STORMWATER CONTROL PLAN (SWCP)

For

Arco AM/PM

Avenue of the Flags & Central Avenue

Buellton, CA

(November 30, 2017)

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Stormwater Control Plan Exhibit

Central Coast Region Stormwater Control Measure Sizing Calculator

Appendices

This Stormwater Control Plan was prepared using the template dated January 2017.

I. Project Data

Table 1. Project Data Table 1. Project Data

Project Name/Project Case Number	Arco AM/PM
Project Location	Avenue of the Flags & Central Ave. Buellton, CA
Project Phase No.	N/A
Project Type and Description	4,559 sf Gas Station Building with 6 pumps and parking areas
Total Project Site Area (ac)	0.73
New Impervious Surface Area (sf)	1,013
Replaced Impervious Surface Area (sf)	24,288
Pre-Project Impervious Surface Area (sf)	28,749
Post-Project Impervious Surface Area (sf)	25,301
"Net Impervious" Area, if applicable	Negative, not applicable
Watershed Management Zone(s)	Zone 1
Tier	Tier 4 (> 22,500 sf of impervious surface replaced)
Design Storm Frequency Used (85^{th} or 95^{th} percentile) and Design Storm Depth (in)	1.7" (95^{th} percentile)
Urban Sustainability Area, if applicable	[Contact municipality]

II. Setting

II.A. Project Location and Description

The project includes the demolition of an existing building and parking lot and replacement with a new gas station, fuel pumps and parking lot. The project is located at the intersection of Avenue of thee Flags and Central Ave. in Buellton, CA.

II.B. Existing Site Features and Conditions

The existing site has a significant slope, dropping approx. 8' over approx. 140' from West to East. The existing site is paved and incudes a building. The frontage of the site includes existing sidewalk and landscape planters which include some mature trees and bushes. There is an existing retaining wall

along a portion of the west side of the site. The existing drainage system is connected to a municipal storm drain system.

II.C. Opportunities and Constraints for Stormwater Control

Stormwater can be retained in landscaped areas to south and east of the proposed building. Because of the slope across the project site, there is limited area which could be lowered and used for retention. Because the existing site's runoff goes into the municipal storm drain system, keeping runoff on-site will result in a net decrease in runoff to the municipal system.

II.D. Summary of Design Approach for Meeting the Post-Construction Requirements

The site is meeting performance requirements by directing runoff into vegetated areas and away from buildings (performance requirement 1). The proposed bio-retention area is considered an LID treatment system, designed to hold runoff generated by the 95th percentile, 24-hour storm (performance requirement 3). Runoff from the existing site flows entirely into the municipal storm system. The proposed site results in a net increase in pervious area as well as a reduction in runoff out of the site by putting a retention area on-site. Therefore, the post-development peak flow shall not exceed pre-project peak flow (performance requirement 4).

III. Low Impact Development Design Strategies

III.A. Site Design and Runoff Reduction (Performance Requirement No.1)

III.A.1. Limit disturbance to creeks and natural drainage features, if applicable

Not applicable - no creeks or natural drainage features.

III.A.2. Minimize compaction of highly permeable soils, if applicable

Not Applicable, as nearly the entire site has been previously paved.

III.A.3. Limit of clearing and grading of native vegetation to minimum area needed, if applicable

The demolition of existing pavement and building will be replaced with new pavement and building. The existing landscape area on the west side will be preserved as much as possible. The project will result in a net gain of landscaped area.

III.A.4. Apply setbacks from creeks, wetlands, and riparian habitats, if applicable

Not applicable - no creeks, wetlands, or riparian habitats.

III.A.5. Minimize stormwater runoff using one or more of the following site design measures

Runoff is designed to be directed away from the buildings and into vegetated areas. Drainage inlets and pipes are to be installed to convey runoff from the parking area to vegetated areas.

III.A.6. Consideration of drainage as a design element within the project

The project has been designed with the intent to drain rainwater away from the buildings and into a storm drain system which will convey it to the bioretention area.

III.A.7. Tier 3 projects must include:

The site has already been developed, so there are no natural areas to protect. The proposed site design will increase the pervious area.

III.B. Site Constraints

III.B.1. Limitation of development envelope due to site constraints including:

The site is limited due to its existing topography. The large grade difference between the east and west sides of the site create a limitation on the possible size of a bioretention area due to the need for a lowered area where water can collect when the west side of the project is already much higher than the east side.

III.C. Dispersal of Runoff to Pervious Areas

III.C.1. Reduce amount of runoff for which Structural Control Measures are required.

Due to the site layout and the limitations on possible grading schemes, drainage inlets must be installed in the parking areas to collect runoff. This runoff will then be piped into the bio-retention area.

IV. Documentation of Drainage Design

IV.A. Descriptions of each Drainage Management Area

Table 2. Drainage Management Areas

DMA Name	Area (sf)	Surface type	Drains to
DMA 1	2,973	Concrete / Asphalt	SCM #1
DMA 2	13,147	Concrete / Asphalt	SCM #1
DMA 3	3,179	Roof	SCM #1
DMA 4	4,559	Roof	SCM #1
DMA 5	1,443	Concrete / Asphalt	SCM #1
DMA 6	2279	Landscape	SCM #1
DMA 7	1238	Landscape	Self-Retaining
DMA 8	1208	Landscape	Self-Retaining
DMA 9	389	Landscape	Self-Retaining

Drainage Management Area Narrative Descriptions

DMA #1, totaling 2,973 SF is as portion of the parking lot which flows to a drainage inlet which pipes to the drainage inlet for DMA 2 and is then directed to the bioretention area.

DMA #2, totaling 13,147 SF is as portion of the parking lot and fueling area which flows to a drainage inlet which directs to the bioretention area

DMA #3, totaling 3,179 SF is the roof canopy for the fueling area. Roof leaders direct the flow to the drainage inlet for DMA 2 which then directs the flow to the retention area.

DMA #4, totaling 4,559 SF is the roof of the gas station building. Roof leaders direct the flow into the parking area where it then flows into the drainage inlet for DMA 2.

DMA #5, totaling 1,443 SF is the sidewalks around the sides of the building which flow into surrounding landscape areas and then into SCM #1

DMA #6, totaling 2,279 SF is the landscaped area behind the building which will drain towards the SCM

DMA #7, totaling 1,238 SF is the landscaped area that will self-retain

DMA #8, totaling 1,208 SF is the landscaped area that will self-retain

DMA #9, totaling 389 SF is the landscaped area that will self-retain

IV.B. Description of each Stormwater Structural Control Measure

SCM#1, totaling 1334 SF is a landscaped bio-retention area behind the proposed building

IV.C. Tabulation and Sizing Calculations for Structural Control Measures

See the attached entries and output from the Central Coast Stormwater Control Measure Sizing Calculator.

V. Source Control Measures

V.A. Site activities and potential sources of pollutants

On-site areas that can become potential sources of pollutants are as follows:

- Landscape Maintenance
- Parking Lots and Driveways – Oil leaks from cars

V.B. Source Control BMPs Table

Table 3. Source Control BMPs

Potential source of runoff pollutants	Permanent source control BMPs	Operational source control BMPs
Landscape Maintenance	Protect existing trees to mature.	Landscaping to be protected and maintained using no pesticides.
Parking Lots and Sidewalks	Not Applicable	Parking lots and sidewalks to be swept daily and debris to be pressure washed periodically. Oil spills to be cleaned as soon as possible when noticed

VI. Stormwater Facility Maintenance

The maintenance of Stormwater facilities will be the responsibility of the property owner and will be performed by the owner's contractors or employees. The applicant accepts the responsibility for this operation and maintenance of Stormwater treatment until such time as this responsibility is formally transferred to subsequent owner.

VII. Stormwater Control Plan/Construction Documents Cross-Checklist

Table 4. Stormwater Control Plan/Construction Documents Cross-Checklist

Stormwater Control Plan Page #	Source Control or LID Facility	See Plan Sheet #s
4 and Exhibit	DMA #1-4 – runoff is transported to the bioretention area via storm-drain pipes	
4 and Exhibit	DMA #5-6 – stormwater is able to runoff directly into the bioretention area	
4 and Exhibit	DMA #7-9 – landscaped areas which will self-retain any stormwater	

VIII. Certifications

The preliminary design of stormwater treatment facilities and other stormwater pollution control measures in this plan are in accordance with the current edition of the Santa Barbara County Project Clean Water's Stormwater Technical Guide.