UC San Diego Voigt Electric Mobility Hub CE Checklist FTA

Date: April 14, 2022

Grant Applicant University of California, San Diego

INFORMATION REQUIRED FOR PROBABLE CATEGORICAL EXCLUSION (23 CFR Part 771.118)

__X__ **A. DETAILED PROJECT DESCRIPTION:** *Describe the project including the type (such as bus storage, maintenance, and/or administration facilities). Indicate the size of the proposed facility, number of vehicles and staff it will house. Describe any construction, demolition, and soil excavation activities. Include a brief discussion summarizing the purpose and need for the project (e.g., congestion, state of good repair). Explain in common language how implementation of the project will address the project need, and its proposed use. Include a complete description of the project components such as length of the project in feet or miles, property size, history, ownership information (land management authority), acreage, and document previously conducted studies if applicable. Provide graphics that describe the proposed project.*

The proposed Voigt Electric Mobility Hub (or the Project) would redevelop existing surface parking lot P701 to provide a six-level above ground electric mobility hub that will serve students, faculty and staff, as well as visitors and patients of UC San Diego's East Campus. The structure will contain approximately 1,150 parking spaces, of which at least 400 spaces will include Level 2 Electric Vehicle (EV) charging. At the core of the project is the Transit Operations Center including a 40-vehicle bus yard and bus barn with 150-kilowatt (kw) depot charging for 24 transit buses in a secure, weather-protected environment.

This facility will provide a permanent home for the more than 200 student and career drivers and administrative staff that keep UC San Diego visitors, patients, students, faculty, and staff moving around campus. Triton Transit operates eight fixed routes that are fare-free and open to the public, along with on-demand and paratransit services. In addition to traditional transit vehicles, the facility includes weather-

protected charging and parking for the campus fleet of 22 electric carts that support micro-transit and door-to-door ADA transit among the more than 630 buildings on the 1,158-acre campus. This leading investment in electric transit infrastructure will allow for accelerated electrification of transit vehicles with the full fleet on track to be electrified by 2030. The proposed Voigt Electric Mobility Hub would provide a vehicle parking destination in close proximity to the Mid-Coast Blue Line Trolley's UC San Diego Health La Jolla Station, which began operation in late 2021. The proposed Voigt Electric Mobility Hub would also be in close proximity to an existing campus shuttle bus stop along the existing North Campus Shuttle Route, which provides a connection from Voigt Drive to the rest of campus. See grant application for full, detailed Project Description.

__X__ **B. <u>LOCATION (INCLUDING ADDRESS)</u>:** *Attach a project location map or diagram, such as a USGS topographic map that identifies the project location. Clearly delineate the project and include streets and features specifically called out in the "detailed project description." If the project work occurs at more than one location, include those locations and adjoining parcels on the map. This information is partly used to determine the probability of impact on the human and natural environment.*

The UC San Diego La Jolla campus is located adjacent to the communities of La Jolla and University City, within the northwest portion of the City of San Diego (see Figure 1). The campus is generally composed of three distinct, but contiguous, geographical areas: the Scripps Institution of Oceanography (SIO) (178.7 acres), the West Campus (634.8 acres), and the East Campus (265.7 acres). The West Campus and the East Campus are bisected by Interstate (I-) 5. The approximate boundaries of the East Campus consist of Voigt Drive and Genesee Avenue on the north, privately owned condominiums along La Jolla Village Drive to the south, and Regents Road on the east. This portion of Campus contains approximately 3 million gross square feet (GSF) of total building space on approximately 265 acres of land. In addition, East Campus supports administrative, sports/recreational (e.g., Triton Baseball Field), student and faculty housing, dining, campus services, and parking facilities. The proposed Voigt Electric Mobility Hub would be located on a 2.9-acre site the northwestern edge of the East Campus within the footprint of existing surface parking lot P701 (see Figure 2). There are no sensitive land uses or sensitive biological resources present within or adjacent to the project site that would be negatively impacted by the project. There are no wetlands, nor rare, threatened, or endangered (RTE) habitat present on the site. See grant application Project Location.

__X__ **C. <u>METROPOLITAN PLANNING AND AIR QUALITY CONFORMITY</u>:** *Is the proposed project included in the current adopted MPO plan, either exclusively or in a grouping of projects or activities? What is the conformity status of that plan? Is the proposed project, or appropriate phases of the project, included in the TIP? What is the conformity status of the TIP? Is the project located in an air quality non-attainment area? Is the project exempt from a conformity review per Table 2 of 40 CFR 93.126? Refer to the non-attainment/maintenance area maps at the U.S. EPA website to*

determine if the project is located in an area that meets all National Ambient Air Quality Standards.

The 2018 Long Range Development Plan (LRDP) Program Environmental Impact Report (EIR) disclosed that implementation of projects under the 2018 LRDP, including the proposed Project, would result in cumulatively significant impacts to air quality due to a considerable net increase in criteria pollutants in a region that is in *nonattainment*. It is important to note that this finding is based on buildout conditions of the 2018 LRDP development plan and the proposed Project would contribute to a relatively small portion of the overall emissions. Implementation of the proposed Project would result in temporary construction emissions and long-term operational emissions that could violate air quality standards or substantially contribute to an existing or projected air quality violation. Mitigation measures identified in the 2018 LRDP EIR would be applied to the Project to partially address these impacts.

Less than significant impacts were identified related to consistency with the Regional Air Quality Strategy (RAQS) and State Implementation Plan (SIP) due to carbon monoxide (CO) hot spots (see Sections 3.2.3.1 and 3.2.3.4 of the 2018 LRDP Program EIR). The 2018 LRDP, including the proposed Project, incorporates development strategies identified in the SANDAG Regional Transportation Plan and Sustainable Communities Strategy by integrating land use, housing, and transportation planning, consistent with the goals developed by SANDAG and the University land use assumed in the RAQS. No significant odor impacts were identified (see Section 3.2.5 of the 2018 LRDP Program EIR). See also Addendum No. 3 to the Program Environmental Impact Report for the 2018 La Jolla Campus Long Range Development Plan.

Potentially significant construction-related emissions could cause exposure of sensitive receptors to toxic air contaminant (TAC) emissions (see Section 3.2.3.5 of the 2018 LRDP Program EIR). Mitigation Measures (MMs) AQ-2A (fugitive dust emissions) and AQ-2B (off-road construction emissions) would be incorporated into construction specifications for the proposed Project in order to minimize potential impacts from construction related emissions to a less than significant level. Construction-related MMs on air quality would be implemented as described further below under "V. Impacts Caused by Construction".

_X_ D. <u>LAND USE AND ZONING</u>: *Describe property zoning and consistency with proposed use. Attach a zoning map of the project area and surrounding area. Attach a land use map that identifies land and water uses in the project area. This information is partly used to determine the probability of impact on the human and natural environment. Land use plans, and zoning maps can be obtained from the tax assessor, city, county, or metropolitan planning organizations.*

The 2018 LRDP for the La Jolla Campus provides a framework for the physical development and land use plan of the La Jolla Campus to meet the academic and

institutional objectives of higher education for UC San Diego. The 2018 LRDP is a broad, coherent, and adaptable policy framework intended to achieve UC San Diego's program goals and to inform decisions concerning land use and capital project development through a planning horizon of 2035-2036.

The 2018 LRDP designates the Project site as Academic land use, defined as land and structures that primarily include classrooms, class and research laboratories, and ancillary support facilities (e.g., administrative, housing and dining facilities, parking, and facilities supporting academic operations). Because the proposed Project would provide parking and a mobility hub, it is considered an academic support facility and therefore is consistent with the Academic land use category designated by the 2018 LRDP.

A Programmatic EIR assessed the potentially significant environmental effects of the 2018 LRDP for the La Jolla campus and was certified by the Regents in November 2018 (2018 LRDP EIR). An Addendum to the 2018 LRDP EIR was prepared in February 2020 to document new information on the proposed Project and evaluate its consistency with the 2018 LRDP and LRDP EIR.

__X__ **E. TRAFFIC IMPACTS:** *Describe potential traffic impacts; including short-term impacts during construction or demolition, and whether the existing roadways have adequate capacity for increased bus and other vehicular traffic as part of the proposed project. Examples of construction-related impacts include lane closures, detours, or dust abatement requirements. Briefly describe traffic control measures required to minimize impacts of construction.*

The proposed Project is consistent with the transportation analysis provided in the 2018 LRDP Program EIR. In addition, a project-specific Transportation Study was conducted by LLG in August 2019 (as updated in March 2022) that assessed existing conditions (traffic volumes, pedestrian/bicycle/transit connections, and street networks), trip attraction and distribution for nearby intersections under two scenarios: Opening Day with Project and Opening Day without Project. The study included a long-term scenario of 2040.

Vehicular, pedestrian, and bicycle counts at the study intersection were conducted by LLG in January 2019 between the hours of 7:00-9:00 AM and 4:00-6:00 PM, while school was in session. The trip attraction rate for the proposed parking structure was determined by calculating the trip rate associated with a parking lot with similar operating characteristics and forming a trip ratio with the number of current parking spaces (i.e., 4.9 average daily trips [ADT] per stall) based on counts collected at surface parking lot P502) and 4.2 ADT/stall for surface parking lot P701. Based on the capacity analysis, the Project will have the following effects on the traffic operations at Study Intersections 1 and 2:

- Study Intersection #1 is calculated to continue to operate at an unacceptable level of service with the Project.
- Study Intersection #2 is calculated to fail with Project traffic. With Project scenario operations went from an acceptable level of service to an unacceptable level of service with the Project traffic.

LLG calculated that the proposed Project would attract a net total of 4,293 ADT with 397 trips (378 inbound / 19 outbound) during the AM peak hour and 438 trips (164 inbound / 274 outbound) during the PM peak hour. Based on the capacity analysis provided in LLG's study, the following improvements should be implemented to improve the traffic operations:

Study Intersection #1: Voigt Drive / Gilman Drive / Greenhouse Lane Intersection

- Install a traffic signal
- Provide east-west split phasing
- Provide a dedicated southbound left-turn lane and a shared thru/right-turn lane
- Provide a dedicated northbound left-turn lane and a shared thru/right-turn lane
- Provide a dedicated eastbound right-turn lane and a shared thru/left-turn lane
- Retain the existing dedicated westbound left-turn lane, thru lane, and right-turn lane
- Provide right-turn overlap phases for the eastbound and westbound approaches

Study Intersection #2 Voigt Drive / P701 Driveway Intersection

- Install a traffic signal
- Provide a dedicated westbound left-turn lane
- Provide a dedicated northbound left-turn lane and a dedicated right-turn lane
- Provide a right-turn overlap phase for the northbound approach

With the implementation of the above roadway improvements, both intersections are calculated to operate at an acceptable level of service (LOS D or better).

Vehicle access to the project site was analyzed by LLG in a project-specific Traffic Access Analysis. Vehicle access to the parking structure would be provided from an existing UC San Diego driveway off Voigt Drive. The access analysis included two scenarios: Opening Day with Project (and associated improvements) and Opening Day without Project. The analysis shows that access to the project site with intersection improvement features is expected to function well with no significant near- or long-term traffic impacts. Under each scenario, existing Campus roadways have adequate capacity for increased bus and other vehicular traffic resulting from the proposed Project.

The proximity of the Project site to alternative transportation features such as the UC San Diego Health La Jolla Station and the campus shuttle bus stop at the intersection of Voigt Drive and Scripps Memorial Hospital La Jolla would facilitate long-term trip reduction. Additionally, the proposed Project would include pedestrian connections, bicycle racks, and long-term bicycle storage containers further incentivizing these modes of travel throughout the East Campus. Less than significant impacts would occur, and the proposed Project is consistent with the transportation analysis provided in the 2018 LRDP Program EIR.

Construction-related impacts on transportation would be temporary and traffic control measures would be implemented as described further below under "V. Impacts Caused by Construction".

__X__ **F. CO HOT SPOTS:** *If there are serious traffic impacts at any affected intersection or area where buses congregate, and if the area is in an air quality non-attainment area for CO, demonstrate that CO hot spots will not be created as a result of the project.*

Traffic associated with the proposed Project would be negligible given that the proposed parking structure would be used by students, faculty, staff, and visitors to the UC San Diego campus that already occupy existing parking structures, surface parking lots, or other street parking on the campus. The proposed Project would not result in a measurable increase in trips to the campus and would not contribute to any exceedances of the 1-hour or 8-hour CO standards during the AM peak periods. Therefore, operation of the proposed Project would not expose sensitive receptors to substantial pollutant concentrations caused by localized traffic CO emissions. The proposed Project would result in less than significant impacts.

__X__ **G. PM2.5 AND PM10 HOT SPOTS:** *If there are serious traffic impacts at any affected intersection or area where buses congregate, and if the area is a nonattainment or maintenance area for any particulate matter (PM2.5 or PM10), then demonstrate that PM2.5 or PM10 "hot spots" will not result. In nonattainment areas, interagency concurrence and documentation must be attached. If the proposed project is not in a non-attainment or maintenance area for PM2.5 and PM10, then state this in the discussion. Refer to the non-attainment/maintenance area maps at the U.S. EPA website to determine if the project is located in an area that meets all National Ambient Air Quality Standards.*

The region is not a nonattainment area for PM2.5 or PM10. However, implementation of the proposed Project would contribute to the 2018 LRDP's cumulatively considerable net increase of PM10 emissions. It is important to note that this finding is based on buildout conditions of the 2018 LRDP development plan and the proposed Project would contribute to a relatively small portion of the overall emissions. MMs AQ-2A (control of construction-related fugitive dust emissions) and

AQ-2B (off-road construction emissions) would be incorporated into construction specifications for the proposed Project in order to minimize potential impacts from construction related emissions to a less than significant level.

__X__ **H. HISTORIC RESOURCES:** *Describe any cultural, historic, or archaeological resources located in the immediate vicinity of the proposed project and the impact of the project on the resources. Show these resources on a map. FTA initiates all consultations per Section 106 of the National Historic Preservation Act (NHPA). FTA also makes a determination of "No Effect/No Historic Properties" or "No Historic Properties Affected," if no historic resources or potential to affect resources exists. FTA requests concurrence for this determination from the appropriate State Historic Preservation Office (SHPO) or Tribal Historic Preservation Office (THPO). SHPO/THPO concurrence must be included as an attachment before NEPA approval. If an "Adverse Effect" determination is made as a result of the proposed project, rather than a "No Effect/No Historic Properties" or "No Historic Properties Affected" determination, then FTA may determine a new NEPA class of action to evaluate alternatives or mitigation measures to deter these adverse effects. If the project has potential effects to NRHP-eligible or listed projects, the Section 106 process must be followed. Refer to the ACHP website for more information. Projects involving modifications to historic buildings or structures should comply with the Secretary of the Interior Standards for the Rehabilitation of Historic Structures, which is available from the SHPO/THPO and the National Park Service.*

The Project site is an existing surface parking lot that does not contain any structures or facilities that could be considered historic resources. Project site is not located in any of the historic districts defined on campus. Therefore, the proposed Project would not cause any changes to the significance of historic resources due to removal or demolition and is consistent with the historic resources analysis evaluated in the 2018 LRDP Program EIR.

Based on a review of the Projects area of potential effect (APE) and the inventory and analysis contained in the Archaeological Resources Report prepared for the 2018 LRDP Program EIR (AECOM 2018), the Project site contains no known archaeological/Tribal Cultural resources. Given that the Project site has been previously developed/disturbed during the construction of the existing surface parking lot, archaeological/Tribal Cultural resources are not expected to be found during Project construction.

The Project site is located within undifferentiated Eocene Sedimentary Deposits, qualifying it as an area of high potential for paleontological resources (refer to Figure 3.4-2 in the 2018 LRDP Program EIR). As such, excavation associated with the subterranean level of the parking structure could expose previously unknown paleontological resources. In the unlikely event that previously unidentified resources are discovered during Project construction, implementation of the 2018 LRDP Program EIR mitigation measure (MM) Cul-3, which would require a paleontological

monitor onsite during grading activities, would reduce impacts to less than significant levels.

__X__ **I. VISUAL QUALITY:** *Describe the existing visual setting, identify any sensitive views/viewers, and describe the visual impact of the proposed project.*

The 2018 LRDP EIR identified and evaluated all sensitive views/viewers on campus and the visual impacts that could result from the LRDP development program. The proposed Voigt Electric Mobility Hub would not be located within a designated Visual Sensitive Zone (VSZ) or a Perimeter Development Zone (PDZ) as identified in the 2018 LRDP Program EIR. Further, the proposed Project would not be located within or near any of the Key Vantage Points (KVPs) identified in the 2018 LRDP EIR.

Direct views of the proposed six-story, above ground parking structure would be visible from surrounding facilities including the adjacent Triton Baseball Field, as well as the Altman Clinical and Translational Research Institute (ACTRI) and Jacobs Medical Center. The proposed Project would also be directly visible from the north along Voigt Drive, from the east at UC San Diego Health La Jolla Station, and along the new aerial tracks. Further, the proposed Project would be directly visible from the west along I-5, for both northbound and southbound travelers. Howevever, these views are not considered sensitive.

Consistent with the 2018 LRDP EIR, the proposed Project has undergone a comprehensive design review by the San Diego Design Review Board (DRB) to ensure that the design is consistent with the visual landscape and/or the character of the surrounding development. The design review process ensures campus development, including the proposed Project, incorporate, where appropriate, factors including but not necessarily limited to: building mass and form, building proportion, roof profile, architectural detail and fenestration, texture, color, type and quality of building materials, and landscaping.

In addition, the following 2018 LRDP EIR design MM has been incorporated into the Project early on in the design process (Aes-2A and Aes-3):

- Projects that include development or alteration of a parking area, parking structure, or road that could result in the prolonged or excessive repetitive exposure of residential areas or other light sensitive uses, to glare from vehicle headlights shall be designed to shield direct glare from such uses. If shielding cannot be implemented through design modifications during the conceptual design phase, then walls, landscaping, or other glare barriers shall be provided as appropriate to shield direct glare into the nearby light sensitive uses. Implementation of MM Aes-3 would reduce impacts to a level that is less than significant.

In addition, no significant impacts to scenic resources within the viewshed of the state scenic highway were identified. For the reasons stated above, aesthetics impacts resulting from the proposed development would be less than significant, consistent with the 2018 LRDP EIR.

__X__ **J. NOISE:** *Compare the distance between the center of the proposed project and the nearest noise receptor to the screening distance for this type of project in FTA's noise and vibration guidelines (Section 4.2 in FTA guidelines). If the screening distance is not achieved, attach a "General Noise Assessment" with conclusions. Refer to FTA's Transit Noise and Vibration Impact Assessment manual (May 2006).*

Implementation of the proposed Project would replace an existing surface parking lot and result in modified noise sources associated with the above ground parking structure. The most prevalent intermittent sources include tire noise, car alarms, vehicle engine idling, shutting of vehicle doors, bus barn operations, and vehicle stereos; all of which are typically momentary and irregular with little potential to result in continuous noise level over a 24-hour period that would exceed the outdoor criteria (65 dBA CNEL or more than 3 dBA increase in the existing ambient noise level). The dominant continuous source of noise associated with parking structures typically include the operation of exhaust fans. Fan noise from a parking structure would be expected to yield 65 dBA CNEL, the noise-sensitive land use (NSLU) threshold for outdoor noise, at 250 feet. However, the nearest sensitive receptor to the Project site would be the inpatient Sulpizio Cardiovascular Center, located within the Jacobs Medical Center approximately 680 feet southeast of the Project site. At this distance, the noise expected from the proposed Project would not impact the NSLU. No other noise-sensitive land-uses, such as dormitories, residential lodging, classrooms, or libraries exist within the immediate Project vicinity. Therefore, impacts associated with an increase in noise level would be less than significant.

__X__ **K. VIBRATION:** *If the proposed project includes new or relocated steel rails/tracks, compare the distance between the center of the proposed project and the nearest vibration receptor to the screening distance for this type of project in FTA's guidelines (Section 9.2 in FTA guidelines). If the screening distance is not achieved, attach a "General Vibration Assessment" with conclusions. Refer to FTA's Transit Noise and Vibration Impact Assessment manual (May 2006).*

The proposed project does not involve new or relocated steel tracks.

__X__ **L. ACQUISITIONS & RELOCATIONS REQUIRED:** *Describe land acquisitions and displacements of residences and businesses. Include current use, ownership, and the date and type of property transaction (such as lease or purchase). If FTA funds are used to acquire property or the property is used as local match, then the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 must be*

followed and documented. No offers or appraisals may occur prior to FTA's approval of a NEPA evaluation.

No land acquisitions or transfers would occur associated with the proposed project. The site is currently vacant (surface parking) and no displacements of residences of businesses will occur.

__X__ **M. HAZARDOUS MATERIALS:** *If real property has been acquired, has a Phase I site assessment for contaminated soil and groundwater been performed? If a Phase II site assessment is recommended, has it been completed? What steps will be taken to ensure that human and ecological receptors in the project area are protected from contamination encountered during construction and operation of the project? State the results of consultation with the State agency with jurisdiction over proposed remediation of soil and/or groundwater contamination. Include anticipated effects of the project on asbestos-containing building materials and lead-based paints.*

The Project site is located in an area formerly occupied by the U.S. Marine Corps Camp Calvin B. Matthews included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List; see Impact 3.9-2 in the 2018 LRDP Program EIR). The Formerly Used Defense Site (FUD) was primarily used for weapons training, coast artillery and anti-aircraft training which regularly involved fuel, gas and other hazardous materials (e.g., munitions and explosives of concern [MEC]). Camp Matthews was closed for operation prior to environmental legislation that required the removal and proper disposal of hazardous materials, and therefore, the possibility for military-related hazardous materials to be disturbed during project construction exists.

As previously described, the Project site has been previously developed as a surface parking lot. Therefore, the potential to encounter hazardous materials (e.g., MEC) is low. Additionally, no hazardous materials were noted during the analysis conducted on each of the soil borings. In the unlikely event that previously unknown contaminated sites are discovered during construction activities, all work would be discontinued until appropriate health and safety procedures are implemented. Contamination remediation and removal would be conducted in accordance with local, state, and federal regulatory guidelines, under the oversight of the appropriate regulatory agency, consistent with the following 2018 LRDP EIR MM (Haz-4C).

- In the event that USTs, not identified in consultation with UC San Diego Environmental, Health & Safety (EH&S), or undocumented areas of contamination are encountered during construction or redevelopment activities, work shall be discontinued until appropriate health and safety procedures are implemented. Either the County of San Diego DEH or the San Diego Regional Water Quality Control Board (RWQCB), depending on the nature of the contamination, must be notified regarding the contamination. Each agency and program within the respective agency has its own

mechanism for initiating an investigation. The appropriate program (e.g., the DEH Local Oversight Program for tank release cases, the County of San Diego DEH Voluntary Assistance Program for non-tank release cases, the RWQCB for non-tank cases involving groundwater contamination) will be selected based on the nature of the contamination identified. The contamination remediation and removal activities will be conducted in accordance with pertinent regulatory guidelines, under the oversight of the appropriate regulatory agency.

As such, potential impacts associated with hazardous material sites would be reduced to a level that is less than significant.

__X__ **N. SOCIAL IMPACTS AND COMMUNITY DISRUPTION:** *Provide a socio-economic profile of the affected community. Describe the impacts of the proposed project on the community. Identify any community resources that would be affected and the nature and extent of the effect.*

The proposed Project would not affect the socio-economic profile of the nearby communities. It would instead support mobility services utilized by the campus population and visitors, including ADA electric cart transit. The Project is consistent with the 2018 LRDP land-use designation, and no community resources would be affected. The Project would provide an overall net benefit to the community by providing EV charging stations, currently available only in a few locations.

__X__ **O. ENVIRONMENTAL JUSTICE:** *Identify the concentrations of minority and low-income populations in the area. Following FTA guidelines on environmental justice (FTA Circular 4703.1), define "minority" and "low-income" populations, and describe whether or not the project would result in disproportionately high and adverse impacts on minority or low-income populations.*

A *VTOC and Environmental Justice Memorandum* was prepared in order to address this NEPA specific question regarding Environmental Justice. The program is not anticipated to have the potential to cause adverse impacts to communities in the proximity of UC San Diego, and therefore is also not anticipated to have adverse impacts that would fall within the scope of Environmental Justice as defined by US EPA.

__X__ **P. USE OF PUBLIC PARKLAND AND RECREATION AREAS:** *Indicate parks, recreational areas, wildlife refuges, and/or trails on a project location map (Section 4(f) resources). Describe how the activities and purposes of these resources will be affected by the project. Based on the definitions of use outlined in 23 CFR § 774, determine if the project will result in an actual (direct), temporary, or constructive (proximity impacts) use of the Section 4(f) resource. Locate Section 4(f) properties on project map. Refer to the Section 4(f) overview at FTA's website.*

The proposed Voigt Electric Mobility Hub would not affect the use of public parkland or recreation areas. As described in the application, the Voigt Electric Mobility Hub will act as a supporting facility to the adjacent Triton Baseball Field by providing parking for teams and spectators attending games.

__X__ **Q. IMPACTS ON WETLANDS:** *Show potential wetlands and boundaries on a map. Integrate data from the National Wetlands Inventory. Describe the project's impact on on-site and adjacent wetlands. If the project impacts wetlands, provide documentation of consultations and permits from the U.S. Army Corps of Engineers, as well as, minimization and mitigation efforts. If applicable, provide documentation to demonstrate that wetlands are not present, or the proposed project will not impact any wetland areas.*

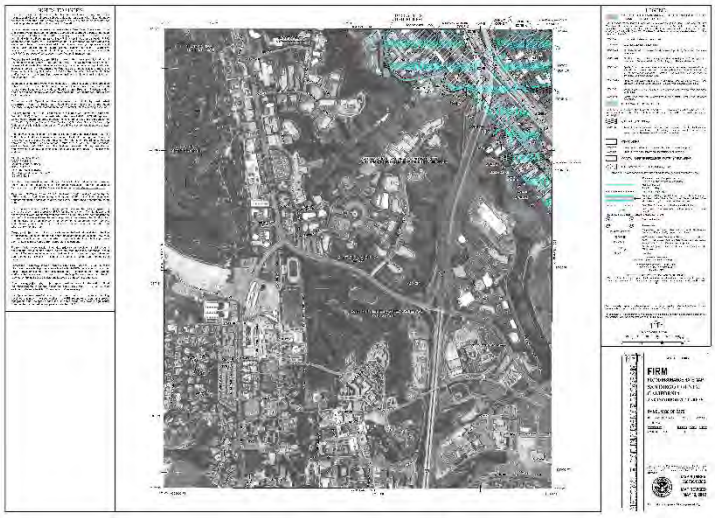
Development would not be located within a wetland and is within previously disturbed/developed area (existing paved surface parking lot). However, the 2018 LRDP Program EIR identifies disturbed wetland habitat to the south of the Project site. As such, a Wetland Demarcation was conducted by Wood Environment & Infrastructure Solutions, during which a botanist assessed the potential for wetland features using the presence of predominantly wetland-associated species (i.e., sedges and rushes, willows, giant reed, etc.). The intent of this demarcation was to conservatively identify and avoid approximate wetland boundaries during the development of the Project footprint (see Figure 3).

The Project site footprint avoids direct impacts to potential wetland features by at least 50 feet, to the extent practicable. The configuration of the proposed parking structure would encroach up to 25 feet from the existing man-made drainage channel; however, the building footprint would remain within the existing surface parking lot (P701) and would not result in direct fill or alternation of this channel. Prior to construction activities, the setback from the wetland boundary to the west would be demarcated by a chain-link fence, which would remain in place throughout the duration of all construction activities. Standard BMPs, required under the UC San Diego Stormwater Management Plan (SWMP), would include construction of a silt fence to ensure that no indirect-construction related water quality impacts to potential wetlands adjacent to the Project site would occur.

__X__ **R. FLOODPLAIN IMPACTS:** *Determine if the project is within a 100-year floodplain. Review FEMA 100-year FIRMs on the FEMA website. Include a FIRM floodplain map, if available. Include all floodplain FIRM numbers that occur in the project area and the effective or revision date for each FIRM. Include the FEMA FIRM numbers for the project area, even if the 100-year floodplain has not been delineated. If the proposed project is located within the 100-year floodplain describe what will be done to address possible flooding of the proposed project location and flooding induced by the project due to reduced capacity to retain storm water runoff. Provide documentation on how the project will be designed to restore floodplain capacity. If applicable, provide documentation to demonstrate that the project is not sited in a floodplain. If a*

determination cannot be made whether or not the project is within a 100-year floodplain, contact the county flood control district or the local floodplain manager for assistance.

The Voigt Electric Mobility Hub is not located within a 100-year floodplain, as shown on the attached FIRM floodplain map as shown below.



__X__ **S. IMPACTS ON WATER QUALITY, NAVIGABLE WATERWAYS, & COASTAL ZONES:** *If any of these resources are implicated, describe the project's potential impacts. Determine if National Pollutant Discharge Elimination System (NPDES) permits are applicable as a result of ground disturbance or point sources that will discharge pollutants into waters of the United States. Refer to BMPs at the U.S. EPA website. How will storm water be treated during and after construction? How will wastewater from bus washing facilities be treated? Determine if project area is in a sole-source aquifer, if not document in narrative (refer to the U.S. EPA website).*

A project-specific Hydrology and Water Quality Study was prepared that analyzed the existing and proposed drainage patterns and peak flow rates associated with the proposed Project. The impervious area increases by approximately 0.10 AC (2.2% of the total area) in the proposed condition. With incorporation of the recommendations contained within the study, the Project will mitigate water quantity and quality impacts to the maximum extent practical through the use of Best Management Practices. A bioretention BMP, amended swales, and areas with amended soils (amended strips) are proposed to provide pollutant control for the site. As a result, the total peak flow rate from the site will be reduced from 12.53 to 11.23 cfs, which is 1.3 cfs less than existing condition. No adverse impact to the receiving drainage system is anticipated because the proposed peak flow rate will be less than existing.

The proposed development would comply with UC San Diego's Stormwater Management Program and other regulatory requirements, as needed to minimize erosion and topsoil loss. Specifically, the proposed Project would comply with all of UC San Diego's NPDES permit requirements, including the General Permit for Storm Water Discharges Associated with Construction Activity (General Construction Permit) and the General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (Phase II Small MS4 Permit), which requires management of long-term stormwater discharges and implementation of pollution protection measures. The Project is not located within the Coastal Zone, therefore a Coastal Development Permit is not required.

__X_ **T. IMPACTS ON ECOLOGICALLY-SENSITIVE AREAS AND ENDANGERED SPECIES:**
Describe any natural areas (woodlands, prairies, wetlands, rivers, lakes, streams, designated wildlife or waterfowl refuges, and geological formations) on or near the proposed project area. If present, state the results of consultation with the state department of natural resources and, if appropriate, the U.S. Fish and Wildlife Service on the impacts to critical habitats and on threatened and endangered fauna and flora that may be affected. Refer to the U.S. Fish and Wildlife Service website.

The Project site has been previously disturbed/developed and consists of an existing, paved surface parking lot. The 2018 LRDP EIR defines it as Urban/Developed Land and it does not support sensitive wildlife species. While the paved surface parking lot does not support any habitat for special-status species, the 2018 LRDP Program EIR identified disturbed wetland habitat to the south of the Project site. Wood Environment & Infrastructure Solutions, Inc. (2019) conducted a field survey in April 2019 that included vegetation mapping and a wetland demarcation within a 500-foot buffer of the Project site, including the entire Open Space area to the south. No sensitive plant or wildlife species were observed during Wood's field survey in 2019. Further, no sensitive species have been documented within the immediate vicinity of the Project site. Construction related MMs would be implemented during construction, as necessary, to avoid impacts to nesting birds protected under the Migratory Bird Treaty Act (MBTA). See MM Bio-2D and Bio-2E described further below under "V. Impacts Caused by Construction".

__X_ **U. IMPACTS ON SAFETY AND SECURITY:** *Describe the measures that would need to be taken to provide for the safe and secure operation of the project after its construction. List any security measures that are planned as part of the project (e.g., security guards, fencing, secured access, lighting, cameras, etc.).*

The proposed Project includes, but is not limited to, the following measures to ensure the safe and secure operation of the facility following construction:

- Enhance safety for cyclists, pedestrians and drivers by adding a class IV separated cycle track on Voigt Drive extending from Genesee Avenue to the LRT station.

- Signalization of the intersection of Voigt Drive and the proposed Project site provides the safety benefit of a controlled access for vehicles, pedestrians and cyclists.
- Emergency power at the Project site would provide backup power for all life safety equipment, security, telecommunication, egress lighting, and all other safety and security monitoring systems.
- A fire system, fire alarms, and fire access plan would be prepared in accordance with the City of San Diego Fire Safety Code.

With implementation of the above safety features incorporated into the Project, it is anticipated that the facility would operate in a safe and secure environment.

_X_ V. **IMPACTS CAUSED BY CONSTRUCTION**: *Describe the construction plan and identify construction impacts with respect to noise, dust, utility disruption, debris and spoil disposal, air quality, water quality, erosion, safety and security, and disruptions of traffic and access to businesses or residential property. Identify steps that will be taken to provide alternatives or mitigate the impacts of construction impacts. Cite applicable local, state, and federal regulations, and any standards or BMPs that will be followed. If applicable, please include any NPDES best practice measures (refer to the U.S. EPA website).*

UC San Diego will follow all relevant federal, state, and local regulations related to construction and operation of the Voigt Electric Mobility Hub Project (Project). UC San Diego will implement appropriate Best Management Practices (BMPs) prior to and during construction for air quality, biological resources, hydrology/water quality, hazardous materials, and traffic access/circulation. The following 2018 LRDP Program EIR construction related MMs will be implemented as part of the Project to avoid or minimize impacts prior to and/or during construction:

Air Quality Measures

UC San Diego will implement measures to Control PM Emissions Generated by Construction Activities. UC San Diego shall require by contract specification that contractors implement the following measures during all phases of construction of individual projects developed under the proposed 2018 LRDP (Air-QA and Air-QB):

- Water the grading areas a minimum of twice daily to minimize fugitive dust;
- Stabilize graded areas as quickly as possible to minimize fugitive dust;
- Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry;
- Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads;
- Remove any visible track-out into traveled public streets via regular street sweeping;
- Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred;

- Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads;
- Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling;
- Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 mph;
- Cover/water onsite stockpiles of excavated material;
- Enforce a 15-mph speed limit on unpaved surfaces;
- On dry days, dirt and debris spilled onto paved surfaces shall be swept up immediately to reduce re-suspension of particulate matter caused by vehicle movement. Approach routes to construction sites shall be cleaned daily of construction-related dirt in dry weather;
- Disturbed areas shall be hydroseeded, landscaped, or developed as quickly as possible to reduce dust generation; and
- Limit the daily grading volumes/area to the extent feasible.

UC San Diego will minimize Off-Road Construction Equipment Emissions. UC San Diego shall require by contract specification that the construction contractor use off-road construction diesel engines that meet, at a minimum, the Tier 4 interim California Emissions Standards, unless such an engine is not available for a particular item of equipment. Tier 3 engines will be allowed on a project-by-project basis when the contractor has documented that no Tier 4 interim equipment or emissions equivalent retrofit equipment is available or feasible for the project.

Biological Resources Measures

Nesting Raptors and Birds

i. If project construction is scheduled to commence during the raptor nesting season (generally January 15 through July 31), pre-construction surveys for raptor nests shall be performed by a qualified biologist within 500 feet of project construction activities no more than seven days prior to the initiation of construction. Construction activities within 500 feet of an identified active raptor nest shall not commence during the breeding season until a qualified biologist determines that the nest is no longer active and any young birds in the area have adequately fledged and are no longer reliant on the nest. Trees with inactive nests can be removed outside the breeding season without causing an impact.

ii. No grubbing, trimming, or clearing of vegetation (including brush management) from project sites shall occur during the general avian breeding season (February 15 through August 31). If grubbing, trimming, or clearing cannot feasibly occur outside of the general avian breeding season, a qualified biologist shall perform a pre-construction nesting bird survey no more than seven days prior to the commencement of vegetation clearing or grubbing to determine if active bird nests are present in the affected areas. Should an active migratory bird nest be located, the project biologist shall direct vegetation clearing away from the nest until it has been determined by the project biologist that the young have

fledged, or the nest has failed. If there are no nesting birds (includes nest building or other breeding/nesting behavior) within the survey area, clearing, grubbing, and grading shall be allowed to proceed.

Biological Resource Construction Measures

UC San Diego shall conduct a pre-construction meeting held between the Project Manager, qualified Biologist, Environmental Planner, and construction crews consistent with 2018 LRDP EIR mitigation measure Bio-3E to ensure crews are informed of the sensitivity of habitats in the Open Space Preserve and adjacent undeveloped lands (Bio-3E).

i. Prior to commencement of clearing or grading activities, fencing (e.g., silt fencing, orange construction fencing, and/or chain-link fencing as determined by campus planning) shall be installed around the approved limits of disturbance to prevent errant disturbance of sensitive biological resources by construction vehicles or personnel. Installation of fencing to demarcate the approved limits of disturbance shall be verified by the project biologist prior to initiation of clearing or grading activities. All movement of construction contractors, including ingress and egress of equipment and personnel, shall be limited to designated construction zones. This fencing shall be removed upon completion of all construction activities.

ii. No temporary storage or stockpiling of construction materials shall be allowed within the Ecological Reserve or Restoration Lands, and all staging areas for equipment and materials shall be located at least 50 feet from the edge of these areas. This prohibition shall not be applied to facilities that are planned to traverse Ecological Reserve or Restoration Lands (e.g., trails and utilities). Staging areas and construction sites in proximity to the Ecological Reserve or Restoration Lands shall be kept free of trash, refuse, and other waste; no waste dirt, rubble, or trash shall be deposited in these areas.

iii. Equipment to extinguish small brush fires (e.g., from trucks or other vehicles) shall be present on site during all phases of project construction activities, along with personnel trained in the use of such equipment. Smoking shall be prohibited in construction areas adjacent to flammable vegetation.

iv. Temporary night lighting shall not be used during construction unless determined to be absolutely necessary. If night lighting is necessary, lights shall be directed away from sensitive vegetation communities and shielded to minimize temporary lighting of the surrounding habitat.

Cultural and Tribal Resources Measures

UC San Diego will adhere to measures contained in the 2018 LRDP EIR regarding Paleontological resources during construction. Grading and excavation equating to 1,000 cubic yards or more at depths of 10 feet or greater within highly sensitive geologic

formations (i.e., Ardath Shale, Scripps Formation, and Old Paralic Deposits) shall require monitoring by a qualified paleontologist, including the following measures:

i. Prior to beginning any work that requires paleontological monitoring:
   a) a preconstruction meeting shall be held that includes the qualified paleontologist, Construction Manager and/or Grading Contractor, and other appropriate personnel so the qualified paleontologist can make comments and/or suggestions concerning the monitoring program to the Construction Manager and/or Grading Contractor.
   b) the qualified paleontologist shall (at that meeting or subsequently) submit to the Project Manager a copy of the site/grading plan (reduced to 11 x 17 inches) that identifies areas to be monitored as well as areas that may require delineation of grading limits.
   c) the qualified paleontologist shall also coordinate with the Project Manager on the construction schedule to identify when and where monitoring is to begin and to specify the start date for monitoring.

ii. The qualified paleontologist shall document monitoring activity on a standardized form. A record of daily activity shall be sent to Campus Planning and the Project Manager each month.

iii. The qualified paleontologist shall be present initially during all earth-moving activities. After 50 percent of the excavations are complete within the unit, if no significant fossils have been recovered, the level of monitoring may be reduced or suspended entirely at the qualified paleontologist's discretion and in consultation with Campus Planning. These deposits may be included in those identified as Undifferentiated Tertiary Sedimentary deposits in Figure 3.5-1.

iv. Discoveries
   a) Discovery Process – In the event of a discovery, and when requested by the qualified paleontologist, the Project Manager shall be contacted and shall divert, direct, or temporarily halt ground-disturbing activities in the area of discovery to allow for preliminary evaluation of potentially significant paleontological resources. The paleontologist shall also immediately notify Campus Planning of such findings at the time of discovery.
   b) Determination of Significance – The significance of the discovered resources shall be determined by the paleontologist in consultation with the Project Manager and Campus Planning, who must concur with the evaluation before grading activities will be allowed to resume.
   c) Documentation and Treatment of Finds – Based on the scientific value and/or uniqueness of the find, the qualified paleontologist may record the find and allow work to continue or recommend salvage and recovery of the fossil. If treatment and salvage are required, recommendations shall be consistent with Society of Vertebrate Paleontology 2010 guidelines and currently accepted scientific practice. Work in the affected area may resume once the fossil has been assessed and/or salvaged and a paleontological monitor is present.

v. Notification of Completion – The paleontologist shall notify Campus Planning in writing of the end date of monitoring.

vi. Handling and Curation of Significant Paleontological Specimens and Letter of Acceptance – The paleontologist shall ensure that all significant fossils collected are appropriately prepared and permanently curated with an appropriate institution, and that a letter of acceptance from the curation institution has been submitted to Campus Planning.

vii. Final Results Reports (Monitoring and Research Design and Recovery Program) – Prior to completion of the project, two copies of the Final Results Report (even if no significant resources were found) and/or evaluation report, if applicable, which describe the results, analysis, and conclusions of the Paleontological Monitoring Program (with appropriate graphics) shall be submitted to Campus Planning for approval.

Hazards and Hazardous Materials Measures

UC San Diego shall implement the following measures during construction regarding hazards and hazardous materials:

i. In the event that USTs, not identified in consultation with EH&S, or undocumented areas of contamination are encountered during construction or redevelopment activities, work shall be discontinued until appropriate health and safety procedures are implemented. Either the County of San Diego DEH or the San Diego RWQCB, depending on the nature of the contamination, must be notified regarding the contamination. Each agency and program within the respective agency has its own mechanism for initiating an investigation. The appropriate program (e.g., the DEH Local Oversight Program for tank release cases, the County of San Diego DEH Voluntary Assistance Program for non-tank release cases, the RWQCB for non-tank cases involving groundwater contamination) will be selected based on the nature of the contamination identified. The contamination remediation and removal activities will be conducted in accordance with pertinent regulatory guidelines, under the oversight of the appropriate regulatory agency.

ii. In the event that construction of a project requires a lane or roadway closure on campus, prior to construction the contractor and/or Project Manager shall ensure that the UC San Diego Fire Marshal and campus community at large are notified. If determined necessary by the UC San Diego Fire Marshal, local emergency services will be notified by the Fire Marshal of the closure.

Noise Control Measures

UC San Diego shall implement the following noise measures during construction if construction necessitates the use of vibratory or impact-type equipment (Noi-1F):

i. Require the construction contractor to work with proper administrative controls on equipment operation periods so as not to exceed a 12-hour average sound level of 75 dBA Leq at any NSLU between 7:00 a.m. and 7:00 p.m. Monday through Saturday.

ii. Outfit construction equipment with properly maintained, manufacturer-approved or recommended sound abatement means on air intakes, combustion exhausts, heat dissipation vents, and the interior surfaces of engine hoods and power train enclosures.

CONCLUSION

The action described above meets the criteria for a NEPA categorical exclusion (CE) in accordance with 23 CFR Part 771.118.

_____

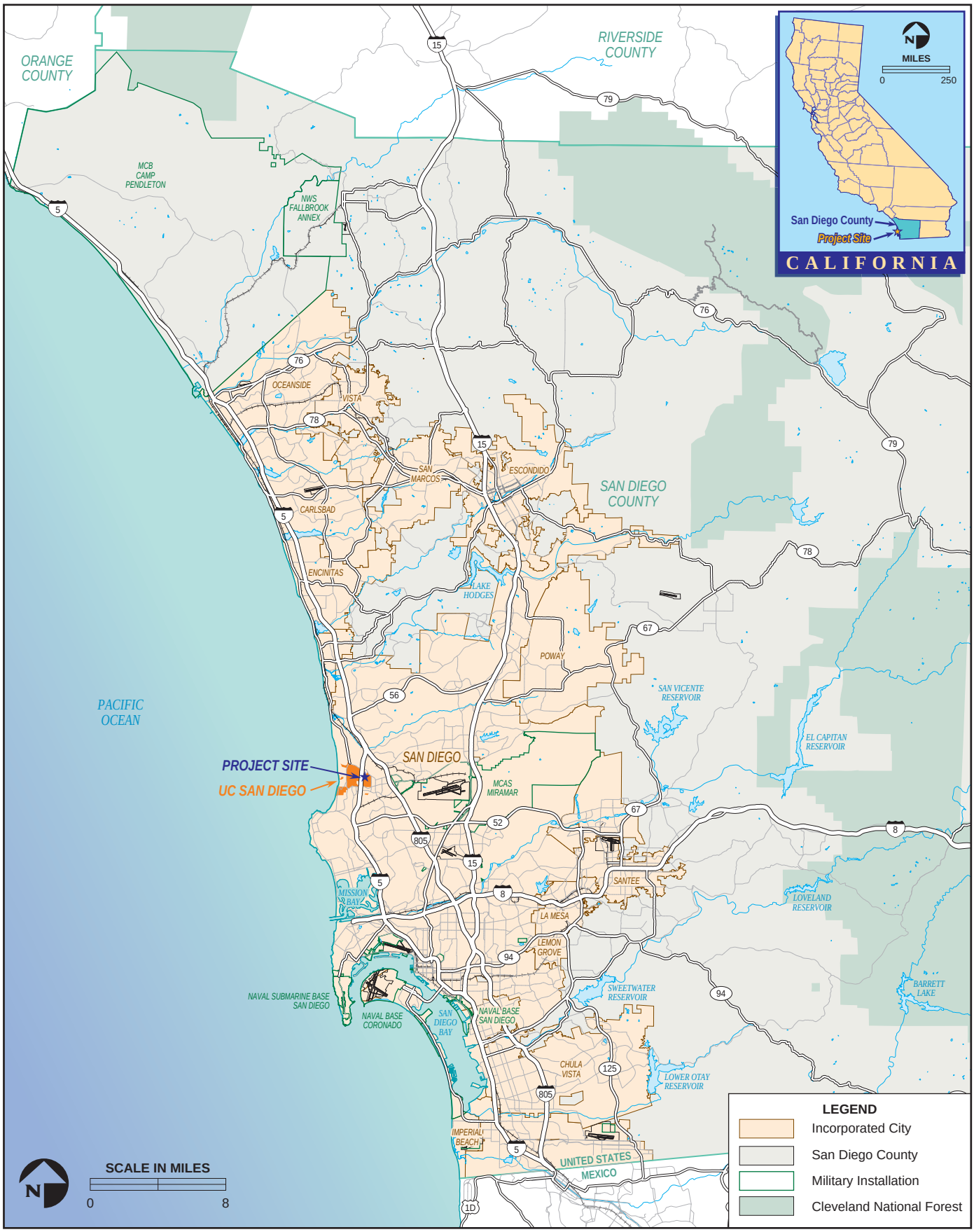
Applicant's Environmental Reviewer **Date**

_____

FTA Grant Representative **Date**

UC San Diego Voigt Electric Mobility Hub CE Checklist FTA

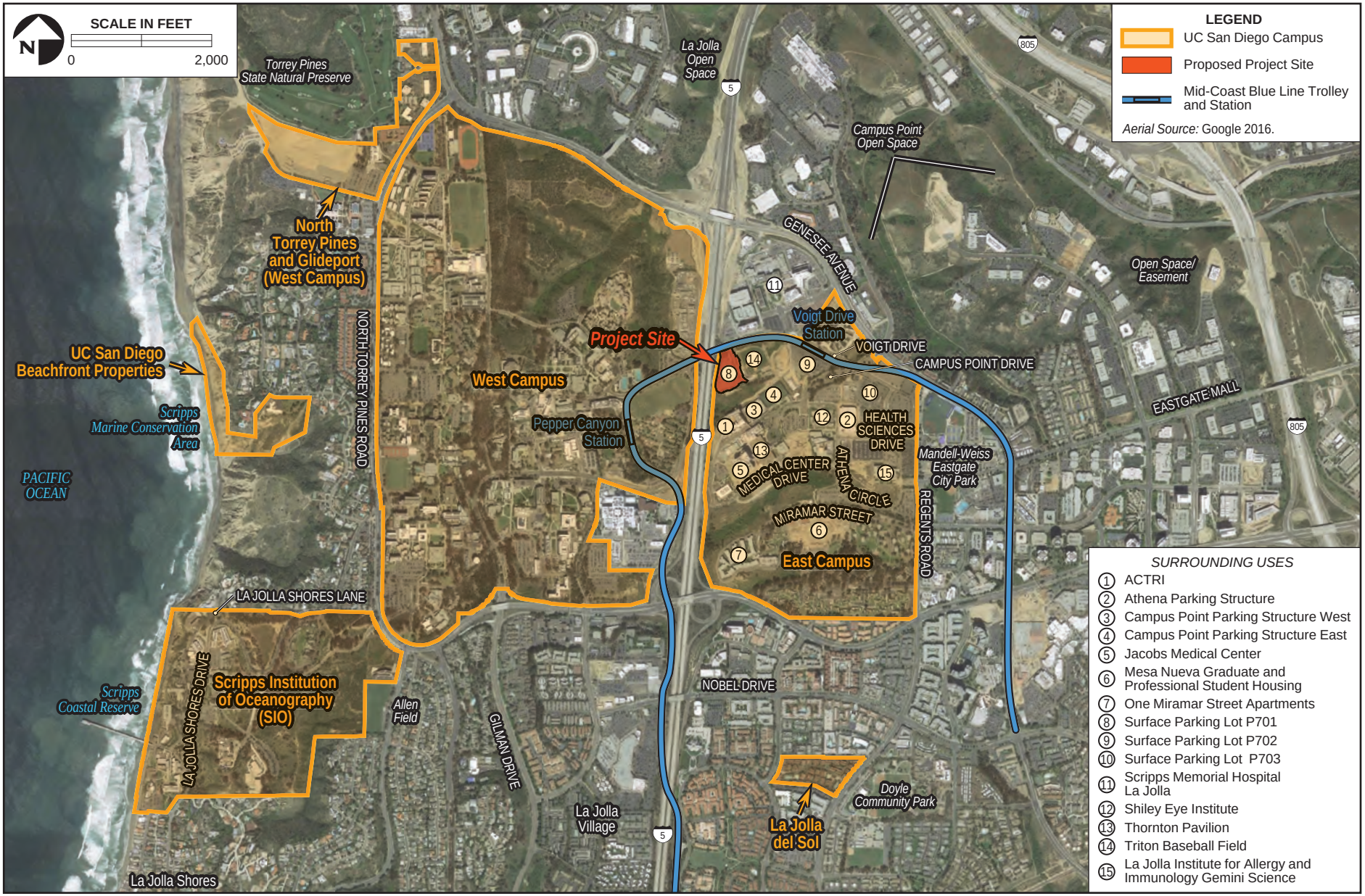
Appendix 1 -- Regional Project Site (Figures 1, 2)



wood.

Regional Vicinity
UC San Diego

FIGURE
1



wood.

Project Site Vicinity

FIGURE 2

UC San Diego Voigt Electric Mobility Hub CE Checklist FTA

Appendix 2 - Biological and Wetlands Demarcations

Path: Q:\3554_NaturalResources\UCSD_VoigtWetland\MXD\ReportFigures\Fig1_VegetationCommunities.mxd, chris.nixon 5/2/2019

Wetlands (Buffer 50ft)

Vegetation

Wetlands

- SWS: Southern Willow Scrub
- SWR: Southern Willow Riparian
- HW: Herbaceous Wetland
- DW: Disturbed Wetland

Uplands

- DCSS: Diegan Coastal Sage Scrub
- DCSS-D: Diegan Coastal Sage Scrub Disturbed
- NNG: Non-Native Grassland
- EW: Eucalyptus Woodland
- NNWS: Non-Native Woody Shrub
- DH: Disturbed Habitat
- DEV: Urban/Developed Land

1 inch = 200 feet
0 100 200 Feet

wood.

FIGURE 1

Vegetation Communities
East Campus Voigt Parking Structure Project
La Jolla, Ca.

UC San Diego Voigt Electric Mobility Hub CE Checklist FTA

Appendix 3 - Environmental Justice Memo

transpogroup
WHAT TRANSPORTATION CAN BE.

MEMORANDUM

Date:	4/1/22	**TG:**	22114
To:	Alison Buckley, UCSD		
From:	Scott Le Vine, Transpo Group		
cc:			
Subject:	VEMH and Environmental Justice		

VEMH and Environmental Justice

The Voigt Electric Mobility Hub (VEMH) is proposed for the current site of Parking lot P701 on the UCSD East Campus, with elements along Voigt Drive (Level IV cycle track)and the La Jolla Health Trolley Station.

Federal agencies must consider environmental justice in their activities under the National Environmental Policy Act (NEPA).

Environmental Justice, per the US EPA's Office of Environmental Justice, refers to:

> *The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.*[1]

The VEMH program involves relocating parking and traffic-circulation away from the eastern edge of UCSD's East Campus, with the replacement parking being located on Voigt Drive adjacent to the I-5 freeway. This action this moves the adverse impacts from existing parking/automobile-traffic activity further away from communities in the proximity of UCSD (i.e. communities to the east of UCSD).

The Project Site is located entirely within Census Tract 6073008305, which meets the definition of a USDOT Area of Persistent Poverty. but not a historically disadvantaged community. The State of California has determined that the number of people living below twice the poverty level is high, ranking this Census Tract in the 82nd percentile across California. This designation as a Low-Income Community qualifies the site as a CA Air Resources Board Priority Population for Investments which "is especially vulnerable to the impacts of climate change". The population is 42% White,40% Asian American, 11% Hispanic, 3% African American and 5% Other.

The EPA's EJ Screen (see attached "Standard Report") indicates that the Project site is significantly impacted, with an air toxics hazard index in the 78th percentile, traffic proximity in the 87th percentile, and wastewater discharge in the 95th percentile. These significant environmental concerns, paired with the Project site demographic in the 79th percentile make the site a strong candidate for environmental justice investment.

[1] https://www.epa.gov/sites/default/files/2014-08/documents/ej_guidance_nepa_epa0498.pdf

The Project site exceeds the USDOT objective to address the disproportionate negative environmental impacts of transportation on underserved, overburdened, or disadvantaged communities at the site itself, in addition to the substantial benefits to the underserved, overburdened and disadvantaged communities along the Light Rail Trolley and MTS service area who will benefit from more effective transit due to improved last-mile options and many overburdened communities in the I-5 corridor south of the project site, some rating as high as the 97th percentile in EJ Screen's Demographic Index that will see reduced traffic, noise and particulate emissions as the project shifts travelers to LRT. The VEMH program also includes elements to increase the usage of electric vehicles (both campus buses and private automobiles), powered by 100% renewable zero-emission electricity. This will tend to reduce exposure to pollutant emissions in communities proximate to UCSD.

The VEMH program also includes various measures to support mode shift away from private car usage and towards active travel, notably cycling. This would also tend to reduce the existing impacts of UCSD parking/traffic on communities proximate to UCSD.

The VEMH program is not anticipated to have the potential to cause adverse impacts to communities in the proximity of UCSD, including disadvantaged communities. Therefore, the VEMH is not anticipated to have adverse impacts that would fall within the scope of Environmental Justice as defined by US EPA.

Save as PDF

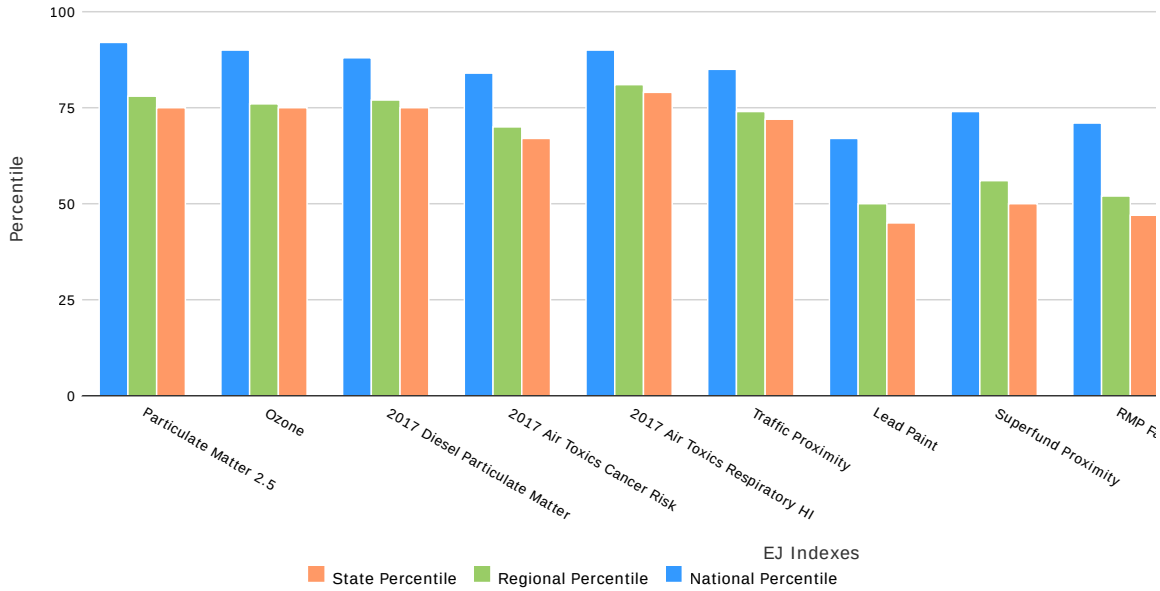
EJScreen Report (Version 2.0)

1 mile Ring Centered at 32.881454,-117.227519
CALIFORNIA, EPA Region 9
Approximate Population: 8,892
Input Area (sq. miles): 3.14

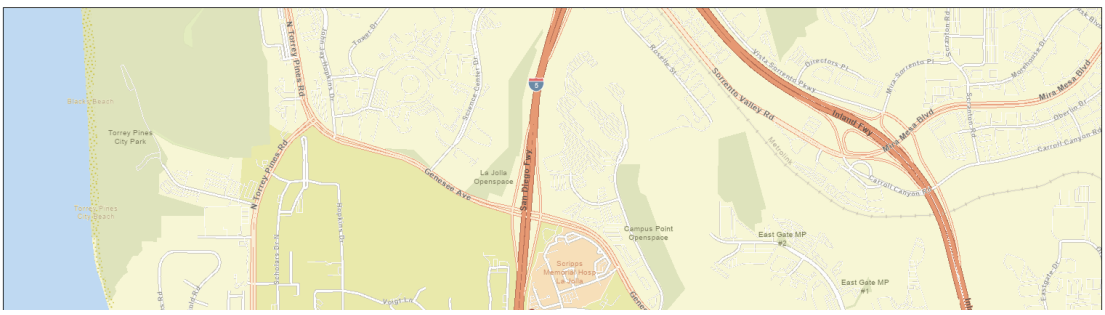
(The study area contains 1 blockgroup(s) with zero population.)

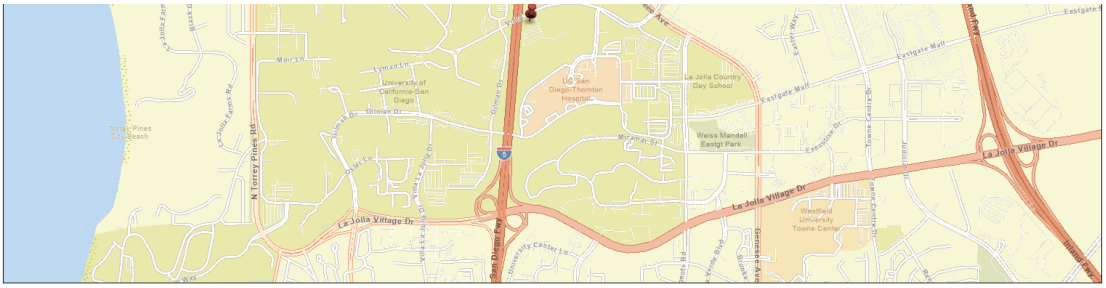
Selected Variables	Percentile in State	Percentile in EPA Region	Percentile in USA
Environmental Justice Indexes			
EJ Index for Particulate Matter 2.5	75	78	92
EJ Index for Ozone	75	76	90
EJ Index for 2017 Diesel Particulate Matter*	75	77	88
EJ Index for 2017 Air Toxics Cancer Risk*	67	70	84
EJ Index for 2017 Air Toxics Respiratory HI*	79	81	90
EJ Index for Traffic Proximity	72	74	85
EJ Index for Lead Paint	45	50	67
EJ Index for Superfund Proximity	50	56	74
EJ Index for RMP Facility Proximity	47	52	71
EJ Index for Hazardous Waste Proximity	95	96	99
EJ Index for Underground Storage Tanks	80	82	88
EJ Index for Wastewater Discharge	85	86	97

EJ Index for the Selected Area Compared to All People's Blockgroups in th



This report shows the values for environmental and demographic indicators and EJScreen indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJScreen documentation for discussion of these issues before using reports.





Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	11

Selected Variables	Value	State		EPA Region		USA	
		Avg.	%tile	Avg.	%tile	Avg.	%tile
Pollution and Sources							
Particulate Matter 2.5 (µg/m^3)	9.98	11.7	19	10.8	35	8.74	83
Ozone (ppb)	41.1	48.1	27	49.6	21	42.6	38
2017 Diesel Particulate Matter* (µg/m^3)	0.298	0.33	47	0.33	<50th	0.295	60-70th
2017 Air Toxics Cancer Risk* (lifetime risk per million)	20	31	16	30	<50th	29	<50th
2017 Air Toxics Respiratory HI*	0.39	0.43	64	0.41	60-70th	0.36	70-80th
Traffic Proximity (daily traffic count/distance to road)	720	1300	64	1300	67	710	76
Lead Paint (% Pre-1960 Housing)	0.016	0.29	16	0.23	24	0.28	16
Superfund Proximity (site count/km distance)	0.02	0.18	8	0.15	14	0.13	17
RMP Facility Proximity (facility count/km distance)	0.094	1.1	5	1	9	0.75	14
Hazardous Waste Proximity (facility count/km distance)	17	5.2	97	4.4	97	2.2	98
Underground Storage Tanks (count/km^2)	2.6	3.7	56	3.3	60	3.9	64
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.67	74	69	59	71	12	91
Socioeconomic Indicators							
Demographic Index	55%	47%	63	46%	65	36%	78
People of Color	60%	63%	44	60%	48	40%	72
Low Income	50%	31%	79	31%	79	31%	80
Unemployment Rate	7%	6%	65	6%	65	5%	71
Linguistically Isolated	10%	9%	64	8%	68	5%	83
Less Than High School Education	2%	17%	10	16%	10	12%	12
Under Age 5	5%	6%	42	6%	42	6%	45
Over Age 64	8%	14%	23	15%	23	16%	17

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's 2017 Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update. (https://www.epa.gov/haps/air-toxics-data-update)

For additional information, see: www.epa.gov/environmentaljustice (https://www.epa.gov/environmentaljustice)

EJScreen is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJScreen documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJScreen outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

UC San Diego Voigt Electric Mobility Hub CE Checklist FTA

Appendix 4 - UC San Diego Storm Water Management Plan

STORM WATER MANAGEMENT PLAN

for

UNIVERSITY OF CALIFORNIA SAN DIEGO

*Updated **October** 2019*

UC San Diego

University of California, San Diego

Storm Water Management Plan

Updated October 2019

TABLE OF CONTENTS

		Page
1.0	Introduction	1
1.01	Regulatory Background	1
1.02	Purpose of the SWMP	4
1.03	SWMP Development Committee	4
2.0	Site Information	6
2.01	Facility Description	6
2.02	Facility Operation	6
2.03	Climate and Rainfall	6
3.0	Description of Potential Sources of Pollution	7
4.0	Program Elements	12
4.01	Education and Outreach Program	13
4.02	Public Involvement and Participation	16
4.03	Illicit Discharge Detection and Elimination	16
4.04	Pollution Prevention / Good Housekeeping for Permittee Operations	19
4.05	Construction Site Storm Water Runoff Control	22
4.06	Post-construction Storm Water Management Program	23
4.07	Trash Amendment Policy Implementation	25
5.0	Monitoring Program	27
5.01	Dry Weather Monitoring	27
5.02	Storm Water Monitoring	27
5.03	Ecosystem Assessment Monitoring	28
5.04	Regional Monitoring	28
5.05	La Jolla Shores Integrated Coastal Watershed Management Plan	28
5.06	California Environmental Quality Act Monitoring	29
5.07	Program Effectiveness Assessment and Improvement Plan	29
5.08	Total Maximum Daily Loads Compliance	29
6.0	Record Keeping	31
6.01	SWMP Updating	31
6.02	SWMP Public Access	31
6.03	SWMP Annual Reports	31
6.04	Training	31
7.0	Enforcement Program	32
8.0	Appendices	33

LIST OF TABLES

Table 4.01. Public Education and Outreach Management Measures 13
Table 4.02. Public Involvement/Participation Management Measures 16
Table 4.03. Illicit Discharge Detection and Elimination Management Measures 17
Table 4.04. Pollution Prevention/Good Housekeeping Management Measures 19
Table 4.05. Construction Site Storm Water Runoff Control Management Measures..22
Table 4.06. Post-Construction Site Storm Water Runoff Control Management Measures 24

LIST OF FIGURES

Figure 1. UCSD West Campus Drainage Map
Figure 2. UCSD East Campus Drainage Map
Figure 3. Scripps Institution of Oceanography Drainage Map
Figure 4. UC San Diego Medical Center Hillcrest Drainage Map
Figure 5. Nimitz Marine Facility
Figure 6. Elliot Field Station
Figure 7. Mount Soledad Research Station Drainage Map
Figure 8. Trade Street Drainage Map

LIST OF APPENDICES

Appendix A Main Campus and Offsite Facility Information
Appendix B Illicit Discharge Detection and Elimination Program
Appendix C UC San Diego Storm Water Map and Outfall Map
Appendix D UC San Diego Integrated Pest Management Program
Appendix E Storm Water Monitoring Locations
Appendix F Program Effectiveness Assessment and Improvement Plan

ACRONYMS

BAS	Birch Aquarium at Scripps
BMP	Best Management Practice
CEQA	California Environmental Quality Act
COC	Constituent of Concern
CWA	Clean Water Act
EH&S	Environment, Health & Safety
EPA	Environmental Protection Agency
FM	Facilities Management
HDH	Housing, Dining & Hospitality
HS	Health Systems
LID	Low Impact Development
MC	UC San Diego Medical Center
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
PAHs	Polycyclic Aromatic Hydrocarbons
PD&C	Planning, Design, and Construction
PEAIP	Program Effectiveness Assessment and Improvement Plan
QSP	Qualified SWPPP Practitioner
RWQCB	Regional Water Quality Control Board
SIO	Scripps Institution of Oceanography
SF	Sports Facility
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
UC	University of California
UCtr	University Center

1.0 Introduction

1.01 Regulatory Background

This Storm Water Management Plan (SWMP) was prepared in accordance with the federal Environmental Protection Agency (EPA) Phase II storm water regulations, promulgated under the Clean Water Act (CWA) and incorporated into the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) Order No. 2013-0001-DWG, NPDES No. CAS000004. UC San Diego obtained coverage under the revised Phase II Small MS4 General Permit as a Non-Traditional Permittee on July 1, 2013.

Section F of the Phase II Small MS4 General Permit establishes requirements for a storm water management program for non-traditional MS4s, such as universities and state and federal agencies, that are intended to improve the nation's waterways by reducing the quantity of pollutants that are picked up by storm water runoff and carried into storm water conveyance systems during storm events. Urban runoff is a leading cause of pollution of California's rivers, lakes, bays, and ocean. Common pollutants include: oil and grease from roadways and parking lots; pesticides and herbicides from landscaping; sediment from construction sites and erosion; metals and polycyclic aromatic hydrocarbons (PAHs) from vehicles; and litter and trash, such as cigarette butts, paper wrappers, and plastic bags/bottles. These pollutants can be carried into nearby waterways by storm water runoff, discouraging recreational use and negatively impacting natural ecosystems.

The Phase II Small MS4 General Permit requires operators of small MS4s to develop, implement, and enforce a storm water management program designed to:

- Reduce the discharge of pollutants to the "Maximum Extent Practicable" (MEP);
- Protect water quality; and
- Satisfy the appropriate water quality requirements of the CWA and Regional Water Quality Control Board (RWQCB) Basin Plans.

Program elements required under the Phase II program include:

1. Program Management / Legal Authority
2. Education and Outreach (storm water pollution prevention);
3. Public Involvement and Participation;
4. Illicit Discharge Detection and Elimination (discharges to storm water systems that are not composed entirely of rain water);
5. Construction Site Runoff Control;
6. Pollution Prevention/Good Housekeeping for Permittee Operations (e.g., pollutant source controls);
7. Post-Construction Storm Water Management (e.g., Low Impact Development treatment controls);
8. Trash Amendment Policy Implementation
9. Monitoring
10. Program Effectiveness Assessment and Improvement; and
11. Total Maximum Daily Loads Compliance

In addition to the Phase II program described above, the western portion of the main UC San Diego campus (Scripps Institution of Oceanography) discharges seawater and storm water into a marine area that has been designated by the California State Water Resources Control Board (SWRCB) as an "Area of Special Biological Significance" (ASBS 31). There are 34 ASBS along the coastline in California, two of which are in San Diego. The California Ocean Plan prohibits the discharge of waste into ASBS. This includes storm water runoff that contains pollutants. As a result, UC San Diego worked with the SWRCB to obtain an Exception to this Ocean Plan prohibition with conditions designed to protect the ASBS. An NPDES permit with waste discharge requirements (WDRs) was issued by the San Diego Regional Water Quality Control Board in February 2005 and renewed in November 2015 (Order No. R9-2015-0070, NPDES Permit No. CA0107239) that incorporates these conditions for the seawater and storm water discharges at Scripps Institution of Oceanography (SIO).

This SWMP plan is intended to meet the storm water management requirements set forth in Order No. R9-2015-0070, NPDES Permit No. CA0107239. Under this program, a storm water outfall pipe that discharges onto the beach is monitored and analyzed for the California Ocean Plan constituents in the permit as well as for bacterial indicators and toxicity. In addition, the receiving water (Pacific Ocean) is monitored to determine if runoff from the campus is altering natural water quality. The analytical results are compared to the water quality objectives in the permit. Constituents that exceed the permit water quality objectives are further evaluated to identify potential sources (natural or anthropogenic). UC San Diego then evaluates existing source controls and/or

treatment controls to determine if changes or additional controls can be implemented to reduce these constituents. The permit also specifically prohibits the discharge of dry weather flows (also referred to as "non-storm water discharges") into the ASBS.

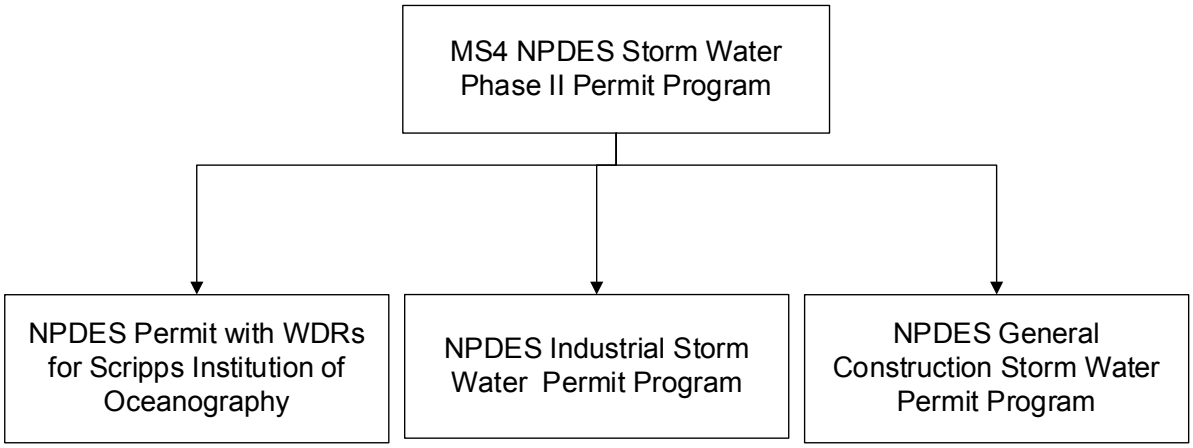
UC San Diego's Nimitz Marine Facility in Point Loma and the Fleet Services Facility at the Campus Services Complex on the main campus must comply with the State General Industrial Stormwater Permit (revised IGP permit became effective on July 1, 2015). These facilities implement facility specific Storm Water Pollution Prevention Plans (SWPPP) and management measures to keep pollutants such as sediment, metals, oil and grease, trash, and non-storm water discharges (e.g., irrigation runoff and wash water, etc.) out of the storm water system. These programs include inspections and storm water monitoring (analyze storm water runoff for selected pollutants) to verify that the management measures are effective.

Lastly, construction projects at UC San Diego that disturb more than one acre must comply with the State Construction Storm Water Program requirements identified in the General Permit. This includes developing and implementing a site specific SWPPP which emphasizes the use of appropriately selected, correctly installed and maintained pollution reduction Best Management Practices (BMPs) that will prevent construction pollutants from contacting storm water and leaving the project site. The SWPPP for each project must:

- Identify pollutant sources associated with construction activities that may affect the quality of storm water discharges.
- Identify and prevent non-storm water discharges.
- Identify, construct, and implement storm water pollution prevention BMPs to reduce or eliminate pollutants in storm water discharges from the construction site, both during construction and after construction is completed.

Storm water runoff from the construction site must be monitored and analyzed based on the calculated risk level of the project.

Throughout the construction period, a qualified SWPPP Practitioner (QSP) conducts inspections and evaluations as detailed in the SWPPP, including but not limited to: weekly site inspections, quarterly site inspections, pre-rain event inspections within 24 hours prior to a rain event, post-rain event inspections within 24 hours after a rain event, every 24 hours during an extended rain event (lasting longer than one day), and maintenance inspections.



1.02 Purpose of the SWMP

This document has been developed to comply with the Phase II Small MS4 General Permit requirements and the SWMP requirements in the UCSD/SIO NPDES permit.

The purpose of the SWMP is to:

(1) Identify pollutant sources potentially affecting the quality and quantity of storm water discharges

(2) Develop source control BMPs to prevent the discharge of pollutants from operation and construction activities implemented by UC San Diego staff and contractors

(3) Prevent non-storm water discharges throughout the UC San Diego campus

(4) Detect and eliminate illicit discharges and illegal connections to the MS4

(5) Implement the management measures identified in the SWMP

This SWMP covers UC San Diego's main campus and its off-site facilities situated in urban areas.

1.03 SWMP Development Committee

The SWMP was developed with input from representatives from the following UC San Diego campus departments. The campus committee members ranged from departmental directors to operations personnel.

- Birch Aquarium at Scripps (BAS)
- Environment, Health, and Safety (EH&S)
- Planning, Design and Construction (PD&C)

- Facilities Management (FM)
- Housing, Dining, and Hospitality (HDH)
- UC San Diego Health Services (HS)
- Scripps Institution of Oceanography (SIO)

2.0 Site Information

2.01 Facility Description

UC San Diego is one of ten UC campuses governed by the Regents of the University of California and is an internationally recognized public teaching and research institution.

The total average daily campus population for the main campus in La Jolla for 2016-2017 is approximately 59,519 (includes students, faculty, researchers, staff, patients, and visitors). There are an additional 15,000 (est.) including the off-site facilities.

This SWMP covers all facilities in urbanized areas owned and operated by UC San Diego. Facility operations vary widely and not all BMPs in this SWMP apply at each facility. Specific facility information is attached in Appendix A. In addition to UC San Diego's main campus, the following off-site facilities are situated in urban areas:

- UC San Diego Medical Center, Hillcrest
- Trade Street (UC San Diego Storehouse and Surplus Sales)
- Nimitz Marine Facility
- Elliott Field Station
- Mt. Soledad Research Laboratory (currently not occupied)

2.02 Facility Operation

UC San Diego employs maintenance, custodial, and grounds staff for daily operations. This includes building maintenance (cleaning, painting, and repairs), completion of departmental work requests, grounds maintenance, small construction jobs, and various repair and maintenance activities. UC San Diego FM, HDH, and outside contractors perform electrical, plumbing, roofing, asphalt, exterior building painting, sewer line cleaning, utility repairs, and janitorial activities.

2.03 Climate and Rainfall

The prevailing winds and weather at the UC San Diego facilities are tempered by the Pacific Ocean, with the result that summers are cool and winters are mild. Daily temperatures for San Diego range between 70 and 85 degrees Fahrenheit (°F) in the summer and 55 to 65°F in the winter. Average total precipitation for San Diego is 10 inches annually. Eighty-five percent of the rainfall occurs from November through March.

3.0 Description of Potential Sources of Pollution

Information on past spills as well as knowledge of the daily operations on campus was used to identify potential sources of pollution. BMPs developed to address these pollutant sources and activities are summarized below and are provided on UC San Diego's storm water management program webpage: http:// stormwater.ucsd.edu

Additional management measures are described in the Program Elements.

Potential Pollutant Activity or Sources List

Activity/Source	Potential Pollutants	BMP
Outdoor material storage and outdoor work areas	oil and grease, metals, sediment, non-storm water discharge, bacteria, trash and debris, and vehicle and equipment fluids	A01 C07 E01
Outdoor spills	non-storm water discharge, oil and grease, hazardous materials, and vehicle and equipment fluids	A02 E01
Marine activities	non-storm water discharge, oil and grease, metals, bacteria, paint, and vehicle and boat fluids	A03 E01
Loading dock management	hazardous materials, non-storm water discharge, oil and grease, trash and debris, and equipment and vehicle fluids	A04 E01
Outdoor washing/cleaning. Includes equipment, vehicle, and boat washing/cleaning	non-storm water discharge, total residual chlorine, oil and grease, vehicle and equipment fluids, bacteria, trash and debris, and sediment	B01 E01
Fueling operations	oil and grease and vehicle fluids	B02 E01
Equipment, vehicle, and boat maintenance	oil and grease, paint, and vehicle and equipment fluids	B03 B04 E01
Trash management	bacteria, oil and grease, and trash and debris	C01 E01
Hazardous materials management	hazardous materials	C02 E01
Hazardous waste management	hazardous waste	C03 C07 E01

Activity/Source	Potential Pollutants	BMP
Onsite transportation of materials/waste	metals, oil and grease, vehicle fluids, hazardous materials and waste, and trash and debris	C04 E01
Food service management	bacteria, oil and grease, non-storm water discharge, and trash and debris	C05 E01
Sanitary sewer overflows/ sewer line blockages	bacteria and non-storm water discharge	C06 E01
Metal waste management	metals	C07 E01
Storm water conveyance system maintenance	non-storm water discharges, sediment, and trash and debris	D01 E01
Improper discharge into storm drains	bacteria, oil and grease, sediment, non-storm water discharge, and trash and debris	D01 E01
Landscape management: irrigation runoff, erosion, green waste	non-storm water discharge, bacteria, nutrients, pesticides, fertilizers, sediment, and trash and debris	D02 D13 E01
Surface cleaning/pressure washing	non-storm water discharge, total residual chlorine, bacteria, oil and grease, sediment, and trash and debris	D03 E01
Water utility line maintenance and repairs, fire hydrant and fire suppression system testing, water system flushing, and outdoor fountain, water tank, and emergency eyewash/shower maintenance	non-storm water discharge and total residual chlorine	D04 D10 D11 D12 E01
Outdoor painting and sandblasting	metals, non-storm water discharge, and paint / paint chips	D05 E01
Non-storm water discharges / dry weather flows	oil and grease, sediment, bacteria, total residual chlorine, non-storm water discharge	D06 E01
Integrated pest management	pesticides and trash	D07 E01

Activity/Source	Potential Pollutants	BMP
Building maintenance, repair or remodeling	non-storm water discharge, paint, hazardous materials, oil and grease, and trash and debris	D08 E01
Parking lot and storage area maintenance	oil and grease, vehicle fluids, sediment, and trash and debris	D09 E01
Maintenance on equipment or features containing water and flushing water systems	bacteria, total residual chlorine, non-storm water discharge	D10 D11 D12 E01
Erosion prevention and control	sediment	D13 E01
Utility vault water removal	non-storm water discharge, oil and grease, sediment, vehicle fluids	D14 E01
Employee training	storm water pollution awareness and behavior change	E01
Construction activities	non-storm water discharge, sediment, trash and debris	UC San Diego Division 1 specifications and/or project SWPPP BMPs

BMP		Pollutants Addressed													
		Sediment	Metals	Non-Storm Water Discharges	Trash & Debris	Oil & Grease	Bacteria	Vehicle / Boat Fluids	Equipment Fluids	Hazardous Materials	Hazardous Waste	Paint / Paint chips	Residual Chlorine	Pesticides	Fertilizers / Nutrients
A01	Housekeeping	x	x	x	x	x	x	x	x						
A02	Spill Control & Clean up			x		x		x	x	x					
A03	Marine Activities		x	x		x	x	x				x			
A04	Loading Dock Management			x	x	x		x	x	x					
B01	Outdoor Washing/ Cleaning	x		x	x	x	x	x	x				x		
B02	Fueling Operations					x		x							
B03	Equipment, Vehicle, & Boat Maintenance					x		x	x			x			
B04	Preventative Maintenance					x		x	x						
C01	Trash Management				x	x	x								
C02	Hazardous Materials Management									x					
C03	Hazardous Waste Management										x				
C04	Onsite Transportation of Materials/ Waste		x		x	x		x	x	x	x				
C05	Food Service Management			x	x	x	x						x		
C06	Sanitary Sewer Overflows & Cleanup			x			x								
C07	Metal Tracking		x												

BMP		Pollutants Addressed												
		Sediment	Metals	Non-Storm Water Discharges	Trash & Debris	Oil & Grease	Bacteria	Vehicle / Boat Fluids	Equipment Fluids	Hazardous Materials	Hazardous Waste	Paint / Paint chips	Residual Chlorine	Pesticides	Fertilizers / Nutrients
D01	Storm water Conveyance System Management	x		x	x	x	x								
D02	Landscape Management	x		x	x		x							x	x
D03	Surface Cleaning/ Pressure Washing	x		x	x	x	x						x		
D04	Fire Sprinkler and Hydrant Testing/Flushing			x									x		
D05	Outdoor Painting & Sandblasting		x	x								x			
D06	Non-Storm Water Discharges / Dry Weather Flows	x		x		x	x						x		
D07	Integrated Pest Management				x									x	
D08	Building Maintenance, Repair, or Remodeling			x	x	x				x		x			
D09	Parking Lot and Storage Area Maintenance	x			x	x		x							
D10	Maintenance on Equipment Containing Water			x			x						x		
D11	Potable Water System Flushing or Chlorination			x									x		
D12	Pools, Decorative Fountains, and Other Water Features			x			x						x		
D13	Erosion and Sediment Control	x													
D14	Utility Vault Water Removal	x		x		x		x							
E01	Employee Training	x	x	x	x	x	x	x	x	x	x	x	x	x	x

4.0 Program Elements

The UC San Diego Storm Water Management Program (SWMP) is comprised of the following elements aimed at achieving improved water quality:

1. Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Pollution Prevention / Good Housekeeping for Operations
6. Post Construction Storm Water Management
7. Trash Amendment Policy Implementation
8. Monitoring
9. Program Effectiveness Assessment and Improvement
10. Total Maximum Daily Loads Compliance

The goal of the SWMP is to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) and to identify activities or structural improvements that are effective in reducing or eliminating the discharge of pollutants and improve the quality of storm water runoff. BMPs have been developed for the SWMP to reduce the discharge of pollutants to the storm drain system to the MEP. BMPs include source and treatment controls, operating procedures, and practices to prevent storm water pollution and to protect the ocean and ASBS located adjacent to the UC San Diego campus.

The management measures described in the Program Elements in this SWMP and the source control BMPs provided on UC San Diego's storm water management program webpage "http://blink.ucsd.edu/go/stormwater" are to be implemented by UC San Diego staff, faculty, students, and outside contractors when they are performing the activities covered by these BMPs at UC San Diego. The steps outlined in each relevant BMP, or other proven techniques that reach the same goal, must be used to comply with storm water discharge regulations. These practices are applicable to outdoor work and storage area management; vehicle, equipment, and boat management; material and waste management (including food service management); and facilities and grounds management. For construction projects less than one acre at a UC San Diego facility, a Water Pollution Control Plan must be prepared and implemented as required in UC San Diego's Division 1 Specifications. For construction projects greater than one acre, the BMPs in the project SWPPP must be implemented and the requirements of the General Construction Permit must be met.

UC San Diego's SWMP is designed to be an adaptive program that evaluates the effectiveness of the management measures and BMPs on a recurring basis. This evaluation is critical to the storm water program framework, which uses the iterative approach of implementing controls, conducting assessments, and revising controls as necessary to improve the effectiveness of the program.

4.01 Education and Outreach Program

The goal of this program is to develop and distribute educational materials and to perform outreach to students, faculty, and staff to inform them about the causes of storm water pollution, the impact of urban runoff on the receiving waters (e.g., the ocean), and what they can do to prevent storm water pollution and dry weather flows.

The following management measures have been and continue to be implemented to meet the Public Education and Outreach Program requirements in Section F.5.b of the Phase II Small MS4 General Permit.

Table 4.01. Education and Outreach Management Measures

F.5.b.	Education and Outreach Program	Implementation Year	Responsible Department
F.5.b.2	Develop and begin implementation of storm water public education and outreach program.	2 (FY 14/15)	EH&S
F.5.b.2	Develop and implement a public education strategy that establishes education tasks based on water quality problems, target audiences and anticipated task effectiveness. This shall include the following:	2 (FY 14/15)	EH&S
a.	Develop and implement a comprehensive education and outreach program.	2 (FY 14/15)	EH&S
b.	Gauge level of awareness in target audiences and effectiveness of education tasks.	Ongoing	EH&S
c.	Develop and convey a storm water message that considers pollutants of concern, target audience, and water quality issues.	Ongoing	EH&S
d.	Develop and disseminate education materials to target audiences and translate	Ongoing	EH&S

F.5.b.	Education and Outreach Program	Implementation Year	Responsible Department
	as appropriate.		
e.	Distribute educational materials.	Ongoing	EH&S, BAS
f.	Provide guidance to staff about water-friendly landscape.	Ongoing	EH&S, PD&C, FM
g.	Utilize information from storm water-friendly landscaping programs (if appropriate).	Ongoing	EH&S, PD&C, FM, HDH, SIO
h.	Provide guidance to staff about reducing illicit discharges.	Ongoing	EH&S
i.	Provide guidance to staff about pesticide and fertilizer use.	Ongoing	EH&S, FM
j.	Provide materials to school children (if applicable).	Ongoing	BAS
k.	Provide guidance to staff about pressure washing and landscape irrigation.	Ongoing	EH&S, FM, HDH, HS, SF UCtr
l.	Provide guidance about community car washes (if applicable).	Ongoing	EH&S, HDH
m.	Provide guidance to staff in illicit discharge flow areas.	Ongoing	EH&S
F.5.b.3	Develop and implement a training program for all Permittee staff, who, as part of their normal job responsibilities, may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection to the storm drain system. This training must include:	Ongoing	EH&S
a.	Identification of an illicit discharge or illegal connection.	Ongoing	EH&S
b.	Procedures for reporting and responding to an illicit discharge.	3 (FY 15/16)	EH&S
c.	As needed follow-up training to review changes in procedure, techniques or staffing.	Ongoing	EH&S

F.5.b.	Education and Outreach Program	Implementation Year	Responsible Department
d.	Annual assessment of trained staff knowledge of illicit discharge response. Provide refresher training as needed.	Ongoing	EH&S
e.	Training new staff who as part of their normal job responsibilities may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection.	Ongoing	EH&S, PD&C, FM
f.	Include contact information for reporting illicit discharges in each fleet vehicle used by field staff.	3 (FY 15/16)	EH&S
F.5.b.4	Provide a biennial training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices. This training must include:	Ongoing	EH&S
a.	General storm water education including permit requirements and appropriate BMPs to be implemented during Operations and Maintenance (O&M) activities.	Ongoing	EH&S
b.	An assessment of trained staff's knowledge of pollution prevention and good housekeeping. Information to be used to revise and target training as needed.	Ongoing	EH&S
c.	Requirement that any contractors responsible for O&M activities be contractually required to comply with all applicable BMPs.	Ongoing	EH&S, FM, HS,
d.	Oversight to be provided to ensure O&M contractors are implementing appropriate BMPs.	Ongoing	EH&S, FM, HDH, HS, SF, UCtr

BAS = Birch Aquarium at Scripps
EH&S = Environment, Health & Safety
FM = Facilities Management
HS = Health Systems
HDH = Housing, Dining, and Hospitality
UCtr = University Center
PD&C = Planning, Design, and Construction
SIO = Scripps Institution of Oceanography
SF = Sports Facility

4.02 Public Involvement and Participation

The purpose of this program is to provide opportunities for the campus community (students, faculty, and staff) to participate in storm water pollution prevention outreach events and increase awareness about storm water pollution and steps that can be taken to protect water quality.

The following management measures have been and continue to be implemented to meet the Public Involvement and Participation requirements in Section F.5.c of the Phase II Small MS4 General Permit.

Table 4.02. Public Involvement and Participation Management Measures

F.5.c.	Public Involvement and Participation Program	Implementation Year	Responsible Department
F.5.c.	Involve the public in the development and implementation of activities related to the program.	Ongoing	EH&S
a.	Label high priority storm drain inlets.	3 (FY 15/16)	EH&S, HS
b.	Integrate storm water awareness information on a publicly accessible website: http://blink.ucsd.edu/go/stormwater	Ongoing	EH&S

EH&S = Environment, Health & Safety HS = Health Systems

4.03 Illicit Discharge Detection and Elimination

The goal of the Illicit Discharge Detection and Elimination program is to identify, investigate and eliminate non-storm water discharges (illicit discharges) such as process water, wash water, irrigation runoff, and other non-rainwater discharges to the storm drain system. UC San Diego's Illicit Discharge Detection and Elimination Program, included in Appendix B, summarizes the procedures and corrective actions that will be implemented to address identified illicit discharges.

All discharges of non-storm water urban runoff (i.e., any discharge of urban runoff to a storm drain that is not composed entirely of storm water), except those associated with emergency firefighting, are prohibited for the western portions of campus that discharge to the Area of Special Biological Significance (ASBS 31) adjacent to Scripps Institution of Oceanography (SIO). The map of the storm water conveyance system at SIO in Appendix C shows the storm water outfalls and areas that discharge into ASBS 31 where dry weather flows are prohibited.

For the portions of the main campus that do not drain to the ASBS (see Figures 1 and 2 in Appendix A) and the offsite facilities, the following categories of non-storm water discharges or flows will not be considered illicit discharges unless they are determined to be significant contributors of pollutants: ground water, foundation drains, air conditioning condensation, water from crawl space pumps, footing drains, and discharges or flows from firefighting activities.

The following management measures have been and continue to be implemented to meet the Illicit Discharge Detection and Elimination requirements in Section F.5.d of the Phase II Small MS4 General Permit.

Table 4.03. Illicit Discharge Detection and Elimination Management Measures

F.5.d.	Illicit Discharge Detection and Elimination	Implementation Year	Responsible Department
F.5.d.	Develop an Illicit Discharge Detection and Elimination program to detect, investigate, and eliminate illicit discharges, including illegal dumping into its system, to the extent allowable under law. See Appendix B	2 (FY 14/15)	EH&S
F.5.d.1	Create and maintain an outfall map. See Appendix C	2 (FY 14/15)	EH&S
F.5.d.1	Include in the outfall map, the location of all outfalls and drainage areas within the urbanized area that are operated by the Permittee and that directly discharge within the Permittee's jurisdiction to a receiving water.	2 (FY 14/15)	EH&S
F.5.d.1	Include in the outfall map, the location (and name, where known to the Permittee) of all water bodies receiving direct discharges from those outfall pipes.	2 (FY 14/15)	EH&S
F.5.d.2	Conduct field sampling of any outfalls that were flowing or ponding when it has been more than 72 hours after the last rain event (i.e., were suspected of illicit discharges) during outfall mapping inventory (under section F.5.d.1., page 81).	2 (FY 14/15)	EH&S
F.5.d.2	Conduct monitoring for the parameters listed in Table 1 (page 83), or for parameters selected by Permittee based on local knowledge of pollutants of concern.	Ongoing	EH&S

F.5.d.	Illicit Discharge Detection and Elimination	Implementation Year	Responsible Department
F.5.d.2	Verify that indicator parameter action levels in Table 2 (page 83), or tailored parameter action levels were not exceeded.	Ongoing	EH&S
F.5.d.2	Conduct follow-up investigations per Section F.5.d.3. if the action level concentrations were exceeded.	Ongoing	EH&S, PD&C, FM
F.5.d.3	Develop written procedures for conducting investigations into the source of all suspected illicit discharges. See Appendix B.	Ongoing	EH&S
F.5.d.3	Report immediately the occurrence of any flows believed to be an immediate threat to human health or the environment to local Health Department.	Ongoing	EH&S, HS
F.5.d.3	Determine and document through investigations the source of all non-storm water discharges.	Ongoing	EH&S, HS
F.5.d.3	Once the source of an illicit discharge has been determined, immediately notify the responsible party of the problem.	Ongoing	EH&S, HS
F.5.d.3	Report immediately to the owners/operators of the downstream MS4 any non-storm water discharge suspected of being a sanitary sewage and/or significantly contaminated material.	Ongoing	EH&S, HS
UCSD	Maintain an email link on UC San Diego's Storm Water Pollution Prevention Program webpage to report storm water pollution (non-storm water discharges): http://blink.ucsd.edu/go/stormwater	Ongoing	EH&S
UCSD	Educate UC San Diego Staff and faculty on the proper disposal of waste at UC San Diego and notification procedures for abandoned waste.	Ongoing	EH&S
UCSD	Educate appropriate UC San Diego Staff on proper notification procedures for sanitary sewer overflows and spills into storm drains: http://blink.ucsd.edu/go/sewerplan	Ongoing	EH&S
UCSD	Implement UC San Diego's Sanitary Sewer Management Program: http://blink.ucsd.edu/go/sewerplan	Ongoing	EH&S

F.5.d.	Illicit Discharge Detection and Elimination	Implementation Year	Responsible Department
UCSD	Visually inspect Outfall 2, a storm water outfall at SIO, on a daily basis for evidence of dry weather flows into the ASBS.	Ongoing	FM, EH&S
UCSD	Visually inspect Fleet Services and the Nimitz Marine Facility for evidence of dry weather discharges into the storm water conveyance system on a monthly basis in accordance with the Industrial General Permit.	Ongoing	EH&S
UCSD	Investigate reports of spills and other dry weather flows into the campus storm water conveyance system and take appropriate measures to mitigate the discharge (e.g., clean up spill and/or repair leaking line, etc.) as appropriate.	Ongoing	FM, PD&C, EH&S

EH&S = Environment, Health & Safety
FM = Facilities Management
PD&C = Planning, Design and Construction
HS = Health Systems

4.04 Pollution Prevention / Good Housekeeping for Permittee Operations

The goal of this program is to prevent or reduce pollutant runoff from facility operation and maintenance activities. The program also includes training to relevant staff on pollution prevention measures and techniques (e.g., regular street sweeping, reduction in the use of pesticides, and storm water catch-basin cleaning).

The following management measures have been and continue to be implemented to meet the Pollution Prevention/Good Housekeeping for Permittee Operations requirements in Section F.5.f of the Phase II Small MS4 General Permit.

Table 4.04. Pollution Prevention/Good Housekeeping Management Measures

F.5.f.	Pollution Prevention/Good Housekeeping For Permittee Operations Program	Implementation Year	Responsible Department
F.5.f.	Develop and implement a program to prevent or reduce the amount of pollutant runoff from Permittee operations.	2 (FY 14/15)	EH&S, PD&C, FM, HDH, HS, SF, UCtr
F.5.f.1	Develop and maintain an inventory of facilities that may impact storm water.	2 (FY 14/15)	EH&S

F.5.f.	Pollution Prevention/Good Housekeeping For Permittee Operations Program	Implementation Year	Responsible Department
F.5.f.2	Develop and make available a map that identifies the storm water drainage system corresponding to each of the facilities as well as the receiving waters to which these facilities discharge. The map must also include the facility location and the name of the facility manager, including contact information.	2 (FY 14/15)	EH&S
F.5.f.3	Conduct an annual review and assessment of all Permittee-owned or operated facilities to determine their potential to impact surface waters.	Ongoing	EH&S
F.5.f.4	Develop and implement SWPPPs for hotspots.	4 (FY 16/17)	EH&S
F.5.f.5	Conduct quarterly visual inspection of hotspots and hotspot discharge locations.	Ongoing	EH&S
F.5.f.5	Conduct quarterly comprehensive hotspot inspection.	Ongoing	EH&S
F.5.f.5	Inspect each inventoried facility that is not a hotspot once during permit term.	Ongoing	EH&S
F.5.f.6	Implement procedures to assess and prioritize maintenance of storm drain system infrastructure and assign a high priority to each catch basin meeting any of the criteria listed in section F.5.f.6(ii)	Ongoing	FM, PD&C
F.5.f.7	Begin maintenance of storm drain systems according to the procedures and priorities developed according to section F.5.f.7(ii)(a-d).	Ongoing	FM
F.5.f.7	Develop and implement a strategy to inspect storm drain systems, based on the priorities assigned in section F.5.f.6(ii).	Ongoing	FM
F.5.f.7	Develop and implement a schedule to clean high priority catch basins and other systems.	Ongoing	FM
F.5.f.8	Develop and implement an O&M activity assessment including the potential to discharge pollutants in storm water.	Ongoing	EH&S

F.5.f.	Pollution Prevention/Good Housekeeping For Permittee Operations Program	Implementation Year	Responsible Department
F.5.f.8	Identify all materials that could be discharged from each of these O&M activities, and which materials contain pollutants.	Ongoing	EH&S
F.5.f.8	Develop and identify a set of BMPs that, when applied during Permittee O&M activities, will reduce pollutants in storm water and non-storm water discharges. UC San Diego Source Control BMPs: **http://blink.ucsd.edu/go/stormwater**	Ongoing	EH&S
F.5.f.8	Evaluate all BMPs implemented during O&M activities annually.	Ongoing	EH&S
F.5.f.9	Implement a landscape design and maintenance program to reduce the amount of water, pesticides, herbicides and fertilizers used by Permittee. UC San Diego's Integrated Pest Management Program is included in Appendix D.	2 (FY 14/15)	FM, HDH, HS, SF
F.5.f.9	Evaluate pesticides, herbicides and fertilizers used and application activities performed and identify pollution prevention and source control opportunities.	2 (FY 14/15)	FM
F.5.f.9	Implement practices that reduce the discharge of pesticides, herbicides and fertilizers.	Ongoing	FM, HDH, HS, SF
F.5.f.9	Implement integrated pest management measures that rely on non-chemical solutions, including the measures specified in section F.5.f.9(ii)(b)(2)(a-f). See Appendix D for UC San Diego's Integrated Pest Management Program	Ongoing	EH&S, FM, HDH, HS, SF
F.5.f.9	Collect and properly dispose of unused pesticides, herbicides and fertilizers.	Ongoing	EH&S, FM

F.5.f.	Pollution Prevention/Good Housekeeping For Permittee Operations Program	Implementation Year	Responsible Department
F.5.f.9	Minimize irrigation runoff.	Ongoing	EH&S, FM, HDH, HS, SF
UCSD	Using a street sweeper, clean the streets and parking lots on UC San Diego's main campus and at SIO on a weekly basis.	Ongoing	FM
UCSD	Identify and prioritize storm water pollution prevention projects and conveyance system retrofits and repairs through the UC San Diego Clean Water Utility Program.	Ongoing	EH&S, PD&C, FM

EH&S = Environment, Health & Safety
FM = Facilities Management
HDH = Housing, Dining, and Hospitality
HS = Health Systems
PD&C = Planning, Design & Construction
SF = Sports Facility
UCtr = University Center

4.05 Construction Site Storm Water Runoff Control

The goal of this program is to develop, implement, and enforce a program for construction activities to control erosion and sediment, properly manage site materials and wastes, and prevent dry weather flows.

The following management measures are implemented to meet the Construction Site Storm Water Runoff Control requirements in Section F.5.e of the Phase II Small MS4 General Permit.

Table 4.05. Construction Site Storm Water Runoff Control Management Measures

F.5.e.	Construction Site Runoff Control Program	Implementation Year	Responsible Department
F.5.e.	Develop and implement contract language ensuring all outside contractors comply with the CGP and implement appropriate BMPs. Contract language shall apply to all projects that result in a total land disturbance of either one acre or more or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale.	1 (FY 13/14)	PD&C

F.5.e.	Construction Site Runoff Control Program	Implementation Year	Responsible Department
UCSD	Implement UC San Diego Division 1 Specifications (or equivalent) for construction contract sediment and erosion control BMP specifications and site pollution control requirements.	Ongoing	PD&C
UCSD	Administer existing contract provisions for enforcement of control measures	Ongoing	PD&C
UCSD	Implement the construction storm water management requirements process summarized at: http://blink.ucsd.edu/go/stormwater	Ongoing	PD&C, FM
UCSD	For construction projects >1 acre, review SWPPPs prior to filing Notice of Intent (NOI)	Ongoing	PD&C and authorized representatives
UCSD	Conduct inspections of SWPPP BMPs for construction projects greater than one acre in accordance with the Construction General Permit. Coordinate findings with project contractor and UCSD Project Manager.	Ongoing	PD&C and authorized representatives
UCSD	For construction projects greater than one acre, review storm water issues with all project affiliated personnel at SWPPP kick-off meetings prior to construction commencement.	Ongoing	PD&C and authorized representatives
UCSD	For construction projects greater than one acre, a qualified SWPPP Practitioner (QSP) will conduct construction site inspections in accordance with the Construction General Permit requirements.	Ongoing	PD&C and authorized representatives

PD&C = Planning, Design, and Construction FM = Facilities Management

4.06 Post-construction Storm Water Management Program

The purpose of this program is to develop, implement, and enforce a program to address discharges of storm water runoff from new development and redevelopment areas after construction is complete.

Post-construction storm water management controls include permanent structural (e.g., rooftop runoff infiltration galleries) and non-structural BMPs (e.g. conservation of natural and permeable areas) that remain in place after the project is completed and reduce runoff pollution as well as runoff volume and velocity from the new development over time.

New development and redevelopment construction projects that create and/or replace 2,500 square feet or more of impervious surface are subject to the requirements for post-construction storm water management measures. If the project site does not accommodate the required management measures, UC San Diego may propose alternative post-construction management measures that achieve multiple-benefits (alternative compliance must be approved by the Regional Water Quality Control Board).

The following management measures have been and continue to be implemented to meet the Post-construction Storm Water Management requirements in Section F.5.g of the Phase II Small MS4 General Permit.

Table 4.06. Post-construction Site Storm Water Runoff Control Management

F.5.g	Post Construction Storm Water Management Program	Implementation Year	Responsible Department
F.5.g.	Develop and implement a post-construction storm water management program to comply with Section F.5.g.	2 (FY 14/15)	PD&C, FM EH&S
F.5.g.	Regulate development to comply with sections F.5.g.1. through F.5.g.4.of permit.	Ongoing	PD&C, FM,
F.5.g.1	Require implementation of site design measures for all projects that create and/or replace 2,500- 5,000 square feet of impervious surface.	Ongoing	PD&C, FM,
F.5.g.2	Implement standards, including measures for site design, source control, runoff reduction, storm water treatment and baseline hydromodification management, on projects that create and/or replace more than 5,000 square feet of impervious surface (Regulated Projects).	Ongoing	PD&C, FM
F.5.g.3	Propose alternative post-construction requirements that achieve multiple-benefits.	UCSD may Propose if Desired	PD&C

F.5.g	Post Construction Storm Water Management Program	Implementation Year	Responsible Department
F.5.g.4	Implement an O&M verification program for new development projects. UC San Diego Storm Water Treatment Control BMP Inventory is posted at: http://blink.ucsd.edu/go/stormwater	Ongoing	EH&S, PD&C, FM
UCSD	Review and update UC San Diego design standards as needed to ensure the following: • New development is designed to conform to the storm water treatment standards of the time, as listed in the County of San Diego Standard Urban Storm Water Mitigation Plan (SUSMP), including the Hydromodification Management Plan (HMP) requirements or equivalent UC San Diego requirements. • Low Impact Development (LID) requirements are evaluated for each project and implemented as appropriate.	Ongoing	PD&C
UCSD	Inspect and maintain the LID treatment control BMPs on the inventory in accordance with the maintenance schedule.	Ongoing	EH&S, PD&C, FM

EH&S = Environment, Health & Safety PD&C = Planning, Design, and Construction
FM = Facilities Management

4.07 Trash Amendment Policy Implementation

On April 7, 2015, the SWRCB adopted the Trash Amendment Policy. The goal of the policy is to provide statewide consistency for the Water Boards' regulatory approach to reduce environmental issues associated with trash in state waters. The Trash Amendment water quality objective reads: "*Trash shall not be present in inland surface waters, enclosed bays, estuaries, and along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance*."

UC San Diego has selected the Track 1 compliance option for implementing the trash amendments. This requires installing trash capture devices or low impact development BMPs that have been approved by the SWRCB in high priority land use areas (commercial, industrial, high density residential apartments, and public transportation stations).

In November 2018, UC San Diego submitted a jurisdictional map to the State Water Resources Control Board identifying the high priority land use areas on campus where certified and approved trash capture devices or approved BMPs will be installed. These areas include North Campus Housing, the University Center, the future North Torrey Pines Living and Learning Neighborhood (NTPLLN), the Theater District, the Superloop Station, the future Light Rail Transit (LRT) Station, One Miramar Apartments, Southern Mesa Apartments, and the Forum/Caroline's Cafe at SIO.

5.0 Monitoring Program

Monitoring and assessment are critical components of UC San Diego's SWMP. Because the data collected drives many of the program management decisions, adaptive management is predicated on an effective monitoring and assessment program.

5.01 Dry Weather Monitoring

In accordance with NPDES Permit No. CA0107239 (Order No. R9-2015-0070), UC San Diego performs dry weather monitoring of the Area of Special Biological Significance (ASBS) located adjacent to the UCSD/SIO campus as summarized below.

UC San Diego samples the surf zone of the ASBS on a weekly basis for indicator bacteria (total coliform, fecal coliform, and enterococcus).

Once a year, the permitted seawater outfalls at SIO and the receiving water are sampled for 24 hours and analyzed for the constituents listed in NPDES Permit No. CA0107239 (Order No. R9-2015-0070). The results are compared to the permit limitations and California Ocean Plan water quality objectives to ensure that the seawater discharges from UCSD/SIO are not altering natural water quality in the ASBS.

If outfall monitoring results are above the permit limitations (seawater discharge), and/or receiving water samples exceed California Ocean Plan water quality objectives, UC San Diego investigates to identify the source of the pollutant(s) and addressed them as appropriate. Based on the evaluation, changes may be made to existing BMPs or new BMPs may be developed to address the constituent of concern.

A map showing the sampling locations is provided in Appendix E.

5.02 Storm Water Monitoring

Storm water runoff at UC San Diego is monitored at the following three locations:

1. Scripps Institution of Oceanography: Outfall 2 and the receiving water. NPDES Permit No. CA0107239 (Order No. R9-2015-0070).
2. Fleet Services located at the Campus Services Complex (State General Industrial Storm Water Permit)
3. Nimitz Marine Facility in Point Loma (State General Industrial Storm Water Permit)

The monitoring locations at each of these sites are shown in Appendix E. The storm water runoff at each location is monitored for the constituents listed in their respective permits.

If results are above the permit limitations and/or water quality objectives, UC San Diego investigates to identify the source of the pollutant(s) and reviews the non-structural and structural BMPs that have been implemented to address the pollutant(s) to determine if changes need to be made to existing BMPs and/or if new BMPs are needed to address the constituents of concern.

5.03 Ecosystem Assessment Monitoring

UC San Diego participates in the Southern California Bight Regional Monitoring Program as part of an ASBS workgroup to develop and implement long term biological monitoring programs to better assess the ASBS in the region and the impacts from storm water discharges. Bioaccumulation studies and benthic marine surveys of ASBS 31 have been performed in accordance with the conditions in NPDES Permit No. CA0107239 (Order No. R9-2015-0070). UC San Diego has partnered with the City of San Diego to perform several ecosystem assessment studies of the two ASBS in San Diego using Proposition 84 grant funding.

5.04 Regional Monitoring

UC San Diego has also participated in the Southern California Bight Regional Monitoring Program as part of an ASBS workgroup to assess water quality impacts to ASBS in the region from storm water discharges. Based on the data collected during these studies (BIGHT'08 and BIGHT'13), the ASBS in southern California (including ASBS 31) are consistently protective of natural water quality following storm events. On average, the range of post-storm pollutant concentrations in receiving waters sampled near ASBS discharge sites were not significantly different from post-storm concentrations at reference drainage sites, which included storm water inputs free of (or minimally influenced by) anthropogenic sources. Furthermore, no post-storm samples collected near ASBS discharges exhibited toxicity.

5.05 La Jolla Shores Integrated Coastal Watershed Management Plan

Using Proposition 50 planning grant funding, UCSD/SIO, the City of San Diego and San Diego Coastkeeper partnered together to develop the La Jolla Shores Integrated Coastal Watershed Management Plan. This plan was finalized in February 2008 and approved by the State Water Resources Control Board. The plan includes an ASBS Protection Model that integrates water quality data from the watershed with other ecosystem assessment findings to identify the watershed pollutants, or constituents of concern (COCs), most likely to negatively impact the ASBS. A tiered approach was then used to develop BMPs to address these COCs:

- Tier 1 = non-structural BMPs and activities;
- Tier 2 = structural BMPs and activities; and
- Tier 3 = treatment BMPs and activities.

These BMPs were then prioritized using a phased management approach (Phase 1: 3-5 years; Phase 2: 5-10 years; Phase 3: 10+ years). UCSD/SIO and the City of San Diego have implemented many of the high priority BMPs identified in this plan.

5.06 California Environmental Quality Act Monitoring

The California Environmental Quality Act (CEQA) requires that each UC adopt objectives, criteria, and specific procedures to administer its responsibilities under the Act and the CEQA Guidelines (Section 21082). The task of designing monitoring and reporting programs is the responsibility of the UC which is approving the project. Although UC may delegate this work, UC must ensure the adequacy of the program. "Reporting" may be defined as a written review of mitigation activities. A report may be required at various stages during project implementation and upon completion of the project. "Monitoring" can be described as a continuous, ongoing process of project oversight. Monitoring, rather than simply reporting, is suited to projects with complex mitigation measures, such as wetlands restoration or archeological protection, which may exceed the expertise of the local agency to oversee, which are expected to be implemented over a period of time, or which require careful implementation to assure compliance. UC has enacted a program which reflects adopted mitigation pursuant to AB 3180. Project level hydrology and water quality issues are routinely addressed for UCSD's capital improvement projects pursuant to the foregoing regulations.

5.07 Program Effectiveness Assessment and Improvement Plan

UC San Diego has developed a Program Effectiveness Assessment and Improvement Plan (PEAIP) to track the short and long-term progress of the storm water (see Appendix F). The PEAIP is used as a tool to adaptively manage the SWMP and make necessary modifications to the program to improve program effectiveness, reduce pollutants of concern, achieve the MEP standard, protect water quality, and to document UC San Diego's compliance with permit conditions.

5.08 Total Maximum Daily Loads Compliance

UC San Diego is located with the Peñasquitos Hydrologic Unit (Unit 6.00) of the San Diego Region. The Peñasquitos Hydrologic Unit is comprised of five hydrologic areas (HAs) and UC San Diego is located within three of them: the Scripps HA; the Miramar HA; and the Miramar Reservoir HA.

The drainage areas on campus can be divided into three general areas: those that drain directly west into the Pacific Ocean (located in the Scripps HA); those that drain to the

south towards Rose Canyon Creek (located in the Miramar HA); and those that drain north towards Los Peñasquitos Creek (located in the Miramar Reservoir HA). Figures 1, 2, and 3 in Appendix A depict the campus drainage boundaries.

In 2018, UC San Diego was added to the following TMDL's under the Phase II Small MS4 General Permit:

- The Bacteria Project I Total Maximum Daily Load (TMDL) for Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) includes several segments of the La Jolla Shores Beach in the Scripps Hydrologic Area (906.30) that are located south of the UC San Diego Scripps Institution of Oceanography (e.g., La Jolla Shores Beach at El Paseo Grande).

- The TMDL for sediment for the Los Peñasquitos Lagoon watershed

UC San Diego has developed and implements a TMDL implementation program for bacteria for the portion of campus in the Scripps HA. UC San Diego monitors for indicator bacteria (total coliform, fecal coliform, and Enterococcus) at three Pacific Ocean shoreline locations in accordance with Monitoring and Reporting Program No R9-2005-0008, NPDES Permit No. CA0107239. Receiving water samples are collected from the following three surf zone locations at a minimum of once per week with a minimum of five samples in a thirty day period:

1. S1, surfzone 1,000 feet south of SIO Pier

2. S2, surfzone 250 feet south of SIO Pier

3. S3, surfzone 500 feet north of SIO Pier

Monitoring results are evaluated to confirm that the source and treatment controls implemented by UC San Diego to prevent the discharge of bacteria are effective.

UC San Diego has also developed a TMDL implementation program for sediment for the portion of campus in the Miramar Reservoir HA (Los Peñasquitos Lagoon watershed). UC San Diego monitors for sediment in the storm water runoff from the Campus Services Complex, located in the Miramar Reservoir Hydrologic Area (HA), in accordance with the General Permit for Storm Water Discharges Associated with Industrial Activities Order NPDES No. CAS000001 (Order 2014-0057-DWQ). Monitoring results are evaluated to confirm that the source and treatment controls implemented by UC San Diego to prevent the discharge of sediment are effective.

Both TMDL Implementation Reports (for bacteria and sediment) and monitoring results are included with UC San Diego's Annual Report submittal to the State Water Resources Control Board.

6.0 Record Keeping

6.01 SWMP Updating

The SWMP and storm water systems map (including outfall map) will be reviewed annually. UC San Diego will update BMPs when storm water monitoring results or facility assessments indicate a revision in source or treatment controls is needed or when a change in activities or operations occurs that may significantly affect the discharge of storm water pollutants. The storm water maps (found in Appendix C) will be updated when a change in the storm water conveyance system is identified (e.g. when entry points are discovered or new systems are added).

6.02 SWMP Public Access

This SWMP is meant for use by UC San Diego staff and is a public document. An electronic copy of the SWMP will be maintained at:
http://blink.ucsd.edu/go/stormwater

6.03 SWMP Annual Reports

EH&S will complete and submit annual reports summarizing the implementation of the SWMP in the State Water Resources Control Board's Storm Water Multiple Application and Report Tracking System (SMARTS) database.

6.04 Training

EH&S provides the "Environmental Compliance and Hazard Awareness" training on an annual basis (can be taken online or at an instructor led class) for operations and maintenance staff that perform outdoor work activities. This training covers storm water pollution prevention. Staff training records are maintained by the UC Learning Center and are available upon request.

7.0 Enforcement Program

For day to day activities on campus, UC San Diego enforces storm water pollution prevention requirements primarily through education and training. Unlike a municipality, UC San Diego has oversight and control of all operation and maintenance activities on the campus. When an activity is observed that could result in the discharge of a pollutant(s), including dry weather flows, into the storm water conveyance system, staff from EH&S or FM are typically notified and will first try to correct the issue through education. If a department repeats the activity, the director or dean responsible for that department will be notified.

Housing, Dining, and Hospitality includes storm water pollution prevention specifications in the housing contracts that students must sign to live on campus. This includes the prohibition of car washing, vehicle maintenance, and improper outdoor storage. Violations of a housing contract condition can be reported to the customer service center and are then reported to resident deans for corrective action.

For construction projects less than one acre in size, UC San Diego inspectors from PD&C, FM, or EH&S inspect the project site on a regular basis and notify the contractor if an issue is identified. Provisions in the construction contract hold contractors accountable for any violations of storm water regulations.

For construction projects greater than one acre, PD&C engages a Qualified Stormwater Practitioner (QSP) to inspect the project sites in accordance with the requirements in the General Construction Permit to verify that the project is complying with its SWPPP and permit requirements. The inspection results are documented and deficiencies are noted for the contractor to correct. Contractors must implement corrective actions which are verified by the campus QSP inspector. Provisions in the construction contract hold contractors accountable for any violations of storm water regulations.

For construction projects on undeveloped land sites regardless of size, biological monitors are on site at least weekly during initial earth moving activities and periodically thereafter. The contractor is notified if any storm water/water quality related issues are identified that could affect offsite resources. These issues are documented in daily reports and moved forward for corrective action.

8.0 Appendices

Appendix A **Main Campus and Off-site Facility Information**
Appendix B **Illicit Discharge Detection and Elimination Program**
Appendix C **UC San Diego Storm Water Map and Outfall Map**
Appendix D **UC San Diego Integrated Pest Management Program**
Appendix E **Storm Water Monitoring Program**
Appendix F **Program Effectiveness Assessment and Improvement Plan**

Appendix A

Main Campus and Offsite Facility Information

Appendix A

Main Campus and Off-site Facility Information

Main Campus

As shown in Figures 1, 2, and 3, the main UC San Diego campus is composed primarily of three distinct, but contiguous, geographical entities: the western portion of the campus (668 acres), the eastern portion of the campus (267 acres), and the Scripps Institute of Oceanography (SIO) portion of the campus (160 acres) as described below:

- The western area of the campus (Figure 1) is bordered by Genesee Avenue on the north, La Jolla Village Drive on the south, North Torrey Pines Road and City of San Diego property on the west, and Interstate 5 on the east.
- The eastern area of the campus (Figure 2) is separated from the western area by Interstate 5. In addition to Interstate 5 on the west, the approximate boundaries of the eastern area consist of Voight Drive and Genesee Avenue on the north, privately owned condominiums along La Jolla Village Drive to the south, and Regents Road on the east.
- The SIO portion of the campus (Figure 3) lies along the coast immediately southwest of the bulk of the campus and includes a span of approximately 3,000 feet of ocean frontage.

The following properties are also part of the Main Campus:

- La Jolla Del Sol, a housing development located southeast of these larger geographical areas (12 acres)
- University House (seven acres)
- A parcel adjacent to University House consisting of coastal canyon and beachfront (19 acres)
- Glider Port (30 acres)
- Torrey Pines Center North (2.3 acres) and Torrey Pines Center South (just the building — the land is not owned by the University)

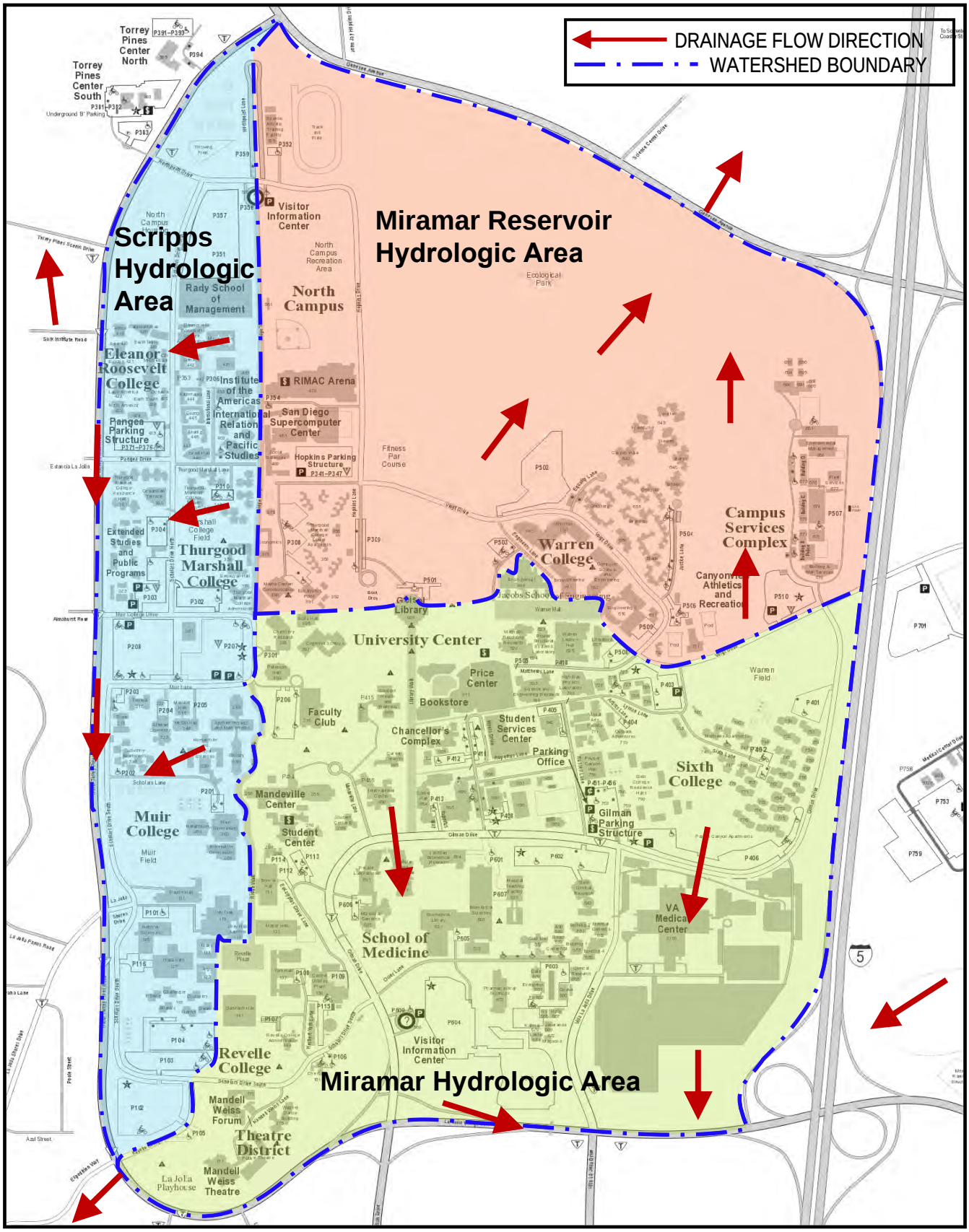
Land Use

Of the total 1,165-acres that make up the main campus, approximately 44 percent consists of open space, habitat areas, eucalyptus groves, landscaped buffer areas, landscaped courtyards and plazas, gardens, and recreational areas. The remaining 56 percent consists of buildings totaling approximately 10 million ground square feet, two parking structures, surface parking lots, and other paved areas, walkways, and roadways.

Facility Drainage

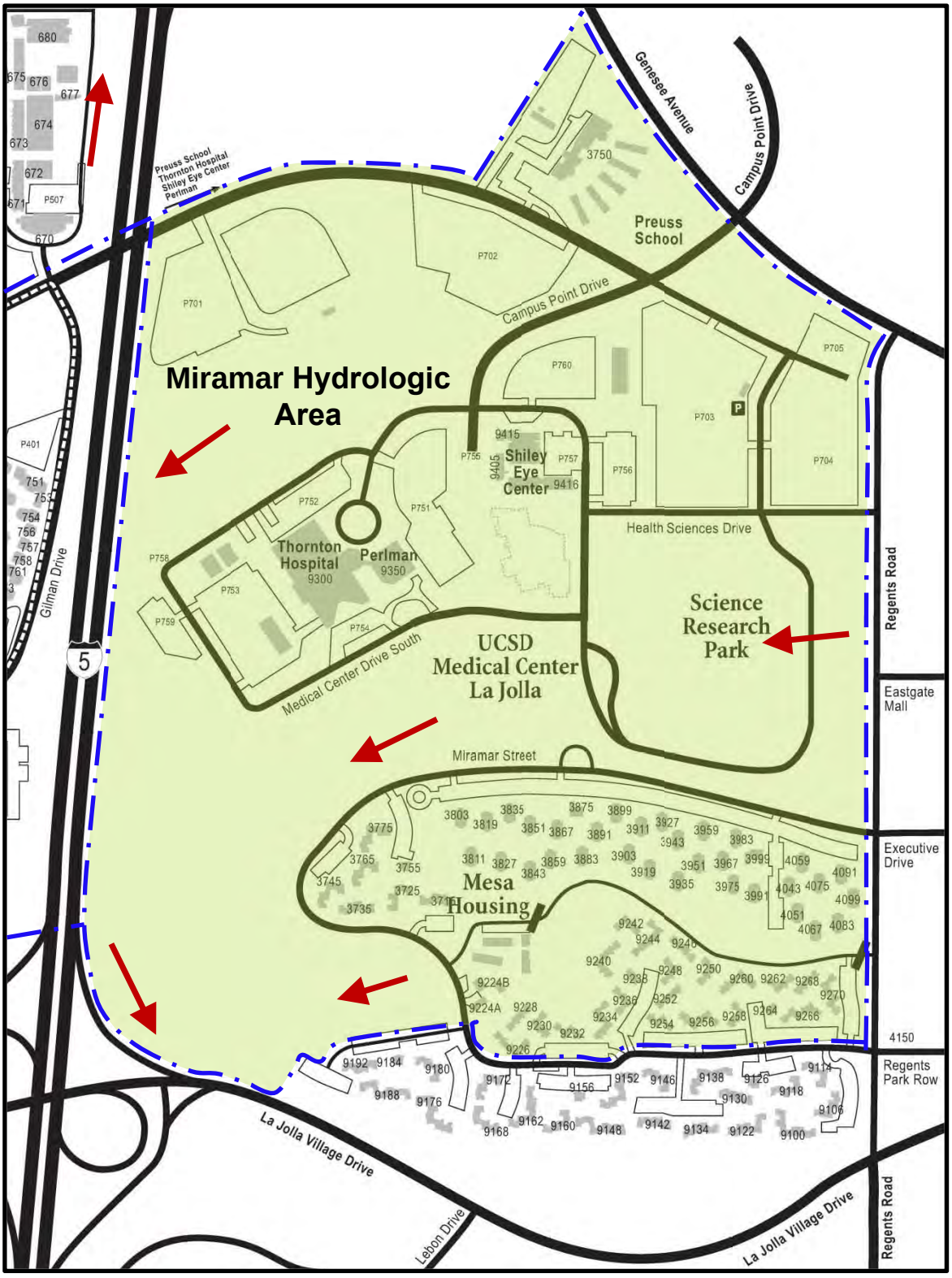
The general flow of storm water discharge off east campus, west campus, and SIO is summarized in the following three figures. More detailed information on the storm water conveyance system at UC San Diego is available from EH&S.

Figure 1. UC San Diego West Campus Drainage Map



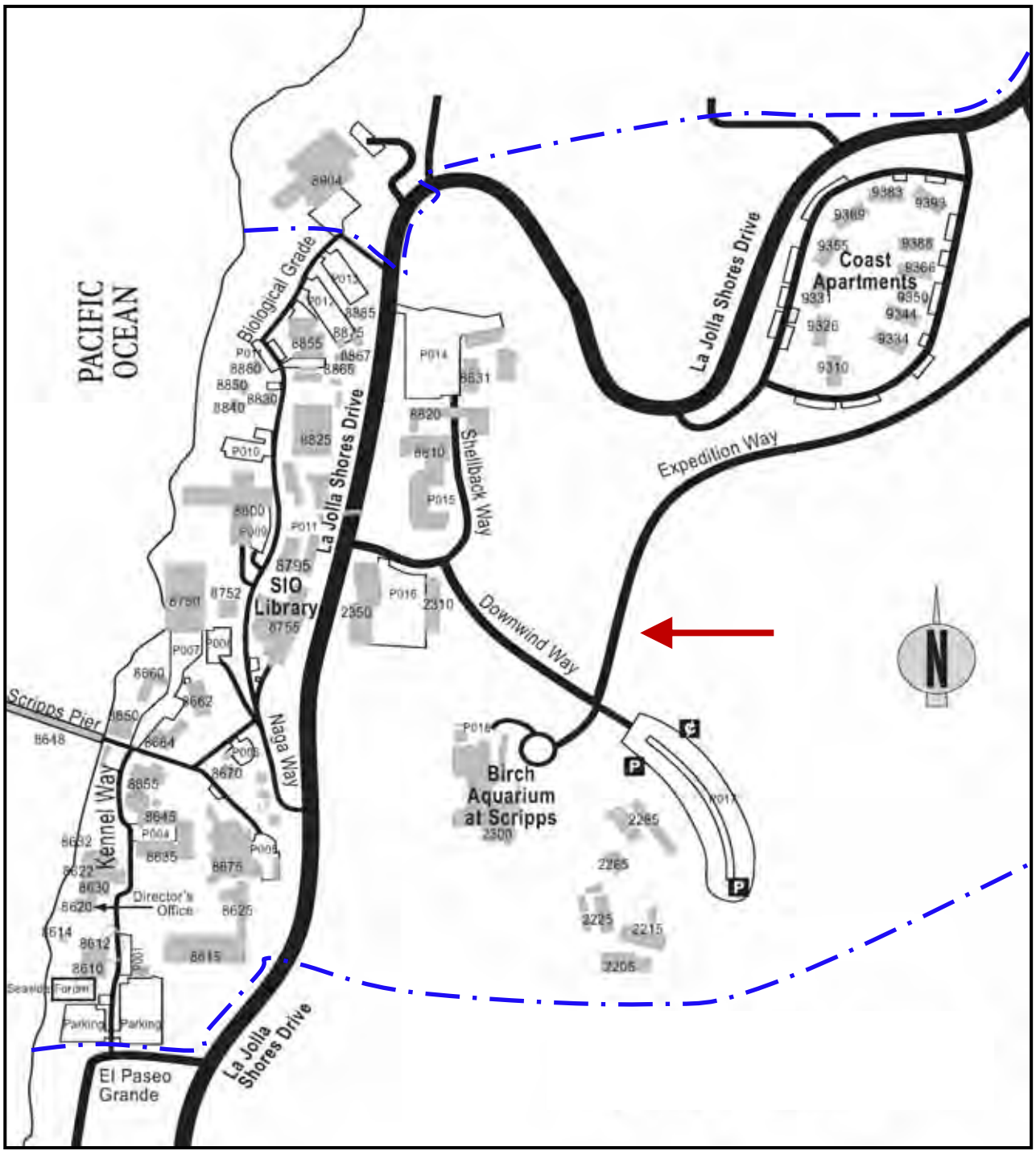
Note: UC San Diego West Campus drainage flows towards the Pacific Ocean, Los Peñasquitos Creek, Los Peñasquitos Lagoon, Rose Canyon Creek, and Mission Bay.

Figure 2: UC San Diego East Campus Drainage Map



Note: UC San Diego East Campus drainage flows towards Rose Canyon Creek and Mission Bay.

Figure 3. Scripps Institution of Oceanography Drainage Map



Note: Scripps Institution of Oceanography (SIO) drainage flows towards Pacific Ocean.

DRAINAGE FLOW DIRECTION
WATERSHED BOUNDARY

OFF-SITE FACILITIES

UC San Diego Hillcrest Medical Center

UC San Diego has located a number of medical activities, including patient care and some of the School of Medicine's instruction and research programs, at the UC San Diego Medical Center (MC) in Hillcrest. The MC in Hillcrest is the only academic medical center in the greater San Diego Region.

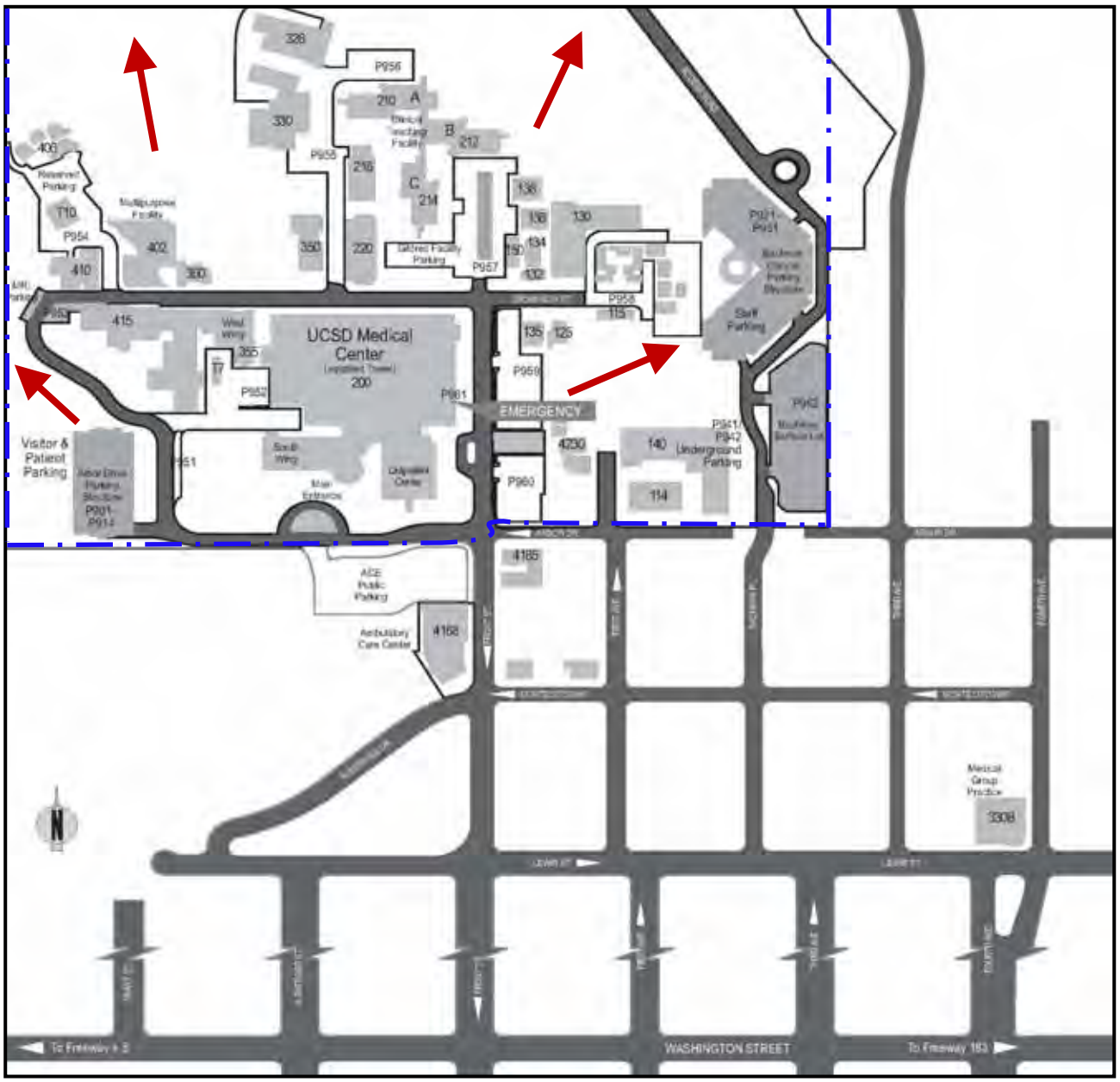
UC San Diego MC Hillcrest is situated on approximately 56 acres of steep slopes and level mesas overlooking Mission Valley to the north. Located in the northeastern corner of the Uptown community of San Diego, southwest of the intersection of Interstate 8 (I-8) and State Route 163 (SR-163), the campus is located 13 miles south of the main campus in La Jolla.

The south rim of Mission Valley forms the practical limits of development to the north, leaving approximately 26 of the campus's existing 56 acres suitable for building. Virtually all of these 26 acres are currently occupied by buildings and parking facilities. The valley topography limits expansion to the north and west. Nearly one-half of the southern boundary of the campus is formed by property owned by the Unitarian Church. The remainder of the southern edge is formed by the residential neighborhood extending south to Washington Street. To the east is Vauclain Point and residential development. Thus, the open space to the north and west and the neighborhood to the south and east form the primary context for the campus.

Facility Drainage

The general flow of storm water discharge off MC in Hillcrest is summarized in Figure 4.

Figure 4. UC San Diego Medical Center Hillcrest Drainage Map



Note: UCSD Medical Center Hillcrest drainage flows towards San Diego River and Pacific Ocean.

Nimitz Marine Facility

UC San Diego maintains the Nimitz Marine Facility that consists of two facilities on Point Loma operated under the auspices of SIO, the Marine Facility (MarFac), and the Marine Propulsion Lab (MPL). The Nimitz Marine Facility is the support and management center for the Scripps fleet of five research vessels and the platform FLIP.

The Nimitz Marine Facility covers 5.7 acres of land on the bay side of Point Loma at the mouth of the Shelter Island yacht basin. The facility includes four buildings and a pier operated by SIO. There are no residences, businesses, recreational facilities, or community services on the property. The site is bordered by private land in the City of San Diego to the north, U.S. Navy land to the west, and Shelter Island, North Island, San Diego Bay, and the San Diego main navigation channel on the north, east, and south.

Facility Drainage

Drainage at the Nimitz Marine Facility is generally to the east towards San Diego Bay as shown in Figure 5 A. Drainage improvements have been made to the facility to convey storm water runoff from most of the facility into a 57,000 gallon prefabricated concrete storm water detention system located underground on the east side of the materials storage yard. The detention system is equipped with a controller so that collected water can be manually discharged to the sanitary sewer in accordance with City of San Diego requirements. The 57,000 gallon detention system is kept in the "closed" position, discharges from the system to the sanitary sewer system are controlled by facility staff. A schematic of this system is shown in Figure 5 B.

Elliott Field Station

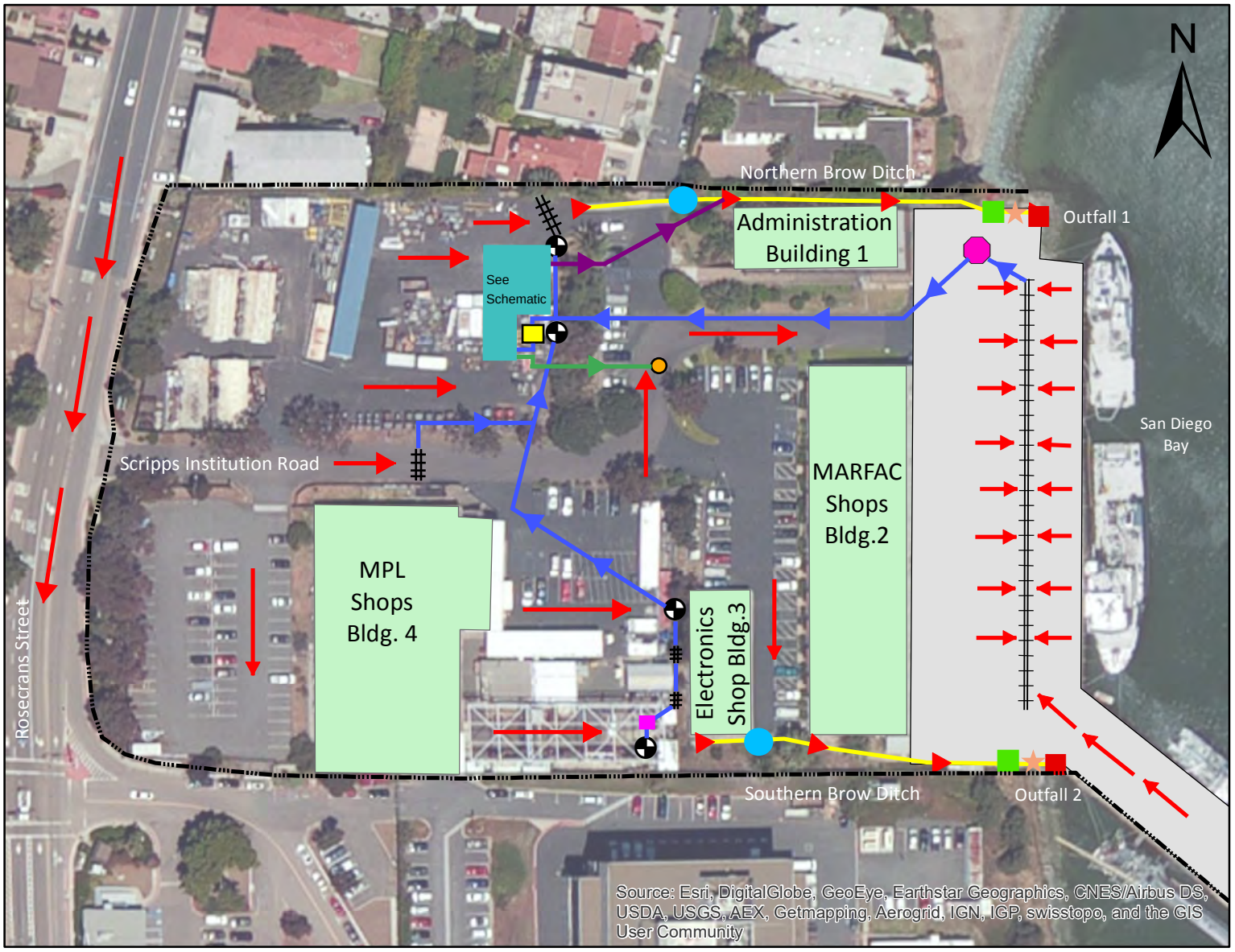
Elliott Field Station occupies approximately 324 acres of land east of Interstate 15 (I-15) and just south of Pomerado Road in the City of San Diego. It is approximately 10 miles northeast of the main campus. Elliott Field Station provides opportunities for outdoor research activities not available on the main campus.

Elliott Field Station is bordered on the northeast by the Alliant International University (AIU), on the east by the UC Elliot Chaparral Reserve, and on the south and west by the U.S. Marine Corps Air Station, Miramar (MCAS).

Facility Drainage

In general, storm water from the site drains northerly towards Pomerado Road and southwesterly based on the varying topography as shown in Figure 6.

Nimitz Marine Facility Stormwater Map



Miles

0 0.0125 0.025 0.05 0.075 0.1

- Grate Inlet Stormwater Treatment System
- Modular Wetland Stormwater Treatment System
- Flume Filter
- Stormwater Inlet
- Monitoring Location
- Outfall
- Direction of Stormwater Flow
- Hydrodynamic Separator
- Stormwater Detention System (57,727 gal)
- Wharf and Pier
- Facility Boundary
- Trench Drain
- Stormwater Brow Ditch
- Pipe
- Pipe to Sanitary Sewer
- Overflow Pipe to Northern Brow Ditch
- Pump Station
- Manhole to Sanitary Sewer

Updated July 2019

Figure 5 B. Stormwater Detention System Schematic

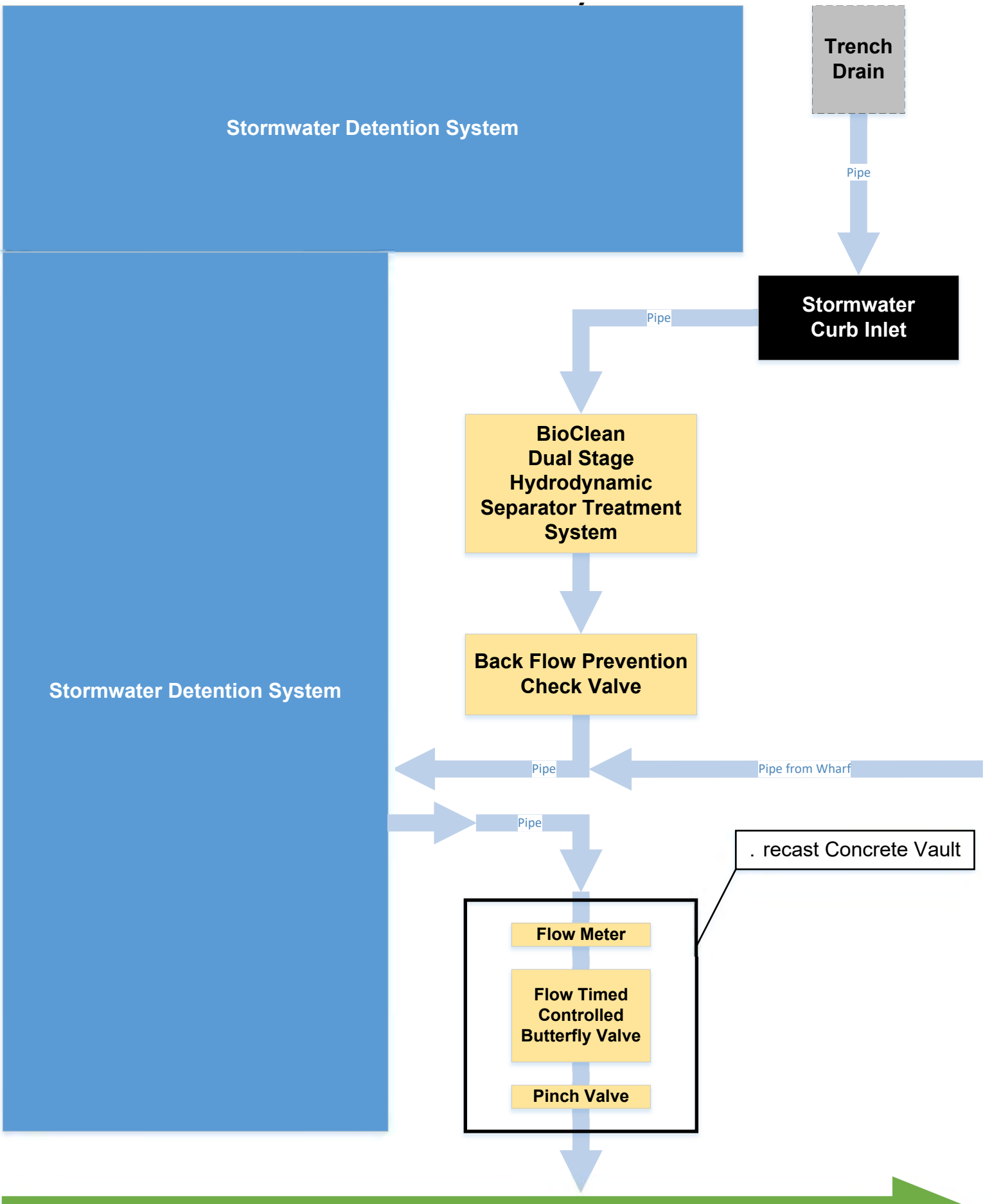
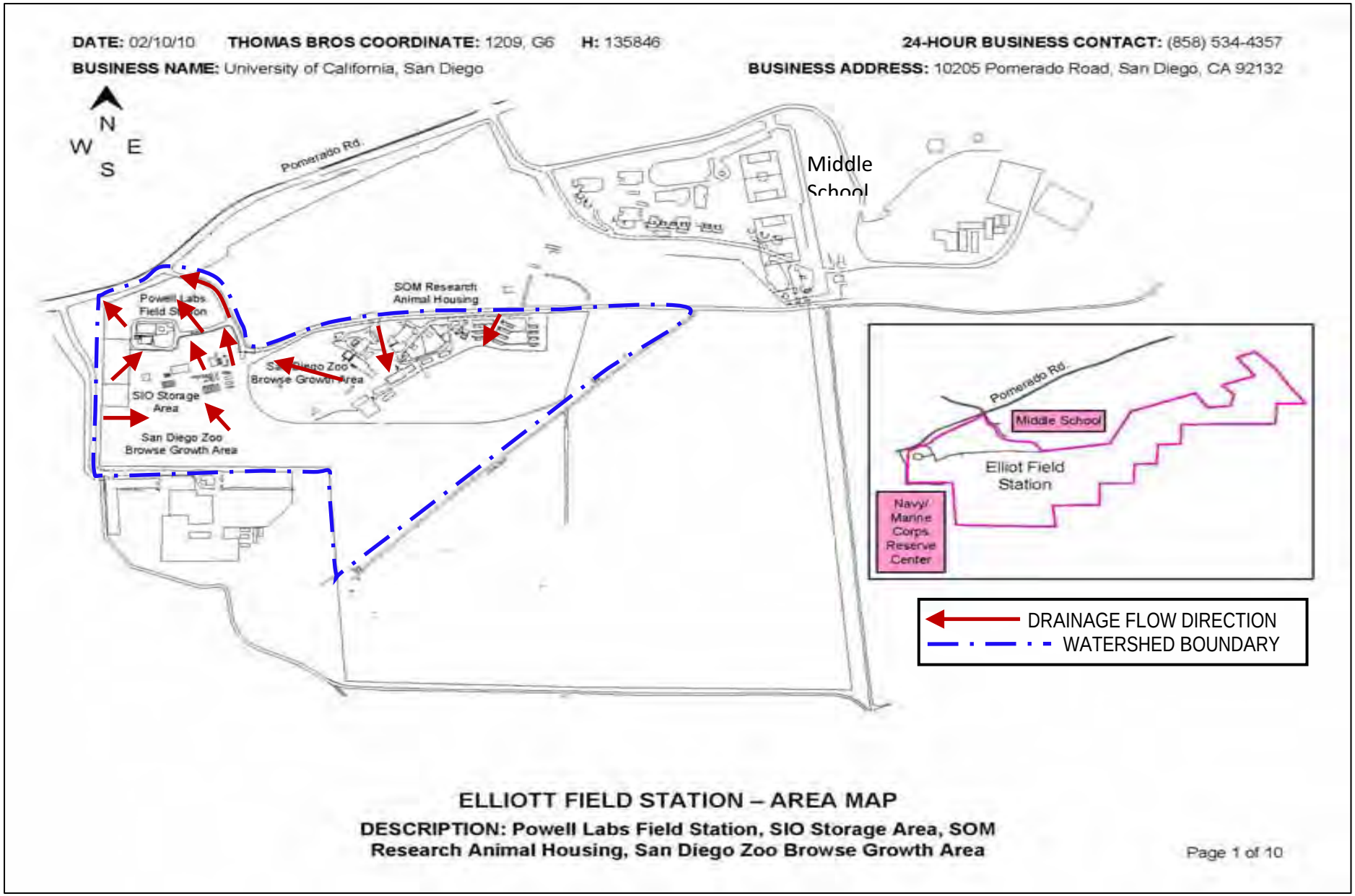


Figure 6. Elliot Field Station



Mount Soledad Research Station

The Mount Soledad property in La Jolla, located near the crest of the mountain on Via Capri, supports two research laboratories on approximately 10 acres. These laboratories operate under the auspices of SIO.

Facility Drainage

The general flow of storm water discharge from the Mount Soledad Research Station is shown in Figure 7.

Trade Street

The Trade Street storage facility is located approximately four miles east of the main campus. The facility covers eight acres east of Interstate 805, north of Miramar Road, at the north end of Trade Street in the City of San Diego. UC San Diego Materials Management Office uses the facility for warehousing and distribution operations. The UC San Diego Storehouse, Shipping/Receiving, Surplus Sales, Self-Storage, Bookstore, and the Library Annex are the primary users.

The Trade Street facility is bordered on all sides by light industrial and commercial facilities.

Facility Drainage

The general flow of storm water discharge from the Trade Street storage facility is shown in Figure 8.

FIGURE 7. MOUNT SOLEDAD RESEARCH STATION
Drainage Map

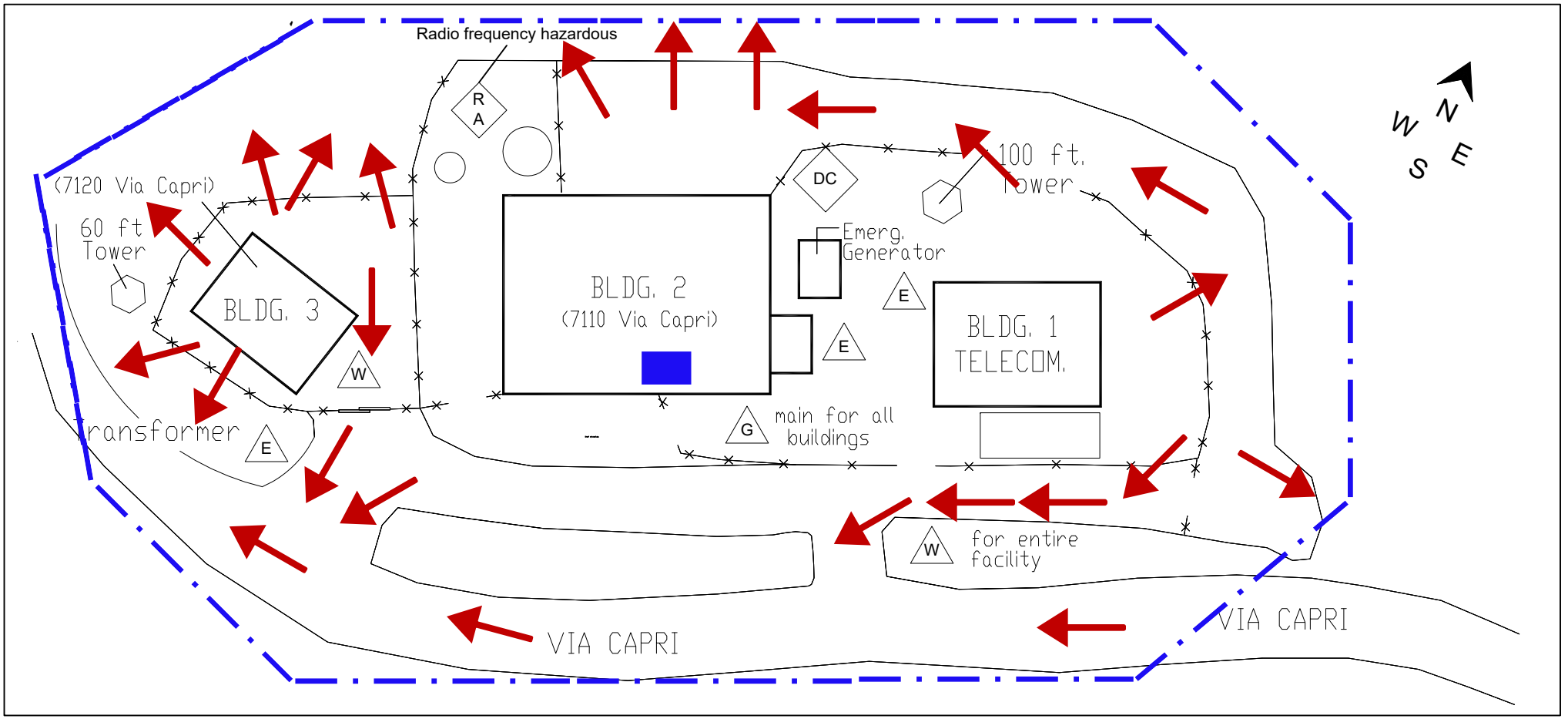
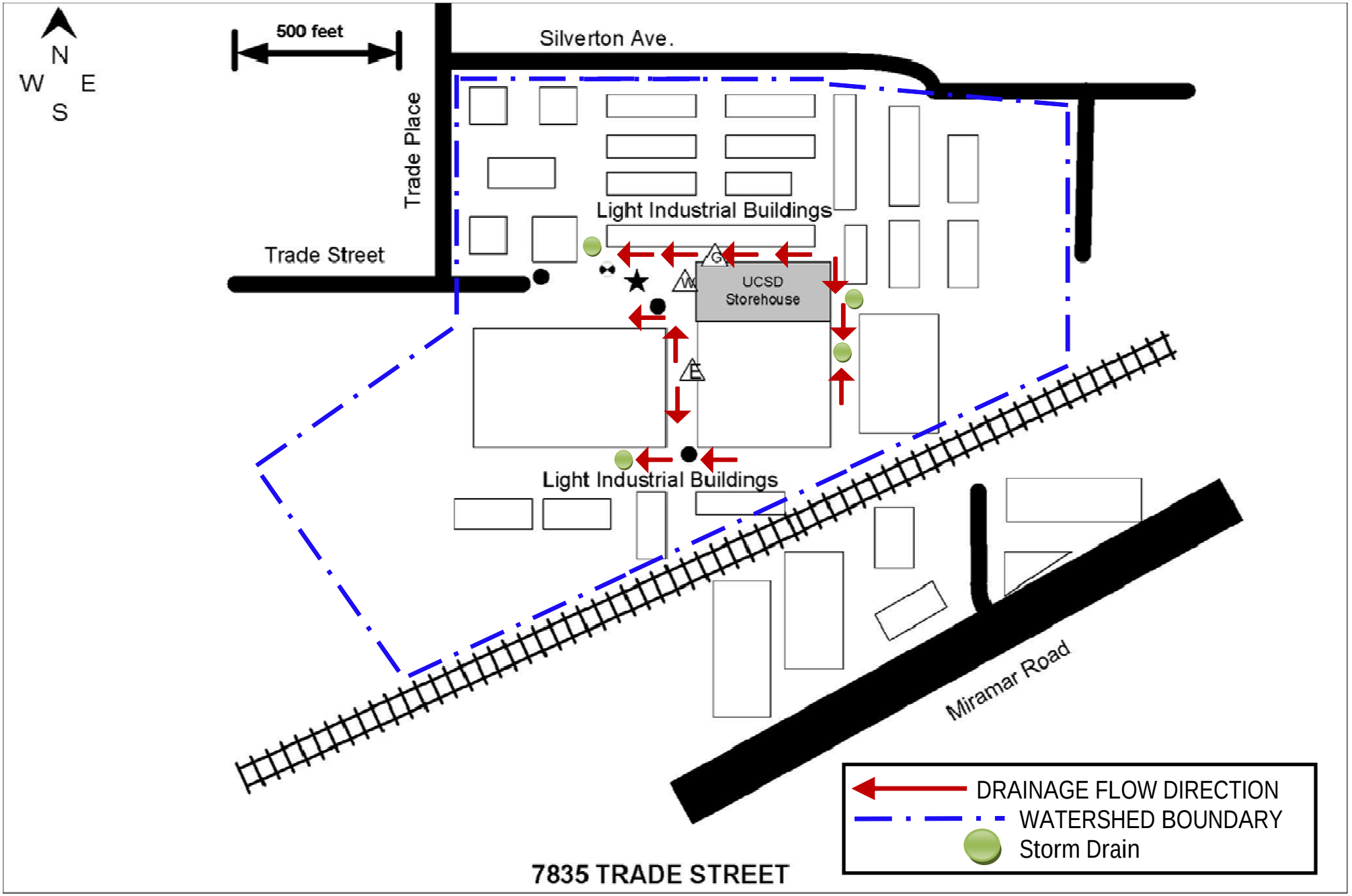


FIGURE 8. TRADE STREET DRAINAGE MAP



Appendix B

Illicit Discharge Detection and Elimination Program

UC SAN DIEGO ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

SCOPE

The purpose of UC San Diego's Illicit Discharge Detection and Elimination Program is to prevent non-storm water discharges (NSWDs) into the storm drain system on campus. An NSWD is any discharge to a storm drain or storm water conveyance system that is not composed entirely of storm water such as irrigation runoff. Some types of NSWDs are referred to as "illicit" discharges. These are NSWDs that are specifically prohibited by UC San Diego's Phase II Small MS4 General Permit because they contain pollutants that can impact downstream waterways. Examples of illicit discharges into a storm drain that are prohibited include sanitary sewer wastewater (e.g., sewer overflows), spills or releases of hazardous materials or waste, wash water, and improper waste disposal. Investigations of NSWDs suspected to be "illicit discharges" such as sanitary sewage and/or significantly contaminated are to be conducted immediately following discovery as described below.

PROCEDURES FOR ILLICIT DISCHARGE DETECTION AND ELMINATION

1. Education and Outreach

a. EH&S will mark storm drains on campus with "No Dumping" labels to prevent people from dumping water or other pollutants into them.

b. EH&S provides training on NSWDs and Illicit Discharges in the Annual Shop & Studio Environmental Compliance & Hazards Training. In addition, students, faculty, and staff are educated on the water quality impacts of NSWDs during outreach events on campus.

2. NSWD Prevention

a. Look for evidence of NSWDs during routine outdoor work activities.

   i. If water is observed going into a storm drain and it isn't raining, try to identify the source and report it (see reporting procedures below). Stop the source of the NSWD if possible.

   ii. Evidence of a NSWD might include staining on pavement, ponding, the sound of water in a storm drain, etc.

b. Monitor irrigation systems at least once a year for discharges into the storm water conveyance system. Adjust irrigation system as needed.

c. Maintain equipment to prevent leaks and spills.

3. Reporting a NSWD

a. Report an outdoor hazardous material spill (e.g., oil or fuel), a sanitary sewer overflow, or any other contaminated discharge that gets into an outdoor storm drain to EH&S at(858) 534-3660, or if after hours, call UC San Diego Police Department at(858) 534-HELP (4357)

b. For a water leak, broken pipe or sprinkler, or irrigation problem, call Facilities Management Customer Relations help desk at (858) 534-2930 or email wsc@ucsd.edu. Please include detailed location information and pictures if available.

c. For all other NSWDs, email ehsea@ucsd.edu or call EH&S Environmental Affairs at (858) 246-1148

d. EH&S Reporting: Any non-storm water discharge believed to be an immediate threat to human health or the environment or suspected of being sanitary sewage and/or significantly contaminated material shall be reported immediately to the San Diego Regional Water Quality Control Board and to the San Diego Department of Environmental Health. If the discharge continues offsite, the City of San Diego (downstream MS4) will also be notified.

4. NSWD and Illicit Discharge Investigations, Response, and Corrective Actions

a. When a NSWD is observed or reported, EH&S, FM, or FD&C staff will conduct a field investigation to determine if the source of the NSWD can be identified.

   i. If the source of the NSWD is identified, corrective actions will be implemented to address the NSWD. Corrective actions may include but are not limited to:

      1. Addressing NSWD caused by behavior (e.g., dumping) by educating the responsible party on the water quality impacts of NSWDs. Disciplinary or enforcement actions will be taken if necessary
      2. Irrigation system adjustments/repairs;
      3. Water pipe repairs;
      4. Sanitary sewer system repairs;
      5. Equipment adjustments/repairs.

   ii. If the source of the NSWD cannot be located, arrangements will be made with FM or FD&C for the storm water conveyance system upstream of the observed NSWD to be inspected (e.g., CCTV) to identify the source.

b. If the NSWD is suspected to be an illicit discharge, UC San Diego will conduct an investigation to identify and locate the source of any suspected illicit discharge within 72 hours of becoming aware of the suspected illicit discharge. For investigations that require more than 72 hours, EH&S shall identify the actions being taken to identify and locate the source of the suspected illicit discharge.

i. Non-storm water discharges suspected of being sanitary sewage and/or significantly contaminated shall be investigated within 24 hours.

ii. Investigations of suspected sanitary sewage and/or significantly contaminated discharges shall be prioritized over investigations of NSWDs suspected of being cooling water, wash water, or natural flows.

iii. If the investigation reveals an illicit discharge into UC San Diego's storm water conveyance system, mitigation measures will be implemented to remove the contamination. A spill mitigation contractor will be used if necessary to ensure the illicit discharge is contained and cleaned.

c. Identify and document the source of all non-storm water discharges. If the source of the non-storm water discharge is found to be a discharge authorized under UC San Diego's Phase II Small MS4 General Permit, or authorized under another National Pollutant Discharge Elimination System (NPDES) permit, no further action is required.

5. Monitoring

a. If the source of the NSWD cannot be located through investigative procedures, samples will be collected and analyzed for the following: ammonia, color, conductivity, detergents-surfactants, fluoride, hardness, pH, potassium, and turbidity.

b. EH&S will review laboratory results to verify that the action level concentrations for indicator parameters shown in the table below are not exceeded.

Indicator Parameter	**Action Level Concentration**
Ammonia	>= 50 mg/L
Color	>= 500 units
Conductivity	>= 2,000 µS/cm
Hardness	<= 10 mg/L as $CaCO_3$ or >= 2,000 mg/L as $CaCO_3$
pH	<= 5 or >=9
Potassium	>= 20 mg/L
Turbidity	>= 1,000 NTU

c. If action levels are exceeded, and/or visual observations indicate a suspected illicit discharge to any of the storm water outfalls at UC San Diego identified in the attached map, additional investigations will be conducted and notifications will be made.

6. Record of Investigation

a. EH&S will fill out the Non-Storm Water Discharge Log and maintain it electronically.

b. EH&S will report NSWDs that pose an immediate threat to human health or the environment to the Regional Water Quality Control Board, the Department of Environmental Health, and the City of San Diego.

Appendix C

UC San Diego Storm Water Map and Outfall Map

UC San Diego Storm Water Conveyance System

MATCH LINE - SEE RIGHT

MATCH LINE - SEE LEFT

N

33

0 100 200 400 600

(IN FEET)
1 inch = 200 ft.

N

33

0 150 300 600 900

(IN FEET)
1 inch = 300 ft.

LEGEND:

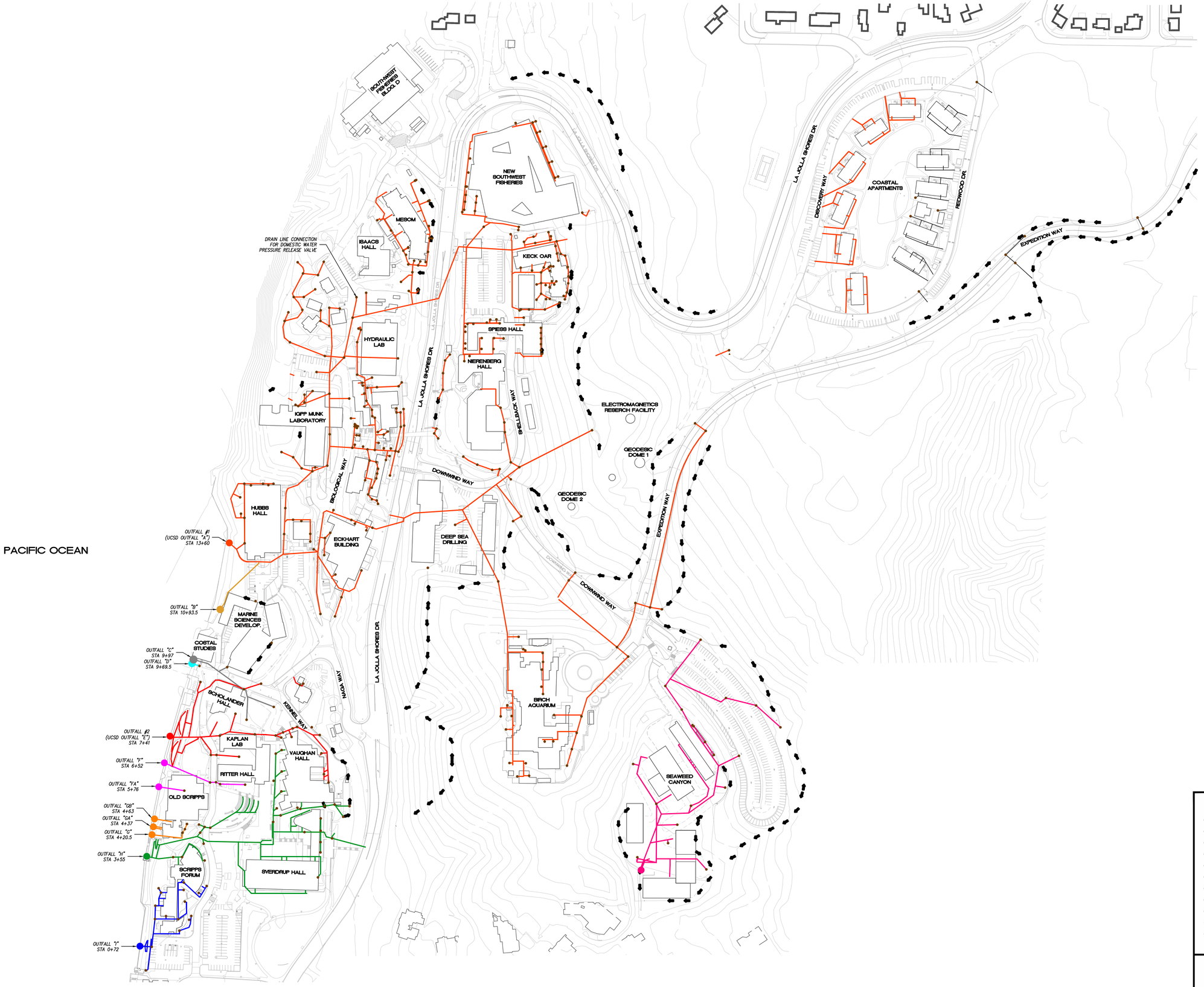
STORM DRAIN

CITY STORM DRAIN

W4552 CAMPUS WIDE STORM DRAIN SYSTEM

SCALE:	NOTED		
DATE:	12-9-2015	DRAWN BY:	BSS
JOB NO.:	1650.00	CHECKED BY:	
SHEET:			

UC San Diego latitude 33 PLANNING & ENGINEERING
9966 Hibert Street, 2nd Floor, San Diego, CA 92131
Tel 858.751.0633



SCRIPPS INSTITUTION OF OCEANOGRAPHY

LEGEND

- OUTFALL "A" DRAINAGE AREA
- OUTFALL "B" DRAINAGE AREA
- OUTFALL "C" DRAINAGE AREA
- OUTFALL "D" DRAINAGE AREA
- OUTFALL "E" DRAINAGE AREA
- OUTFALL "F" DRAINAGE AREA
- OUTFALL "G" DRAINAGE AREA
- OUTFALL "H" DRAINAGE AREA
- OUTFALL "I" DRAINAGE AREA
- SWALE
- INLET

THE UNIVERSITY OF CALIFORNIA
SAN DIEGO
STORM WATER OUTFALL MAP

UC San Diego

REVISION: 10/10/2018
REVISION:
REVISION:
REVISION:
REVISION:

Appendix D

UC San Diego Integrated Pest Management Program

UC SAN DIEGO INTEGRATED PEST MANAGEMENT PROGRAM

The University of California performs research on Integrated Pest Management (IPM) and provides information to the public at: www.ipm.ucdavis.edu

UC San Diego implements IPM through a combination of techniques such as biological controls, use of pest resistant varieties, and modification of irrigation or pruning to make the habitat less conducive to pest development. The campus Storm Water Management Program includes an Integrated Pest Management Best Management Practice. If pesticides are used, the least toxic, most effective, and most specific product is used. Organic based products are used whenever possible. Mulch is used for weed prevention and moisture retention to reduce irrigation and use of chemical controls. The campus also monitors and repairs or replaces irrigation equipment as needed to conserve water and prevent irrigation run-off.

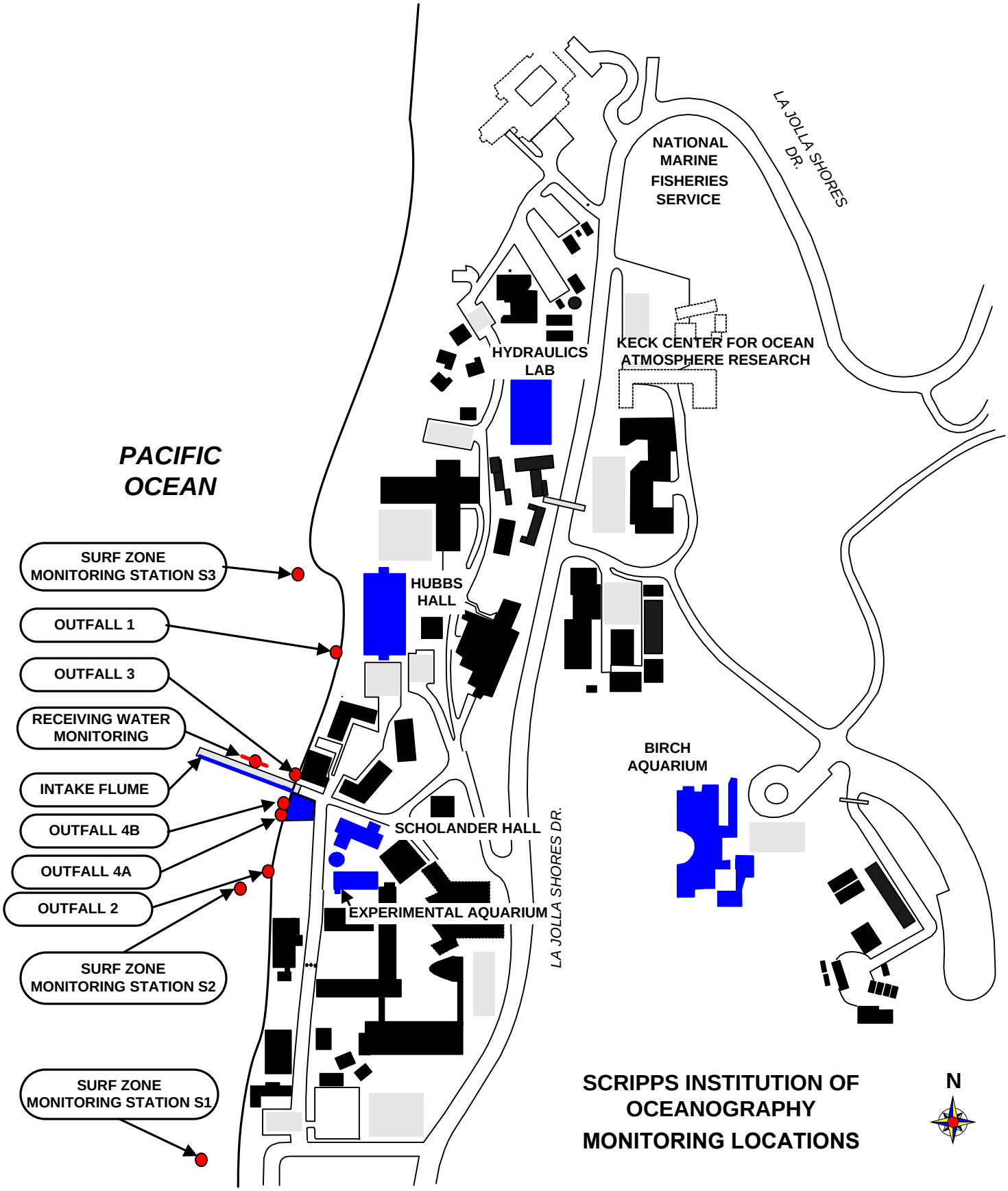
Pesticide and herbicide application on campus is limited to the following applicators:

- Two licensed and trained applicators from Corky's Pest Control (for services campus-wide)
- Two licensed and trained UC San Diego Groundskeepers with Housing, Dining, and Hospitality Services (for services around campus housing and dining facilities)
- Three licensed and trained applicators from UC San Diego EH&S (for services inside buildings and 3 feet from building exteriors)

These applicators all follow IPM principles and only use pesticides or herbicides when mechanical removal or other controls are not practical. Pesticides and herbicides are not applied before a forecasted storm and are not applied in proximity to storm drains. Unused pesticides and herbicides are managed in accordance with manufacturer specifications, product labels, and State regulations.

Appendix E

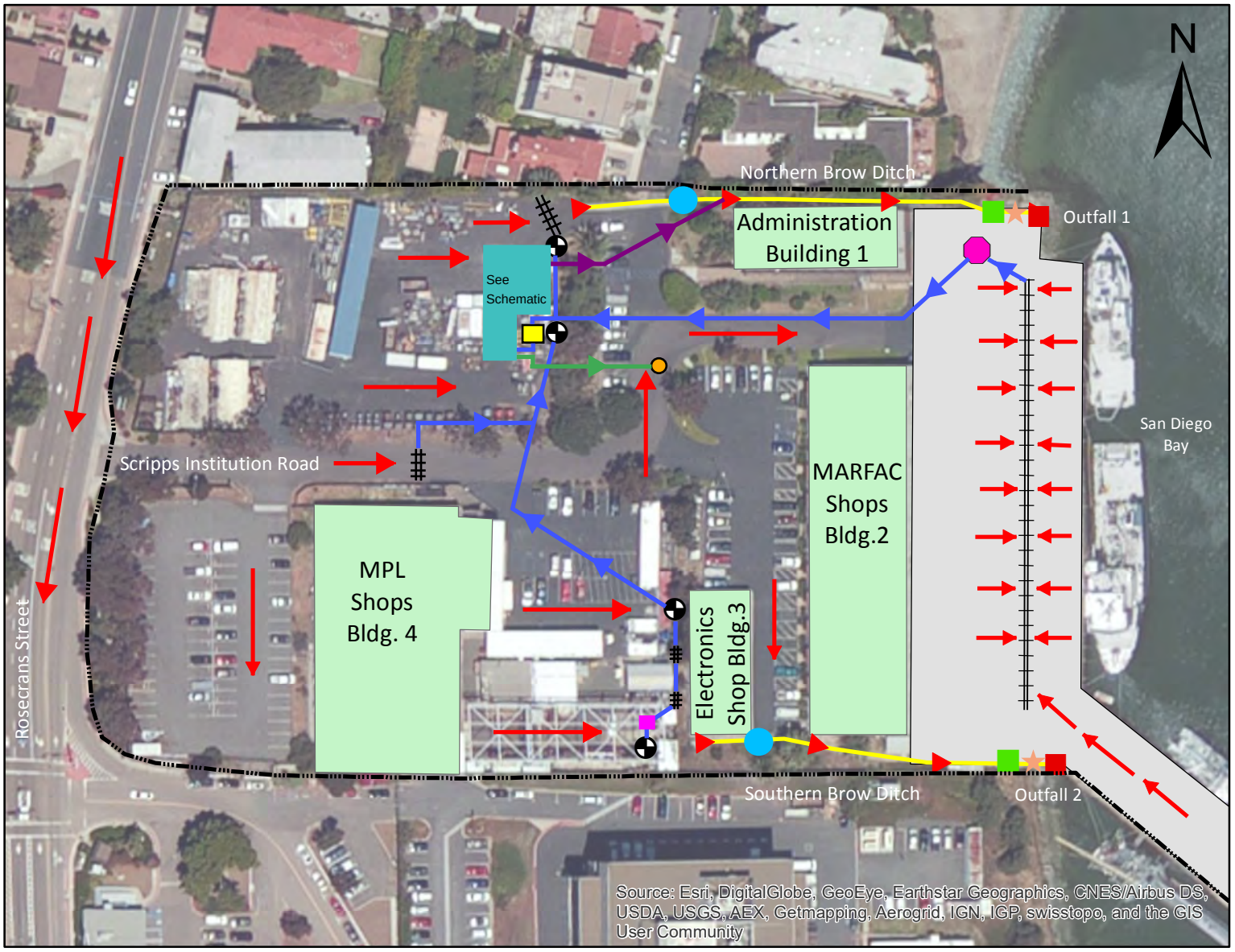
Storm Water Monitoring Locations


PACIFIC OCEAN
SURF ZONE MONITORING STATION S3
OUTFALL 1
OUTFALL 3
RECEIVING WATER MONITORING
INTAKE FLUME
OUTFALL 4B
OUTFALL 4A
OUTFALL 2
SURF ZONE MONITORING STATION S2
SURF ZONE MONITORING STATION S1
NATIONAL MARINE FISHERIES SERVICE
LA JOLLA SHORES DR.
HYDRAULICS LAB
KECK CENTER FOR OCEAN ATMOSPHERE RESEARCH
HUBBS HALL
BIRCH AQUARIUM
SCHOLANDER HALL
EXPERIMENTAL AQUARIUM
LA JOLLA SHORES DR.
SCRIPPS INSTITUTION OF OCEANOGRAPHY
MONITORING LOCATIONS
N

Fleet Services Stormwater Sample Location

G:\UCSD_Data\Main_Campus\ArcGIS_Maps\Phase II Small MS4 General Permit - Stormwater\Campus Service Complex\CSC_Stormwater.mxd

Nimitz Marine Facility Stormwater Map



Miles

0 0.0125 0.025 0.05 0.075 0.1

- Grate Inlet Stormwater Treatment System
- Modular Wetland Stormwater Treatment System
- Flume Filter
- Stormwater Inlet
- Monitoring Location
- Outfall
- Direction of Stormwater Flow
- Hydrodynamic Separator
- Stormwater Detention System (57,727 gal)
- Wharf and Pier
- Facility Boundary
- Trench Drain
- Stormwater Brow Ditch
- Pipe
- Pipe to Sanitary Sewer
- Overflow Pipe to Northern Brow Ditch
- Pump Station
- Manhole to Sanitary Sewer

Updated July 2019

Appendix F

Program Effectiveness Assessment and Improvement Plan

STORM WATER MANAGEMENT PROGRAM EFFECTIVENESS ASSESSMENT AND IMPROVEMENT PLAN

UNIVERSITY OF CALIFORNIA SAN DIEGO

Updated 2019

UC San Diego

UPDATED OCTOBER 2019

UNIVERSITY OF CALIFORNIA SAN DIEGO

Storm Water Management Program Effectiveness Assessment and Improvement Plan

Prepared by

UNIVERSITY OF CALIFORNIA SAN DIEGO
ENVIRONMENT, HEALTH, AND SAFETY

TABLE OF CONTENTS

1 Program Effectiveness Assessment and Improvement Plan Overview 1

1.1 Goals of the Program Effective Assessment and Improvement Plan 1

1.2 Program Effective Assessment and Improvement Plan Process 2

2 Storm Water Program Overview 4

2.1 Storm Water Program Summary 4

2.2 Storm Drainage System 5

2.3 Watersheds and Land Use 5

3 Receiving Water Quality and Source Assessment 7

3.1 Pacific Ocean / San Diego – Scripps Area of Special Biological Significance 7

3.2 Los Peñasquitos Creek 7

3.3 Rose Canyon Creek 8

3.4 Pollutants of Concern 8

3.5 Source Assessment 8

4 Priority Best Management Practices (BMP) Identification and Assessment 11

4.1 Priority BMPs 11

4.2 Priority BMP Effectiveness Assessment 11

4.3 Assessment Tools 11

4.4 Annual Reporting and Program Assessment 12

List of Tables

Table 3-1: Program Water Quality Objectives 10

List of Figures

Figure 1-1: CASQA Outcome Levels 3

List of Appendices

Appendix A – Campus Drainage and Watershed Maps

Appendix B – Priority BMP Assessment

1 PROGRAM EFFECTIVENESS ASSESSMENT AND IMPROVEMENT PLAN OVERVIEW

The University of California, San Diego (University) has developed this Program Effectiveness Assessment and Improvement Plan (PEAIP) to meet the requirements of the Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4) Order No. 2013-001-DWQ (referred to as the Phase II MS4 Permit).

1.1 GOALS OF THE PROGRAM EFFECTIVE ASSESSMENT AND IMPROVEMENT PLAN

The PEAIP provides a process for:

1. Identifying storm water runoff pollutants of concern on campus;
2. Determining priority Best Management Practices (BMPs) and/or campus policies/ procedures to address these pollutants of concern; and
3. Identifying assessment tools that can provide data to be used to evaluate the effectiveness of the priority BMPs and/or campus policies/procedures at protecting storm water runoff water quality.

The goals of the PEAIP are to:

- Improve the implementation and effectiveness of the campus storm water program elements
- Improve management of limited resources (includes shifting priorities as needed to make effective use of resources)
- Continue to evaluate BMPs to identify those that prove to be effective
- Use findings to focus/modify program (adaptive management) to improve pollutant load reductions
- Identify implementation gaps

The successful operation of the University's Storm Water Program relies on the implementation of program elements and the effectiveness of those elements at achieving the program water quality goals. Due to the complexity of storm water, a combination of metrics will be used to evaluate the effectiveness of the program. The University will use the six outcome levels from the California Stormwater Quality Association (CASQA)'s guidance document *A Strategic Approach to Planning for and Assessing the Effectiveness of Stormwater Programs* to evaluate program policies and procedures:

Level 1:	Implementation of program activities (no effectiveness assessment)
Level 2:	Knowledge and awareness of target audiences
Level 3:	Behavior of target audiences
Level 4:	Pollutant load reductions achieved
Level 5:	MS4 storm water runoff quality
Level 6:	Receiving water conditions

The outcome levels range from implementation of storm water program elements (i.e. storm water outreach website was made available) at Outcome Level 1 to improving receiving water quality at Outcome Level 6. In this PEAIP, the goal is to link Outcome Levels 4, 5, and 6 results with Outcome Level 1 program elements by targeting the correct audience (Outcome Level 3) and addressing barriers and bridges to action (Outcome Level 2). Therefore while it can be difficult to isolate the impacts of changes in receiving water conditions, the University can determine if the program is effective by evaluating Outcome Levels 1, 2, and 3.

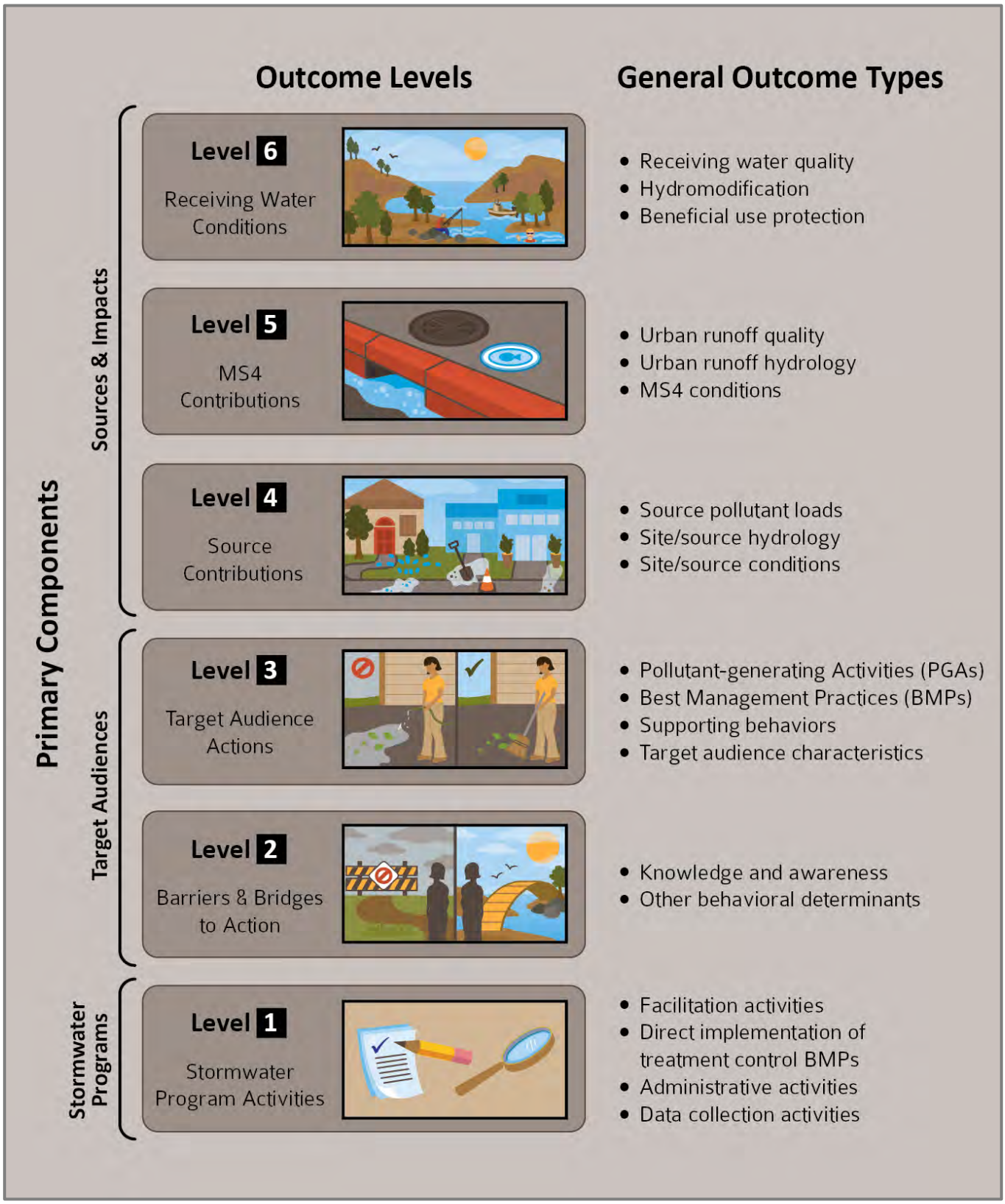
Based on the effectiveness assessment, modifications can be made to program elements, BMPs, and policies as needed to better meet water quality objectives.

1.2 Program Effective Assessment and Improvement Plan Process

The University will implement the following methodology to evaluate and modify the program to improve effectiveness. Figure 1-1, shown below, illustrates the relationship between the program components, outcome levels, and outcome types for evaluation purposes.

1. Collect and evaluate the identified data
2. Use data collected to identify if priority elements have been implemented and identify behavior determinants
3. Answer management questions to determine if pollutant-generating activities are being reduced and BMPs are effective
4. Identify effectiveness of priority BMPs, data gaps, and recommend changes based on data collected.

Figure 1-1: CASQA Outcome Levels



2 STORM WATER PROGRAM OVERVIEW

2.1 STORM WATER PROGRAM SUMMARY

UC San Diego is one of ten UC campuses governed by the Regents of the University of California. UC is the landowner for residential, commercial and institutional uses, and UC holds ground leases for some on-campus development and leases and licenses some campus-owned assets. Through contract language for UC-contracted construction and other services, ground lease requirements for third-party contracted construction and other services, and lease/license language for tenants, UC articulates and enforces its requirements for storm water management and quality. Because the entire MS4 is the property of UC San Diego, certain controls that do not exist in a traditional community are present. For example, UC San Diego employs staff or contracts for the services and activities that might impact storm water quality such as construction activities, new development activities, building maintenance, landscape maintenance, and vehicle maintenance, etc. Potentially polluting activities such as landscape maintenance, building maintenance, and food facility operations are performed by a relatively small number of departments and/or people all under employment or contract to the University. As a result, reaching these influential staff or contractors and obtaining desired outcomes is made easier.

In compliance with the Phase II MS4 permit requirements, the University has developed a set of programs that are designed to reduce the discharge of pollutants and to protect water quality. All program elements are evaluated in the PEAIP. The following programs are being implemented to accomplish the listed objectives:

- **Education and Outreach Program:**
  The Education and Outreach Program objectives are to inform University faculty, students, staff, and visitors about storm water pollution and steps that can be taken to reduce storm water pollution. The purpose of this program is to increase the campus community's knowledge regarding the storm drain system, impacts of urban runoff and illicit discharges on receiving waters, and potential BMP solutions for the target audiences. The Education and Outreach Program includes public outreach and staff pollution prevention and good housekeeping training.

- **Public Involvement and Participation Program:**
  The goal of the Public Participation and Involvement Program is to increase storm water awareness in the campus community. This is accomplished by encouraging the campus community to volunteer and participate in storm water pollution prevention activities on campus and to provide public comment and input on campus policies and activities related to storm water management.

- **Illicit Discharge Detection and Elimination Program:**
  The goal of the Illicit Discharge Detection and Elimination (IDDE) Program is to detect, investigate, and eliminate illicit discharges, including illegal dumping. UC San Diego has developed an outfall map to understand where storm drains from the campus discharge to receiving water bodies, conducts field investigations to identify illicit discharges, and implements IDDE procedures for source investigations and corrective actions.

- **Construction Site Storm Water Runoff Control:**
  The Construction Site Storm Water Runoff Control Program is implemented to prevent construction site discharges of pollutants and impacts on beneficial uses of receiving waters. UC San Diego implements the conditions of the Construction General Permit and requires projects that disturb one acre or more to implement appropriate BMPs and obtain coverage under the Construction General Permit.

- **Pollution Prevention/Good Housekeeping for Permittee Operations Program:**
  The Pollution Prevention/Good Housekeeping Program prevents or reduce the amount of pollutant runoff from University operations. University operations with the potential to contribute to storm water pollution have been identified and source control Best Management Practices have been developed to

address these activities. Staff responsible for operations that may impact storm water and for the routine operation and maintenance (O&M) of the storm water conveyance system are trained on these source control measures.

- **Post Construction Storm Water Management Program:**
  The objective of the Post Construction Storm Water Management Program is to control hydromodification and prevent pollutant runoff from new development and redevelopment projects. The Post Construction Storm Water Management Program includes required site design measures, source control measures, and low impact development design criteria. The program also includes the processes for review and approval of construction plans, documentation of treatment measures, and O&M requirements for storm water treatment measures.

These programs work together to comprise a well-rounded and multi-faceted approach to reducing urban runoff pollution within the University.

2.2 Storm Drainage System

The campus's storm water conveyance system is comprised of a variety of systems including: bioretention, engineered storm water detention systems, underground pipes, catch basins, small open drainage channels, surface run-off, and swales that discharge storm water to natural drainage channels.

The campus is situated on hilly terrain with steep natural drainage channels which include gulches and coastal canyons. The ravines separate the clusters of buildings grouped into colleges. UC San Diego relies heavily on natural drainages to manage storm water on its campus.

Maintenance and repair of the University's storm drain system is overseen by the UC San Diego Facilities Management Department and the Planning, Design, & Construction Department.

2.3 Watersheds and Land Use

UC San Diego is located with the Peñasquitos Hydrologic Unit (Unit 6.00) of the San Diego Region. The Peñasquitos Hydrologic Unit is relatively dry with annual precipitation averaging approximately 8 to 10 inches per year. The Peñasquitos Hydrologic Unit is comprised of five hydrologic areas (HAs) and UC San Diego is located within three of them: the Scripps HA; the Miramar HA; and the Miramar Reservoir HA.

The drainage areas on campus can be divided into three general areas: those that drain directly west into the Pacific Ocean (located in the Scripps HA); those that drain to the south towards Rose Canyon Creek (located in the Miramar HA); and those that drain north towards Los Peñasquitos Creek (located in the Miramar Reservoir HA). Figures A-1, A-2, and A-3 in Appendix A depicts the campus drainage and sub-drainage boundaries.

Land use at the UC San Diego campus includes the following:

- High-Density Academic/Administrative Use (includes Science Research Parks)
  - *Areas for large, multi-story facilities that facilitate teaching, research, and public service operations. These include classrooms, research laboratories, research support areas, offices, libraries, and meeting rooms. Most of this area is occupied by University programs; however, some are occupied by University-related public or private partnerships.*

- Low Density Academic Use (includes Science Research Parks)
  - *These areas are similar to high-density academic/administrative use, but have buildings typically only one-story in height and have less impervious surface area.*

- Residential (Faculty/Staff Housing, Student Housing, Mixed Use Housing)
    - *University-owned housing which includes residence halls with dining commons, mixed-use residential housing, single-unit detached, multi-family units, and apartments. This category includes ancillary services to support housing such as on-campus child care.*

- Medical Centers
    - *Clinical and medical research, and teaching facilities associated with the UC San Diego Medical Center.*

- Teaching and Research Field Station (Biology Field Station)
    - *Open land used for teaching, research and support of academic programs. Land is typically free of large buildings, but may include research-related buildings and facilities.*

- Open Space / Park (Natural Reserves, Recreation, Community Gardens, Canyons)
    - *Open space includes land for outdoor athletic facilities and fields, landscaped spaces, community gardens, Natural Reserves, groves, restoration lands, canyons, and bluffs.*

- General Services
    - *Support services systems include operational facilities related to the operations, security and safety, and maintenance of University Facilities such as: Fleet Services; shops supporting general maintenance activities; Police; utility plants; service yards; recycling areas; storage; and parking.*

Approximately 73% of the campus is developed (840 acres) and 27% is open space/park (312 acres).

The portion of the campus in the Scripps HA drains towards the Pacific Ocean and consists of Torrey Pines, Scripps Institution of Oceanography (SIO), and the western edge of the main campus. The drainage basins that are included in this area are approximately 480 acres.

The portion of campus in the Miramar Reservoir HA drains north to the Los Peñasquitos Creek consists of the northern part of the campus west of the Scripps HA. This portion of campus contains two undeveloped canyons which some of the storm water drains into. Approximately 290 acres of UC San Diego drains towards Los Peñasquitos Creek which flows to Los Peñasquitos Lagoon.

The portion of campus that is in the Miramar HA drains south and includes the remainder of the west campus, all of east campus, and La Jolla del Sol. Storm water in this area flows through campus storm drains to off campus Caltrans and City storm drains which eventually discharge to Rose Creek in Rose Canyon and then to Mission Bay. Drainage basins delineated for the UC San Diego campus portions that drain to Mission Bay total approximately 380 acres.

3 RECEIVING WATER QUALITY AND SOURCE ASSESSMENT

This section presents an evaluation of the water quality of the receiving water body, the identified pollutants of concern (POCs), and the source assessment for the POCs.

3.1 PACIFIC OCEAN / SAN DIEGO – SCRIPPS AREA OF SPECIAL BIOLOGICAL SIGNIFICANCE

UC San Diego has multiple storm water outfalls that discharge into the San Diego – Scripps Area of Special Biological Significance (ASBS 31). The California Ocean Plan requires that the following beneficial uses of the ocean waters of the State be protected:

- Industrial water supply
- Water contact and non-contact recreation, including aesthetic enjoyment;
- Navigation
- Commercial and sport fishing
- Mariculture
- Preservation and enhancement of ASBS
- Rare and endangered species
- Marine habitat;
- Fish migration;
- Fish spawning and shellfish harvesting

The California Ocean Plan prohibits the discharge of waste into ASBS. Because UC San Diego discharges seawater from Scripps Institution of Oceanography and storm water into ASBS 31, the University has an Exception to the Ocean Plan that was adopted by the State Water Resources Control Board (SWRCB) in July 2004 and renewed in April 2015. The exception includes conditions that were incorporated into Order No. R9-2015-0070, NPDES Permit No. CA0107239. The purpose of these conditions is to ensure that the discharges into ASBS 31 from UC San Diego do not adversely impact the biological communities in the ASBS or compromise protection of ocean waters for beneficial uses.

In addition, the Bacteria Project I Total Maximum Daily Load (TMDL) for Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) includes several segments of the La Jolla Shores Beach in the Scripps Hydrologic Area (906.30) that are located south of the UC San Diego Scripps Institution of Oceanography (e.g., La Jolla Shores Beach at El Paseo Grande). In 2018, UC San Diego was added to this TMDL for bacteria under the Phase II Small MS4 General Permit. As part of the NPDES permit program described above, UC San Diego performs surf zone water quality monitoring for indicator bacteria (total coliform, fecal coliform, and Enterococcus). Monitoring results are evaluated to confirm that the source and treatment controls implemented by UC San Diego to prevent the discharge of bacteria are effective.

3.2 LOS PEÑASQUITOS CREEK

Storm water runoff from the portion of campus in the Miramar Reservoir HA discharges first to two undeveloped canyons on campus and then north into the Soledad Canyon drainage where, after 1.5 miles, it discharges to Los Peñasquitos Creek. Los Peñasquitos Creek has 303(d) listings for the following pollutants:

- Enterococcus
- Fecal Coliform
- Total Dissolved Solids
- Selenium
- Total Nitrogen as N
- Toxicity

No Total Maximum Daily Loads (TMDLs) have been adopted for Los Peñasquitos Creek; however there is a draft TMDL for sediment and bacteria. Los Peñasquitos Creek discharges into Los Peñasquitos Lagoon which has a TMDL for sediment. UC San Diego has been added to the TMDL for sediment under the Phase II Small MS4 General Permit and monitors for sediment in the storm water runoff from the Campus Services Complex which discharges towards Los Peñasquitos Creek. Monitoring results are evaluated to confirm that the source and treatment controls implemented by UC San Diego to prevent the discharge of sediment are effective

3.3 Rose Canyon Creek

Storm water runoff from the portion of campus in the Miramar HA discharges into Caltrans and City storm drains that eventually flow to Rose Creek in Rose Canyon. Rose Canyon Creek flows south and into Mission Bay. Water quality protections for Rose Canyon Creek, therefore, also benefit the water quality of Mission Bay. Mission Bay has 303(d) listings for the following pollutants:

- Bacteria
- Eutrophic substances
- Lead

3.4 Pollutants of Concern

The University conducts monitoring of storm water runoff and the receiving water in ASBS 31 in accordance with the UCSD/SIO NPDES permit monitoring requirements for the discharge of seawater and storm water. Metals (e.g., copper and zinc), sediment, and bacteria have been identified as POCs in storm water runoff. In addition, the University has included trash as a pollutant of concern based on the Amendment to the California Ocean Plan to Control Trash that was adopted by the SWRCB on April 15, 2015.

3.5 Source Assessment

The University identified sources for each of the POCs in storm water is based on the understanding of University operations and land use.

- Sediment
  - Construction sites
  - Infrastructure (streets and storm drains)
  - Open spaces
- Metals (copper and zinc)
  - Roads (brake dust and tire wear from vehicles)
  - Outdoor metal storage
- Bacteria
  - Turf and Vegetative waste
  - Litter
  - Animal waste in open spaces
- Trash
  - Litter (priority land use areas such as commercial areas, high density residential apartments, City transit stations on campus, and construction sites, etc.)
  - Trash collection areas

Storm water pollutant sources such as those summarized in Table 3.1 are managed by various campus departments through programs and policies in place such as:

- Leases/Licenses
- Purchase Order Terms and Conditions
- Construction Contracts
- Volunteers and Internships
- Storm Water Inspections
- Storm Water Webpage with Non-Storm Water Discharge Reporting Guidance
- Source Control BMPs
- Landscape and Turf Management
- Irrigation Management
- Refuse and Recycling Program
- Street Sweeping
- Storm Drain Inspection and Preventative Maintenance

TABLE 3-1: PROGRAM WATER QUALITY OBJECTIVES

POLLUTANT OF CONCERN	SOURCE	TARGET AUDIENCE	PROGRAM WATER QUALITY OBJECTIVES (CASQA OUTCOME LEVEL)
Sediment	Construction sites	Contractors Staff	• Awareness of construction BMPs (2) • Proper design and implementation of construction BMPs (3) • Minimize sediment runoff from construction (4)
	Open space	Students Staff Faculty	• Awareness of sediment generated from ad-hoc trails (2) • Implement erosion and sediment controls on steep terrain (4)
	Infrastructure: streets and storm drains	Staff	• Awareness of Storm Drain Maintenance BMPs (2) • Street sweeping (3) • Reduce sediment load and associated pollutants going into storm drain from streets (4)
Metals	Roads	Staff	• Street sweeping (3)
	Outdoor storage	Staff Contractors	• Cover outdoor metal storage (4)
Trash	High Density Residential	Students	• Increase awareness of trash impacts on environment (2) • Reduce littering (3)
	Commercial	Students Staff Lessee	• Retrofit outdoor trash collection bins to types that birds and animals cannot get into (4) • Increase awareness of trash impacts on environment (2) • Reduce littering (3)
	Transit Stations	Students Staff Faculty	• Retrofit outdoor trash collection bins to types that birds and animals cannot get into (4) • Increase awareness of trash impacts on environment (2) • Reduce littering (3)
	Construction	Contractors	• Increase awareness of trash impacts on environment (2) • Reduce littering (3)
Bacteria	Turf and vegetative waste	Staff	• Increased awareness of landscape and turf management (4)
	Litter	Students Staff Faculty Contractors	• Increase awareness of trash impacts on environment (2) • Reduce littering (3) • Retrofit trash collection bins to types that birds and animals cannot get into (4)
	Animal waste in open spaces	Students Staff Faculty	• Increase awareness of pet waste impacts on water quality (2)

4 PRIORITY BEST MANAGEMENT PRACTICES (BMP) IDENTIFICATION AND ASSESSMENT

4.1 PRIORITY BMPS

The University evaluated the program elements to determine which BMPs target the Pollutant of Concern (POC) sources from the University operations to compile a list of Priority BMPs. The Priority BMPs are presented in the Program Effectiveness Assessment and Improvement Plan (PEAIP) Matrix in Appendix B as Table B-1. PEAIP Matrix includes the Priority BMPs, the targeted audience, the targeted POC, the associated program element, and the year of implementation. The Priority BMPs will be assessed each year to evaluate effectiveness. Non-priority BMPs will also be implemented but will not be included in the matrix.

4.2 PRIORITY BMP EFFECTIVENESS ASSESSMENT

The successful operation of the Storm Water Program requires tracking the progress of the program and modifying the program to improve effectiveness. Priority BMPs are assessed using the following criteria:

- **Level of Implementation** is an evaluation of whether implementation achieved the program goal. Ranked "None" if the BMP was not implemented at all, "Ongoing" if the BMP requires ongoing implementation to achieve program goals, or "Completed" if the BMP was fully implemented and achieved the program goals.

- **Effectiveness** is a measure of the impact of a BMP in terms of reducing a priority pollutant's load or reaching a target audience. Ranked from "Low" if a BMP is not effective to "High" if the BMP achieves a significant impact. Effectiveness is evaluated based on the targeted management questions developed for each Priority BMP. Management questions are used as a tool to evaluate whether the implementation of the BMP achieved the intended goal.

- **Priority Pollutants Targeted**: a BMP is included on the PEAIP Matrix in Appendix B if it targets a priority pollutant of concern.

- **Proposed Modifications:** Based on the review of data gathered to answer management questions, modifications may be proposed to increase the effectiveness of the Priority BMP or to redirect resources in a more effective manner. Proposed modifications will be summarized on the PEAIP Matrix when the assessment indicates changes are needed to improve a BMP and/or the desired outcome.

4.3 ASSESSMENT TOOLS

The University uses a diverse set of tools to evaluate the level of implementation, the effectiveness of priority BMPs, and answer Management Questions. The assessment tools include, but are not limited to the following:

- Staff, Faculty, and Student Storm Water Surveys
- Training Quiz Results
- Evaluation of BMP implementation
- Facility Inspections
- Reports of pollutant-generating activities
- Outfall Inspections

- Illicit Discharge Reports
- Follow-up Investigations
    - Illicit Discharge Detection and Elimination
- Receiving Water Quality
    - Sample results for metals, sediment, and bacteria from NPDES monitoring
- Storm Water Runoff Monitoring
    - Sample results for sediment and metals from NPDES monitoring

Annually, the data collected from the above activities and reports is used to track both short and long-term effectiveness of the storm water program.

4.4 Annual Reporting and Program Assessment

The BMP effectiveness assessment matrix (Table B-1) is used to document the annual assessment. The Priority BMP implementation and effectiveness level is determined based on the review of the data collected to answer management questions. The University submits the summary annually as a part of the Annual Report and identifies proposed modifications as needed to improve BMP and program effectiveness. Modifications may also include the need to collect additional data to better determine effectiveness.

Starting in July 2017, the program effectiveness assessment report combines the results of the annual BMP effectiveness assessment matrix to determine:

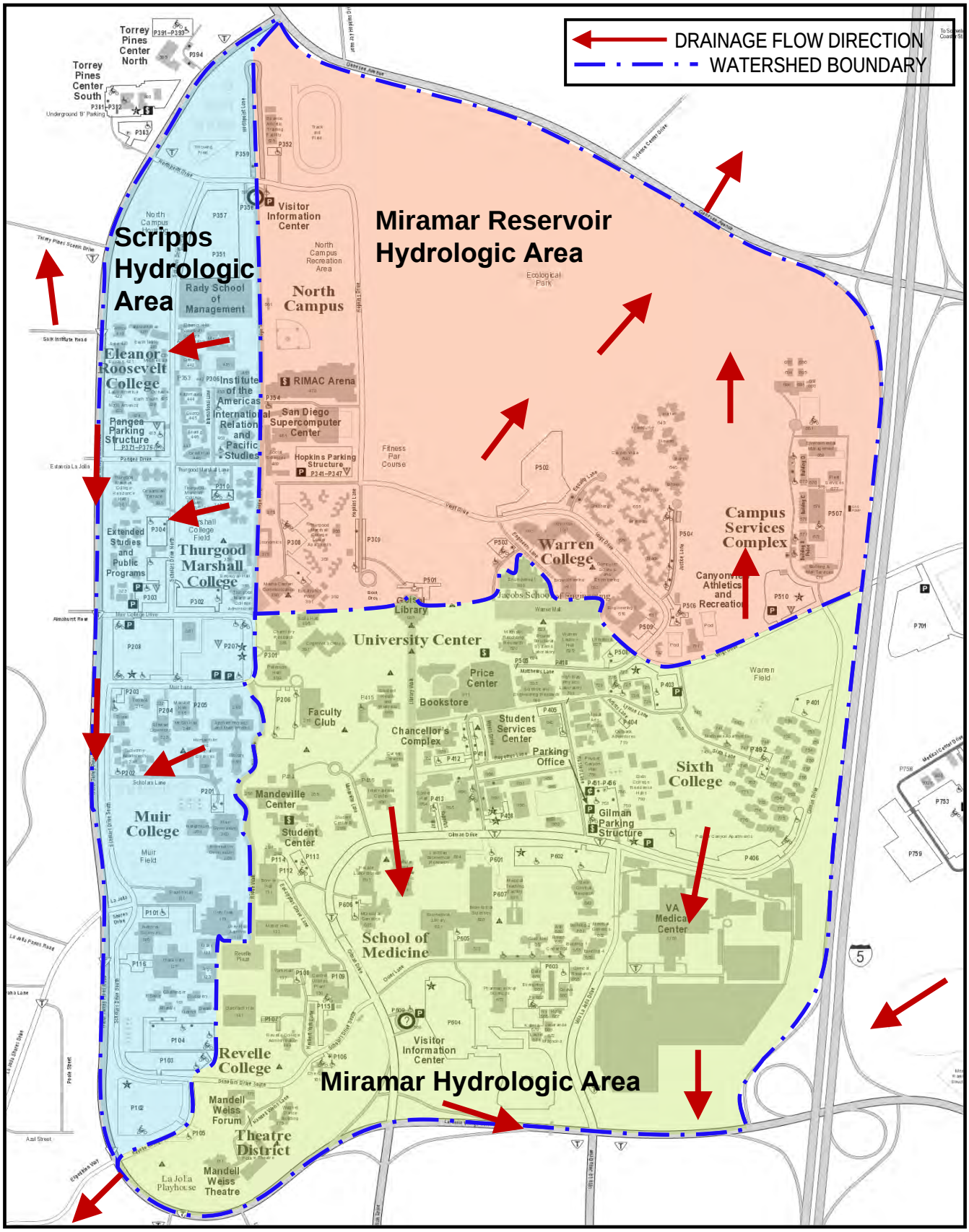
- Is the implementation of the Program improving water quality?
- Do any programs/policies need modification?
- Should any programs/policies/BMPs that have proved to be effective be expanded?
- Should any programs/policies/BMPs that are not effective be discontinued?
- Should priorities be shifted to make more effective use of resources?

The University includes the BMP effectiveness assessment matrix with proposed modifications with the Annual Report.

Appendix A

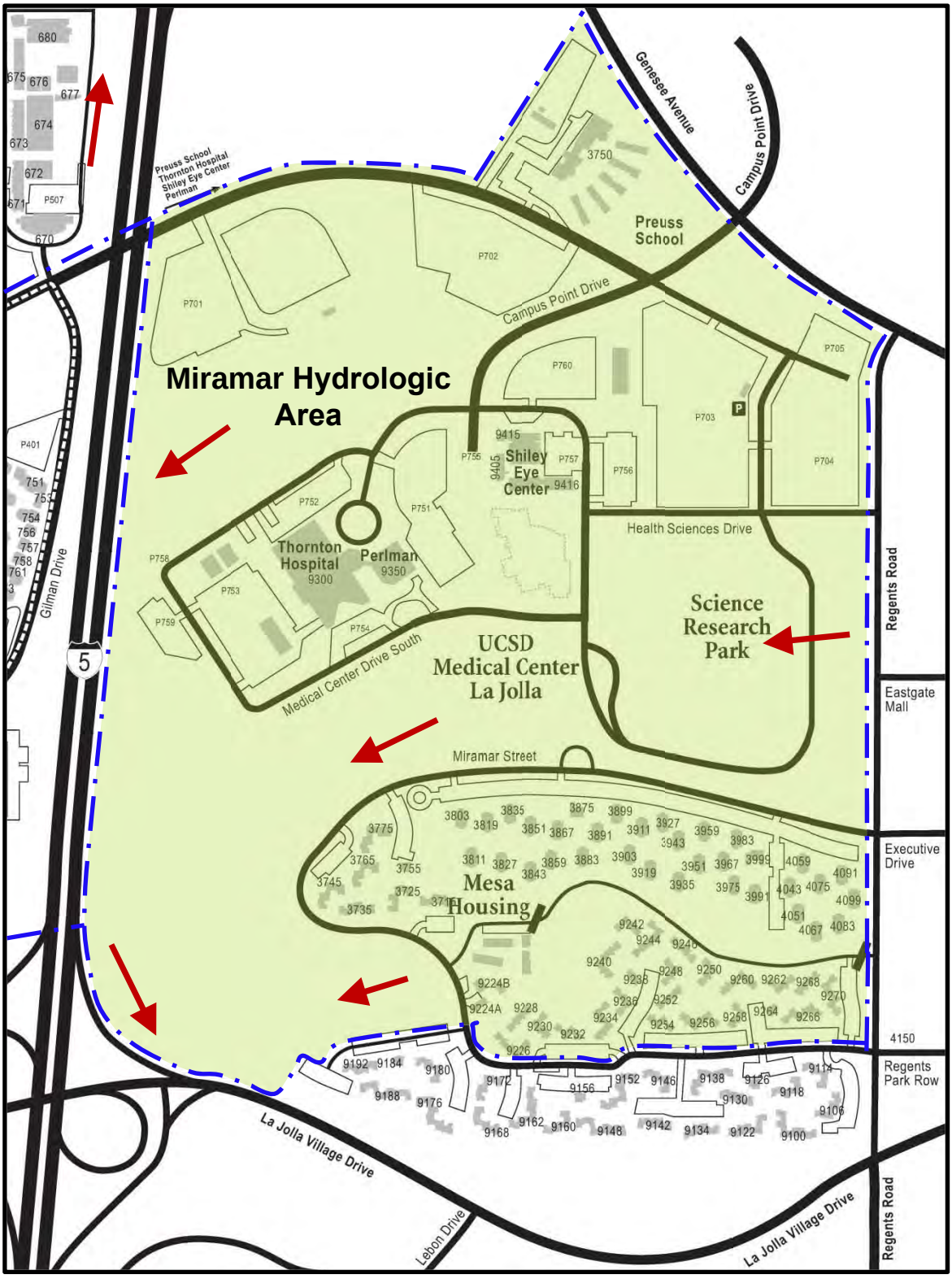
Campus Drainage and Watershed Maps

Figure 1. UC San Diego West Campus Drainage Map



Note: UC San Diego West Campus drainage flows towards the Pacific Ocean, Los Peñasquitos Creek, and Rose Canyon Creek.

Figure 2: UC San Diego East Campus Drainage Map



Note: UC San Diego East Campus drainage flows towards Rose Canyon Creek and Mission Bay.

Appendix B
Priority BMP Assessment

University of California San Diego

Storm Water Management Program Effectiveness Assessment and Improvement Plan (PEAIP) Matrix (July 2018 - June 2019)

PERMIT SECTION AND ELEMENT		Policy/ Procedure/ BMP Description	Permit Compliance Year for Implementation	Target Audience	Pollutant of Concern (POC)	CASQA Outcome Level (1-6)	Implementation Level (None, Ongoing, Completed)	Effectiveness Level (Low, Medium, High)	Summary	Proposed Modifications
F.5.b.	**EDUCATION AND OUTREACH PROGRAM**									
F.5.b.2	**Public Outreach and Education**									
	Disseminate education materials to target audiences and translate as appropriate	Storm water education and outreach program has been developed and is implemented on an ongoing basis. Storm water website is available to the public: http://stormwater.ucsd.edu	2 (2015)	Staff, Faculty, Students, Contractors	All POCs	2	Ongoing	High	Storm water pollution prevention educational materials have been developed for students, faculty, and staff and are used by EH&S at outreach events on campus throughout the year. The campus community is educated on the Area of Special Biological Significance (ASBS) adjacent to the campus, sources of storm water pollution, examples of things they can do at home and at work to prevent pollution, and the prohibition of non-storm water discharges into the campus storm water system. Storm water surveys are distributed at outreach events and the results of the surveys are evaluated to assess campus community awareness of storm water pollution and to adjust outreach information accordingly. In the fall of 2018, an EH&S storm water intern student created a storm water survey in Spanish to be used in conjunction with the survey in English at outreach events. Storm water Pollution Prevention training is provided in English and Spanish to UCSD Custodial Staff each year. Custom classes in English and in Spanish were conducted for the University Center custodial staff on 9/19/18 for 9 attendees and a total of 365 attended training on December 11, 2019 (four classes). Campus community storm water pollution prevention outreach events for the 2018/19 reporting year included the following 5 events with a total of 520 storm water surveys filled out by students, staff, and faculty: The All Staff Picnic on August 10, 2018 had 230 surveys filled out by students, graduate students, faculty, staff, and visitors. The SIO Safety Day on October 17, 2018 had 42 surveys filled out by students, graduate students, faculty, staff, and visitors. ESYS 90 Seminar Class on October 23, 2018 had 23 surveys filled out by students. Green Labs Fair on April 4, 2019 had 79 surveys filled out by students, graduate students, faculty, staff, and visitors. The Earth Day Fair on April 26, 2019 had 146 surveys filled out by students, graduate students, faculty, staff, and visitors. EH&S also facilitated an Industrial General Permit (IGP) Storm Water Workshop at Scripps Institution of Oceanography (SIO) in February 2019 in partnership with UC Extension to teach students about Best Management Practices. In early 2019, an EH&S storm water intern student created an online version of the storm water survey that could also be used at outreach events to reduce the use of paper. The survey is accessible through a QR code that a smartphone camera can read and will open the phone's browser to the survey. This was piloted at the Earth Day Fair and the 2019 All Staff Picnic. A back-up iPad is used for phones that cannot read the QR code.	Use the online/cell phone format to conduct surveys. Use the "review" feature of the survey to go over answers after completion. Use the iPad as a back-up when phones cannot read the QR code.
	Promote reporting of illicit discharges	UC San Diego's Illicit Discharge Detection and Elimination Program UC San Diego Blink Storm Water Management Program page at: http://stormwater.ucsd.edu includes an email link to report non-storm water discharges to storm drains. BMP D02 Landscape Management BMP D06 Non-Storm Water Discharges / Dry Weather Flows BMP E01 Employee Training	2 (2015)	Staff, Faculty, Students	All POCs	3	Ongoing	High	The campus community is educated on the prohibition of illicit discharges and non-storm water discharges into the campus storm water system and how to report them during outreach events on campus. Storm water surveys are distributed at outreach events to increase awareness of non-storm water discharges being a pollutant and how to report them. The UC San Diego storm water website includes an email link to report non-storm water discharges to storm drains. The annual "Environmental Compliance & Hazard Awareness" training for campus operations and maintenance staff identifies sources of non-storm water discharges, how to report them, and how to reduce/eliminate them. IDDE Vehicle Information Cards with information on how to identify and report NSWDs have been distributed to UC San Diego Departments with vehicles for field staff. A total of 467 cards have been distributed to the following departments: 50 to HDH, 30 to Transportation/Parking, 12 to PD&C, 121 to FM, 200 to Transportation/Fleet Services, 30 to UCPD, and 39 to EH&S.	None at this time
	Provide materials to effectively educate school-age children, if applicable, about storm water and how they can help to protect water quality habitat in their local watersheds	The Birch Aquarium at Scripps (BAS) has a number of education and outreach programs for school-age children that highlight storm water pollution and water quality impacts from pollution and demonstrate what people can do to protect their local watersheds.	2 (2015)	Public	Storm Water Awareness	2	Ongoing	High	A core component of UC San Diego, Scripps Institution of Oceanography's mission is to engage in education and outreach on ocean protection and water quality issues. Examples of education and outreach programs include, but are not limited to the following: https://scripps.ucsd.edu/iod/education-and-outreach Education: Southern California Coastal Ocean Observing System (SCCOOS) Community & Classroom, UCSD TV Perspectives on Ocean Science Lectures, Scripps Collections Teaching and Outreach, Birch Aquarium at Scripps Education Programs Outreach: SIO Games, Palmer LTER Education Outreach, Center for Ocean Sciences Education Excellence - California (COSEE-CA), Birch Aquarium at Scripps Public Programs, Scripps Technical Forum, and the following two Instagram accounts on social media: https://www.instagram.com/p/BhFjjPThrl-/?taken-by=scripps_ocean and https://www.instagram.com/p/BiR_AAcnkeG/?taken-by=scripps_ocean The Birch Aquarium at Scripps (BAS) hosts over 480,000 public visitors and 55,000 K-12 students each year through educational programs and experiences that are all, in some way, related to the mission of connecting understanding to ocean protection. BAS has an exhibit called "Inside the Plastic Vortex" which explains how plastic makes its way into the ocean from a number of avenues/sources. BAS uses plastic collected from the North Pacific Gyre during Scripps Environmental Accumulation of Plastic Expeditions (SEAPLEX) at outreach events in the community (e.g., Earth Fair). On World Oceans Day on 06/08/19, the theme of the entire aquarium was "Humans are the solution to plastic pollution." This included an interactive scavenger hunt around the tanks of the aquarium, with facts about marine debris-related issues and ways people can help. Hands-on activities included a recycling relay, dissecting albatross boluses, a test of whether marine debris sinks or floats, and a tap water vs. bottled water taste test. All of these helped aquarium visitors understand and take ownership of their watershed and their role in fighting plastic pollution. https://aquarium.ucsd.edu/events/2019/world-oceans-day-2019 Scripps Community Outreach for Public Education (SCOPE) specializes in connecting groups in the general public directly with the science conducted at Scripps. SCOPE organizes tours of various facilities on campus (most popularly the Ellen Browning Scripps Memorial Pier) and also arranges volunteers to attend off-campus events (like school career nights or library talks). Topics include oceanography, water quality issues, and climatology. SCOPE also offers scholarships to help enable field trips for students from low-income schools. Many researchers at Scripps Institution of Oceanography provide outreach talks and guest lectures to K-college classes and to the public on their PhD research. For example, Jenni Brandon, a Price Postdoctoral Fellow, has given multiple talks to the public on microplastic marine debris, and the effects of marine debris on the pelagic ecosystem. She emphasizes the fact that 80% of the marine debris in the ocean is from land-based sources, including much of it from wastewater. In her research, she found an abundance of clothing fibers, which are predominately from wastewater. She teaches the public about ways they can actively reduce the amount of plastic they consume and limit their plastic from getting to the ocean.	None at this time
F.5.b.3	**Staff and Site Operator Training and Education: Illicit Discharge Detection and Elimination Training**	The annual "Environmental Compliance & Hazards" training for Operations and Maintenance staff identifies sources of non-storm water discharges, how to report them, and how to reduce/eliminate them. UC San Diego's Illicit Discharge Detection and Elimination Program BMP D02 Landscape Management BMP D06 Non-Storm Water Discharges / Dry Weather Flows BMP E01 Employee Training	3 (2016)	Staff	All POCs	3	Ongoing	High	The campus community is educated on the prohibition of illicit discharges and non-storm water discharges into the campus storm water system. The annual "Environmental Compliance & Hazard Awareness" training for operations and maintenance staff and the annual "Environmental Compliance/Pollution Prevention" training for custodial staff identifies sources of non-storm water discharges, how to report them, and how to reduce/eliminate them. The training includes questions to test the participants knowledge. Additional 2018/2019 trainings for staff that also covered illicit discharge and non-storm water discharge detection, reporting, prevention, and elimination included the Storm Water Industrial General Permit Pollution Prevention Team Training for Fleet Services and Nimitz staff. The percentage of staff during outreach events who correctly answered the survey question, "Which of the following should NOT go into a storm drain? (check ALL that apply)" with checking both "Irrigation Runoff" and "Clean Water from a Hose/Bucket" increased from Fiscal Year 2016/17 with 28% correct to 31% correct in FY 2017/18. This percentage increased again in the 2018/19 FY to 45% correctly identifying both pollutants.	During the All Staff Picnic in 2019, EH&S piloted an online version of the storm water survey that could be taken using a smart phone. The primary lessons learned from this event was that a review feature was needed after the online survey was completed to ensure participants understand what the correct answers are to the survey prior to leaving. In the past, EH&S staff would go over their answers on the paper survey with them. A "review" feature will be tested at future outreach events.

EHS- Environment, Health, and Safety
FM- Facilities Management
PDC- Planning, Design, and Construction
HDH- Housing, Dining, and Hospitality
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F.5.b.4	**Staff Pollution Prevention and Good Housekeeping**	The annual "Environmental Compliance & Hazard Awareness" training for Operations and Maintenance staff covers UC San Diego's storm water pollution prevention program and identifies pollution prevention source control BMPs to be implemented for specific campus O&M activities. These Source Control BMPs are posted at: http://stormwater.ucsd.edu	2 (2015)	Staff	All POCs	3	Ongoing	High	The annual "Environmental Compliance & Hazard Awareness" training for operations and maintenance staff, the Environmental Compliance/Pollution Prevention training for custodial staff, and the Storm Water Pollution Prevention customized training for staff and students cover UC San Diego's storm water pollution prevention program and identify pollution prevention BMPs to be implemented for specific campus O&M activities. These trainings include questions to test the participants knowledge. Additional 2018/19 trainings for staff that covered UC San Diego's storm water pollution prevention program and identified pollution prevention BMPs to be implemented for specific O&M activities included NPDES permit compliance training for aquarists at the Birch Aquarium at Scripps and Storm Water Industrial General Permit Pollution Prevention Team Training for Fleet Services and Nimitz staff.	Training material is reviewed and updated on an annual basis
F.5.c	**PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM**									
	High Priority Storm Drains Labels	More than 95% of storm drains have been labeled on campus. Labeling of campus storm drains is ongoing. BMP D01 Storm Drain Management	3 (2016)	EH&S and HDH	All POCs	1	Ongoing	High	More than 99% of storm drains have been labeled on campus. Labeling of campus drains is ongoing. As EH&S does facility inspections, labels are added/replaced as needed. For future development projects that include pouring concrete around storm drain inlets, a concrete stamp will be used to imprint "NO DUMPING, DRAINS TO OCEAN" into the concrete.	EH&S has purchased a "NO DUMPING, DRAINS TO OCEAN" concrete imprint stamp to use for future development projects that include pouring concrete around storm drain inlets. This stamp will be more sustainable than the markers which have to be replaced.
	Storm Water Awareness messages on a publicly available website	UC San Diego Storm Water Management website: http://stormwater.ucsd.edu	3 (2016)	Staff, Faculty, Students, Contractors	All POCs	2	Completed	High	Storm water pollution prevention awareness information is included on the UC San Diego Storm Water Management Program website at: http://stormwater.ucsd.edu	The UC San Diego Storm Water Management website is reviewed annually and updated as needed. It was last updated in March 2019 and will be updated again in FY 19/20 with two new source control BMPs, revisions to the Post-Construction BMP checklists, and revisions to the Storm Water Management Plan
	Staff Outreach	Participation at the annual Staff Picnic and at Earth Day events by staff volunteers who conduct outreach and surveys on storm water awareness	3 (2016)	Staff	All POCs	2	Ongoing	High	EH&S staff volunteers conduct outreach and give surveys on storm water pollution prevention awareness at events such as the Annual Staff Picnic, the HDH Wellness Fair, SIO Safety Days, and at Earth Day events. The surveys are evaluated to assess the effectiveness of outreach efforts at increasing storm water pollution prevention awareness.	None at this time
	Volunteer/Intern Program	EH&S has a volunteer/internship program with Environmental System (ESYS) students to do a project related to storm water.	3 (2016)	Students	All POCs	2	Ongoing	High	EH&S works with UC San Diego students majoring in Environmental Systems (ESYS) to complete projects related to storm water pollution prevention and involves students in campus community outreach events. Projects have included construction of a rain barrel on campus; updating the inventory of campus treatment control BMPs and mapping them on GIS; evaluating trash capture device options for campus; evaluating the pollutant removal effectiveness of different types of media filters; carrying out duties described in the Phase II Small Municipal Separate Storm Sewer System (MS4) permit such as, but not limited to, performing outdoor inspections of campus facilities (High Medium and Low Priority) and completing inspection checklists (as described in F.5.f.5. Inspections, Visual Monitoring, and Remedial Action), updating the campus building inventory (as described in section F.5.f.1. Inventory of Permittee-Owned or Operated Facility), investigating NSWDs (as described in section F.5.d.3. Illicit Discharge Detection and Elimination Source Investigations and Corrective Actions), distributing Storm Water Pollution Prevention Plans to High Priority areas (as described in section F.5.f.4. Storm Water Pollution Prevention Plans), and attending meetings to implement plans and projects to support the MS4 permit, etc. The FY 2018/2019 student projects included: (1) Phase II Storm Water Compliance Evaluations; (2) Storm Water Treatment System Best Management Practice (BMP) Inventory updates; and (3) Storm Water Pollution Prevention and Water Conservation Education and Outreach. The student interns performing the storm water compliance/BMP implementation facility inspections evaluated approximately 300 campus facilities during the 2018/19 academic year.	EH&S is piloting an inspection app to enable storm water compliance/BMP implementation facility inspections to be performed using a smart phone. Student interns will be tasked with testing this application during the 19/20 academic year.
F.5.d	**ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM**									
F.5.d.2	**Field Sampling to Detect Illicit Discharges**	UC San Diego Illicit Discharge Detection and Elimination Program includes procedures for field sampling.	2 (2015)	EH&S	Bacteria, Sediment	1	Ongoing	High	EH&S staff inspect the outfalls at Scripps Institution of Oceanography and the main campus for non-storm water discharges (NSWDs) and work closely with FM staff when NSWDs are observed to identify the source and address it (e.g., irrigation system repairs). Field sampling procedures for non-storm water discharges are included in the UC San Diego Illicit Discharge Detection And Elimination Program. If the source of a non-storm water discharge can not be identified, EH&S collects samples to verify the water does not contain pollutants or exceed the Indicator Parameter Action Level Concentrations in the permit. Section 4. NSWD and Illicit Discharge Investigations and Response and Corrective Actions. Section 5. Monitoring Part A. If the source of the NSWD cannot be located through investigative procedures, samples will be collected and analyzed for: ammonia, color, conductivity, detergents-surfactants, fluoride, hardness, pH, potassium, and turbidity. Section 5. Monitoring Part B. EH&S will review laboratory results to verify that the action level concentrations for indicator parameters are not exceeded. Indicator Parameter Action Level Concentration Ammonia >= 50 mg/L Color >= 500 units Conductivity >= 2,000 µS/cm Hardness <= 10 mg/L as CaCO3 or >= 2,000 mg/L as CaCO3 pH <= 5 or >=9 Potassium >= 20 mg/L Turbidity >= 1,000 NTU EH&S maintains a Non-Storm Water Discharge Log for reported NSWDs on campus that includes responses/corrective actions taken. If the leak cannot be identified, the water is sampled in accordance with the plan.	None at this time
F.5.d.3	**Illicit Discharge Detection and Elimination Source Investigations and Corrective Actions**									

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	Illicit Discharge Detection and Elimination Program	The UC San Diego Illicit Discharge Detection And Elimination Program details how to identify and report non-storm water discharges, how to identify an "illicit" discharge and includes procedures for investigations and corrective actions. A link for reporting non-storm water discharges (NSWD) is on the UC San Diego Storm Water Management Website: http://stormwater.ucsd.edu BMP D02 Landscape Management BMP D06 Non-Storm Water Discharges / Dry Weather Flows BMP E01 Employee Training	2 (2015)	Staff, Contractors, EH&S	All POCs	4	Ongoing	High	EH&S Investigates reports of spills and other dry weather flows into the campus storm water conveyance system and takes appropriate measures to mitigate the discharge (e.g., clean up spill and/or repair leaking line, etc.). Inspection records are documented and saved. Once the source of an NSWD or illicit discharge has been identified, EH&S works with the responsible party to implement corrective actions. EH&S will report to the City of San Diego (downstream MS4), the San Diego RWQCB, and the San Diego Department of Environmental Health any non-storm water discharge suspected of being sanitary sewage and/or significantly contaminated material as outlined in Section 4. NSWD and Illicit Discharge Investigations and Response and Corrective Actions. IDDE Vehicle Information Cards with information on how to identify and report NSWDs have been distributed to UC San Diego Departments with vehicles for field staff. A total of 487 cards have been distributed to the following departments: 50 to HDH, 30 to Transportation/Parking, 12 to PD&C, 121 to FM, 200 to Transportation/Fleet Services, 30 to UCPD, 39 to EH&S and 20 to FM PM staff.	None at this time
F.5.e	**CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM**									
	Implement Construction Contracts	Construction projects greater than or equal to one acre are required to have Construction General Permit coverage and to implement CGP requirements.	1 (2014)	PD&C, FM	Sediment, Trash	1	Ongoing	High	UC San Diego implements the following for construction projects greater than or equal to 1 acre: Review SWPPPs prior to filing Notice of Intent (NOI), Conduct inspections of SWPPP BMPs in accordance with the Construction General Permit, Coordinate findings with project contractor and PD&C staff, and Review storm water issues with all project affiliated personnel at SWPPP kick-off meetings prior to construction commencement.	None at this time
	Construction Inspection Program	For construction projects >1 acre, a qualified SWPPP Practitioner (QSP) conducts construction site inspections in accordance with the procedures identified in the Construction General Permit.	1 (2014)	PD&C	Sediment, Trash	3	Ongoing	High	For construction projects greater or equal to 1 acre in size, a qualified SWPPP Practitioner (QSP) conducts construction site inspections in accordance with the procedures identified in the Construction General Permit based on the risk level for the project. For Risk Level 2 projects, for example, this includes: weekly site inspections; rain event action plans; pre-rain, rain, and post-rain event inspections; and maintenance inspections. For construction projects less than 1 acre in size, training is provided to Facilities Management Project Management staff on construction storm water BMP inspections and Post-Construction requirements. A storm water BMP inspection checklist for outdoor construction projects less than one acre (not subject to the General Construction Permit) was developed to improve construction BMP oversight on small projects. EH&S is conducting BMP inspections at construction project sites less than 1 acre in size that discharge runoff directly to storm water environmentally sensitive locations such as Scripps Institution of Oceanography.	A storm water BMP inspection checklist for outdoor construction projects less than 1 acre has been developed to improve BMP implementation. In addition, EH&S is working with staff from PD&C to revise planning and construction specifications for projects that discharge to storm water environmentally sensitive locations to improve storm water BMP guidance.
	Plan Review for storm water quality impacts	Project SWPPPs and water quality technical reports are reviewed by PD&C or a designated University Representative.	1 (2014)	PD&C	Sediment, Trash	4	Ongoing	High	Project SWPPPs and water quality technical reports are reviewed by PD&C staff or a designated University Representative to confirm compliance with CGP and University policy requirements.	None at this time
F.5.f	**POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS PROGRAM**									
F.5.f.3.	**Facility Assessment**	EH&S staff conduct an annual review of UC San Diego facilities with a potential to impact surface waters.	3 (2016)	EH&S	All POCs	1	Ongoing	High	As storm water inspections are conducted by EH&S staff (quarterly for hotspots, annually for medium priority facilities, and every 3 to 5 years for low priority facilities), an inventory is kept for each facility including the date and the identified priority level (high, medium, or low) based on the inspection. The facility inventory and inspection checklists are kept on file by EH&S. During the 2018-2019 academic year, ESYS student interns performed source control BMP evaluations at more than 300 "low priority" facilities on campus.	Priority levels for facilities are evaluated during each assessment and modified as needed
F.5.f.4	**Storm Water Pollution Prevention Plans**	EH&S maintains Storm Water Pollution Prevention Plans for hot spot facilities. In addition, EH&S maintains a Storm Water Management Plan, a Spill Prevention, Control, and Countermeasures Plan, and Hazardous Materials Business Plans for the campus.	4 (2017)	EH&S, Facility Managers	All POCs	1	Completed	High	UC San Diego has developed and implemented Storm Water Pollution Prevention Plans (SWPPPs) for the Nimitz Marine Facility and for Fleet Services which are both regulated under the Industrial General Permit (IGP) and are high priority sites. These plans were updated in 2019. A Storm Water Pollution Prevention Plan has also been developed for the Campus Services Complex, a designated Hot Spot, and is displayed in break rooms inside the CSC shops and offices. EH&S also maintains a Storm Water Management Plan, a Spill Prevention, Control, and Countermeasures Plan, and Hazardous Materials Business Plans for the campus.	These plans are reviewed on a regular basis and updated as needed
F.5.f.5	**Inspections, Visual Monitoring and Remedial Action**	EH&S will conduct quarterly inspections of high priority facilities (hotspots) and inspections of low priority facilities once per permit term.	5 (2018)	EH&S	All POCs	4	Ongoing	High	Visual inspections are performed monthly at Fleet Services and at the Nimitz Marine Facility (high priority sites) through the Industrial General Permit program. Storm water pollution prevention inspections of high priority campus facilities identified as "hot spots" (e.g., Campus Services Complex) are performed quarterly by EH&S staff. Visual inspections of the outfalls at SIO (discharge to the ocean) are performed weekly by EH&S as part of the SIO NPDES Permit program. Storm water pollution prevention inspections of campus facilities that have been identified as low priority based on visual inspections are being done at a minimum of every 3 to 5 years.	None at this time
F.5.f.6	**Storm Drain System Assessment and Prioritization**	As part of the storm drain catch basin cleaning process, UC San Diego is assessing storm drains with CCTV. As catch basins and underground pipes are inspected and cleaned, the storm drain systems are identified as high or low priority and put on the corresponding cleaning/maintenance schedule.	2 (2015)	PD&C, FM, HDH	All POCs	1	Ongoing	High	As part of the storm drain catch basin cleaning process, UC San Diego is assessing storm drains with CCTV. As catch basins and underground pipes are inspected and cleaned, high priority areas are identified and logged. As "High Priority" storm drains are identified, increased cleaning for these areas is scheduled by FM. High Priority Determination for a Catch Basin: (1) catch basin is known to accumulate a significant amount of sediment, trash, and/or debris; (2) catch basin collects a large volume of runoff; (3) catch basin collects runoff from an area that does not receive regular street sweeping; (4) catch basin collects runoff from drainage areas with exposed or disturbed soil; and/or (4) catch basin receives complaints/reports from staff, students, faculty, visitors, etc. FM and HDH Grounds and Landscaping staff visually inspect above ground storm water conveyance systems and inlets for accumulated sediment and debris and clean as needed. Conveyance systems in high pollutant load areas are cleaned before the rainy season.	None at this time
F.5.f.7	**Maintenance of Storm Drain System**									

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Storm Water Management Program Effectiveness Assessment and Improvement Plan (PEAIP) Matrix (July 2018 - June 2019)

PERMIT SECTION AND ELEMENT		Policy/ Procedure/ BMP Description	Permit Compliance Year for Implementation	Target Audience	Pollutant of Concern (POC)	CASQA Outcome Level (1-6)	Implementation Level (None, Ongoing, Completed)	Effectiveness Level (Low, Medium, High)	Summary	Proposed Modifications
	Inspect storm drain systems based on assigned priorities. Inspect high priority catch basins annually	High priority storm drain systems are inspected and cleaned on an annual basis as described in BMP D01 Storm Water Conveyance System Management	3 (2016)	FM, PD&C, HDH	All POCs	4	Ongoing	High	UC San Diego is assessing storm drain pipes on campus with CCTV, starting with main pipes and working outward. As lines are inspected and cleaned, high priority areas are identified and logged. As "High Priority" storm drains are identified, increased cleaning for these areas is scheduled by FM. FM and HDH Grounds and Landscaping staff visually inspect above ground storm water conveyance systems and inlets for accumulated sediment and debris and clean as needed. Conveyance systems in high pollutant load areas are cleaned before the rainy season.	None at this time
	Clean high priority storm drains	BMP D01 Storm Water Conveyance System Management. High priority areas will be cleaned annually before the rainy season.	3 (2016)	PD&C, FM, HDH	All POCs	4	Ongoing	High	As "High Priority" storm drains/catch basins are identified, increased cleaning is scheduled. FM and HDH Grounds and Landscaping staff visually monitor open channels, detection basins, and other aboveground storm water conveyance systems and clean high pollutant load areas before the rainy season to remove accumulated sediment and debris.	None at this time
	Maintain surface drainage structures	UCSD Storm Water Conveyance System Management BMP D01: 1. Conduct visual storm drain inspections annually in high pollutant load areas where sediment, trash, or other pollutants accumulate more often. 2. Clean storm drain conveyance system at least once before the wet season (October – May). 3. Maintain records of inspections and maintenance	3 (2016)	FM, HDH	Sediment, Trash, Bacteria	4	Ongoing	High	FM and HDH Grounds and Landscaping staff visually monitor all aboveground open channels, detention basins, and other drainage structures for debris and prioritize problem areas as described in BMP D01 Storm Water Conveyance System Management.	None at this time
	Develop procedure to dispose of waste materials removed from catch basins	Storm Water Conveyance System Management BMP D01 includes procedures for proper disposal of waste materials from catch basins.	3 (2016)	EH&S	Sediment, Trash, Bacteria	3	Completed	High	UCSD Storm Water Conveyance System Management BMP D01 includes procedures to properly remove and dispose of waste materials removed from catch basis. BMP D01 is in the UC San Diego Storm Water Management Plan and is posted on the website.	None at this time
F.5.f.8	**Permittee Operations and Maintenance Activities (O&M)**									
	O&M activity assessment and BMP Handbook	EH&S developed the UC San Diego Storm Water Pollution Prevention Source Control Best Management Practices Handbook for outdoor operations and maintenance activities that have the potential to discharge pollutants to storm water. The BMP handbook identifies the pollutants that can be discharged from these activities and the procedures to reduce the discharge of pollutants to storm water. These Source Control BMPs are posted at: http://stormwater.ucsd.edu	3 (2016)	EH&S	All POCs	3	Completed	High	UC San Diego implements source control Best Management Practices (BMPs) to prevent or reduce pollutants in storm water runoff. These BMPs are categorized into 6 sections. Section A Outdoor Work Area Management: BMP A01 Good Housekeeping; BMP A02 Spill Prevention, Control, and Cleanup; BMP A03 Marine Activities; and BMP A04 Loading Dock Management. Section B Vehicle, Equipment, and Boat Management: BMP B01 Outdoor Washing/Cleaning, BMP B02 Fueling Operations, BMP B03 Equipment and Vehicle Maintenance, and BMP B04 Preventative Maintenance. Section C Materials and Waste Management: BMP C01 Trash Management, BMP C02 Hazardous Material Management, BMP C03 Hazardous Waste Management, BMP C04 Materials and Waste Transportation, BMP C05 Food Service Management, BMP C06 Sanitary Sewer Overflows, and BMP C07 Metal Tracking. Section D Facilities and Grounds Management: BMP D01 Storm Drain Management; BMP D02 Landscape Management; BMP D03 Surface Cleaning; BMP D04 Fire Sprinkler and Hydrant Testing/Flushing; BMP D05 Outdoor Painting and Sandblasting; BMP D06 Non-Storm Water Discharges (NSWD); BMP D07 Integrated Pest Management; BMP D08 Building Repair and Remodeling; BMP D09 Parking and Storage Area Maintenance; BMP D10 Maintenance on Equipment Containing Water (e.g., eyewash showers, boilers, condensate drains, rooftop HVAC equipment, and drainage sumps); BMP D11 Potable Water System Flushing; BMP D12 Pools, Decorative Fountains, and Other Water Features; BMP D13 Erosion and Sediment Control; and BMP D14 Utility Vault Water Removal. Section E Training: BMP E01 Training.	Updated as new activities or procedures are identified during O&M BMP evaluations (last updated in September 2019 to include metal tracking and utility vault water removal)
	O&M Priority BMPs	Based on the priority pollutants of concerns (sediment, trash, bacteria, metals), the following are high priority BMPs, policies, and procedures: 1) Street sweeping 2) IDDE Program 3) BMP A01 Housekeeping 4) BMP A02 Spill Prevention, Control, and Cleanup 5) BMP A04 Loading Dock Management 6) BMP C01 Trash Management 7) BMP C07 Metal Tracking 8) BMP D01 Storm Water Conveyance System Management 9) BMP D02 Landscape Management (includes irrigation runoff, erosion, and green waste) 10) BMP D03 Surface Cleaning 11) BMP D06 Non-Storm Water Discharges 12) BMP D09 Parking Lot and Storage Area Management 13) BMP D13 Erosion and Sediment Control 14) BMP E01 Training	3 (2016)	FM, HDH, PD&C, O&M Staff, Contractors	All POCs	4	Completed	High	Based on the priority pollutants of concerns (sediment, trash, bacteria, metals), the following are high priority BMPs, policies, and procedures: 1) Street sweeping 2) IDDE Program 3) BMP A01 Housekeeping for Outdoor Material Storage and Outdoor Work Areas 4) BMP A02 Spill Prevention, Control, and Cleanup for Outdoor Spills or Leaks 5) BMP A04 Loading Dock Management 6) BMP C01 Trash Management 7) BMP C07 Metal Tracking 8) BMP D01 Storm Water Conveyance System Management 9) BMP D02 Landscape Management (includes irrigation runoff, erosion, and green waste) 10) BMP D03 Surface Cleaning 11) BMP D06 Non-Storm Water Discharges 12) BMP D09 Parking Lot and Storage Area Management 13) BMP D13 Erosion and Sediment Control 14) BMP E01 Training	O&M Priority BMPs are updated as new activities or procedures are identified during O&M BMP evaluations. BMP C07 Metal Tracking, is a new priority BMP that was developed in 2019 to provide guidance on waste metal recycling and disposal requirements.

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F.5.f.9	**Landscape Design and Maintenance**									
	Implement practices that reduce the discharge of pesticides, herbicides and fertilizers.	UC San Diego Integrated Pest Management Program BMP D07 Integrated Pest Management BMP D02 Landscape Management Pesticide and herbicide application on campus is limited to licensed and trained staff and contractors	2 (2015)	EH&S, FM, HDH, Contractors	Bacteria, Sediment	4	Ongoing	High	Pesticide and herbicide application on campus is limited to licensed and trained staff and contractors UC San Diego implements Integrated Pest Management (IPM) strategies on campus through a combination of techniques such as biological controls; use of pest resistant, climate appropriate plant varieties; and modification of irrigation or pruning to make the habitat less conducive to pest development. If pesticides are used, the least toxic, most effective, and most specific product is used. Organic based products are used whenever possible. Mulch is used for weed prevention and moisture retention to reduce irrigation and use of chemical controls. The campus has also retrofitted irrigation equipment to conserve water and prevent irrigation run-off. Clippings, leaves, and other vegetative debris is collected to keep it out of the storm drain system and is properly disposed of or used as mulch. Unused pesticides and herbicides are managed in accordance with manufacturer specifications, product labels, and State regulations. In May 2019, UCOP issued a temporary suspension (with several exceptions) of the use of glyphosate-based herbicides at all UC campuses, including UC San Diego. Research is being conducted to evaluate human health and ecological hazards associated with these chemicals. UCOP is also initiating the UC Herbicide Taskforce for guidance in the future.	None at this time
	Minimize irrigation run-off.	FM and HDH monitor and repair or replace irrigation equipment as needed to conserve water and prevent irrigation run-off.	2 (2015)	FM, HDH	Bacteria, Sediment	4	Ongoing	High	The campus monitors and repairs or replaces irrigation equipment as needed to conserve water and prevent irrigation run-off. EH&S assists with monitoring irrigation systems during facility assessments.	None at this time
F.5.g	**POST CONSTRUCTION STORM WATER MANAGEMENT PROGRAM**									
F.5.g.1	**Site Design Measures**	UC San Diego requires the implementation of site design measures for regulated projects that create or replace 2,500 SF or more of impervious area. These requirements are summarized on the UC San Diego Storm Water Management Website: http://stormwater.ucsd.edu	2 (2015)	P&CP, PD&C, FM, HDH	Sediment	5	Ongoing	High	A Post-Construction BMP Checklist is required to be completed for regulated projects that create or replace 2,500 SF or more of impervious area. Site Design Measures that will be implemented for the project are identified in the checklist. EH&S collects completed Post-Construction BMP Checklists from PD&C.	Post-Construction BMP checklists are being revised to be incorporated into standard title block templates
F.5.g.2.	**Low Impact Development (LID) Design Standards**	UC San Diego requires the implementation of Low Impact Development (LID) Design Standards for regulated projects that create or replace 5,000 SF or more of impervious area. These requirements are summarized on the UC San Diego Storm Water Management Website: http://stormwater.ucsd.edu	2 (2015)	P&CP, PD&C, FM, HDH	Sediment	5	Ongoing	High	A Post-Construction BMP Checklist is required to be completed for regulated projects that create or replace 2,500 SF or more of impervious area. LID Design Standards and hydromodifications that will be implemented for the project are identified in the checklist. EH&S collects completed Post-Construction BMP Checklists from PD&C and adds the BMPs to the BMP inventory when the project is completed. The checklists contain a section called "Post Construction BMP follow-up" which asks if there was a storm water treatment system installed, who has O&M responsibility post construction (HDH, FM, contractor, or other), and if O&M procedures or guidance was provided to UC San Diego.	The Post-Construction Storm Water BMP Checklist for projects that create or replace 5,000 square feet of impervious area was updated and posted on the Campus Storm Water webpage. In addition, the checklist is being incorporated into a standard title block template to be used for future development and redevelopment projects.
F.5.g.4	**Operation and Maintenance of Post-Construction Storm Water Management Measures**									
	The Permittee shall ensure that systems and hydromodification controls installed at projects are properly operated and maintained for the life of the projects.	EH&S works with FM, PD&C, HDH and vendors to verify that storm water management systems are being properly operated and maintained through routine inspections.	3 (2016)	EH&S, PD&C, FM, HDH	Sediment, Trash	4	Ongoing	High	UC San Diego maintains an inventory of storm water treatment control BMPs. The inventory is updated as new treatment control BMPs are installed on campus. Inspection and maintenance of the BMPs is included in the work order system for Facilities Management (Maximo) so the inspections and maintenance can be assigned to appropriate staff and tracked. In addition, EH&S schedules and oversees the O&M for the treatment control systems that are inspected and maintained by vendors. The treatment control inventory is maintained by EH&S. UC San Diego Storm Water Treatment Control BMP Inventory is posted at: http://stormwater.ucsd.edu	EH&S is working with PD&C to create standardized O&M procedures for the storm water treatment systems on campus to improve the current O&M guidance in the work order system for Facilities Management.

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