7: no grading or development within 100 ft. of ESHA. If the 100 ft. renders a parcel within the urban services line physically unusable for a principally permitted use, the setback may be reduced.	

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Management Measure	Existing LCP Policies	Existing Ordinances
3. development to protect natural integrity of waterbodies and natural drainage systems.	See above policies on buffers. **North Coast**: Design projects to improve existing drainage patterns. Development at Hearst Ranch shall include analysis of impacts on coastal resources generated by water withdrawals from Arroyo de la Cruz or San Carpoforo watersheds.	Ordinance 23.05.034 prohibits grading, dredging, or diking from altering any intermittent or perennial stream or natural body of water shown on any USGS 7 ½ minute map, except as permitted through approval of a county drainage plan and streambed alteration permit from Dept. of Fish and Game. Fills placed within watercourses shall have suitable protection again erosion during flooding. Excavated materials shall not be deposited or stored in or alongside a watercourse where materials can be washed away by high water or storm runoff. Grading equipment shall not disturb channels containing live streams without siltation control measures. Ordinance 23.05.036 requires sedimentation and erosion control plan if land disturbance activities are within 100 ft. of any water course shown on the most current 7 ½ minute USGS quad map.
4. Limit increase of impervious areas.	**North Coast**: In Lodge Hill area, impervious surfaces such as driveways and walkways shall be limited to smallest functional size. **Estero**: Combine driveways where possible to reduce impervious surfaces. Design new development to minimize amount of impervious surface. **SLB, S. County**: combine driveways where possible to reduce impervious surfaces.	For new land divisions, if applicant chooses to cluster development, minimize site disturbance by clustering building sites locations, placing roads along contours (Ord. 23.04.036 (e)(3)).

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Management Measure	Existing LCP Policies	Existing Ordinances
5. Limit land disturbance activities (clearing, grading, cut, and fill).	WS Policy #8: Minimize area and time of soil exposure.	
6. Limit disturbance of natural drainage features and vegetation.	ESHA policy #18: Coastal streams and riparian vegetation are ESHAs and the natural hydrological system and ecological function of coastal streams shall be protected and preserved. ESHA Policy 21 protects beneficial use of coastal stream waters and ensure quantity and quality of surface water discharge from stream and rivers shall be maintained at levels necessary to sustain functional capacity of streams. ESHA policy #23 limits streambed alterations (see Ordinance 23.07.174).	Ordinance 23.07.174 limits channelization or other alteration of stream channels to necessary water supply projects, flood control projects, improvements to fish and wildlife habitat, and maintenance of existing flood control channels. Restricts cutting or alteration of natural vegetation that protects a riparian habitat.
7. Reduce post-development loadings of total suspended solids to that of predevelopment loadings.		

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Table D-2b: Management Measures to address Nonpoint Source Pollution from Construction Activities

Management Measure	Existing LCP Policies	Existing Ordinances
1. Reduce erosion and retain sediment onsite to extent practicable during and after construction.	WS Policies 7-10, 13: limits grading on steep slopes; erosion control measures in place before start of rainy season; minimize area of soil exposure; land clearing/grading avoided during rainy season if potential for serious erosion and sedimentation; use appropriate measures to minimize erosion and sedimentation; site design shall ensure drainage does not increase erosion; erosion/sedimentation plan required for vegetation clearance on slopes over 30% in geologically unstable areas or on soils rated as severe erosion hazard. **North Coast**: In Lodge Hill area, protect stockpiles and disturbed soils from rain and erosion by plastic sheets or other coverage. Have temporary or permanent erosion control devices in place when revegetating areas disturbed by grading.	Ordinance 23.05.036: Requires sedimentation/ erosion control plan for projects where a) grading between Oct 15-April 15; b) activities on slopes over 30%, on soils rated as severe erosion hazard, within 100 ft. of water course on USGS quad; c) where placement/ disposal of material may be carried into watercourse by rainfall or runoff in quantities deleterious to fish, wildlife, or other beneficial uses.
2. Prior to land disturbance, implement erosion/sediment control plan.	See above. **North Coast**: For Lodge Hill area, install permanent erosion control devices prior to or concurrent with grading for SFRs. Submit sediment/erosion control plans if grade between Oct. 15-April 15.	See above.
3. Limit application, generation, and migration of toxic substances		
4. Ensure proper storage and disposal of toxic materials.		

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Management Measure	Existing LCP Policies	Existing Ordinances
5. Apply nutrients at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface waters.		

Table D-2c: Management Measures to address Nonpoint Source Pollution from Existing Developed Areas

Management Measure	Existing LCP Policy	Existing LCP Ordinance
1. Develop and implement watershed management programs to reduce runoff pollutant concentrations and volumes from existing development.		
2. Limit destruction of natural conveyance systems.		
3. Preserve, enhance, or establish buffers along surface waterbodies and their tributaries.		

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Table D-2d: Management Measures to address Nonpoint Source Pollution from Bridges and Roads

Management Measure	Existing LCP Policy	Existing LCP Ordinance
1. Protect areas that provide important water quality benefits or are particularly susceptible to erosion or sediment loss.		
2. Limit land disturbance such as clearing, grading, cut, and fill to reduce erosion and sediment loss.	**North Coast, Estero, SLB**: Design roads in new subdivisions to minimize terrain disturbance. Revegetate or otherwise protect sloped areas.	
3. Limit disturbance of natural drainage features and vegetation.		
4. Site, design, and maintain bridge structures to protect sensitive and valuable aquatic ecosystems and areas providing important water quality benefits.		
5. Reduce erosion and retain sediment, to extent practicable, onsite during and after construction.		
6. Prior to land disturbance, prepare and implement approved erosion control plan.		
7. Limit application, generation, and migration of toxic substances.		
8. Ensure proper disposal and storage of toxic materials.		
9. Apply nutrients at rates necessary to establish and maintain vegetation without causing significant nutrient runoff.		
10. Incorporate pollution prevention procedures into operation and maintenance.		
11. Develop and implement runoff management systems to reduce pollutant concentrations and volumes entering surface		

Management Measure	Existing LCP Policy	Existing LCP Ordinance
waters.		

Table D-2e: Management Measures to address Nonpoint Source Pollution from Onsite Disposal Systems (Septic systems for SFRs)

Management Measure	Existing LCP Policy	Existing LCP Ordinance
1. Ensure new OSDSs are located, designed, installed, operated, inspected, and maintained to prevent discharge of pollutants to surface of the ground and to groundwater.		
2. Direct placement of OSDSs away from unsuitable areas and establish protective setbacks from surface waters, wetlands, and floodplains.		
3. Where nitrogen limited surface waters may be adversely affected by excess nitrogen loadings from ground water, require installation of OSDS that reduces total nitrogen loadings.		
4. Establish protective separation distances between OSDS system components and groundwater.		

Table D-2f: Management Measures to address Pollution Prevention for Nonpoint Source Pollution

Management Measure	Existing LCP Policy	Existing LCP Ordinance
1. Implement pollution prevention and education programs to reduce nonpoint source pollutants generated from the following activities: household hazardous		

Management Measure	Existing LCP Policy	Existing LCP Ordinance
chemicals; lawn and garden activities; turf management on gold courses and recreational areas; discharge of pollutants into stormdrains; commercial activities including parking lots and gas stations not under NPDES review.		

Table D-3: Management Measures to address Nonpoint Source Pollution from Marinas and Boating Areas

Management Measure
1. Assess water quality as part of marina siting and design.
2. Site and design marinas to ensure flushing or recycling of water through the site.
3. Site and design marinas to protect against adverse impacts on aquatic resources, including shellfish, wetlands, submerged aquatic vegetation, riparian vegetation, or other important aquatic habitat areas as designated by local, state, or federal governments.
4. Where shoreline or streambank stabilization is required to protect existing structures from damage by erosion, vegetative methods of stabilization should be considered first over structural methods.
5. Implement effective runoff control strategies, including pollution prevention activities and proper design of hull maintenance areas. Reduce the average annual loadings of total suspended solids (TSS) in runoff from hull maintenance areas by 80 percent. Implement effective runoff control strategies, including pollution prevention activities and proper design of hull maintenance areas. Reduce the average annual loadings of total suspended solids (TSS) in runoff from hull maintenance areas by 80 percent
6. Design fuel stations so spills can be contained and easily cleaned, and ensure fueling stations have spill containment equipment and spill contingency plans.
7. Install pumpout, dump station, and restroom facilities where needed at new and expanding marinas to reduce release of sewage to surface waters. Design these facilities to allow ease of access and post signage to promote use by the boating public. Install pumpout, dump station, and restroom facilities where needed at new and expanding marinas to reduce release of sewage to surface waters. Design these facilities to allow ease of access and post signage to promote use by the boating public.
8. Properly dispose of solid wastes produced by operation, cleaning, maintenance, and repair of boats to prevent entry of solid wastes to surface waters
9. Promote sound fish waste management through fish-cleaning restrictions, public education, and proper disposal of fish waste.
10. Provide and maintain appropriate storage, transfer, containment, and disposal facilities for liquid material (e.g. new and used oil, solvents, antifreeze and paints) , and encourage recycling of such materials. Provide and maintain appropriate storage, transfer, containment, and disposal facilities for liquid material (e.g. new and used oil, solvents, antifreeze and paints) , and encourage

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recycling of such materials.
11. Reduce amount of fuel and oil from boat bilges and fuel tank air vents entering marina and surface waters
12. Perform in-water hull cleaning operations to minimize the release of cleaners, solvents, and paint to surface waters.
13. Ensure that sewage pumpout facilities are maintained in operational condition and encourage the use of sewage pumpout facilities.
14. Where necessary, restrict boating activities to decrease turbidity and physical destruction of shallow water habitat
15. Public education, outreach, and training programs should be instituted for boaters, as well as marina owners and operators, to prevent improper disposal of polluting material.

Table D-4: Proposed Drainage and Pollution Control Program

A drainage/pollution control plan shall be completed for all development with water quality impacts identified through use of the modified Water Quality Checklist. A drainage/pollution control plan may be waived for all development that meets the General Exemptions and which identifies within the development plans sufficient BMPs to mitigate water quality impacts identified by the modified Water Quality Checklist and achieve the water quality protection goals for new development.

General Exemptions: a) rain water is diverted from an area smaller than 5,000 sq. feet; or b) impervious surfaces is less than 5,000 sq. feet.

Application: a permit must contain all of the following: c) Interim erosion and sediment control plan. d) final drainage and pollution control plan or equivalent list of BMPs and CEQA checklist.

Definitions: a) Drainage and Pollution Control Plan: set of measures design to control runoff after all other planned final structures and permanent improvements have been erected or installed.

b) Interim Erosion and Sediment Control Plan: a set of measures to control runoff during the period of construction and related disturbances.

Final Plan: The final plan shall incorporate into the design of new development and redevelopment projects, Best Management Practices (BMPs) and other applicable Management Measures contained in the California Nonpoint Source Pollution Control Plan, that will reduce to the maximum extent practicable the amount of pollutants that are generated and/or discharged into the City's storm drain system, creeks and rivers, and surrounding coastal waters. BMPs should be selected based on efficacy at mitigating pollutants of concern associated with respective development types or uses.

The applicant may propose the use of any pollution control techniques in the final plan provided such techniques are proven to be as or more effective than the equivalent Best Management Practices contained in the appropriate manuals and achieve the appropriate runoff control objectives.

The Administrator shall require the applicant to change the proposed techniques or BMPs, where he deems necessary.

Runoff Control: On soils having high permeability, all runoff in excess of predevelopment levels shall be retained on the site. This requirement may be waived where the health department determines that high groundwater, slope stability problems or other conditions would inhibit or be aggravated by onsite retention or where retention will provide no benefits for ground water recharge or erosion control.

On projects where onsite percolation is not feasible, all runoff must be detained or dispersed over nonerodible vegetated surfaces so that the runoff rate does not exceed the predevelopment levels. On site detention may be required where excessive runoff would contribute to downstream erosion or flooding. Any polices and regulations for any drainage zones where the project is located will also apply.

Any concentrated runoff which cannot be effectively detained or dispersed without causing erosion, shall be carried in nonerodible channels or conduits to the nearest drainage course designated for such a purpose or to onsite percolation devices. Where water will be discharged to natural ground or channels, appropriate energy dissipaters shall be installed to prevent erosion at the point of discharge.

Runoff from disturbed areas shall be detained or filtered by berms, vegetated filter strips, catch basins, or other means as necessary to prevent the escape of sediment and other NPS contaminants.