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## 4.6 - Hydrology and Water Quality

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### 4.6.1 - Introduction

This section provides an evaluation of hydrology and water quality. The analysis for the proposed Walmart includes a discussion of construction and operational impacts. The analysis concludes that there are no mitigation measures required because similar to the approved 158,000 square foot “Large Box Retail” use, the 170,000 square foot proposed Walmart will result in less than significant construction and operational hydrology and water quality impacts. The following is a list of information reviewed in preparation of this section:

- City of Wasco General Plan. June 2010. City of Wasco. This document is not contained in the ~~Draft~~ [Final](#) SEIR appendices but is instead available for review at the City of Wasco Community Development Department at 764 E Street, Wasco, California, 93280. Pursuant to CEQA Guideline § 15150, the City of Wasco General Plan is hereby incorporated by reference.
- Kern County New Development Standards. Update August 2010. Kern County - Engineering, Surveying, and Permit Processing Department. This document is not contained in the ~~Draft~~ [Final](#) SEIR appendices but is instead available for review at the County of Kern Engineering, Surveying, and Permit Processing Department at 2700 M Street, Suite 570, Bakersfield, California, 93301. Pursuant to CEQA Guideline § 15150, the County of Kern New Development Standards is hereby incorporated by reference.
- Underground Retention Basin Calculations for Wasco Center Walmart. October 2010. Eda, Inc. This information is located in this ~~Draft~~ [Final](#) SEIR’s Appendix H.
- Wasco Center Mitigated Negative Declaration. August 2008. Chambers Group. This document is not contained in the ~~Draft~~ [Final](#) SEIR appendices but is instead available for review at the City of Wasco Community Development Department at 764 E Street, Wasco, California, 93280. Pursuant to CEQA Guideline § 15150, the Wasco Center MND is hereby incorporated by reference.
- Soil Survey of Kern County, California, Northwestern Part. Issued September 1988. U.S. Department of Agriculture, Soil Conservation Service. This document is not contained in the ~~Draft~~ [Final](#) SEIR appendices but is instead available for review at the City of Wasco Community Development Department at 764 E Street, Wasco, California, 93280.

### 4.6.2 - Environmental Setting

The City of Wasco, as well as most of Kern County, is located within the Tulare Lake Hydrologic Region. The Tulare Lake Hydrologic Region comprises the drainage area of the San Joaquin Valley south of the San Joaquin River and encompasses approximately 10.9 million acres (17,050 square miles). The valley floor in this region had been a complex series of interconnecting natural sloughs, canals, and marshes, once containing the largest block of wetland habitat in California. Today,

however, the area which has an “inland Mediterranean” climate and is characterized by long, hot, dry summers and short, foggy winters, is the driest region of the Central Valley and is one of the nation’s leading agricultural production areas, growing a wide variety of crops on approximately three million acres (CDWR 2009). The majority of the rainfall in the Central Valley occurs between November and April. Based on the closest meteorological station (Bakersfield-Meadows Field Airport), the average annual precipitation is 6.23 inches.

Major rivers draining into the Tulare Lake Hydrologic Region include the Kings, Kaweah, Tule, and Kern rivers. The original ecological character of the region has been significantly altered over the years, primarily from the taming of local rivers and tributaries for agriculture irrigation. Significant geographic features of the region include the Buena Vista/Kern Lake and Tulare Lake to the south, the Tehachapi Mountains to the south, the Coast Range to the west, and the Sierra Nevada Mountains to the east.

### **Surface Water**

As identified by the FEMA Flood Insurance Rate Map, the nearest surface water feature to the project sites is the Calloway Canal, located approximately 5 miles east of the project site. However, there are no significant hydrological surface water features identified within the City of Wasco or on the project site. The project site is not located within a FEMA designated flood zone.

Regionally, Lake Isabella, along with the Kern River and its tributaries, are the nearest prominent surface water features. However, these features are located approximately 30 miles southeast and 50 miles east of the project site, respectively. Another larger source of surface water in the region includes the California Aqueduct, which extends the entire length of the western portion of the Tulare Lake Hydrologic Region, delivering water to State Water Project (SWP) and Central Valley Project (CVP) contractors and exporting water to Southern California.

### **Groundwater**

The Tulare Lake Hydrologic Region has 12 distinct groundwater basins and 7 subbasins. These basins encompass approximately 5.33 million acres (8,330 square miles) or 49 percent of the entire hydrologic region. Groundwater accounts for 41 percent of the region’s total annual supply. In addition, groundwater use in the region represents approximately 10 percent of the state’s overall water supply for agricultural and urban uses. Most towns and cities along the east side of the valley, including Fresno, Bakersfield, Shafter, and Wasco rely heavily on groundwater.

Groundwater recharge is primarily from rivers and streambeds, irrigation water percolating below the root zone of irrigated fields, direct recharge from developed ponding basins and water banks, and in-lieu recharge where surface water is made available in-lieu of groundwater pumping. Water agencies throughout the Tulare Lake Hydrologic Region manage groundwater supplies by practicing conjunctive use, which involves the collecting and storing of surface water during wet years to assist during dry years.

The proposed Wasco Center Walmart is located within the San Joaquin Valley Groundwater Basin, Kern County Subbasin. The Kern County Groundwater Subbasin is bordered on the north by the Kern County line and the Tulare Groundwater Subbasin, on the east and southeast by granite bedrock of the Sierra Nevada foothills and Tehachapi Mountains, and on the southwest and west by marine sediments of the San Emigdio Mountains and Coast Ranges.

The City of Wasco's water supply is provided from groundwater. The City has a water distribution system consisting of eight wells; however, only seven of the wells currently operate. Six of the seven wells provide water for domestic service and fire flow, while one of the wells provides water for irrigation for a golf course. The inoperative well is inactive due to high concentrations of nitrates and dibromochloropropane (DBCP) concentrations that exceed drinking water standards. In addition to these contaminants, during a recent groundwater supply survey performed by the State of California, Department of Health Services (DHS), 1,2,3-trichloropropane and dichloromethane were found to be present.

### **Onsite soils**

Based on a review of the U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Kern County, California, Northwestern Part prepared in September 1988, the project site consists of Wasco sandy loam, which has deep, well drained soil on recent alluvial fans. It formed in alluvium derived dominantly from granitic rock. Permeability of this soil type is moderately rapid. Runoff is slow and the hazard of water erosion is slight.

## **4.6.3 - Regulatory Setting**

### **Federal**

#### ***Clean Water Act***

The principal law governing pollution of the nation's surface waters is the Federal Water Pollution Control Act, or Clean Water Act (CWA). In 1972, the CWA was substantially revised by amendments, creating the majority of the statutory scheme we find today. As outlined by the CWA, states are required to adopt water quality standards. In an effort to protect surface waters and achieve its desired objectives, the CWA is based on the assumption that all discharges into the nation's waters are unlawful, unless specifically authorized by permit. Moreover, the CWA states that discharge of pollutants into waters of the United States from any point source or non-point source is unlawful unless the discharge complies with the National Pollution Discharge Elimination System (NPDES) permit.

The CWA § 402 regulates construction-related stormwater discharges to surface waters through the NPDES permit. Construction activities that are subject to this permit include clearing, grading, and general disturbances to the ground such as stockpiling or excavation. In California, the NPDES program is administered through the nine Regional Water Quality Control Boards, including the Central Valley Region Board. The State Water Resources Control Board (SWRCB) has developed a general permit for Storm Water Discharges Associated with Construction Activities (Water Quality

Order 99-08-DWQ) (Construction General Permit). Because construction activities on the project site are expected to disturb more than five acres at any one time, the RWQCB will need to be notified of the intention to proceed under the general permit for construction activities and abide by the terms of that permit, or obtain an individual storm water permit for construction. Locally, the Central Valley Regional Board is responsible for determining the City of Wasco's compliance with the CWA. Stormwater pollution prevention plans (SWPPPs) are required for the issuance of a General Construction Activity Stormwater NPDES permit and typically include the implementation of structural and non-structural Best Management Practices (BMPs) to reduce water quality impacts.

In July 2010, changes to the SWPPP requirements became effective by the SWRCB. SWPPPs require specific BMPs to be implemented, require a greater number of BMPs, and require quantitative numeric effluent limitations for water quality metrics such as pH and turbidity. In addition, a Rain Event Action Plan that is designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event is required. Furthermore, there are new monitoring and reporting requirements.

## **State**

### ***Porter-Cologne Water Quality Control Act***

The Porter-Cologne Water Quality Control Act of 1969 establishes a program to protect water quality and beneficial uses of state water resources and includes both groundwater and surface water. The SWRCB and the Regional Water Quality Control Boards (RWQCBs) are the principal agencies responsible for control of water quality.

The Porter-Cologne Act authorizes the SWRCB to provide comprehensive protection for California's waters through water allocation and water quality protection. The SWRCB implements the requirement of the Clean Water Act Section 303, indicating that water quality standards have to be set for certain waters by adopting water quality control plans under the Porter-Cologne Act. The Porter-Cologne Act established the responsibilities and authorities of the nine RWQCBs, which include preparing water quality plans for areas in the region, identifying water quality objectives, and issuing NPDES permits and Waste Discharge Requirements. Water quality objectives are defined as limits or levels of water quality constituents and characteristics established for reasonable protection of beneficial uses or prevention of nuisance. The Porter-Cologne Act was later amended to provide the authority delegated from the EPA to issue NPDES permits.

## **Local**

### ***Kern County New Development Standards***

The Kern County Engineering, Surveying, and Permit Services Department's (Kern County ESS) New Development Standards contain the following sections that address issues related to hydrology and water quality:

Division Four: Standards for Drainage (Chapter VIII. Retention Basin Design)

Section 408-1 The design volume of storm water retention basins shall be based upon the runoff from the Intermediate Storm Drainage Discharge (ISDD) five-day storm event and a volume of nuisance water determined by the engineer. No runoff generated on site from the design storm or from nuisance flows will be allowed to leave the site unless downstream drainage disposal facilities exist to handle the flow. The retention of upstream off-site flows shall not be considered to reduce the size of the required on-site retention facilities or mitigate the runoff from the proposed development. An evaluation of the runoff volumes associated with the site in its existing condition shall not reduce the size of the required drainage facilities. The runoff volume from the ISDD five-day storm shall be calculated using the formula:  $\text{Runoff Volume} = .12(D10)(a_i)(\text{Area})$ , where D10 = 10-year, 24-hour depth of rainfall;  $a_i$  = average percentage of impervious area; and Area = Drainage area of total development.

**City of Wasco General Plan**

The City of Wasco General Plan contains the following objectives and policies that address issues related to hydrology and water quality:

Conservation and Open Space Element (Natural Resources)

Objective B Ensure that environmental hazards, including potential flooding and impacts from agricultural practices are adequately addressed in the development process within the City and the Wasco Planning Area.

Policy 1 Protect areas of natural groundwater recharge from land uses and disposal method, which would degrade groundwater quality. Promote activities, which combine stormwater control, and water recharges.

Safety Element (Flooding)

Objective A Protect the lives and property of residents from the hazards of flooding.

**4.6.4 - Thresholds of Significance**

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether hydrology and water quality impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

- a) Violate any water quality standards or waste discharge requirements?
- b) Substantially deplete groundwater supplies or interfere substantially 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 7, Effects Found Not To Be Significant.)

- c) Substantially alter the existing drainage pattern of 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? (Refer to Section 7, Effects Found Not To Be Significant.)
- d) 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?
- e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
- f) Otherwise substantially degrade water quality?
- g) 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, Effects Found Not To Be Significant.)
- h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? (Refer to Section 7, Effects Found Not To Be Significant.)
- i) 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, Effects Found Not To Be Significant.)
- j) Inundation by seiche, tsunami, or mudflow? (Refer to Section 7, Effects Found Not To Be Significant.)

For the purpose of the proposed Walmart, the following threshold has been added to evaluate the proposed Walmart's consistency with applicable standards, objectives, and policies related to hydrology and water quality.

- Conflict with any applicable local standards or objectives or policies?

#### **4.6.5 - Impact Analysis and Mitigation Measures**

##### **Water Quality Standards and Requirements**

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**Impact HWQ-1:**      **The proposed Walmart would not violate any water quality standards or waste discharge requirements.**

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##### ***Project Specific Impact Analysis***

Short-term Construction Impacts

(Refer to Section 7, Effects Found Not To Be Significant.)

### Long-term Operational Impacts

Development of the proposed Walmart includes long-term operational activities that could potentially violate water quality standards or waste discharge requirements. The Wasco Center found that development of the Wasco Center would alter the composition of surface water runoff due to the addition of impervious surfaces and irrigation of landscaped areas. Paved surfaces could accumulate pollutants such as atmospheric pollution, tire-wear residues, petroleum products, fertilizers, pesticides, litter, animal droppings, and other pollutants. Rainfall could convey these pollutants away from the project site and into downstream areas. However, as part of the Wasco Center, a storm drainage system is proposed that conveys stormwater to underground retention basins, allowing surface runoff and potential urban contaminants to remain onsite.

The proposed Walmart includes a modification to the stormwater drainage system currently approved for the Wasco Center. The approved drainage system includes storm drains located on the Walmart parcel that would convey stormwater to an underground retention basin located within the Wasco Center parcel and west of the 17-acre project site. The proposed modification includes a storm drainage system that collects surface runoff from the project site and conveys the stormwater to an onsite 120,000 cubic foot underground retention basin located to the southern portion of the 17-acre parcel (Exhibit 2-8, in Section 2). According to a basin analysis conducted by Eda, Inc. engineers (Eda, Inc. 2010), this underground retention basin would have the capacity to accommodate surface runoff generated by the 10-year, 24-hour storm event that the City of Wasco and Kern County require. Urban Pollutants within the stormwater would be conveyed to this onsite underground retention basin. The urban pollutants associated with the project are assumed identical to those pollutants associated with the previously approved large box retail store.

Since the proposed Walmart is larger in both size and scope than the previously approved large box retail store, the proposed project is expected to produce more vehicle trips and thus generate more urban pollutants than considered in the Wasco Center MND. To lower the impact of surface runoff, and to comply with the City of Wasco and Kern County requirements, the stormwater drainage system for the project would conform to the City's General Plan and the County's Engineering, Surveying, and Permit Services Department (Kern County ESS) New Development Standards (Kern County 2010). Compliance with the General Plan and the New Development Standards ensures that the project addresses a 10-year, 24-hour storm event by constructing adequate storm drainage facilities to prevent flooding within the community. The proposed Walmart's modifications to the previously approved Wasco Center stormwater drainage system would result in less than significant long-term impacts associated with water quality standards and waste discharge requirements.

### **Cumulative Impact Analysis**

Implementation of the proposed Walmart and cumulative projects would potentially result in construction and operational activities that would violate water quality standards or waste discharge requirements. Similar to all construction projects encompassing over five acres, construction of the proposed and cumulative projects would follow standard requirements associated with the National

Pollutant Discharge Elimination System (NPDES) and a Stormwater Pollution Prevention Plan (SWPPP). Compliance with standard NPDES and SWPPP requirements through the employment of best management practices (BMPs) would lessen the short-term impacts of stormwater runoff and the potential pollutants found within. Once operational, the proposed Walmart and cumulative projects and their associated stormwater drainage systems would be required to conform to the requirements of the City of Wasco General Plan and Kern County New Development Standards. Compliance with these requirements ensures that the proposed and cumulative projects address a 10-year, 24-hour storm event by constructing adequate storm drainage facilities to prevent flooding within the community. The adjacent Wasco Center project has its own, previously proposed stormwater drainage system to accommodate surface runoff generating from its site. This drainage system, along with all other cumulative projects' systems, would need to comply with all local requirements. Therefore, the proposed Walmart's cumulative impacts associated with water quality standards and waste discharge requirements would not be deemed cumulatively considerable, and therefore, less than significant.

### ***Mitigation Measures***

#### **Project Specific**

No mitigation measures are required.

#### **Cumulative**

No mitigation measures are required.

### ***Level of Significance After Mitigation***

#### **Project Specific**

Less than significant impact.

#### **Cumulative**

Less than significant impact.

### **Drainage Pattern: Flooding**

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**Impact HWQ-2:**     **The proposed Walmart would not 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 that would result in flooding on- or off-site.**

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### ***Project Specific Impact Analysis***

Development of the proposed Walmart would alter the existing drainage pattern and increase the rate and amount of surface runoff similar to the rate and amount of surface runoff that would occur with the approved, but not yet constructed, "Large Box Retail" use. As discussed in the Wasco Center MND, the Wasco Center, including the 17-acre project site, is not located within a FEMA designated 100-year flood zone. However, development of the proposed Walmart or the approved "Large Box Retail" use would alter the composition of surface water runoff by substantially increasing the amount of impervious surfaces on the project site. The addition of impervious surfaces would increase the rate and amount of surface runoff compared with the existing conditions found on the

currently undeveloped site. To lower the impact of surface runoff, a stormwater drainage system for the site would be required to comply with all local requirements, including the City of Wasco General Plan and Kern County New Development Standards. Compliance with these requirements would ensure that future development on the site addresses a 10-year, 24-hour storm event by constructing adequate storm drainage facilities to prevent flooding within the community. The proposed Walmart includes a modification to the stormwater drainage system originally proposed for the 158,000 sq. ft. approved "Large Box Retail" use. This originally proposed system accommodated stormwater flow within the portion of the Wasco Center west of Central Avenue to Magnolia Avenue. The proposed modification involves the addition of a supplementary stormwater drainage system to accommodate the proposed 170,000 sq. ft. Walmart, including storm drains that convey surface runoff to an onsite 120,000 cu. ft. underground retention basin proposed in the southern portion of the proposed Walmart parcel. Additionally, proposed onsite landscaped areas could serve as drainage swales, supplementing the stormwater drainage system during storm events by allowing water to percolate below the ground surface and reducing surface runoff volumes. Therefore, less than significant impacts associated with the proposed alteration of the onsite drainage patterns would occur from development of the proposed Walmart.

### **Cumulative Impact Analysis**

Implementation of the proposed Walmart and cumulative projects would potentially alter existing drainage patterns and potentially increase the rate and amount of surface runoff both on- and offsite. The proposed Walmart and cumulative projects would increase the amount of impervious surfaces found onsite and surrounding areas, consequently increasing the rate and amount of surface runoff compared with the existing conditions. To lower the impact of surface runoff, the stormwater drainage systems for the proposed Walmart and cumulative projects would be required to conform to the requirements found within the City of Wasco General Plan and Kern County New Development Standards. Compliance with these requirements ensures that the proposed Walmart and cumulative projects address a 10-year, 24-hour storm event by constructing adequate storm drainage facilities to prevent flooding within the community. The proposed stormwater drainage system for the Wasco Center includes storm drains and underground retention basins to accommodate surface runoff generated both onsite and offsite, reducing the potential impacts of flooding on and around the project site. Likewise, the proposed Walmart would include a modified stormwater drainage system that would reduce the potential impacts of flooding on and around the project site. Therefore, the proposed Walmart's cumulative impacts associated with the altering of drainage patterns would not be deemed cumulatively considerable, and therefore, less than significant.

### **Mitigation Measures**

#### Project Specific

No mitigation measures are required.

#### Cumulative

No mitigation measures are required.

**Level of Significance After Mitigation**

Project Specific

Less than significant impact.

Cumulative

Less than significant impact.

**Runoff Water and Drainage Systems**


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**Impact HWQ-3:**      **The proposed Walmart would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.**

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**Project Specific Impact Analysis****Short-term Construction Impacts**

Development of the proposed Walmart could potentially create or contribute runoff water that would provide additional sources of polluted runoff similar to the approved “Large Box Retail” use. The proposed Walmart as well as the approved “Large Box Retail” use would increase the amount of impervious surfaces found onsite. These impervious surfaces could collect debris and contaminants generated during construction activities that would potentially provide additional sources of polluted runoff. To prevent these and other debris and contaminants from becoming additional sources of polluted runoff, development of the site would follow standard requirements associated with NPDES and SWPPP. Compliance with standard NPDES and SWPPP requirements through the employment of BMPs would lessen the potentially harmful impacts of surface runoff. As with all construction activities, the City of Wasco reviews NPDES and SWPPP to ensure consistency with the regulations set forth by the SWRCB. Adherence to NPDES and SWPPP, and conformance with SWRCB guidelines reduces the potential for pollutants being conveyed offsite via runoff water originating onsite. Therefore, less than significant short-term impacts associated with polluted runoff would occur from development of the proposed Walmart.

**Long-term Operational Impacts**

Implementation of the proposed Walmart could potentially create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems similar to the approved “Large Box Retail” use. Addition of these impervious surfaces would increase the rate and amount of surface runoff compared with the existing conditions found on and around the current undeveloped site. The proposed Walmart includes the construction of a stormwater drainage system that would convey potentially polluted runoff to a network of storm drains and an onsite 120,000 cu. ft. underground retention basin. To comply with the City of Wasco and Kern County requirements, the retention basin would have sufficient capacity to contain surface runoff originating from the proposed Walmart. Additionally, proposed onsite landscaped areas could serve as drainage swales, supplementing the stormwater drainage system during storm events by allowing water to percolate below the ground surface and reducing runoff volumes. Therefore, less than significant long-term impacts associated with stormwater drainage systems capacity would occur from development of the proposed Walmart.

### **Cumulative Impact Analysis**

Development of the proposed Walmart and cumulative projects could potentially create or contribute runoff water that would either exceed the capacity of stormwater drainage systems or provide additional sources of polluted runoff. The proposed Walmart and cumulative projects would increase the amount of impervious surfaces. Addition of these impervious surfaces would increase the rate and amount of stormwater runoff compared with the existing conditions found on and around these currently undeveloped sites. During construction of the proposed Walmart and cumulative projects, standard requirements associated with NPDES and SWPPP, as well as the regulations set forth by the SWRCB would be followed to lessen the short-term impacts of runoff water. Once the proposed Walmart and cumulative projects are operational, compliance with the City of Wasco and Kern County requirements will ensure that no projects would exceed the capacity of their individual stormwater drainage system. Therefore, the proposed Walmart's cumulative impacts associated with polluted runoff and stormwater drainage systems capacity would not be cumulatively considerable, and therefore, less than significant.

### **Mitigation Measures**

Project Specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

### **Level of Significance After Mitigation**

Project Specific

Less than significant impact.

Cumulative

Less than significant impact.

### **Water Quality**

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**Impact HWQ-4: The proposed Walmart would not otherwise substantially degrade water quality.**

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### **Project Specific Impact Analysis**

Short-term Construction Impact

(Refer to Section 7, Effects Found Not To Be Significant.)

Long-term Operational Impact

Similar to the approved "Large Box Retail" use, development of the proposed Walmart could potentially degrade water quality. By changing the use of the 17-acre project site from undeveloped agriculture to developed commercial, the proposed Walmart as well as the approved "Large Box Retail" use would alter the existing drainage pattern of the site. Impervious surfaces found onsite could collect debris and contaminants generated during operational activities that could potentially provide additional sources of polluted runoff. Additionally, the proposed stormwater drainage system

for the Wasco Center was designed with anticipation of construction of a 158,000 sq. ft. large box retail space, not a 170,000 sq. ft. Walmart.

However, several measures would be implemented to lessen the long-term impacts on water quality. The proposed Walmart includes its own stormwater drainage system, modified from the proposed system found in the Wasco Center MND, with the appropriate capacity to contain surface runoff originating from the proposed Walmart. The modified drainage system's underground retention basin will have a capacity of 120,000 cubic feet and will be located between two and four feet below ground level. Borings taken during soil sampling concluded that subsurface water is located more than 79.5 feet below the project site, therefore, the bottom of the proposed retention basin, which will be less than 10 feet deep, would not encounter groundwater supplies.

In general, compliance with the City of Wasco General Plan and the Kern County New Development Standards would assure that measures are implemented to channel pollutants to the retention basin instead of groundwater supplies. With continued compliance with local, state, and federal water quality regulations, and construction of the proposed stormwater drainage system, the proposed Walmart would not degrade water quality. Therefore, less than significant impacts associated with the degradation of water quality would occur from development of the proposed Walmart.

**Cumulative Impact Analysis**

Implementation of the proposed Walmart and cumulative projects could potentially degrade water quality. To limit the cumulative effects on water quality, all local, State, and federal water quality regulations would be followed during all construction and operational activities. All construction activities would follow standard requirements associated with the NPDES and a SWPPP, as well as all other applicable SWRCB regulations. The implementation of stormwater drainage systems for the proposed Walmart and cumulative projects would comply with requirements found within the City of Wasco General Plan and the Kern County New Development Standards, which establish capacity standards for stormwater collection systems to ensure that potentially polluted surface runoff is contained in retention basins. Therefore, the proposed Walmart's cumulative impacts associated with the degradation of water quality would not be deemed cumulatively considerable, and therefore, less than significant.

**Mitigation Measures**

Project Specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

**Level of Significance After Mitigation**

Project Specific

Less than significant impact.

Cumulative  
Less than significant impact.

**Policies, Objectives, and Standards Related to Hydrology and Water Quality**

**Impact HWQ-5      The proposed Walmart would not conflict with local policies, objectives, and standards related to hydrology and water quality.**

**Project Specific Impact Analysis**

Table 4.6-1 provides a discussion of the proposed Walmart’s consistency with the policies, objectives, and standards contained in the Kern County New Development Standards and the City of Wasco General Plan pertaining to hydrology and water quality. As discussed in Table 4.6-1, the proposed Walmart would be consistent with all of the relevant hydrology and water quality policies, objectives, and standards. Therefore, no impacts associated with the hydrology and water quality policies, objectives, and standards would occur with implementation of the proposed Walmart.

**Table 4.6-1: Consistency of the Wasco Center Walmart Project with the Policies, Objectives, and Standards**

| Objectives, Policies, and Standards  | Project Consistency   |
|--|---|
| <i>Kern County New Development Standards - Division Four: Standards for Drainage (Chapter VIII. Retention Basin Design)</i>  |   |
| Section 408-1. The design volume of storm water retention basins shall be based upon the runoff from the Intermediate Storm Drainage Discharge (ISDD) five-day storm event and a volume of nuisance water determined by the engineer. No runoff generated on site from the design storm or from nuisance flows will be allowed to leave the site unless downstream drainage disposal facilities exist to handle the flow. The retention of upstream off-site flows shall not be considered to reduce the size of the required on-site retention facilities or mitigate the runoff from the proposed development. An evaluation of the runoff volumes associated with the site in its existing condition shall not reduce the size of the required drainage facilities. | The proposed Walmart includes construction of a 120,000 cu. ft. underground retention basin capable of accommodating surface runoff generated by a 10-year, 24-hour storm event. This capacity is compliant with Kern County’s New Development Standards. Therefore, the proposed Walmart is consistent with this objective.  |
| <i>City of Wasco General Plan – Conservation and Open Space Element (Natural Resources)</i>  |   |
| Objective A. Protect natural resources, including groundwater, soils, and air quality, to meet the needs of present and future generations.  | The proposed Walmart includes implementation of stormwater drainage system consistent with Kern County’s New Development Standards. The drainage system will have the capacity to collect on-site surface runoff and pollutants in a retention basin before they can directly enter and contaminate groundwater. Therefore, the proposed Walmart is consistent with this objective. |

**Table 4.6-1 (cont.): Consistency of the Wasco Center Walmart Project with the Policies, Objectives, and Standards**

| Objectives, Policies, and Standards   | Project Consistency  |
|---|--|
| Objective B. Ensure that environmental hazards, including potential flooding and impacts from agricultural practices are adequately addressed in the development process within the City and the Wasco Planning Area. | The proposed Walmart includes implementation of stormwater drainage system consistent with Kern County’s New Development Standards. The drainage system will have the capacity to collect surface runoff. The proposed Walmart will also include landscaped area that would act as drainage swales, collecting surface runoff and minimizing the potential for flooding. Therefore, the proposed Walmart is consistent with this objective.  |
| Policy 1. Protect areas of natural groundwater recharge from land uses and disposal method, which would degrade groundwater quality. Promote activities, which combine stormwater control, and water recharges.       | The proposed Walmart includes implementation of stormwater drainage system consistent with Kern County’s New Development Standards. The drainage system will have the capacity to collect on-site surface runoff and pollutants in a retention basin before the surface runoff can percolate below the surface. Therefore, the proposed Walmart is consistent with this policy.  |
| <i>City of Wasco General Plan – Safety Element (Flooding)</i>   |  |
| Objective A. Protect the lives and property of residents from the hazards of flooding.  | The proposed Walmart includes implementation of stormwater drainage system consistent with Kern County’s New Development Standards. The drainage system will have the capacity to collect surface runoff. The proposed Walmart will also include landscaped areas that could act as drainage swales, collecting surface runoff and minimizing the potential for flooding. Therefore, the proposed Walmart is consistent with this objective. |
| Source: City of Wasco. June 2010. City of Wasco General Plan. County of Kern. August 2010. Kern County New Development Standards.   |  |

**Cumulative Impact Analysis**

Based on the above consistency analysis, the proposed Walmart would not contribute to the potential cumulative impacts on the local policies, objectives, and standards related to hydrology and water quality.

**Mitigation Measures**

Project-Specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

**Level of Significance After Mitigation**

Project-Specific

No impact.

Cumulative

No impact.