5.9 HYDROLOGY AND WATER QUALITY

This Section analyzes potential impacts associated with drainage, short- and long-term storm water quality, ocean water quality, and risk of flooding. Mitigation measures are recommended, as needed, to avoid or reduce potential impacts to a less than significant level.

EXISTING CONDITIONS

- The following discussion is a description of the regulatory setting and existing flooding and storm water drainage conditions in Cambria. Existing conditions were identified through review and compilation of existing information included in the following documents:*2001 Final Feasibility Report for Flood Mitigation in the West Village of Cambria*, California;
- *Cambria Drainage and Flood Control Study*, Final Report, 2003;
- *Storm Water Management Program County of San Luis Obispo*, Second Revision May 7, 2004;
- *Cambria Flood Control Project Final Environmental Assessment*, March 2005;
- *Cambria and San Simeon Acres Community Plans of the North Coast Area Plan Draft EIR*, May 18, 2005;
- *Cambria and San Simeon Acres Community Plans of the North Coast Area Plan Final EIR*, October 6, 2005;
- *North Coast Area Plan Cambria and San Simeon Acres Portions Updated* (November 6, 2007);
- *San Luis Obispo County Code; and*
- *Coastal Zone Land Use Ordinance* (CZLUO).

REGULATORY SETTING

National Pollution Discharge Elimination System Permit (NPDES)

As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

Enacted in 1990, Phase I of the Storm Water Rule applied to municipal separate storm sewer systems (MS4s) with a service population of 100,000 or more, to construction projects affecting five acres or more of land disturbance, and to certain industrial activities. The NPDES Phase II

Final Rule was adopted in December 1999 and requires operators of small municipal separate storm sewer systems (MS4s) located in designated urbanized areas (UAs) and in areas meeting certain regulatory criteria to develop and implement Storm Water Management Programs (SWMPs).

Under the NPDES Phase II Rule and the MS4 General Permit, Small MS4s that meet specific criteria must obtain MS4 General Permit coverage for storm water discharges. The Central Coast Regional Water Quality Control Board (RWRCB) issues MS4 General Permit coverage for the County of San Luis Obispo (County). The County was required to comply with Federal NPDES Phase II requirements on March 10, 2003, at which time, the County submitted a Notice of Intent (NOI) to comply with the State's MS4 General Permit to the RWQCB. To comply with the State's MS4 General Permit, the MS4 operator (in this case, the County) must implement a Storm Water Management Program (SWMP) that reduces the discharge of pollutants to the "maximum extent practicable" (MEP), that protects water quality, and that satisfies the requirements of the Clean Water Act according to California's MS4 General Permit. The County has completed several revisions to its Storm Water Management Plan, with its final version being accepted by the Central Coast RWQCB during its March 23, 2007 meeting.

Coastal Act

The Coastal Act of 1976 requires that new development be located in areas that are relatively safe from hazardous conditions, and that development not aggravate or create other hazardous conditions. Section 30253 states that new development shall minimize risks to life and property in areas of high flood hazard.

To address the Coastal Act requirements, the Coastal Plan Policies document requires a detailed review of development proposed within the Flood Hazard Combining Designation. A qualified registered and/or certified engineering geologist must perform this review.

State Water Resources Control Board Stormwater General Construction Permit

In 1999, the State Water Resources Control Board (SWRCB) adopted Order No. 99-08-DWQ, NPDES General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Stormwater Runoff Associated with Construction Activity (General Construction Permit). This permit was subsequently amended to include smaller construction sites. The General Construction Permit requires that construction sites with one acre or greater of soil disturbance or less than one acre, but part of a greater common plan of development, apply for coverage for discharges under the General Construction Permit by submitting a Notice of Intent (NOI) for coverage, developing a Stormwater Pollution Prevention Plan (SWPPP), and implementing Best Management Practices (BMPs) to address construction site pollutants.

The SWRCB has identified Cambria (and several other unincorporated communities located in San Luis Obispo County), as being subject to NPDES Phase II requirements under the MS4 General Permit.

COUNTY OF SAN LUIS OBISPO

NORTH COAST AREA PLAN (NCAP)

Combining Designation Overlays

Combining Designations (CD) are special overlay land use categories applied in areas of the County with potentially hazardous conditions or significant natural resources. In these areas, more detailed project review is needed to avoid or minimize adverse environmental impacts, or effects of hazardous conditions on proposed projects. The following CDs relative to hydrology and water quality have been applied in Cambria:

CD-2 Arroyo de la Cruz, San Carpoforo, Pico, San Simeon, Santa Rosa, Perry, and Arroyo Del Padre Juan Creeks (FH). These are identified areas of potential flood hazards; development and fill in the creeks should be avoided. Maintenance of the creek habitats is essential to protect many coastal resources. These creeks support a number of declining species, such as the Tidewater Goby, Striped Garter Snake, Western Pond Turtle, Red-legged Frog, and Steelhead Trout.

CD-7 Bluff Erosion (GSA). Portions of the coastline where bluff erosion poses a concern for siting new development have been noted. Development should be located so that it can withstand 100 years of bluff erosion, without the need for a shoreline protection structure that would substantially alter the landform, affect public access, or impact sand movement along the beach.

Planning Area Standards

The NCAP contains special "standards" for the North Coast Planning Area that are mandatory requirements for development, designed to handle identified problems in a particular rural area, or to respond to concerns in an individual community. The criteria for application of the Planning Area standards are discussed in detail in Section 5.1 (Land Use and Planning). The NCAP standards are presented below according to the location in the planning area where they apply (i.e., Cambria Urban or Rural). The NCAP standards[1] regarding hydrology and water quality that are relevant to the proposed Project are:

Cambria Urban Area

Community Designations (CD):

CD-2 *Flood Hazard (FH)*. New development shall comply with Coastal Plan Policies for Hazards and the Flood Hazard provisions of the CZLUO, and shall be reviewed for its relation to the Cambria Flood Mitigation Project. No new expanded development, except necessary public services and public access trails, shall occur within Flood Hazard areas until the County has implemented Phase I of the Cambria Flood Mitigation Project in a manner that is consistent with the protection of the coastal stream.

[1] It is noted that the sub-sections of the NCAP Standards that are not relevant to this issue area have been presented in summary form; refer to the 2007 NCAP for the text in its entirety.

CD-3 *Santa Rosa Creek (FH)*. The following standards affect all land use categories in and adjacent to Santa Rosa Creek, as shown on Figure 7-4 [of the NCAP].

A. Biological Viability. Proposed development…..

B. Channelization or Filling in Floodways. Channelization or fill in the undeveloped floodway (active channel) and floodway fringe (flood plain) of Santa Rosa Creek shall be prohibited unless such development is consistent with Coastal Act Section 30236 and other applicable provisions of the LCP (see Figure 7-4 [of the NCAP]).

C. Creek Setbacks and Habitat Protection. All new development shall be set back a minimum of 100 feet from the upland edge of riparian vegetation….

D. Public Access. All new development…..

Community Wide (CW):

CW-1 *Marine Habitat Protection - Projects with Point-Source Discharges*. The richness, sensitivity, and unspoiled character of the marine in the Cambria demand particularly rigorous measures to protect, maintain, enhance, and restore these special resources. Accordingly, no surface point-source discharges into the marine environment are allowed, except as follows:

Exceptions:

A. Cambria Community Services District. Discharges by the Cambria Community Services District (CCSD) that have been properly permitted, when permits are required, by the County, the California Coastal Commission (CCC), Regional Water Quality Control Board (RWQCB), State Lands Commission (SLC), Environmental Protection Agency (EPA), and Monterey Bay National Marine Sanctuary (MBNMS). Any discharge of brine from desalination facilities directly into the marine environment shall be prohibited unless the following criteria have been satisfied:

1. The brine discharge receives all legally required approvals from the agencies listed above.

2. The discharge point is located south of San Simeon Point, and where it will not adversely impact any kelp bed or intertidal habitat.

3. The discharge point is designed to maximize rapid mixing of the brine with ambient seawater in order to minimize hypersaline concentrations.

4. Other locations or types of discharges (e.g., subsurface discharges, co-locating new discharges with existing discharges) are infeasible or more environmentally damaging.

5. The discharge sustains the biological productivity of coastal waters and maintains healthy populations of all species of marine organisms.

6. The adverse effects of discharges are minimized and mitigated.

B. Stormwater Outfalls. Stormwater outfalls that discharge…..

C. Passthrough Discharges. Aquaculture seawater passthrough…..

D. Seawater Passthrough Devices. Seawater passthrough discharges…..

E. Water Quality Enhancement. Discharges to streams, for the purpose of hydrologic replenishment and/or stream water quality enhancement, that are consistent with LCP requirements, and provided that:

1. Discharge is consistent with NMFS, U.S. Fish & Wildlife Service (USFWS), EPA, RWQCB, and CDFG Regulations.

2. The discharged waters will be of appropriate temperature and quality so as not to disrupt the steelhead runs, nor the in-stream habitat for any other sensitive species including, but not limited to, the red-legged frog and tidewater goby nor will impact adjacent agriculture.

CW-11 *Erosion Control*. In addition to other applicable requirements of the CZLUO, all runoff from impervious surfaces such as roofs, driveways, walks, patios, and/or decks, shall be collected and retained on-site to the greatest extent possible. Run-off not able to be retained on-site shall be passed through an effective erosion control device or filtration system approved by the Public Works Department. The following guidelines shall be followed to the maximum degree feasible:

A. Impermeable Surfaces. Impermeable surfaces should be minimized in order to maximize the amount of on-site run-off infiltration.

B. Drainage. Drainage systems should be designated to retain water on-site encourage infiltration when feasible.

C. Natural Drainage Patterns. Natural drainage patterns should be retained and remediated if retention is infeasible on-site.

D. Downhill Sites. On downhill sites, encourage drainage easements on lower properties so that drainage can be released on the street or other appropriate land area below.

CW-15 *Shoreline Development*. New development or expansion of existing uses proposed to be located on or adjacent to a beach or coastal bluff are subject to the following standards:

A. Application Content. In addition to the application requirements of the CZLUO and other Cambria Urban Area Plan Standards, applications for new development or expansion of existing uses proposed to be located on or adjacent to a beach or coastal bluff shall include the following:

1. An analysis of beach erosion, wave run-up, inundation and flood hazards prepared by a licensed civil engineer with expertise in coastal engineering and a slope stability analysis, prepared by a licensed Certified Engineering Geologist and/or Geotechnical Engineer or Registered Civil Engineer with expertise in soils, in accordance with the procedures detailed by Appendix A1 of this Plan [NCAP]. The report shall include an alternatives analysis to avoid or minimize impacts to public access. On lots with a legally established shoreline protective device, the analysis shall describe the condition of the existing seawall; identify any impacts it may be having on public access and recreation, scenic views, sand supplies, and other coastal resources; and evaluate opportunities to modify or replace the existing armoring device in a manner that would eliminate or reduce these impacts. The analysis shall also evaluate whether the development, as proposed or modified, could be safely established on the property for a one hundred year period without a shoreline protective device.

2. Measurements for the form, mass, scale, and roofing…..

3. Surveyed location of all property lines and the mean high tide line by a licensed surveyor along with written evidence of full consent of any underlying land owner, including, but not limited to the County, State Parks, and State Lands. If application materials indicate that development may impact or encroach on tidelands or public trust lands, the County shall consult with Coastal Commission staff regarding the potential need for a Coastal Development Permit from the Coastal Commission.

4. A preliminary drainage, erosion, and sedimentation plan which demonstrates that no stockpiling of dirt or construction materials will occur on the beach; erosion, runoff, and sedimentation measures to be implemented at the end of each day's work; all construction debris will be removed from the beach daily and at the completion of development; and no machinery will be allowed in the intertidal zone. If there is no feasible way to keep machinery out of the intertidal zone, authorization from the Coastal Commission is required.

B. Bluff Setbacks. The bluff setback is to be determined by the engineering geology analysis required in A.1. above adequate to withstand bluff erosion and wave action for a period of 100 years…..

COASTAL ZONE LAND USE ORDINANCE

Sections 23.05.022 through 23.05.039 of the Coastal Zone Land Use Ordinance (CZLUO) establish standards for grading and excavation activities to minimize hazards to life and property, protect against erosion and the sedimentation of watercourses, and protect the safety, use, and stability of public rights-of-way and drainage channels. Additional standards for grading within a sensitive resource area are in Sections 23.07.160 et. seq.

All land use and building permit applications for new structures or additions to existing structures in Cambria are required by County ordinance to have drainage plan approval before the permit can be issued. The drainage plan must provide for the protection from storm water runoff. This requirement applies to projects within designated areas, unless the County Engineer determines that the building site will neither experience nor create drainage problems. Drainage plans must be prepared and will be processed as required by CZLUO Section 23.05.040 through 23.05.050.

As per CZLUO Section 23.05.042, and more specifically pertaining to Cambria, a drainage plan is required for a project that is located in an area identified by the County Engineer as having a history of flooding or erosion that may be further aggravated by or result in a harmful effect on the project. When reviewing drainage plans submitted by applicants, the Engineering Department will use the following guidelines for site drainage:

- Drainage Plan Requirements: Any new structure built should be safe from flooding.

- Basic Drainage Plan Contents: All drainage plans shall include the following information about the site:

    1) Flow lines of surface waters onto and off of the site.
    2) Existing and finished contours at two-foot intervals or other topographic information approved by the County Engineer.
    3) Building pads, finished floor and street elevations, existing and proposed.
    4) Existing and proposed drainage channels including drainage swales, ditches and berms.
    5) Location and design of any proposed facilities for storage or for conveyance of runoff into indicated drainage channels, including sumps, basins, channels, culverts, ponds, storm drains, and drop inlets.
    6) Estimates of existing and increased runoff resulting from the proposed improvements.
    7) Proposed erosion and sedimentation control measures.
    8) Proposed flood proofing measures where determined to be necessary by the County Engineer.

- Engineered Plan Content: Engineered drainage plans are to include an evaluation of the effects of projected runoff on adjacent properties and existing drainage facilities and systems in addition to the information required above. Most sites in the West Lodge Hill portion of Cambria will require an engineered plan.

- Drainage Plan Review and Approval: All drainage plans are subject to the approval of the County Engineer. In some cases, where there are major drainage facilities affected or proposed, or the facilities are being proposed as part of a development plan review, a plan check and inspection agreement is to be entered into with the County Engineer and the drainage facilities inspected and approved before a certificate of occupancy is issued.

- Standards for Design and Construction: Drainage systems and facilities subject to drainage plan review and approval that are to be located in existing or future public rights-of-way are to be designed and constructed as set forth in the County Engineering Department Standard Improvement Specifications and Drawings. Other systems and

facilities subject to drainage plan review and approval are to be designed in accordance with good engineering practices.

- Site Grading: Final grading of lots shall be in conformance with Chapter 70 of the Uniform Building Code and Sections 23.05.036 of the CZLUO.

  As per CZLUO Section 23.05.036 (Sedimentation and Erosion Control), submittal of a Sedimentation and Erosion Control Plan for review and approval by the County engineer is required when:

  1) Grading requiring a permit is proposed to be conducted or left in an unfinished state during the period from October 15th through April 15th;

  2) Land disturbance activities, including the removal of more than one-half acre of native vegetation are conducted in geologically unstable areas, on slopes in excess of thirty percent on soils rated as having severe erosion hazard, or within one hundred feet of any watercourse shown on the most current seven and a half minute USGS quadrangle map;

  3) The placing or disposal of soil, silt, bark, slash, sawdust or other organic or earthen materials from logging, construction and other soil disturbance activities above or below the anticipated high water line of a watercourse where they may be carried into such waters by rainfall or runoff in quantities deleterious to fish, wildlife or other beneficial uses.

CAMBRIA FLOOD CONTROL PROJECT

The County has applied to the Federal Emergency Management Agency (FEMA) for assistance with a flood control project. FEMA is proposing to fund the project, as part of the recovery from the flooding that occurred in 1995, which was a presidentially declared disaster. This project has now been awarded, with construction starting in 2007.

The proposed Cambria Flood Control Project includes three components. The first component involves constructing a bypass channel to connect the overflow basin to Santa Rosa Creek and constructing a concrete bridge for Highway 1 where the bypass channel would pass under it. This bypass channel would allow floodwater to flow from the overflow basin back into Santa Rosa Creek. The second component involves constructing an earthen berm as a floodwall along the northern edge of the overflow basin. The berm would extend along the south side of the Cambria Drive roadbed embankment and along the south side of the Main Street roadbed embankment. This berm would prevent floodwater from overtopping Cambria Road and flooding the West Village. The third component involves plugging a culvert under Cambria Road that drains water from the overflow basin to Main Street. Closing this culvert would prevent floodwater from flowing through the culvert and into the West Village. The County will also be integrating the widening of Cambria Drive with the flood control project.

STORM WATER MANAGEMENT PROGRAM

The SWMP was prepared by the County to comply with mandatory requirements of the U.S. EPA NPDES Phase II Final Rule and the MS4 General Permit. The SWMP provides an integrated approach for prevention of pollution from storm water runoff in San Luis Obispo

County. The County's SWMP addresses storm water runoff in the unincorporated communities, which are subject to the Phase II Final Rule and the MS4 General Permit. The County is the Lead Planning Agency for administration of the SWMP and for construction measures that are under the jurisdiction of the County. Although the Cambria Community Services District (CCSD) provides other services in Cambria, the County retains jurisdiction over drainage and flood control in the community.

Land uses in Cambria include varying densities of residential, retail commercial, public facilities, agriculture, and open space. Commercial uses in Cambria that may have impacts on water quality include auto body shops, service stations, groceries, and restaurants. The commercial core called the "East Village" is built along Santa Rosa Creek, Cambria's primary water body. Much of the residential development is densely clustered on slopes, which increases the potential for erosion issues.

The County General Plan, Area Plans (i.e., NCAP), Local Coastal Plan, and Zoning and Grading Ordinances address storm water, water quality, and erosion in a number of different ways, including establishing setbacks from creeks and regulating grading. These planning documents generally support minimization of sprawl, low impact development, and development of adequate infrastructure.

EXISTING SETTING – FLOODING/DRAINAGE

Within Cambria, the areas subject to the FH regulations are located along Santa Rosa Creek. In the West Village area, the FH Combining Designation and the flood plain of the creek extend into the developed areas of the community along Main Street. The flooding potential in Cambria involves interactions between water in Santa Rosa Creek, Caltrans structures supporting Highway 1, land and development adjacent to the creek, and the storm drain system. All of these are particularly critical in the West Village Area.

The combination of the area's steep topography, lack of underground drainage facilities, and location of residential parcels below the street grade has resulted in localized poor drainage and/or flooding around some residences, buildings, and roadways. The magnitude of flooding varies by the districts in Cambria and by location in each district. Drainage from a number of uphill lots flows along the edge of street pavement and drains onto lower lots, creating flooding and erosion problems. Drainage problems also exist where curbs are present, but the topography creates conditions where lots adjacent to the roadway are much lower than the roadway surface. This allows street drainage flowing at the curbside to enter the residential lots at the lowered curb section along the driveway entrance. Many upheaved roads are also subject to sheet and rill erosion during storm events.

Most homeowners collect and convey storm runoff from their property to the street right of way. If the street is paved but does not have underground drainage facilities or roadside drainage swales, then the runoff will tend to flow downhill and collect in road sags or properties sitting lower than the road grade. The conversion of forestland to developed residential homes increases the rate and volume of runoff from precipitation. If drainage provisions are not constructed then the storm runoff path may be altered, potentially damaging areas not currently flooded.

There are a few large storm drain pipelines and drainage ditches scattered throughout the districts in Cambria. With the exception of a few storm drains, berms and drainage ditches in

the Marine Terrace, there appears to be little continuity or synergism between the numerous drainage facilities in Cambria. As runoff gathers, concentrates and discharges from one facility (e.g., a storm drain), if no facility is constructed downstream to capture this flow, then roads and homes in the runoff's path could be damaged during large storms. An example of this condition is the discharge of Avon Creek onto Marlborough Lane in the Marine Terrace district. Runoff is not conveyed in a storm drain in Castle Street, but instead flows through private lots and back yards, eventually flooding Drake Street.

In the 1960's, Highway 1 was constructed on fill, dividing the floodplain of Santa Rosa Creek. To the south is the creek channel and to the north is the West Village. Highway 1 now acts as a low levee, separating the creek and its floodplain to the north. A significant flood event occurred in 1995 throughout the West Village. A significant portion of the damage resulted from inadequate capacity in Santa Rosa Creek at the Highway 1 Bridge. This resulted in flow leaving the channel, overtopping a low creek bank levee, flooding West Main Street, and inundating West Village.

Flooding problems along Santa Rosa Creek in the West Village are being addressed by the construction of a by-pass channel for Santa Rosa Creek; refer to the Cambria Flood Control Project discussion below. The by-pass channel will allow overflows to move slowly through the by-pass channel and then rejoin the Santa Rosa Creek downstream without overtopping Cambria Drive or Santa Rosa Creek. The project restores controlled flooding to the historic floodplain of Santa Rosa Creek while protecting the West Village from overflows of Santa Rosa Creek.

Additional improvements to the storm drain system are necessary, however, to reduce the potential for localized flooding during times when water in the main channel is relatively high. A series of local storm drain improvements have been recommended to resolve different localized flooding issues in the community. These include a "pressurized" storm drain system that would convey storm water from the developed hillside areas above the West Village area directly to the creek, and a collection system and pump station to convey runoff from western portions of the West Village area to the creek. Another series of 20 small projects has been recommended. These smaller projects involve such measures as constructing berms along roads and driveways, adding culverts to some streets, and installing storm drains and inlet structures in some areas. The implementation schedule for these projects is uncertain.

SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Initial Study Environmental Checklist Form used during preparation of the Project Initial Study; refer to Appendix 15.1 (Initial Study and Notice of Preparation*)*. The Initial Study includes questions relating to hydrology, drainage, and water quality. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this Section. Accordingly, a project may create a significant environmental impact if it would:

- Violate any water quality standards or waste discharge requirements.

- Substantially deplete groundwater supplies or substantially interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would

drop to a level which would not support existing land uses or planned uses for which permits have been granted); refer to Section 5.12 (Water Resources).

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site.

- Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provision of substantial additional sources of polluted runoff.

- Otherwise substantially degrade water quality; refer to Section 5.12 (Water Resources).

- Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map; refer to Section 7.0 (Effects Found Not to be Significant).

- Place within a 100-year flood hazard area structures, which would impede or redirect flood flows.

- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; refer to Section 7.0 (Effects Found Not to be Significant).

- Expose people or structures to a significant risk of loss, injury, or death from inundation caused by seiche, tsunamis, or mudflow; refer to Section 5.8 (Geology and Soils).

IMPACTS

STORM WATER QUALITY – CONSTRUCTION

❖ **GRADING, EXCAVATION, AND CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROPOSED WATER MASTER PLAN IMPROVEMENTS COULD IMPACT STORM WATER QUALITY DUE TO SHEET EROSION OF EXPOSED SOILS AND SUBSEQUENT DEPOSITION OF PARTICLES AND POLLUTANTS IN DRAINAGE AREAS. IMPACTS ARE CONSIDERED LESS THAN SIGNIFICANT FOLLOWING COMPLIANCE WITH FEDERAL, STATE, AND SAN LUIS OBISPO COUNTY REGULATORY REQUIREMENTS.**

Impact Analysis: Impacts related to water quality range over three different periods: 1) during the earthwork and construction phase, when the potential for erosion, siltation, and sedimentation would be the greatest; 2) following construction, prior to the establishment of ground cover, when the erosion potential may remain relatively high; and 3) following completion of the Project, when impacts related to sedimentation would decrease markedly, but those associated with urban runoff would increase.

Potable and Recycled Water Distribution Systems

Construction controls are discussed separately from other water quality management measures because they are temporary and specific to the type of construction. Grading, excavation, and construction activities associated with implementation of the proposed potable and recycled water distribution system components (e.g., distribution pipelines, storage reservoirs, and pump stations), may impact water quality due to sheet erosion of exposed soils and subsequent deposition of particles and pollutants in drainage areas. Potential impacts could occur where Project components cross or are located within the drainage courses and boundaries of a floodplain. Also, construction activities have the potential to produce pollutants such as nutrients, suspended solids, heavy metals, pesticides and herbicides, toxic chemicals related to construction and cleaning, waste materials (including wash water), paints, wood, paper, concrete, food containers, sanitary wastes, fuel, and lubricants. The significance of these potential impacts would vary depending upon the level of construction activity, weather conditions, soil conditions, and the increased sedimentation of drainage systems within the local area of the development site.

Construction activities that disturb one or more acres of land (or less than one acre, but are part of a larger common plan of development or sale) are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (General Permit). Therefore, potable and recycled water distribution system components satisfying these criteria would be required to submit an NOI for coverage under the County's NPDES permit and implement BMPs to address construction site pollutants.

Overall, construction-related water quality impacts are considered potentially significant. It is noted that specific construction-related impacts to water quality would be dependent upon the final improvement plans for the potable and recycled water system facilities. Through the County's development review process, future improvements would be evaluated to determine the appropriate land use permit for authorizing their use and the conditions for their establishment and operation. The proposed improvements would be subject to compliance with NCAP Standards CW-1 (Marine Habitat Protection – Projects With Point-Source Discharges, CW-11 (Erosion Control), and CW-15 (Shoreline Development). Compliance with the NPDES regulatory requirements (including implementation of BMPs), the County's SWPPP and CZLUO, and the NCAP Standards, would reduce potential short-term impacts to water quality from the proposed potable and recycled water system improvements. Further review may be necessary on a project-by-project basis to evaluate site-specific construction-related impacts.

Water Demand Management

This Project component involves improvements to the current conservation program and regulations, which would not generate construction-related water quality impacts.

Seawater Desalination

The short-term construction-related activities associated with the seawater desalination component would be similar to those described above for the potable and recycled water distribution systems. Additionally, potential impacts could occur where the proposed seawater and seawater concentrate return pipelines cross or are located within the Van Gordon Creek and San Simeon Creek drainage courses and boundaries of their floodplains. Submittal of an NOI for coverage under the County's NPDES permit and implementation of BMPs would be

required to mitigate short-term water quality impacts from construction site pollutants. Compliance with the NPDES regulatory provisions (including implementation of BMPs), and the County's SWPPP, CZLUO, and NCAP Standards would also be required. A future project-specific EIR/EIS would need to further determine the potential short-term construction-related impacts to storm water quality after more details become known regarding the desalination facility. Additionally, the EIR/EIS would analyze alternative desalination facility sites.

Mitigation Measures:

HYD-1 The CCSD shall comply with the relevant Federal, State, and San Luis Obispo County guidelines and standards, including the NPDES regulatory requirements and implementation of BMPs, the County's SWPPP, and the Coastal Zone Land Use Ordinance (Sections 23.05.022 through 23.05.039 regarding grading and excavation activities, Section 23.07.160 regarding grading within a sensitive resource area, and Section 23.05.036 regarding sedimentation and erosion control).

HYD-2 Compliance with the following North Coast Area Plan Standards shall be required:

Cambria Urban Area

Community Wide (CW):
CW-1 (Marine Habitat Protection - Projects with Point-Source Discharges)
CW-11 (Erosion Control)
CW-15 (Shoreline Development)

Category Specific (CS):
The CS Standards that are specific to each land use category; refer to Chapter 7 (Planning Area Standards) of the NCAP.

Rural Area Standards

Category Specific (CS):
The CS Standards that are specific to each land use category; refer to Chapter 7 (Planning Area Standards) of the NCAP.

Level of Significance: Less Than Significant With Mitigation Incorporated.

HYDROLOGY AND DRAINAGE

❖ **IMPLEMENTATION OF THE PROPOSED WATER MASTER PLAN IMPROVEMENTS COULD ALTER THE EXISTING DRAINAGE PATTERN OR THE RATE/AMOUNT OF SURFACE RUNOFF AT THE DEVELOPMENT SITES. IMPACTS ARE CONSIDERED LESS THAN SIGNIFICANT FOLLOWING COMPLIANCE WITH FEDERAL, STATE, AND SAN LUIS OBISPO COUNTY REGULATORY REQUIREMENTS.**

Impact Analysis:

Potable and Recycled Water Distribution Systems

The subterranean potable and recycled water system components (i.e., distribution pipelines, interconnections, and ECS) would not alter the existing drainage pattern or the rate/amount of

surface runoff along their respective alignments. Also, the proposed advanced treatment facilities at the existing Wastewater Treatment Plant (WWTP) would not alter the drainage pattern or surface runoff at the WWTP, because the improvement would occur within the existing facility. However, with implementation of the proposed storage reservoirs and pump stations, the impervious area of the respective development sites could be increased, potentially altering their existing drainage patterns or the rate/amount of surface runoff. Without mitigation, the significance of these potential impacts would vary depending upon the size, location, and topography of the development sites.

Cambria is subject to NPDES Phase II requirements under the County's MS4 General Permit. Alterations to existing drainage patterns or the rate/amount of surface runoff from the proposed storage reservoirs and pump stations may require construction of local drainage facilities, which can include stormdrains, surface inlets, ditches, and downdrains. Through the County's development review process, future WMP improvements would be evaluated to determine the appropriate permits for authorizing their use and the conditions for their establishment and operation. Unless exempted by the County Engineer, all proposed WMP components would require a drainage plan that provides protection from storm water runoff. The proposed improvements would be subject to compliance with NCAP Standards CD-2 (Flood Hazard (FH)), CD-3 (Santa Rosa Creek (FH)), CW-11 (Erosion Control), and CW-15 (Shoreline Development). Following compliance with the NPDES regulatory requirements (including implementation of BMPs), the NCAP Standards, , and the County's SWPPP and CZLUO, the proposed potable and recycled water system improvements would result in a less than significant impact to drainage patterns and the rate/amount of surface runoff. Further review may be necessary on a project-by-project basis.

Water Demand Management

This Project component involves improvements to the current conservation program and regulations, which would not impact drainage patterns or the rate/amount of surface runoff.

Seawater Desalination

The impacts to drainage patterns or the rate/amount of surface runoff associated with the seawater desalination component would be similar to those described above for the potable and recycled water distribution systems. A drainage plan that provides protection from storm water runoff would also be required. Due to the limited scale of the desalination facility and the required drainage plan, impacts to drainage patterns or the rate/amount of surface runoff are not anticipated to be significant. Compliance with the NPDES regulatory requirements (including implementation of BMPs, and the County's SWPPP and CZLUO, would be required. A future project-specific EIR/EIS would need to further determine the potential impacts to drainage patterns and the rate/amount of surface runoff after more details become known regarding the desalination facility.

Mitigation Measures:

HYD-3 Unless exempted by San Luis Obispo County Engineer, all proposed Water Master Plan components shall prepare a drainage plan that provides protection from storm water runoff. The CCSD shall also comply with the Federal, State, and County guidelines and standards, including the NPDES regulatory requirements and implementation of BMPs, the County's SWPPP, and Coastal Zone Land Use

Ordinance (Sections 23.05.022 through 23.05.039 regarding grading and excavation activities, Section 23.07.160 regarding grading within a sensitive resource area, Section 23.05.036 regarding sedimentation and erosion control, and Sections 23.05.040 through 23.05.050 regarding drainage plans).

HYD-4 Compliance with the following North Coast Area Plan Standards shall be required:

Cambria Urban Area

Combining Designations (CD):
CW-2 (Flood Hazard (FH))
CW-3 (Santa Rosa Creek (FH))

Community Wide (CW):
CW-15 (Shoreline Development)

Category Specific (CS):
The CS Standards that are specific to each land use category; refer to Chapter 7 (Planning Area Standards) of the NCAP.

Rural Area Standards

Category Specific (CS):
The CS Standards that are specific to each land use category; refer to Chapter 7 (Planning Area Standards) of the NCAP.

Refer also to Mitigation Measure HYD-1 and HYD-2.

Level of Significance: Less Than Significant With Mitigation Incorporated

STORM WATER QUALITY – LONG-TERM

❖ **IMPLEMENTATION OF THE PROPOSED WATER MASTER PLAN IMPROVEMENTS COULD RESULT IN LONG-TERM IMPACTS TO THE QUALITY OF STORM WATER AND URBAN RUNOFF. IMPACTS WOULD BE REDUCED TO LESS THAN SIGNIFICANT FOLLOWING COMPLIANCE WITH FEDERAL, STATE, AND SAN LUIS OBISPO COUNTY REGULATORY REQUIREMENTS. THE PROPOSED DESALINATION FACILITY COULD IMPACT THE QUALITY OF OCEAN WATER.**

Impact Analysis:

Potable and Recycled Water Distribution Systems

The subterranean potable and recycled water system components (i.e., distribution pipelines, interconnections, and ECS) would not result in long-term impacts to the quality of storm water and urban runoff; therefore, long-term water quality impacts are not anticipated. Also, the proposed advanced treatment facilities at the existing WWTP would not impact storm water quality, because the improvement would occur within the existing facility. However, an increase in impervious surfaces and change in absorption and drainage rates may occur at the respective development sites of the proposed storage reservoirs and pump stations. Water quality issues of concern involve stormwater and nuisance water runoff. A reduction of permeable surfaces would be considered a water quality impact, because permeable surfaces

allow for rain and runoff to infiltrate into the ground. Infiltration both reduces the amount of flow that is capable of washing off additional pollutants and filter water removing potential pollutants. These changes have the potential to affect long-term water quality. It is noted that normal maintenance of wells, pumps, and pipelines does involve occasional small releases of water; however, these are allowed under a general permit issued by the RWQCB.

Storm water quality is generally affected by the length of time since last rainfall, rainfall intensity, urban uses of the area, and the quantity of transported sediment. Typical urban water pollutants usually result from motor vehicle operations, oil and grease residues, fertilizer/pesticide uses, human/animal littering, careless material storage and handling, and poor property management. To reduce long-term water quality impacts at the proposed storage reservoirs and pump stations, a drainage plan that manages storm water, and controls and prevents water quality degradation, would be required. There are many BMPs available for achieving the best possible water quality. BMPs are required by the County, and with proper implementation, BMPs protect the receiving waters from degradation. Common BMPs include structural controls (e.g., detention basins, swales, and filter strips), nonstructural controls (e.g., erosion and sediment control measures), and ongoing management, maintenance, and documentation measures.

The proposed improvements would require an NPDES Storm Water Discharge Permit from the RWQCB and would be subject to compliance with NCAP Standards CW-1 (Marine Habitat Protection – Projects With Point-Source Discharges, CW-11 (Erosion Control), and CW-15 (Shoreline Development). Following compliance with the NPDES regulatory requirements (including implementation of BMPs), the NCAP Standards, and the County's SWPPP and CZLUO, the proposed potable and recycled water system improvements would result in less than significant long-term impacts to storm water quality. Further review may be necessary on a project-by-project basis.

Water Demand Management

This Project component involves improvements to the current conservation program and regulations, which would not impact long-term storm water quality.

Seawater Desalination

The long-term impacts to storm water quality associated with the seawater desalination facility would be similar to those described above for the potable and recycled water distribution systems. Additionally, the seawater desalination component proposes a reverse osmosis (RO) desalination treatment process. Seawater concentrate from the RO process would be conveyed in a separate pipeline back to a subterranean discharge system for return into the groundwater and seawater near the ocean interface. The conditions that influence the quality of the seawater (i.e., the constituents present in the concentrate return) involve the total volume of concentrate being released, the constituents of the concentrate return, and the amount of dilution prior to release. These potential impacts are considered significant, unless mitigated. The proposed improvements would likely require an NPDES Permit for storm water and the seawater concentrate return from the RWQCB. Requirements also include preparation of a drainage plan, which manages storm water and controls/prevents water quality degradation, and implementation of BMPs to protect the receiving waters from degradation. Compliance with the NPDES regulatory requirements (including implementation of BMPs), the County's SWPPP and CZLUO, and the NCAP Standards would be required. A future project-specific EIR/EIS

would need to further determine the potential impacts to storm water and ocean water quality after more details become known regarding the desalination facility. Additionally, the EIR/EIS would analyze alternative desalination facility sites.

Mitigation Measures: Refer to Mitigation Measures HYD-1 and HYD-2.

Level of Significance: Less Than Significant With Mitigation Incorporated.

FLOODING

- **IMPLEMENTATION OF THE PROPOSED WATER MASTER PLAN IMPROVEMENTS COULD EXPOSE PEOPLE OR STRUCTURES TO RISK INVOLVING FLOODING. IMPACTS WOULD BE REDUCED TO LESS THAN SIGNIFICANT LEVELS FOLLOWING COMPLIANCE WITH SAN LUIS OBISPO COUNTY COASTAL ZONE LAND USE ORDINANCE AND NORTH COAST AREA PLAN STANDARDS, AND THE CAMBRIA FLOOD CONTROL PROJECT.**

Impact Analysis:

Potable and Recycled Water Distribution Systems

The subterranean potable and recycled water system components (i.e., distribution pipelines, and interconnections) would not increase the rate and volume of runoff; therefore, potential impacts involving the risk of flooding are not anticipated. Also, the proposed advanced treatment facilities at the existing WWTP would not involve the risk of flooding, because the improvement would occur within the existing facility. However, an increase in the rate and volume of runoff, which may increase the risk of flooding, could occur at the respective development sites of the proposed storage reservoirs and pump stations. Also, as discussed previously, certain areas within Cambria are designated Flood Hazard (FH) Combining Designation, which is consistent with the Zone A, or Special Flood Hazard Area as determined by FEMA.

All proposed WMP components (unless exempted by the County Engineer) would require a drainage plan, which provides a drainage design/other measures to accommodate increases in runoff and minimize the risk of flooding. WMP improvements that may increase the risk of flooding would be reviewed for relationship and consistency with the Cambria Flood Control Project. The proposed improvements would be subject to compliance with CZLUO requirements intended to strengthen flood protection. The proposed improvements would also be subject to compliance with NCAP Standards CD-2 (Flood Hazard (FH)), CD-3 (Santa Rosa Creek (FH)), CW-11 (Erosion Control), and CW-15 (Shoreline Development). Further, WMP improvements within FH-designated areas would also be subject to specific regulations found in the Coastal Plan Policies. Following compliance with the NCAP Standards, CZLUO guidelines and standards, and the Cambria Flood Control Project, the proposed potable and recycled water system improvements would result in a less than significant impact regarding the risk of flooding. Further review may be necessary on a project-by-project basis to evaluate site-specific impacts.

Water Demand Management

This Project component involves improvements to the current conservation program and regulations, which would not expose people or structures to a risk of flooding.

Seawater Desalination

The potential impacts associated with the exposure of people or structures to the risk of flooding from the proposed seawater desalination facility would be similar to those described above for the potable and recycled water distribution systems. An increase in the rate and volume of runoff, which may increase the risk of flooding, may occur at the desalination facility site. Also, the intersection of San Simeon Creek Road and Van Gordon Creek is designated FH Combining Designation.

Compliance with the NCAP and CZLUO guidelines and standards would be required. A future project-specific EIR/EIS would need to further determine the potential impacts associated with flooding after more details become known regarding the desalination facility. Additionally, the EIR/EIS would analyze alternative desalination facility sites.

Mitigation Measures: Refer to Mitigation Measures HYD-3 and HYD-4.

Level of Significance: Less Than Significant With Mitigation Incorporated

CUMULATIVE IMPACTS

❖ **THE WATER MASTER PLAN PROJECT, COMBINED WITH FUTURE DEVELOPMENT WITHIN THE NORTH COAST AREA, COULD RESULT IN INCREASED DRAINAGE, STORM WATER QUALITY IMPACTS, AND RISK OF FLOODING. COMPLIANCE WITH THE FEDERAL, STATE, AND SAN LUIS OBISPO COUNTY REGULATORY FRAMEWORK ON A PROJECT-BY-PROJECT BASIS WOULD REDUCE POTENTIAL IMPACTS TO LESS THAN SIGNIFICANT LEVELS.**

Impact Analysis: The proposed Water Master Plan improvements along with other future development in the North Coast Area may:

- Impact storm water quality due to sheet erosion of exposed soils and subsequent deposition of particles and pollutants in drainage areas from grading, excavation, and construction activities.
- Increase the impervious area of the respective development sites, potentially altering their existing drainage patterns or the rate/amount of surface runoff.
- Reduce the permeable surfaces on the respective development sites and introduce urban water pollutants, which could result in long-term impacts to the quality of storm water and urban runoff.
- Proposed uses in areas designated FH Combining Designation and may increase the rate and volume of runoff, which may increase the risk of flooding.

Compliance with the following established regulatory framework would ensure that potential drainage, short- and long-term storm water quality, and risk of flooding impacts from cumulative development are reduced to less than significant levels.

- NPDES requirements (including BMPs);
- San Luis Obispo County SWPPP requirements;
- North Coast Area Plan Standards;
- Coastal Zone Land Use Ordinance guidelines and standards; and
- Cambria Flood Control Project.

Mitigation Measures: No mitigation measures are recommended beyond compliance with the established regulatory requirements on a project-by-project basis.

Level of Significance: Less Than Significant Impact.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant impacts related to drainage, short- and long-term storm water quality, and risk of flooding have been identified following compliance with the established Federal, State, and San Luis Obispo County regulatory framework.