Appendix H

Hydrology and Water Quality Technical Memorandum

MEMORANDUM

To:	Michael Haberkorn, Gatzke Dillon & Ballance
From:	Perry Russell, Dudek
Subject:	SDSU Brawley Sciences Building Project Technical Memo – Hydrology and Water Quality
Date:	August 16, 2023
cc:	Sarah Lozano, Kirsten Burrowes, Dudek
Attachments:	Figures

Dudek has conducted an evaluation pursuant to the requirements of the California Environmental Quality Act (CEQA), California Public Resources Code 21000, et seq., to determine the presence and potential impacts related to hydrology and water quality associated with the proposed San Diego State University (SDSU) Imperial Valley Campus Brawley Sciences Building Project (proposed project or Project), located east of Brawley, California. This technical memorandum provides the results of the hydrology and water quality investigation.

1 Project Location and Setting

The project is located at 560 California State Route (SR) 78 (also referred to as Ben Hulse Highway) in Imperial County, east of the city of Brawley. Regional access to the campus is provided by SR 111 and SR 86 to the west and northwest, respectively, and SR 115 to the east (See Figure 1). The proposed project site is surrounded by agricultural uses to the north, south, and west. Undeveloped land and a solar farm are located directly east of the proposed project site. The proposed Sciences Building would be constructed northeast of existing campus Building 101, and the associated parking lot. Project construction staging areas would occupy the area of campus located southeast of the site and north of SR 78 (See Figure 2).

2 Project Description

In September 2003, CSU certified an environmental impact report and approved a Campus Master Plan for development of the SDSU Brawley Campus (Brawley Campus or campus), which would serve as an extension of the existing SDSU Imperial Valley Campus (IVC), located in Imperial County. The IVC is an extension of SDSU's main campus located in San Diego and furthers the university's regional educational mission to provide additional educational opportunities to the outlying communities of Imperial County. The approved Campus Master Plan and certified environmental impact report (EIR) provided sufficient environmental analysis and authorization necessary for enrollment of up to 850 full-time equivalent (FTE) students and corresponding faculty and staff and a framework for development of the facilities necessary to serve the approved campus enrollment.

The Brawley Campus is approximately 200 acres in size and is located east of the city of Brawley (city). Currently, the Campus has been partially built out with educational and support facilities, although much of the campus remains undeveloped or used for active agriculture. As noted above, the environmental impacts associated with development of the Brawley Campus, including a student enrollment up to 850 FTE, were evaluated at a program level of review in the previously certified 2003 SDSU Imperial Valley Campus Master Plan Project EIR (2003 EIR) (SCH 200251010). In CSU's effort to build out the IVC consistent with the previously approved Campus Master

Plan, SDSU now proposes construction and operation of sciences research and instruction facility that would be located on the Brawley Campus.

The proposed project involves the construction and operation of a sciencesbuilding (science, technology, engineering, and mathematics) that would house teaching labs, lecture spaces, faculty/administration offices, research spaces, and conference rooms, as well as mechanical, electrical, and telecom support spaces.

The proposed project site is approximately 3.2-acres in size and the construction staging areas would occupy approximately 1-acre in the area of campus located southeast of the site and north of SR 78. The project includes 61,119 sf of on-site landscaping, including the construction of bio-retention areas to capture stormwater runoff from stormwater drainages systems that will be located throughout the project site. Hardscape improvements will include 41,297 sf of sidewalks and pedestrian walkways, which will connect the project site to existing campus buildings and parking lot.

Additionally, the project will require new points of connection to domestic water, fire water, and sewer lines from existing utility lines to serve the new building, as well as new domestic water line infrastructure. Potable water will be provided by the city of Brawley, as well as sewer and wastewater collection services. New utility infrastructure will also be required to support electrical services for the building, as well as a back-up diesel operated generator.

The proposed project building would have an area of 36,900 gross sf and be approximately 35 feet in height. The project is projected to be built over the course of 19 months, with construction estimated to begin in January 2024. Construction and equipment staging would require 1-acre sf of space within the campus, directly east of the existing building (Building 101) and parking lot. The project would involve site preparation, grading, and excavation associated with project construction. Excavation depths are anticipated to be 2 to 5 feet. Waste (i.e., excavated gravel/soil) generated during project construction would be balanced within the site.

3 Analysis Methodology

The analysis presented here considers the potential environmental impacts of the proposed project relative to existing conditions. Establishment of the project site's existing hydrology and water quality conditions has been prepared using information contained in the previously certified 2003 EIR (SDSU 2003), combined with updated information, as applicable, from the California Department of Water Resources (DWR), U.S. Geological Survey (USGS), Federal Emergency Management Agency (FEMA), Imperial County General Plan (Water Element), and Imperial County General Plan EIR.

4. Hydrology and Water Quality

4.1 Existing Conditions

Hydrology and Drainage

Water used to irrigate virtually the entire Imperial Valley (valley) originates from the Colorado River. Local drainage patterns within the valley have been altered through agricultural activities. The Imperial Irrigation District (IID)

maintains approximately 1,600 miles of irrigation drainage structures, which collect surface water runoff and subsurface drainage from some 32,200 miles of agriculture (tile) drains and channel the flow into the New River and Alamo River, which ultimately drain to the Salton Sea. The canals and laterals are often open and unprotected (SDSU 2003).

Surface runoff from the Brawley Campus flows northeast at a gradient of 0.1% (SDSU 2003) toward the Wills Drain, which in turn flows into the Alamo River, located approximately 1 mile east of the campus.

Water Quality

The Brawley Campus is located in the Colorado River Basin (Basin), under jurisdiction of the California Regional Water Quality Control Board, Colorado Region (RWQCB). The Basin encompasses the eastern portions of San Bernardino, Riverside, and San Diego counties and all of Imperial County. The Imperial Valley Planning Area is comprised of 2,500 square miles in the southern portion of the Region. The West Basin (the portion of the Basin that does not drain to the Colorado River) contains the Alamo River, New River, and some Imperial Valley agricultural drains. These surface water features are among the most contaminated and poorest quality water resources in the State. The New River, located approximately 3 miles northwest of the Brawley Campus and one of the few natural surface drainage features in the region, has a total dissolved solids (TDS) concentration between 2,000 and 4,000 parts per million and is classified as brackish rather than fresh water. The New River flows into Imperial Valley from Mexico with very high loads of sewage and industrial waste. As the New River flows through Imperial Valley, drainage from agricultural operations dramatically increases its flows. The New River is considered to be unsuitable for either domestic or agricultural uses.

Surface runoff from the Brawley Campus drains northeast toward the Wills Drain and Alamo River, which has generally better water quality than the New River but also is unsuitable for domestic or agricultural use (SDSU 2003). In accordance with state policy for water quality control, the RWQCB employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The RWQCB Colorado River Basin Plan has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. Beneficial uses of the Imperial Valley Drains and the Alamo River include freshwater replenishment, water contact recreation (limited to fishing), non-contact water recreation, warm freshwater habitat, wildlife habitat, hydropower generation (potential), and preservation of rare, threatened, or endangered species (RWQCB 2019).

Under Clean Water Act Section 303(d), the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. The Alamo River water quality impairments include sedimentation/siltation, toxaphene, chlorpyrifos, selenium, toxicity, polychlorinated biphenyls (PCBs), chlordane, diazinon, Escherichia coli (E. coli), chloride, cypermethrin, Enterococcus, malathion, dichlorodiphenyltrichloroethane (DDT), dieldrin, cyhalothrin, and lambda (SWRCB 2023a).

A Total Maximum Daily Load (TMDL) defines how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards. The RWQCB has developed TMDLs for select reaches of water bodies. According to the State Water Resources Control Board (SWRCB), the primary cause of water quality impairment in the Salton Sea is the heavy use of pesticides in the late 1900s, and the closed-sink nature of the Basin that prevents migration and dissolution of the particles. Though the use of these pesticides has diminished significantly in the last 20 years, the SWRCB has implemented a number of TMDLs to address these water quality

issues. Since many of the pollutants present, such as pesticides, are attached to sediments, sediment management practices plays important roles in reducing the compounds. As a result, an Alamo River Pathogen TMDL was adopted by the RWQCB on June 27, 2001, approved by the SWRCB on February 19, 2002, approved by the Office of Administrative Law on May 3, 2002, and approved by the U.S. Environmental Protection Agency on June 28, 2002. This TMDL addresses sedimentation and siltation in the Alamo River (SWRCB 2023a).

Flooding

Flooding occurs in varying degrees throughout Imperial County. Floodwaters rise either from sudden downpours or as a result of slow heavy precipitation. Hazardous flooding in the Brawley vicinity is more likely to occur in areas adjacent to floodplains located along the New River, located approximately 3 miles northwest of the Brawley Campus, and the Alamo River, located approximately 1 mile east of the campus. These rivers flow in a northerly direction through the center of the Imperial Valley toward the Salton Sea (SDSU 2003).

Flood zones identified on FEMA Flood Insurance Rate Maps (FIRMs) are identified as a Special Flood Hazard Area (SFHA). An SFHA is defined as the area that will be inundated by the flood event having a 1% chance of being equaled or exceeded in any given year. The 1%-annual-chance flood is also referred to as the base flood or 100-year flood. “Floodways” are areas within the SFHA that include the channel of a river/watercourse and adjacent land areas, which in an unobstructed condition can discharge a 100-year flood/base flood without any increase in water surface elevations. The Brawley Campus is not located within a SFHA (FEMA 2008). However, most of the flat irrigated valley, with its low-lying canal/drain systems, is subject to minor, shallow flooding and ponding due to the lack of local topographic relief, occasional intense storm events, and low soil infiltration rates that produce rapid runoff flows (SDSU 2003).

Groundwater

The Brawley Campus is located in the Imperial Valley Planning Area of the West Colorado River Basin, in the Imperial Hydrologic Subunit (HSU). Isolated aquifers of good quality groundwater are present in Imperial HSU, but overall groundwater quality is generally poor. Groundwater resources are generally unsuitable for domestic consumption under federal and State drinking water standards. Groundwater is stored in the Pleistocene sediments of the Imperial Valley floor. These fine-grained lake sediments inhibit ground water movement, and tile-drain systems are utilized to dewater the sediments to a depth below the root zone of crops and to prevent the accumulation of saline water on the surface. Few wells have been drilled in these lake sediments because the yield is poor and the water is generally saline. The few wells in the Valley are for domestic use only. Factors that diminish groundwater reserves are consumptive use, evapotranspiration, evaporation from soils where groundwater is near the surface, and losses through outflow and export. In addition, groundwater quality is considered to result from infiltration of agricultural runoff and pre-existing subsurface salt deposits. The RWQCB has designated groundwaters in Imperial HSU for the beneficial uses of municipal and industrial supply (SDSU 2003).

The Imperial County groundwater basins are not adjudicated and are all designated by the California Department of Water Resources as having a very low priority with regard to enacting the Sustainable Groundwater Management Act (SGMA)(California DWR 2020). Low and very low priority basins are not required to prepare Groundwater Sustainability Plans at this time. Groundwater is managed by Imperial County’s Groundwater Ordinance contained in Title 9, Division 22, of the Land Use Ordinance, Section 92201.

The city of Brawley operates a municipal water treatment system that supplies domestic water to approximately 20,000 people. Colorado River water, imported via the All American Canal, is the predominant water supply and is used for irrigation, industrial, and domestic purposes. Potable water and irrigation water are supplied to the city by the IID (SDSU 2003). The Brawley campus site is located outside of the Service Area of the city , but is located within the city Sphere of Influence (City of Brawley 2015). A Memorandum of Understanding (MOU) has been executed to ensure adequate levels of service for the Brawley campus.

5 Impact Analysis and Conclusions

5.1 Thresholds of Significance

The thresholds of significance used to evaluate the impacts of the proposed project related to hydrology and water quality are based on Appendix G of the CEQA Guidelines (Cal. Code Regs., Title 14, Chptr. 3, sections 15000-15387). A significant impact under CEQA would occur if the proposed project would:

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    i) result in substantial erosion or siltation on- or off-site;
    ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
    iii) 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; or
    iv) impede or redirect flood flows.
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

5.2 Impact Analysis

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Impacts relative to this significance criteria and threshold are separately addressed in the contexts of project construction and operation.

Construction

Construction impacts related to water quality were evaluated in Section 3.11, Water Quality, of the 2003 EIR, which concluded that the potential surface water and groundwater quality impacts during construction would be less than significant with implementation of a construction Stormwater Pollution Prevention Program (SWPPP), as required by the Clean Water Act.

The proposed project involves construction and operation of a new campus building generally within the footprint of Building 102, as identified in the approved Campus Master Plan and previously analyzed in the 2003 EIR. Project construction activities, such as grading, excavation, and trenching, would result in disturbance of soils on the project site. Construction site runoff can contain soil particles and sediments from these activities. Dust from construction sites, in addition to spills or leaks from heavy equipment and machinery, staging areas, or building sites can also enter runoff and water bodies. Typical pollutants could include petroleum products and heavy metals from equipment, as well as products such as paints, solvents, and cleaning agents, which could contain hazardous constituents. Sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of construction materials could result in water quality degradation if runoff containing the sediment entered receiving waters in sufficient quantities to exceed water quality objectives. However, contributions of sediment from construction and construction-related pollutants would be minor and not measurable in the context of the watershed as a whole.

The prevailing standard is nevertheless to reduce pollutant contributions to the maximum extent practicable regardless of how minor the sediment contribution might be. Regulations (Phase II Rule) that became final on December 8, 1999, expanded the existing National Pollutant Discharge Elimination System (NPDES) Program to address stormwater discharges from construction sites that disturb land equal to or greater than 1.0 acre. The regulations also require that stormwater discharges from small municipal separate storm sewer systems (MS4s) be regulated by an NPDES General Permit for Storm Water Discharges Associated with Construction Activity (Order No. 2009-0009-DWQ, NPDES No. CAS000002), also known as the Construction General Permit.

The Construction General Permit requires the development and implementation of a SWPPP, which describes best management practices (BMPs) the discharger would use to protect stormwater runoff. The SWPPP would incorporate effective BMPs, including silt fences installed along limits of work and the project construction site, stockpile containment (e.g., Visqueen, fiber rolls, gravel bags), exposed soil stabilization structures (e.g., fiber matrix on slopes and construction access stabilization mechanisms), construction of temporary sedimentation basins, limitations on work periods during storm events, and street sweeping. The SWPPP must contain a visual monitoring program, a chemical monitoring program for non-visible pollutants to be implemented if there is a failure of BMPs, and a sediment-monitoring plan, as the site discharges directly to a water body listed on the 303(d) list for sediment. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. Surface water pollution prevention would prevent seepage of contaminants into the underlying groundwater. A copy of the applicable SWPPP would be kept at the construction site.

Non-stormwater discharges during construction would include periodic application of water for dust control purposes. Because dust control is necessary during windy and dry periods to prevent wind erosion and dust

plumes, water would be applied in sufficient quantities to wet the soil but not so excessively as to produce runoff from the construction site. Water applied for dust control would either quickly evaporate or locally infiltrate into shallow surface soils. These stipulations are routine in SWPPPs and other construction contract documents, which typically state that water would only be applied in a manner that does not generate runoff. Therefore, water applied for dust control would not result in appreciable effects on groundwater or surface water features and thus would not cause or contribute to exceedances of water quality objectives contained in the RWQCB Basin Plan.

No new information or substantial changes in circumstances have occurred requiring new or additional analysis with regard to construction-related impacts to water quality at the project site. As such, potential project impacts relating to violation of surface water and groundwater quality standards or waste discharge requirements during construction would be **less than significant**, and no mitigation is required.

Operation

The analysis presented in Section 3.11, Water Quality, of the 2003 EIR, concluded that increases in surface runoff would not have a substantial effect on groundwater or surface water quality. Surface flows of fresh water from the site would be lower in salt (i.e., TDS) concentrations than the Salton Sea; therefore, dilution of Salton Sea water with fresh water would not be a significant impact. In addition, conversion of the project site from agricultural uses to urban uses would reduce the amount of fertilizer and pesticide residues, salts, and selenium infiltrating into soils and groundwater, or discharging to the drainage system. While conversion from agricultural to urban uses would increase surface discharges of total petroleum hydrocarbons and other urban pollutants to local drains and the Alamo River, overall changes in water quality to the Alamo River and Salton Sea would be insignificant because of the relatively small amounts of runoff from the site relative to the volume of agricultural water draining to these water bodies.

While the 2003 EIR did not identify significant impacts, mitigation measures were adopted recommending that 1) SDSU coordinate separate storm drain and sanitary sewers for project facilities so that stormwater runoff will not increase the frequency or volume of wastewater treatment overflows, and 2) a stormwater detention basin be constructed at a capacity equal to the flow level now generated, plus the increase generated by impervious surfaces created during development (See Mitigation Monitoring and Reporting Program (MMRP) page 11-4)[1]. With implementation of the mitigation measures, impacts were determined to be less than significant.

The proposed project building would have an area of 36,900gross sf and hardscape improvements would include 41,297sf of sidewalks and pedestrian walkways, which will connect the project site to the existing campus building and parking lot. The project would also include 61,119sf of on-site landscaping, Increased impervious areas and non-point source pollutants associated with the proposed project could alter the types and levels of pollutants that may be present in project site runoff. Runoff from building rooftops, driveways, and landscaped areas can contain nonpoint source pollutants such as sediment, trash, oil,

[1] **3.11 Water Quality Mitigation Measures** included on page 11-4 of the 2003 EIR: (1) SDSU shall coordinate separate storm drains and sanitary sewers for project facilities so that storm runoff from the project will not increase the frequency or volume of waste water treatment plant overflows. (2) Storm water detention basins, as shown as part of the project design, shall be constructed consistent with engineering standards at a capacity equal to the flow level now generated plus the increase generated by impervious surface created during development.

grease, heavy metals, pesticides, herbicides, and/or fertilizers. Concentrations of pollutants carried in urban runoff are extremely variable, depending on factors such as the volume of runoff reaching the storm drains, time since the last rainfall, and degree to which street cleaning occurs. Without design features to capture and treat stormwater runoff, the increase in the developed area could have adverse water quality impacts on downstream drainages and the Alamo River.

The County of Imperial is enrolled under SWRCB Phase II Small MS4 General Permit 2013-0001 DWQ, which provides permit coverage for non-traditional MS4s, such as public campuses (SWRCB 2023b). In compliance with this permit, the project would include the construction of bio-retention areas to capture stormwater runoff from stormwater drainages systems that will be located throughout the project site. Bio-retention features function as both water quality and flood control features, by filtering out surface water contaminants and slowing stormwater runoff prior to off-site stormwater discharge. In addition, proposed landscaping would further reduce potential adverse water quality impacts by reducing impervious surfaces, which increase runoff, collect pollutants, and contribute to adverse water quality impacts. With construction of proposed bio-retention features and landscaping, water quality impacts would be minimized such that the project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Impacts would be **less than significant**, and no additional mitigation is required.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The Initial Study (IS) prepared for the 2003 EIR determined that no impact would occur with regard to decreased groundwater supplies or groundwater recharge. Following project construction, changes in land cover (e.g., increases in impervious surfaces) ultimately could affect the amount of stormwater that percolates into the ground versus the amount that runs off into downstream drainages and the Alamo River. However, the Brawley campus is surrounded by pervious agricultural areas that facilitate percolation and, as such, construction of the proposed building and associated sidewalks and pedestrian walkways would have a nominal effect on groundwater recharge. In addition, the project would include bio-retention basins that will be located throughout the project site, and 61,119sf of on-site landscaping. These pervious areas will slow runoff and enhance groundwater recharge.

As to any potential impacts related to the direct drawing of groundwater supplies, potable water is provided to the campus via a MOU with the city of Brawley. Colorado River water, imported via the All American Canal, is the predominant water supply for the project area and is used for irrigation, industrial, and domestic purposes. Thus, the project would not substantially decrease groundwater supplies such that the project would impede sustainable groundwater management of a groundwater basin.

As such, direct impacts of the proposed project on aquifer volumes and the local groundwater table would be negligible. The project would not substantially interfere with groundwater recharge such that the project may impede sustainable groundwater management of the underlying groundwater basin. Impacts would be **less than significant**.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on- or off-site;

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; or

iii) 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?

Impacts related to changes in drainage patterns and potential increased runoff were evaluated in Section 3.8, Hydrology/Flood Control, of the 2003 EIR, which concluded that undergrounding portions of the drainage system could result in upstream backups or increased flooding due to more restrictive conditions. However, undergrounding portions of the drainage system could incrementally improve water quality in the drains by limiting exposure to surface contaminants. In order to provide stormwater runoff protection for downstream properties, drainage improvements were required in order to retain projected 100-year event storm runoff and release it at existing rates, as allowed by IID. Mitigation measures were adopted recommending that 1) the drainage patterns be coordinated with the City to ensure that new drainage patterns do not adversely affect the City drainage system, 2) a site-specific drainage study and detention basin design shall be conducted, 3) SDSU coordinate with IID to ensure relocation and undergrounding plans for canals and drains are designed to maintain existing flow rates and structure capacity, and 4) any temporary relocation of private or IID canals and drainage ditches are coordinated with the affected agencies (See MMRP page 11-4)[2]. With implementation of these mitigation measures, impacts were determined to be less than significant.

The proposed project would involve the construction of additional improvements that would increase the impervious surface area; these include the proposed building, sidewalks and pedestrian walkways, and landscaping. Although the footprint of pervious and impervious areas would change in comparison to existing conditions, drainage from the site would occur at the same outfall locations as those that currently exist. The topography of the site is relatively flat to gently sloping and would not change appreciably as a result of project construction or operation. As a result, impacts relating to alteration of the existing drainage pattern of the site would not be significant.

As discussed for Threshold b, although the amount of impervious surfaces would increase following project construction, the project would include bio-retention basins that will be located throughout the project site, as well as 61,119sf of on-site landscaping. These pervious areas will slow runoff such that the project would not substantially increase the rate or amount of surface runoff and result in flooding on- or off-site, or result in substantial erosion or siltation on- or off-site. Similarly, inclusion of the bio-retention features and landscaping would reduce runoff such that the project would not create or contribute runoff water

[2] **3.8 Hydrology/Flood Control Mitigation Measures** included on page 11-4 of the 2003 EIR: (1) The drainage patterns will be coordinated with the City of Brawley to ensure that new drainage patterns from the campus will not adversely affect the City drainage system. A site specific drainage study and detention basin design shall be conducted by a registered hydraulic engineer and provided to the City and IID, which will be consistent with engineering standards. (2) SDSU will coordinate with IID to ensure relocation and undergrounding plans for canals and drains are designed to maintain existing flow rates and structure capacity. (3) Any temporary relocation of private or IID canals and drainage ditches shall be coordinated with the affected agencies.

which would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff. For these reasons, impacts would be **less than significant,** and no additional mitigation is required.

iv) impede or redirect flood flows?

The IS prepared for the 2003 EIR determined that no impact would occur with regard to 100-year flood hazard areas.

As discussed in Section 4.1, Existing Conditions, the Brawley Campus is not located within a SFHA. Therefore, construction of the proposed campus building would not impede or redirect flood flows. **No impacts** would occur.

d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

The IS prepared for the 2003 EIR determined that no impact would occur with regard to flooding, including flooding as a result of failure of a levee or dam, or inundation by seiche, tsunami, or mudflow.

As discussed for Threshold c-iv, the Brawley Campus is not located within a SFHA. The project site is not located in proximity to the Pacific Ocean and would therefore not be susceptible to tsunamis. A seiche is oscillations in an enclosed body of water, such as a lake or reservoir, typically as a result of seismically induced ground shaking. No such bodies of water are located adjacent to the Brawley Campus; therefore, the proposed building would not be susceptible to seiches. Since adoption of the 2003 EIR, the CEQA significance criteria have been revised (per Appendix G of the 2023 CEQA Statute and Guidelines) and impacts related to failure of a levee or dam, or inundation by mudflow, are no longer evaluated under CEQA. Therefore, flooding related to levees, dams, and mudflows have not been evaluated in this memo. As a result, the project would not risk release of pollutants due to project inundation. **No impacts** would occur.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The 2003 EIR and IS prepared for the 2003 EIR did not specifically address conflict with or obstruction of implementation of a water quality control plan or sustainable groundwater management plan. Therefore, a discussion regarding this issue is provided below. Impacts related to construction and operation of the proposed project are addressed separately.

Construction

As previously noted, the proposed project would be required to comply with the Construction General Permit requiring preparation and implementation of a SWPPP to control runoff from construction work sites. The SWPPP must include BMPs to address transport of sediment and protect properties from erosion, flooding, or the deposition of mud, debris, or construction-related pollutants. Implementation of BMPs, including physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of infiltration swales, protection of stockpiled materials, and a variety of other measures, would substantially reduce the potential for impacts to surface water quality

occurring during construction. Therefore, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan and impacts from construction would be **less than significant**.

Operations

The proposed project would be subject to the requirements of the Water Quality Control Plan for the Colorado River Basin (i.e., Basin Plan), which outlines water quality objectives for all surface water resources within the basin, including the nearby Alamo River. Compliance with the Basin Plan is ensured through waste discharge requirements for all surface water discharges, including stormwater. Imperial County, as a Permittee under the SWRCB Phase II Small MS4 General Permit (2013-0001 DWQ), is required to implement stormwater BMPs that comply with water quality objectives, including capturing and treating stormwater runoff. The project would include construction of numerous biofiltration features and landscaping, which would ensure that the project is consistent with the Basin Plan's water quality objectives.

Further, groundwater would not be used as a water source for the project. Water would be supplied from the Colorado River via the All American Canal. Therefore, the Project would not conflict with or obstruct implementation of the Basin Plan or a Groundwater Sustainability Plan (under SGMA). As a result, impacts would be **less than significant.**

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