

## 4.9 HYDROLOGY AND WATER QUALITY

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### INTRODUCTION

This section of the Draft EIR evaluates the impacts related to hydrology and water quality, and evaluates flooding and hazards associated with a potential failure of a levee or dam that would result from construction and operation of the proposed Project. The analysis incorporates relevant information from the *Site Hydrology Report: Compton High School* (Hydrology Report), dated September 8, 2017, and prepared by VCA Engineers Inc., which is included as **Appendix K** to this Draft EIR.

### ENVIRONMENTAL SETTING

#### Regulatory Framework

##### *a. Federal*

##### Clean Water Act

The Clean Water Act (CWA)<sup>1</sup> is intended to restore and maintain the cleanliness of the nation's bodies of water to achieve a level of water quality that provides for recreation in and on the water, as well as for the propagation of fish and wildlife. Section 208 of the CWA and the requirements of the Code of Federal Regulations require local water management plans. Preparation of these water management plans is delegated to individual states by the US Environmental Protection Agency (USEPA), which is charged with implementing the CWA.

In 1972 the CWA, previously known as the Federal Water Pollution Control Act of 1948, was amended to prohibit the discharge of pollutants to waters of the United States unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit.<sup>2</sup> The CWA focused on tracking point sources, primarily from wastewater treatments plants and industrial waste dischargers, and required implementation of control measures to minimize pollutant discharges.

The CWA requires all states to conduct water quality assessments of their water resources to identify water bodies that do not meet water quality standards. The water bodies that do not meet water quality standards are placed on a list of impaired waters pursuant to the requirements of Section 303(d) of the CWA.

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1 Federal Water Pollution Control Act (Clean Water Act), 33 US Code (USC) sec. 1251–1387.

2 Clean Water Act, 33 USC sec. 1251–1387, October 18, 1972, as amended.

## **National Pollutant Discharge Elimination System**

The NPDES is a program created to implement the CWA. In November 1990, the USEPA published final regulations that established requirements for specific categories of industries, including construction projects that encompass greater than or equal to 5 acres of land. The Phase II Rule became final in December 1999, expanding regulated construction sites to those greater than or equal to 1 acre. The regulations require that stormwater and nonstormwater runoff associated with construction activity that discharges either directly to surface waters or indirectly through municipal separate storm sewer systems (MS4) must be regulated by an NPDES permit.

The USEPA has delegated management of California's NPDES program to the State Water Resources Board (SWRCB) and the nine regional water quality control board (RWQCB) offices that grant permits to regulate point-source discharges of industrial and municipal wastewater into the waters of the United States. The NPDES program was established in 1972 to regulate the quality of effluent discharged from easily detected point sources of pollution, such as wastewater treatment plants and industrial discharges. The 1987 amendments to the CWA recognized the need to address non-point-source stormwater runoff pollution and expanded the NPDES program to operators of MS4s, construction projects, and industrial facilities.

### ***b. State***

#### **California Porter-Cologne Act**

The California Porter-Cologne Act of 1970 is largely responsible for creating the State's extensive regulatory program for water pollution control.<sup>3</sup> As discussed previously, preparation of water quality control plans has been delegated to the individual states by the USEPA. Pursuant to the Porter-Cologne Act, the responsibility for protection of water quality in California rests with the SWRCB. In turn, the SWRCB has delegated the nine RWQCBs to regulate the nine hydrologic basins in the State. The Porter-Cologne Act gives the SWRCB and RWQCB broad powers to protect water quality by regulating waste discharges to water and land and by requiring cleanup of hazardous conditions.

#### **California State Water Quality Control Board**

The State of California is required by Section 303(d) of the CWA<sup>4</sup> to provide the USEPA with a list of water bodies considered by the State to be impaired (i.e., not meeting water quality standards and not supporting their beneficial uses). The list also identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment, typically a total maximum daily load (TMDL). The TMDL specifies the amount of the target pollutant that the water body can sustain

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3 California Water Code, Cobey-Alquist Flood Plain Management Act, sec. 13000-14958.

4 Clean Water Act, 33 USC sec. 303(d), Water Quality Standard and Implementation Plans (1972).

on a daily or annual basis and is established by amending the water quality control plan. TMDLs are prepared by the RWQCBs and result in amendments to the Water Quality Control Plan (WQCP), which must be approved by the USEPA. The 303(d) list is used by the USEPA to prepare the biennial federal CWA Section 305(b) *National Water Quality Inventory Report to Congress*.

The SWRCB has jurisdiction throughout California. The SWRCB protects water quality by setting Statewide policy, coordinating and supporting the RWQCBs' efforts, and reviewing petitions that contest RWQCB actions. As noted previously, the nine regional RWQCBs exercise rulemaking and regulatory activities by the nine hydrologic basins.

### **Government Code Section 65302**

Government Code Section 65302(a) requires cities and counties located within the State to review the land use, conservation, and safety elements of their general plan "for the consideration of flood hazards, flooding, and floodplains" to address flood risks.<sup>5</sup> Any amendment to these elements requires a review of other general plan elements for internal consistency, including the housing element.

The code also requires cities and counties in the State to annually review their land use element within "those areas covered by the plan that are subject to flooding identified by floodplain mapping prepared by the Federal Emergency Management Agency (FEMA) or the Department of Water Resources."<sup>6</sup> FEMA's floodplain mapping includes:

- Flood Insurance Rate Maps (FIRMs)
- Digital Flood Insurance Rate Maps (DFIRMs)

DWR's floodplain mapping includes:

- Awareness Floodplain Maps
- Best Available Mapping (BAM)
- Levee Flood Protection Zone (LFPZ) Maps
- Central Valley Floodplain Evaluation and Delineation (CVFED) Maps

Additionally, a general plan conservation element shall identify land and natural resources, including rivers, creeks, flood corridors, and riparian habitats, that are used "for purposes of groundwater recharge and storm water management."<sup>7</sup>

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5 California Government Code, sec. 65300–65303.4, Authority for and Scope of General Plans.

6 California Government Code, sec. 65302(a), Authority for and Scope of General Plans.

7 California Government Code, sec. 65302(d)(1), Authority for and Scope of General Plans.

### **Cobey-Alquist Flood Control Act**

The Cobey-Alquist Flood Control Act states that a large portion of land resources of the State of California is subject to recurrent flooding.<sup>8</sup> The public interest necessitates sound development of land use because (1) land is a limited, valuable, and irreplaceable resource; and (2) the floodplains of the State are a land resource to be developed in a manner that, in conjunction with economically justified structural measures for flood control, will prevent loss of life and economic loss caused by excessive flooding. The primary responsibility for planning, adoption, and enforcement of land use regulations to accomplish floodplain management rests with local levels of government. It is State of California policy to encourage local levels of government to plan land use regulations to accomplish floodplain management and to provide State assistance and guidance.

### **California Drainage Law**

California drainage law is essentially case law. As such, it is complex, but the courts have established the following general principles, which apply in general to development projects:

- The downstream property owner is obligated to accept and make provision for those waters that are the natural flow from the land above.
- The upstream property owner shall not concentrate water where it was not concentrated before without making proper provision for its disposal without damage to the downstream property owner.
- The upstream property owner may reasonably increase drainage runoff by paving or construction of other impervious surfaces, including buildings, without liability. The upstream property owner may not further increase drainage runoff by diversion of water that previously drained to another area. Reasonableness is often based on prevailing standards of practice in the community or region.
- No property owner shall block, or permit to be blocked, any drainage channel, ditch, or pipe. No property owner shall divert drainage water without properly providing for its disposal.

### ***c. Regional and Local***

#### **County of Los Angeles**

The Los Angeles County Flood Control Act, adopted by the State Legislature in 1915, established the Los Angeles County Flood Control District (LACFCD) and empowered it to provide flood protection, water conservation, recreation, and aesthetic enhancement within its boundaries. The LACFCD is managed by the Los Angeles County Department of Public Works (LADPW), which handles the planning and policy activities. LADPW implements three levels of protection related to flood protection: capital flood

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<sup>8</sup> California Water Code, Cobey-Alquist Flood Plain Management Act, (1965 as amended), sec. 8400–8401.

protection, urban flood protection, and probable maximum flood protection.<sup>9</sup> Capital flood protection applies to all-natural watercourse facilities, including the Compton Creek, and requires that drainage systems have the capacity to convey runoff from a 50-year storm frequency. Urban flood protection applies to all drainage facilities in urban areas not covered by the capital flood protection conditions. Lastly, the probable maximum flood protection applies to dams and debris basins.

The municipal discharges of stormwater and nonstormwater by the LACFCD, the County of Los Angeles, and 84 incorporated cities within the coastal watersheds of Los Angeles County, including the City of Compton, are subject to waste discharge requirements set forth in Order R4-2012-0175, NPDES Permit No. CAS4001, Waste Discharge Requirements for Municipal Separate Storm System Discharges within the Coastal Watershed of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4 (MS4 Permit).<sup>10</sup> The MS4 Permit requires the implementation of LID (Low Impact Development) design principles to address runoff pollution from postdevelopment projects. The LID design principles should identify Best Management Practices (BMPs) that are appropriate for the watershed pollutants of concern and especially the water constituents that would be generated from the designated project. The goal for the design is to capture and mitigate the volume of runoff produced from an 85th percentile storm event. The LID design principles should also mimic predevelopment hydrology through infiltration, evapotranspiration, and rainfall harvest and use.

### City of Compton General Plan

The City's existing General Plan was adopted in 1990, with its 2030 Comprehensive General Plan Update currently in the working draft stages.<sup>11</sup> The proposed 2030 Comprehensive General Plan Update establishes goals, policies, and programs that provide the City with emergency preparedness and response for potential flooding, fire, hazardous materials, and other public safety threats. The proposed 2030 Comprehensive General Plan Update addresses natural and man-made environmental hazards that might occur in the City and surrounding areas.<sup>12</sup> It provides information, as well as proposed goals, policies, and programs relative to the reduction and mitigation of natural and manmade hazards. The

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9 Los Angeles County, Department of Public Works, *Hydrology Manual* (January 2006).

10 California Regional Water Quality Control Board, Los Angeles Region, "Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4," Order No. R4-2012-0175, NPDES Permit No. CAS004001, accessed February 2018, [https://www.waterboards.ca.gov/losangeles/water\\_issues/programs/stormwater/municipal/la\\_ms4/2012/Order%20R4-2012-0175%20-%20A%20Final%20Order%20revised.pdf](https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/la_ms4/2012/Order%20R4-2012-0175%20-%20A%20Final%20Order%20revised.pdf).

11 City of Compton, *Draft 2030 Comprehensive General Plan Update [Draft General Plan Update]* (November 6, 2014).

12 City of Compton, *Draft General Plan Update*, "Public Safety Element."

assessment of and planning for these hazards or constraints is the primary purpose of those elements found in the Public Safety Element.

In regard to surface water resources, the City's proposed Conservation, Open Space, and Parks and Recreation Element identifies that the City is covered by the Los Angeles County NPDES permit, which requires the development of a Stormwater Quality Management Plan (SQMP) to improve and protect the quality of stormwater runoff within the City.<sup>13</sup> The SQMP is implemented by the City to govern public and private construction projects, site management, and operations.

### **City of Compton Municipal Storm Water Program**

The City has prepared a draft Watershed Management-focused Storm Water Management Program Plan (SWMP) in accordance with Order R4-2012-0175, NPDES Permit No. CAS4001, Waste Discharge Requirements for Municipal Separate Storm System Discharges within the Coastal Watershed of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4 (MS4 Permit). The MS4 Permit was adopted on November 12, 2012, and became effective 45 days later on December 28, 2014. The City submitted a Notice of Intent (NOI) to prepare an Individual Watershed Management Program (I-WMP) Plan, prior to June 28, 2014, to address MS4 Permit requirements. The NOI was subsequently approved by the Regional Board's Executive Officer.

The purpose of the SWMP is twofold. First, to place the City into compliance with the current MS4 Permit through the implementation of the six (6) core programs in accordance with the Code of Federal Regulations, Title 40, Section 122.26(d)(2)(iv). The implementation of the SWMP places the City into compliance with TMDLs and other water quality standards while the submittal is pending approval. Second, the SWMP also serves as the basis for the development of an I-WMP, which was submitted to the Los Angeles Regional Water Quality Control Board (LARWQCB) on June 30, 2014. The LARWQCB determined that the City's submittal of the SWMP did not meet the requirements for a draft WMP pursuant to Part VI.C of the County's MS4 Permit.<sup>14</sup> Given that development of the SWMP is voluntary, the City is subject to the baseline requirements of the County's MS4 Permit.

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13 City of Compton, *Draft General Plan Update*, "Conservation, Open Space, and Parks and Recreation Element."

14 Los Angeles Regional Water Quality Control Board, "Notice of Deficient Submittal Pursuant to Part VI.C of the Los Angeles County Municipal Separate Storm Sewer System (MS4) Permit (NPDES Permit No. CAS004001; Order No. R4-2012-0175)" (October 7, 2014), accessed February 2018, [https://www.waterboards.ca.gov/losangeles/water\\_issues/programs/stormwater/municipal/watershed\\_management/compton/ComptonNotice.pdf](https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/compton/ComptonNotice.pdf).

## Existing Conditions

### *a. Regional Hydrologic Conditions*

#### Surface Water Hydrology and Flooding

The Project Site is located within the boundaries of the Los Angeles River Watershed, which covers approximately 834 square miles within the Southern California region.<sup>15</sup> The eastern portion spans from the Santa Monica Mountains to the Simi Hills; west portion reaches from the Santa Susana Mountains to the San Gabriel Mountains. The City lies within the floodplain of the Los Angeles River and Compton Creek.

Most of the stormwater in the City (76 percent) drains into Compton Creek, which is a tributary to the lower Los Angeles River. The remaining 24 percent of stormwater in the City drains below Vermont Avenue into a segment of the Dominguez Channel, which is unlined.

Flood control and flood min the City is a combined effort between the US Army Corps of Engineers (USACE), the California Department of Water Resources Division of Flood Management, and FEMA.

In the past, most of the area in the City east of Wilmington Avenue was subject to potential inundation by a 100-year flood from the Los Angeles River, which flows from north to south just inside the eastern border. A 100-year flood is a flood that has a 1 percent chance of occurring every year. However, due to the efforts of the USACE, this threat no longer exists.

Compton Creek is a subwatershed of the Los Angeles River. The Compton Creek Watershed drains an area of approximately 42.1 square miles in the central-southern section of the County of Los Angeles. The Compton Creek channel begins in the City near Main Street and 107th Street, then flows generally south 8.5 miles to the confluence with the Los Angeles River in Rancho Dominguez.

#### Dam Inundation

The Whittier Narrows Dam is located approximately 12 miles northeast of the Project Site. A dam failure would result in flood waters reaching the City in approximately 15 hours with a depth of 4 feet. The only areas within the City identified to have the potential to flood as a result of the failure of the Whittier Dam would be east of Interstate 710, which is approximately 2.0 miles east of the Project Site.

The Hansen Dam is approximately 30 miles northwest of the Project Site. In the event of a dam failure, water would reach the City within 20 hours at a depth of 1 foot. The northern portion of the City would

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15 County of Los Angeles, Department of Public Works, "Los Angeles River Watershed," accessed January 2018, <https://dpw.lacounty.gov/wmd/watershed/la/>.

be the first area affected by the potential dam failure, which then would continue to spread throughout the entire City. Last, the Sepulveda Dam is approximately 29 miles northwest of the Project Site. If the Sepulveda Dam were to fail, the City would be flooded within 11 hours at a depth of 1 foot.<sup>16</sup>

As part of the Los Angeles County Drainage Area Project through the LADPW, a series of improvements to existing levees for the Compton Creek were completed in 2001 to provide new protection for the eastern and southern portions of the City.<sup>17</sup> These improvements included modifications to railroad, traffic, utilities, and pedestrian bridges, for a total of approximately 21 miles of existing levees. These levees, which are maintained in a combined effort by the LACFCD, the State of California Division of Safety of Dams, and the USACE, are considered to be structurally sound and do not contain any areas within FEMA's 100-flood hazard zone.<sup>18</sup>

## **b. Project Site**

### **Surface Water Hydrology and Flooding**

The 42-acre Project Site consists of the existing CHS campus, comprising approximately 40 acres, and the acquisition area to the southeast, comprising approximately 2 acres. Topographically, the Project Site is relatively flat, with an elevation of approximately 68 feet above mean sea level, with gentle sloping ground toward the southeast.<sup>19</sup> The historic high depth to groundwater is mapped in the vicinity of the Project Site as approximately 10 feet below the existing ground surface.<sup>20</sup>

The Project Site lies within the floodplain of the Compton Creek. Although the Compton Creek is a potential source of flooding, the amount of water running through the Compton Creek limits the threat to a smaller area and incidence of occurrence. The threat of localized flooding tends to be contingent on the congestion of storm drains within the street systems. The Project Site is located within a FEMA-designated shaded Zone X area, with the eastern portion of the Project Site is located within an area of moderate flood hazard, generally between the limits of the 100-year and 500-year flood hazard zones.<sup>21</sup> No portion of the Project Site is located within a FEMA-designated 100-year flood zone.

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16 City of Compton, *Draft General Plan Update, "Public Safety Element."*

17 City of Compton, *Draft General Plan Update, "Land Use Element."*

18 County of Los Angeles, Department of Public Works, "Levee Certification Program," accessed January 2018, [http://www.ladpw.org/wmd/dsp\\_LeveeCertificationFAQs.cfm](http://www.ladpw.org/wmd/dsp_LeveeCertificationFAQs.cfm).

19 Converse Consultants, *Phase I Environmental Site Assessment Report, Compton High School* (January 3, 2018).

20 Ninyo & Moore Geotechnical & Environmental Science Consultants, *Geotechnical Evaluation, Compton High School Reconstruction* (January 2018).

21 Federal Emergency Management Agency (FEMA), *Flood Insurance Rate Map [FIRM], Los Angeles County California*, panel 1815 of 2350, map no. 06037C1815F (September 26, 2008).

The Project Site is in an urban area served by existing stormwater drainage infrastructure. Surface water on the Project Site is currently infiltrated through the on-site pervious surfaces and storm drains or is conveyed off site to existing drainage facilities serving the Project area. As shown in **Table 4.9-1: Existing Project Site Runoff Discharge Conditions**, it is estimated that the Project Site, including the approximately 2-acre acquisition area, comprises approximately 25 acres of impervious area and 17 acres of pervious area, which generally cover the eastern and western portions of the Project Site, respectively.<sup>22</sup> Overall, the imperviousness of the Project Site, prior to implementation of the proposed Project, is currently 57 percent.

**Table 4.9-1**  
**Existing Project Site Runoff Discharge Conditions**

Area	Pervious	Impervious	Slope	Runoff Discharge (cfs)
42 acres	17 acres	25 acres	.01	0.0139

*Source: VCA Engineers Inc., Site Hydrology Report, Compton High School (September 8, 2017). See Appendix K.*

*Note: cfs = cubic feet per second.*

## Dam Inundation

According to the City's proposed 2030 Comprehensive General Plan Update, the entire Project Site is located within a dam inundation zone.<sup>23</sup>

## ENVIRONMENTAL IMPACTS

### Methodology

The analysis considers pre- and post-Project stormwater runoff conditions to address local on-site and off-site drainage flood conditions. The analysis also evaluates the potential for the proposed Project to place structures within a 100-year flood hazard area or whether the Project Site would be subject to flooding or dam inundation. The analysis is based on information provided in the City's proposed 2030 Comprehensive General Plan Update and by FEMA, as well as relevant information provided in **Appendix K**.

<sup>22</sup> VCA Engineers Inc., *Site Hydrology Report: Compton High School* (September 8, 2017).

<sup>23</sup> City of Compton, *Draft 2030 Comprehensive General Plan Update, "Public Safety Element"* (November 6, 2014), Exhibit 5-1, Seismic and Flood Hazards.

## Thresholds of Significance

To assist in determining whether the proposed Project would have a significant effect on the environment, the District finds the proposed Project may be deemed to have a significant impact related to hydrology and water quality if it would:

**Threshold HYDRO-1: Violate any water quality standards or waste discharge requirements.**

**Threshold HYDRO-2: Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.**

**Threshold HYDRO-3: Place within a 100-year flood hazard area structures, which would impede or redirect flood flows.**

**Threshold HYDRO-4: 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.**

**Threshold HYDRO-5: Be subject to flooding or dam inundation beyond existing conditions.**

Please refer to **Section 6.1: Effects Found Not to Be Significant** for an evaluation of those topics that were determined to be less than significant or have no impact and do not require further analysis in the EIR.

## Project Impact Analysis

**Threshold HYDRO-1: Violate any water quality standards or waste discharge requirements.**

### *Reconstruction of CHS Campus*

#### **Construction**

During construction, the proposed Project could result in short-term adverse impacts to surface water quality. Grading and construction activities within the site would involve the disturbance of on-site soils for utility improvements and building pad preparation, thereby increasing the potential for erosion and off-site transport of sediment in stormwater runoff.

The use of heavy equipment, machinery, and other materials during construction could result in adverse water quality impacts if spills were to encounter stormwater and polluted runoff were to enter downstream receiving waters. Peak stormwater runoff could result in short-term sheet erosion within areas of exposed or stockpiled soils. Additionally, the compaction of soils by heavy equipment may reduce the infiltration capacity of soils and increase runoff and erosion potential.

Construction activities involving more than 1 acre require adherence to the State NPDES permit for construction-related activities from the SWRCB. The permit would require the preparation and implementation of a Project-specific Storm Water Pollution Prevention Plan (SWPPP) that indicates which BMPs are intended to reduce erosion, sedimentation, and nonpermitted discharges of materials during construction. Examples of BMPs include gravel bag berms, silt fencing, fiber rolls, street sweeping, and general housekeeping measures to prevent stormwater contact with construction materials. The District would develop and implement a SWPPP that would demonstrate compliance with the City's NPDES permit, and associated SQMP, during the phased 24-month construction schedule.

The removal of the existing underground storage tank beneath the administration building may also have the potential to affect water quality standards.

Through incorporation of BMPs and compliance with appropriate water quality standards, construction impacts would be less than significant.

### **Operation**

The proposed Project would result in the development of approximately 19 acres of impervious and 23 acres of pervious surfaces on the Project Site, which would cover the western and eastern portions of the Project Site, similar to existing conditions. These proposed improvements would represent an approximate 35 percent increase in pervious surfaces on the Project Site, allowing for increased stormwater infiltration on the site. These pervious surfaces would be associated with the proposed recreational and outdoor facilities and other landscaping features identified in the proposed landscaping plan, including various forms of ground cover, sports turf, and other drought-tolerant landscaping (refer to **Figure 2.0-5: Conceptual Landscaping Plan**, in **Section 2.0: Project Description**). The Proposed Project would also incorporate the design of bioswales and water-retention features within the athletic fields and outdoor improvements along the western boundary of the Project Site to address potential flooding impacts from the adjacent Compton Creek.

The Project Site is relatively flat, with surface water flows directed toward the southeast of the Project Site into the existing municipal storm drains serving the area. Given that the proposed Project would result in the reconstruction of school facilities with an increased percentage of pervious surfaces, existing drainage patterns would slightly change across the 42-acre site.

The proposed bioswales and water-retention features along the western boundary adjacent to Compton Creek would be designed to promote capture, reuse, and generate a postcondition similar to the existing conditions of the Project Site. Surface water runoff that is not infiltrated on the Project Site through the

bioswales and water-retention features, would be directed to flow to the southeast of the Project Site toward the existing municipal storm drains serving the area.

As shown in **Table 4.9-2: Proposed Project Site Run-Off Discharge Conditions**, stormwater runoff on the Project Site would be adequate to convey peak flow rate due to the 85th percentile, 24-hour rainfall depth. As a result of incorporating the Project components described above, the proposed Project would improve the drainage and runoff characteristics of the Project Site compared to existing conditions.

**Table 4.9-2  
Proposed Project Site Run-Off Discharge Conditions**

Area (acres)	Pervious (acres)	Impervious (acres)	Slope	Run-Off Discharge (cfs)
42	123	19	.01	2.42

*Source: VCA Engineers Inc., Site Hydrology Report: Compton High School (September 8, 2017). See Appendix K.*

*Note: cfs = cubic feet per second.*

Furthermore, operation of the proposed Project would introduce sources of potential stormwater pollution that are typical of a high school campus (e.g., cleaning solvents, pesticides for landscaping, and petroleum products associated with parking areas). The parking areas could also contribute additional sources of contaminated runoff. Stormwater runoff from precipitation events could potentially carry urban pollutants into municipal storm drains. The proposed Project would implement BMPs, such as the incorporation of landscaping features and bioswales, and comply with applicable regulations to ensure that water discharge does not exceed current conditions for the Project Site. As such, with the implementation of BMPs, the proposed Project would not have substantial water quality impacts.

Impacts would be less than significant.

### ***Relocation of District Uses***

As part of the Project, the District's Facilities Department and the Pupil Services, Enrollment Center, and Special Education offices would be demolished and relocated to existing District facilities with available capacities at Caldwell Elementary School and Cesar Chavez Continuation High School.

Given that the relocated uses would be contained within already existing buildings at each of the new locations, construction is not warranted, nor would there be any alterations to the existing operations of these District facility sites. The sites already implement BMPs, such as the incorporation of landscaping features, in accordance with applicable regulations to reduce off-site water discharge. As such, the relocation of these District uses would not have substantial water quality impacts.

Impacts would be less than significant.

**Threshold HYDRO-2: Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.**

### ***Reconstruction of CHS Campus***

The drainage pattern would be slightly modified on the Project Site. The proposed Project is not likely to exceed the capacity of existing stormwater infrastructure for the area because it would comply with State stormwater management requirements.

As previously discussed, construction and operational activities of the proposed Project may provide additional sources of polluted runoff. Construction activities would involve the use of heavy equipment, machinery, and other materials, while operations would involve the use of cleaning solvents, pesticides for landscaping, and petroleum products associated with parking areas. These potential sources of pollution could contribute contaminated runoff into the adjacent Compton Creek or surrounding storm drains.

With the implementation of a SWPPP in compliance with the NPDES stormwater permit, the proposed Project would not result in water quality impacts.

Impacts would be less than significant.

### ***Relocation of District Uses***

As part of the Project, the District's Facilities Department and the Pupil Services, Enrollment Center, and Special Education offices would be demolished and relocated to existing District facilities with available capacities at Caldwell Elementary School and Cesar Chavez Continuation High School.

Given that the relocated uses would be contained within already existing buildings at each of the new locations, there would be no change to the existing drainage pattern of these District facility sites. The operation of the relocated uses would be similar to those uses currently operating on the District facility sites, which would involve the use of cleaning solvents, pesticides for landscaping, and petroleum products associated with parking areas. The sites already implement BMPs, such as the incorporation of landscaping features, in accordance with applicable regulations to reduce off-site water discharge. As such, the relocation of these District uses would not have substantial water quality impacts.

Impacts would be less than significant.

**Threshold HYDRO-3: Place within a 100-year flood hazard area structures, which would impede or redirect flood flows.**

### ***Reconstruction of CHS Campus***

Implementation of the proposed Project would involve the construction of similar school facilities within a currently developed area on the Project Site.

The eastern portion of the Project Site is located within a FEMA-designated shaded Zone X area,<sup>24</sup> which is an area of moderate flood hazard, generally between the limits of the 100-year and 500-year flood hazard zones; however, no portion of the Project Site is located within a FEMA-designated 100-year flood zone. The nearest 100-year flood zone is located approximately 2.0 miles southeast of the Project Site. As such, the proposed Project would not place structures within a 100-year flood hazard area that would have the potential to impede or redirect floodwater flows.

Impacts would be less than significant.

### ***Relocation of District Uses***

As part of the Project, the District's Facilities Department and the Pupil Services, Enrollment Center, and Special Education offices would be demolished and relocated to existing District facilities with available capacities at Caldwell Elementary School and Cesar Chavez Continuation High School.

The Caldwell Elementary School is located at located at 2300 W. Caldwell Street, approximately 1.25 miles southwest of the Project Site; and the Cesar Chavez Continuation High School is located at 12501 N. Wilmington Avenue in Compton, approximately 2 miles north of the Project Site. Both of these District facility sites are located within a FEMA-designated shaded Zone X area;<sup>25</sup> thus, they are not located within a designated 100-year flood zone.

Impacts would be less than significant.

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24 FEMA, *FIRM, Los Angeles County California*, panel 1815 of 2350, map no. 06037C1815F.

25 FEMA, *FIRM, Los Angeles County California*, panel 1815 of 2350, map no. 06037C1815F.

**Threshold HYDRO-4: 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.**

### ***Reconstruction of CHS Campus***

The Project Site is located within a FEMA-designated shaded and unshaded Zone X area, which is an area outside the 100-year flood hazard zone.

The City's proposed 2030 Comprehensive General Plan Update identifies the Project Site as being located within a dam inundation zone for the potential failure of the Hansen and Sepulveda Dams.

While the Project Site is located within a City-designated flood inundation zone, various levee improvements have been implemented over the years. Additionally, the LACFCD, State of California Division of Safety of Dams, and the USACE continuously monitor and oversee design and construction practices for the review, modification, and reconstruction of these existing dams to ensure they are structurally sound. Given that the Project Site is in a dense urban area surrounded by existing urban uses, the proposed Project would not introduce people or structures into an area where they would be subject to flood hazards not previously experienced. In the circumstance of a dam inundation event, there would be ample time (20 and 11 hours for the Hansen and Sepulveda Dams, respectively) to evacuate all individuals on the Project Site to higher ground prior to the onset of any flooding hazards. Further, any flooding from the Compton Creek would overflow onto the western portion of the Project Site, infiltrating through the proposed bioswales and water retention features and thus reducing flooding impacts to the buildings and structures along the eastern portion of the site. Therefore, the proposed Project would not expose people or structures to a significant risk of loss, injury, or death from flooding as a result of the failure of a levee or dam.

Impacts would be less than significant.

### ***Relocation of District Uses***

As part of the Project, the District's Facilities Department and the Pupil Services, Enrollment Center, and Special Education offices would be demolished and relocated to existing District facilities with available capacities at Caldwell Elementary School and Cesar Chavez Continuation High School.

As previously identified, the District facility sites are located outside the 100-year flood hazard zone. Of the two District facility sites proposed for relocation, only the Cesar Chavez Continuation High School is located within a dam inundation zone for the potential failure of the Hansen and Sepulveda Dams.<sup>26</sup> This

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26 City of Compton, *Draft General Plan Update*, "Public Safety Element," Exhibit 5-1, Seismic and Flood Hazards.

existing District facility site is located within dense urban area surrounded by existing urban uses and would therefore not introduce people or structures into an area where they would be subject to flood hazards not previously experienced. The District facility site was designed to meet minimum safety standards, including design requirements pertaining to potential flooding hazards.

Impacts would be less than significant.

**Threshold HYDRO-5: Be subject to flooding or dam inundation beyond existing conditions.**

### ***Reconstruction of CHS Campus***

As stated above, the City's proposed 2030 Comprehensive General Plan Update identifies the Project Site as being located within a dam inundation zone for the potential failure of the Hansen and Sepulveda Dams.

The Project Site is located outside of a FEMA-designated 100-year flood hazard zone and is protected by off-site levees continuously monitored by government agencies to ensure they are structurally sound. Furthermore, the proposed Project would implement various recreational and outdoor facilities and other landscaping features that would result in an approximate 35 percent increase in pervious surfaces on the Project Site. These proposed improvements associated with the proposed Project would allow increased stormwater infiltration on the site. The Proposed Project would also incorporate the design of bioswales and water-retention features within the athletic fields and outdoor improvements along the western boundary of the Project Site to address potential flooding impacts from the adjacent Compton Creek.

While the Project Site is located within a dam inundation hazard zone, the proposed Project would not introduce people or structures into an area where they would be subject to flood hazards not previously experienced. Therefore, the potential for the Project Site to be subject to flooding or dam inundation is considered low.

Impacts would be less than significant.

### ***Relocation of District Uses***

As part of the Project, the District's Facilities Department and the Pupil Services, Enrollment Center, and Special Education offices would be demolished and relocated to existing District facilities with available capacities at Caldwell Elementary School and Cesar Chavez Continuation High School.

As previously identified, only the Cesar Chavez Continuation High School is located within a dam inundation zone for the potential failure of the Hansen and Sepulveda Dams. This existing District facility site would therefore not introduce people or structures into an area where they would be subject to flood hazards not previously experienced. The District facility site was designed to meet minimum safety standards, including design requirements pertaining to potential flooding hazards.

Impacts would be less than significant.

### **CUMULATIVE IMPACTS**

The cumulative impact analysis in this section considers related development projects in the area, as identified in **Section 3.0: Environmental Setting**.

The proposed Project includes the reconstruction of an existing high school campus across an approximately 42-acre site. The proposed Project would include improvements to the Project Site, such as the incorporation of bioswales and other water-retention features, that would convey precipitation and storm drain flows across the Project Site before discharging flows into the existing underground storm drain system.

With regard to water quality, the related projects would be required to comply with the City's NPDES General Construction Permit, including implementation of a site-specific SWPPP, to prevent polluted runoff from entering local stormwater drainage systems during construction activities. Given that each related project would be required to comply with NPDES requirements and local regulations designed to prevent polluted runoff from entering local storm drain systems and receiving water bodies during construction and after development, the cumulative impact to water quality would be less than significant.

With regard to flooding and hazards associated with a potential failure of a levee or dam, the related projects would be required to adequately convey stormwater runoff such that flooding does not occur.

The proposed Project and related projects are all located within the Compton Creek Watershed, which is highly urbanized and contains minimal open or vacant space. The related projects would be subject to the

City's Municipal Code, which includes several regulations pertaining to flood control facilities within new development projects located within FEMA-designated special flood hazard zones.

In addition, the related projects require review on a case-by-case basis to determine proximity to flood hazard zones and dam inundation areas. All related projects would be required to comply with all applicable federal, State, and local regulations.

Impacts would not be cumulatively considerable.

### **MITIGATION MEASURES**

No mitigation measures are required.

### **LEVEL OF SIGNIFICANCE AFTER MITIGATION**

Hydrology and water quality impacts would be less than significant.