V.N UTILITIES

This section addresses utility issues related to wastewater and stormwater conveyance and treatment, water availability and supply, solid waste generation and disposal, and electrical service and availability. The Infrastructure Analysis provided as Appendix C to the West Los Angeles College (WLAC) Facilities Master Plan (FMP) and utility service provider input were used to identify the existing utility infrastructure systems and capacities serving the project site.

V.N.1 WASTEWATER

Existing Conditions

According to the Bureau of Sanitation, Wastewater Engineering Services Division[1], three major City sewer lines run beneath the project site: the North Outfall Sewer, the North Central Outfall Sewer, and the North Outfall Relief Sewer. The project site is currently connected to the North Outfall Sewer (NOS) via a 10-inch main line that runs through the campus in a north-south alignment. The NOS is a major, 10.5-foot, semi-elliptical concrete sewer maintained by the City of Los Angeles Bureau of Engineering. It is part of a lager sewage collection system that transports sewage to the Hyperion Treatment Plant in Playa Del Rey, within the City of Los Angeles. The NOS underneath the campus is buried several feet below grade and is located within a utility easement from Sophomore Drive under the Football and Track Fields along B Street and then diagonally out through Parking Lot 6 and the Plant Facilities yard. Major structures are not permitted on top of the sewer easement. However, surface paving, landscaping and other minimal pedestrian amenities may be placed on the easement. The College is responsible for replacing all hardscape elements above the sewer easement, if access to the underground sewer line is required for maintenance or replacement.

As reported by the Bureau of Sanitation, the NOS has been removed from service for cleaning and rehabilitation, except for about two dozen local connections, including the WLAC sewer connection. Current flow within the NOS is about 10 MGD. Upon completion of the sewer cleaning and rehabilitation project, additional flow may be added back to this line, however, this amount has not yet been determined by the Bureau, as completion of the cleaning and rehabilitation project is not expected to occur for several years.

Sewage generated at the WLAC campus is treated at the Hyperion Treatment Plant (HTP). The HTP currently treats approximately 380 million gallons per day (MGD) and has a design capacity of 650 MGD. Treated wastewater from the Hyperion Treatment Plant is discharged into the Pacific Ocean (Santa Monica Bay) on a daily basis. A portion of the treated water is reclaimed and used for irrigation purposes. Solids generated from the treatment process are managed for use in the Hyperion Energy Recovery System, land application and chemical fixation.

According to the flow rates provided in the City of Los Angeles sewage disposal invoice for fiscal year 2001/2002, WLAC produced 13.02 million gallons of sewage for the year. This represents a daily discharge of approximately 56,870 gallons per teaching day (229 teaching days per year). The invoice calculated flow at 9 gallons per day (gpd) per Full Time Equivalent (FTE) student per the number of teaching days. The number of FTE students for the fiscal year 2001/2002 was 6,318.

Threshold of Significance

Build-out of the WLAC Facilities Master Plan would have a significant environmental impact with regard to the sanitary sewer system if the project would:

[1] Throughout this section, information provided by the Bureau of Sanitation is based on a letter from Adel Hagekhalil, Division Manager, City of Los Angeles Bureau of Sanitation Wastewater Engineering Services Division to Brian McCarthy, Envicom Corporation, June 2, 2003.

- Exceed the capacity of the existing sanitary sewer system or treatment plant that serves the project site, thereby requiring new or expanded facilities that would cause a substantial physical adverse change in the environment; or
- Exceed the capacity of the existing sewer system or treatment plant resulting in sewage spills or overflows that would have a substantial physical adverse effect on the public health or the physical environment.

Project Impacts

Under the proposed Facilities Master Plan, additional structures and facilities will be constructed in order to accommodate increased enrollment at the College and associated faculty and staff. These structures and facilities will be connected to the existing 10-inch main, which currently outlets to the NOS at a single location. A second connection to the NOS is recommended in the Facilities Master Plan Infrastructure Analysis in order to create two separate systems, which would allow one system to remain functional should the other require maintenance. The recommended location for this connection is at the intersection of Freshman Drive and F Street.

The increased student enrollment and associated faculty and staff would increase sewage generation at the WLAC campus. Based on standard sewer facility charge flow rates, a college is expected to generate approximately 18 gallons per day (gpd) of wastewater per FTE student. However, according to David Chueng, Senior Sanitary Engineer with the City of Los Angeles (May 2003), since the college has implemented water conservation features into its system, a factor of 9 gpd per FTE student is currently used to determine the wastewater discharge of WLAC. Although it is anticipated that the College will similarly implement water conservation features into the proposed buildings and facilities, for purposes of providing a conservative analysis, sewage generation associated with the proposed project is calculated based on a generation rate of 18 gpd. Based on this generation rate and a projected FTE student enrollment increase of 8,906 between 2022 (15,342 FTE students) and 2002 (6,436 FTE students), sewage generation at the WLAC campus would increase by 160,300 gpd.

As stated in the FMP, according to the LA County Department of Public Works design guide, the existing 10.5-inch main within the campus would be adequate to serve the future build-out as proposed in the FMP. As described above, the NOS has currently been removed from service for cleaning and rehabilitation, with the exception of about two dozen local connections including the WLAC. This line currently accommodates a flow of 10 MGD. The proposed project would increase this flow by about 1.6 percent. The Bureau of Sanitation has not identified an NOS capacity issue associated with the proposed project at this time. Therefore, the proposed project is not expected to result in significant impacts related to the wastewater conveyance system.

As described above, the Hyperion Treatment Plant currently treats approximately 380 MGD and has a design capacity of 650 MGD. The increase in flow of 160,300 gpd would represent an increase of approximately 0.04 percent in the amount of sewage currently treated daily at the Plant. According the Rachel Bass of the City of Los Angeles Bureau of Engineering, the Hyperion Plant would have adequate capacity to accommodate the estimated increased flows associated with build-out in accordance with the FMP (personal communication, May 2003). Accordingly, no significant impact to the wastewater treatment plant would occur.

Cumulative Impacts

Other future development in the service area of the City of Los Angeles Bureau of Sanitation service area would increase the demand on the wastewater conveyance system and the Hyperion Treatment Plant. Projects in the project area that may create compounded impacts to the wastewater system include those listed in Table IV-1. Using the City of Los Angeles standard sewer generation rates, the combined projects provided in the related projects list would generate over 1.5 million gallons per day. Of these projects, Phase I of the Playa Vista development is expected to generate over 1 million gallons per day. The proposed project in combination with the related projects list would generate an estimated increase of approximately 1.66 million gallons per day of sewage. This would represent an increase of approximately 0.4% of the amount of sewage treated daily at the Hyperion Treatment Plant. This is not considered a significant cumulative impact.

Mitigation Measures

While impacts are not significant, project implementation of mitigation measure WW-1 would further reduce wastewater service impacts.

WW-1 The College shall install water conservation features such as low-flow faucets, low-flow toilets, and occupant sensors to the extent feasible in all new construction.

Significant Project Impacts After Mitigation

Neither the completion of the proposed improvements on the campus nor the completion of a second public access road around or through a portion of the Baldwin Hills would result in a significantly adverse impact upon wastewater services.

V.N.2 STORM WATER

Existing Conditions

The Los Angeles County Department of Public Works (LACDPW) maintains the existing main storm drain system servicing the WLAC. The campus contains private drainage systems, which connect to the County system. The County system includes lines beginning along the east side of the campus at Sophomore Drive, which picks up rainwater that falls on the campus and along the portion of the Baldwin Hills located directly east of the campus. Rainwater is diverted into riprap and headwall structures at specific points east of Sophomore Drive and taken underground into the storm drain system, which parallels the centerline of Sophomore Drive.

The campus storm water runoff drains from east to west and down the hills due to the terraced terrain of the campus. Two on-site private main lines at the north and south portions of the campus collect the majority of the stormwater. Runoff at the north portion of the campus enters a line that runs north to south along B Street and east next to the CE Building and Science and Math Building. At the south end this line connects to a line that runs east and west and down hill along Albert Vera Street. This line then connects to the LACDPW main lines near the entrance of the campus. Flows then continue in the LACDPW system until discharged into Ballona Creek located west of the campus and ultimately into the Pacific Ocean at Marina Del Rey.

According to the Hydrology Study prepared for the project[2], two LACDPW lines service the 72-acre project site. One line is a 42-inch Reinforced Concrete Pipe (RCP) / Wide Trapezoidal Channel in Freshman Drive. The other is a 21- to 48-inch RCP in Sophomore Drive. Existing hydrology studies prepared by the Los Angeles County Flood Control District attribute 69.3 acres of area to be tributary to the Freshman Drive line and 3.8 acres to be tributary to the Sophomore Drive line. The current discharge rate is 1.24 cfs/acre.

Thresholds of Significance

Build-out of the WLAC campus in accordance with the Facilities Master Plan would result in significant adverse environmental impacts if the project would:

- Exceed the capacity of the existing storm water drainage system, resulting in on- or off-site flooding; or
- Require or result in the need for new or expanded off-site water drainage facilities, the construction of which would cause a significant adverse environmental effect.

Project Impacts

The Psomas Hydrology Study addresses the adequacy of the existing storm drain system to accommodate any increased flows that may be associated with build-out of the campus under the proposed FMP. Currently, all storm drains are designed to accommodate a 10-year frequency storm with detention volumes based on a 25-year storm per the LACDPW criteria. The majority of the campus has been graded and/or developed and new grading and development in accordance with the FMP will not significantly change the amount or rate of runoff from the existing site conditions. Therefore, the proposed project would result in a minor increase in storm water flows relative to the existing conditions. Existing on-site storm drains will continue to be used and storm drainage will be conveyed in the same manner that it is currently.

Hydrology calculations conducted for the proposed project site compared the existing allowable discharges into LACDPW storm drain systems adjacent to the campus, to the post-development site-runoff discharge volumes (Psomas,2003a). The Project site watershed is divided into four sub-areas (A-1, A-2, B, and C). Sub-area A-1 encompasses most of the southern and eastern portions of the Project site. Sub-area A-2 is in the west-central area with Sub-are B just to the north. Sub-area C includes Sophomore Road and the northern one-quarter of the football

[2] Hydrology Study For West Los Angeles College Campus, Psomas, March 21, 2003.

field area. Together Sub-areas A-1 (42.2 acres) and A-2 (20.5 acres) encompass 63.3 acres, Sub-area B 5.9 acres and Subarea C 4.4 acres. The hydrological calculations indicate the need for an on-site storm drain system, in conjunction with on-site detention structures, to accommodate potential post-construction storm water loadings into to the existing storm drain system, which would then protect the campus and adjacent areas from flooding. **Table V.N.2-1** summarizes the sub-area sizes, the calculated 25-year storm flow rates after project construction, the allowable discharge rates based on LACDPW, and required water storage for each subarea to meet the allowable flow rates.

Table V.N.2-1

Los Angeles County Hydrology Manual Calculation Results for Allowable Off-Site Peak Flow Rates to Existing County Storm Drain Facilities

Subarea	Area (acres)	Calculated Q_{25} (cfs)	Allowable Q (cfs)	Required Detention (cu. ft.)
A	62.7	86	78	3964
B	5.9	10	7	1394
C	4.4	6	5	479

On-site storm drains for Sub-areas A and B will connect to the existing LACDPW storm drain in two places along Freshman Dr. The on-site storm drains for Subarea C will connect to the existing near the intersection of Freshman Drive and Sophomore Drive.

As part of the project plans to retain a portion of the storm water onsite and allow for groundwater percolation, WLAC has included the use of the proposed new soccer field at the lower terrace of the campus to act as a retention basin. The west and south edges of the soccer field would be elevated to retain surface flows and contain a discharge area that would lead directly to the LACDPW drainage ditch along Freshman Drive. A vegetated swale at the south side of the soccer field would also aid in conveyance of surface water flows into the proposed system. With an area of over 140,000 square feet and a design depth of 3 feet, the soccer field can accommodate over 420,000 cubic feet of storm water runoff. The installation of parking lot filter strips and tree rows perpendicular to surface flows, as proposed in the FMP, would aid in slowing storm water runoff, which would reduce strain on the storm drain system.

Construction of the second access roadway will require a storm drainage system, which would be required to comply with LACDPW regulations. Incorporation of recommendations provided in the hydrology analysis into the future design of buildings and facilities and compliance with existing regulations will ensure storm water runoff is adequately contained and that the County system is not significantly impacted by the proposed Project development.

As recommended in the Infrastructure Analysis in the FMP, existing storm drain systems that may interfere with new construction will be removed and new systems of adequate capacity will be installed around the new buildings to accommodate flows. Construction of new storm drain systems will be conducted with accordance with standard Uniform Building Code requirements and would be constructed within a previously disturbed (built) environment. The proposed project would result in a less than significant impact to stormwater services.

Cumulative Impacts

The proposed project is within the existing campus boundary with the exception of the proposed second access roadway. Therefore, while there may be an increase in impervious surface, the surface runoff area would not be significantly increased. Proposed drainage improvements would maintain surface runoff quantities within with the requirements of Los Angeles County. Therefore, the proposed project is not expected to contribute to increase demands of the storm water drainage systems in the area. As such, in consideration of cumulative projects as

provided in Table IV-1, the proposed project would not contribute to any cumulatively significant impacts with regard to storm water.

Mitigation Measures

No mitigation measures are required or recommended.

Significant Project Impacts After Mitigation

The proposed project would not result in a significant unavoidable impact related to stormwater.

V.N.3 WATER SUPPLY

Existing Conditions

Water Supply System

Water is delivered to WLAC through a water main that runs north-south along Freshman Drive. Three separate laterals are connected to the main. Two of the laterals provide service to the Plant Facilities complex; one 3-inch lateral provides domestic water and one 8-inch lateral provides firewater. The third lateral is a 12-inch combination line, which provides domestic water and firewater to the rest of the campus. This third lateral is located directly west and down the hill from the existing tennis courts. The lateral runs east from this point and branches off in two directions near B Street. One branch travels north parallel to B Street and turns east onto E Street. The other branch travels south parallel to B street and turns east at Albert Vera Street up D Street. At the top of D Street the line turns north and runs approximately 700 feet to provide service to an existing fire hydrant.

The 12-inch service lateral provides approximately 3500 GPM at 75 psi to the campus at the point of connection. Unfortunately, the service lateral is connected to the main at the west side of the campus or at the lowest point of elevation. Therefore, as the water main runs east up the hill to service the existing buildings, reduction in pressure is caused by the loss of elevation head. The College has installed several electrical pumps to boost the pressure in the water line to increase the pressure. Also, backup diesel pumps exist for emergency situations where there may be a fire and the system's pressure must be increased further to accommodate sprinkler systems and fire hydrants. With the use of the pumps the system provides sufficient flow to the existing buildings.

Water Supply

The Southern California Water Company (SCWC), a subsidiary of the American States Water Company, currently provides water service to WLAC. According to the SCWC, over the past three years WLAC consumed an average of 75.2 acre feet per year. This translates to an average use of 67,165 gallons per day (gpd). WLAC is within the SCWC Region II Culver City System. As a retail water service provider, SCWC receives its entire water supply from the Metropolitan Water District of Southern California (MWD) by virtue of being located within the West Basin Municipal Water District (WBMWD), a wholesaling member agency of MWD. SCWC Region II has contracts with the WBMWD and the Central Basin Municipal Water District (CBMWD) for the purchase of MWD water.

MWD maintains several sources for water for delivery to the Southern California Region. In its report on Water Supplies, MWD found that its current practices of diversifying water supplies and securing supply reserves allow Metropolitan and its member agencies to adjust to changes in demands and supplies and to maintain a high degree of reliability and that sufficient supplies can be reasonably relied upon to meet projected supplemental demands.[3] The projected supply capability and projected demand of MWD to provide water service until the year 2025 under multiple dry-years, single dry-year, average year and wet-year is provided below in **Table V.N.3-1**.

[3] Source: Report on Metropolitan's Water Supplies A Blueprint for Water Reliability, Metropolitan Water District, March 25, 2003.

Table V.N.3-1

Supply Capability & Potential Reserve or Replenishment

	2005	2010	2015	2020	2025
Multiple Dry-year					
Maximum Supply Capability	2,654,200	3,441,800	3,516,500	3,473,300	3,459,500
Total Demands	2,245,200	2,175,600	2,320,900	2,534,100	2,688,500
Potential Reserve & System Replenishment Supply	*409,000*	*1,266,200*	*1,195,600*	*939,200*	*771,000*
Single Dry-year					
Maximum Supply Capability	2,677,630	3,135,130	3,450,100	3,420,200	3,396,600
Total Demands	2,169,300	2,096,100	2,266,500	2,487,900	2,618,700
Potential Reserve & System Replenishment Supply	*508,330*	*1,039,030*	*1,183,600*	*932,300*	*777,900*
Average-year					
Maximum Supply Capability	2,817630	2,812,030	2,923,730	2,995,230	3,005,730
Total Demands	1,969,700	1,886,500	2,054,800	2,274,000	2,402,300
Potential Reserve & System Replenishment Supply	*847,930*	*925,530*	*868,930*	*721,230*	*603,430*
Wet-year					
Maximum Supply Capability	3,152,200	3,197,200	3,288,630	3,138,530	3,146,030
Total Demands	1,932,700	1,871,500	2,046,200	2,272,500	2,406,000
Potential Reserve & System Replenishment Supply	*1,219,500*	*1,325,700*	*1,242,430*	*866,030*	*740,030*

Source: Report on Metropolitan's Water Supplies, March 25, 2003.

Thresholds of Significance

The proposed WLAC Facilities Master Plan would have a significant environmental impact on the water supply if it:

- Substantially depletes water supplies;
- Requires new off-site water supply or distributions facilities or expansion of existing facilities, the construction of which would cause a substantial adverse physical change in the environment; or
- Requires new or expanded water entitlements.

Project Impacts

Water Supply System

The capacity flow analysis of the water main system shows that the existing system has sufficient flow and would be able to accommodate the existing and future buildings. This is based upon the head loss from the source to the highest point on campus to be about 35 psi. With 75 psi available at the meter, the required 20 psi at the fire hydrants should be attainable with the current system. As indicated in Section V.K.1, the project will be required to construct additional fire hydrants to meet local Fire Department requirements as needed. While, the existing system would be adequate for future development, the FMP recommends that a new line be constructed parallel to Albert Vera Street to provide another connection to the SCWC main line in Freshman Drive to the existing campus line at B Street. This would create a loop system and provide the existing system with two benefits - additional flow and another source of water in case the existing service fails. Additionally the FMP recommends that each future building be provided with a separate double detector check valve, post-indicator valve, and fire department connections.

Water Supply

A variety of factors will affect water usage on campus. The project provides for the replacement of older temporary buildings with new structures of more efficient design. The Master Plan provides that new buildings should be designed so as to create a more sustainable environment. Sustainable design is promoted in the Master Plan by six major design strategies based upon the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) Green Building Rating System and the District's Sustainable Building Principles, Standards and Processes.

The LEED Rating System is a self-assessment system for rating commercial, institutional and high-rise residential buildings on the basis of how much design and construction practices significantly reduce or eliminate the negative impact of those buildings on the environment. It is a whole-building, integrated approach that provides a national standard of measurement for designing, constructing and operating green buildings. There are four levels of certification, from LEED Certified, rising in steps to Silver, Gold and Platinum Levels, based on the number of points a building receives. LEED certification is a three-step process involving product registration, technical support and building certification. Based on scientific standards, the LEED system emphasizes state of the art strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

According to the SCWC, over the past three years WLAC consumed an average of 75.2 acre feet (32,765 hundreds of cubic feet) over a twelve-month period for the past three years. One acre-foot is equal to 326,000 gallons. On average, over a twelve-month period the campus consumed 67,165 gpd, assuming 365 days per twelve-month period.

Based on the expected increase in FTE student population from 6,436 to 15,342 and FTE staff population from 334 to 813 and an increase of 372,722 square feet (sf) of buildings (196,528 sf after Phase I and 176,194 sf after Phase II) upon build-out of the campus under the proposed FMP in 2022, water consumption on the campus is expected to double. Reduction in water usage as result of sustainable building design principles is unknown. The expected water consumption would be approximately 150 acre-feet, in the year 2022.[4] This would represent an increase of 75 acre-feet per year over existing conditions. This increase would not substantially deplete water supplies, require new off-site water supply or distribution facilities or expansion of existing facilities, or require new or expanded water entitlements. Therefore, the project would not result in a significant impact upon water services.

Cumulative Impacts

Cumulative impacts to water services could occur from the development of the project, and related projects. Installation of water efficient structures and landscaping will help to minimize the College's demand on water supplies. Related development may require some local site-specific improvements. According to the Report on Metropolitan's Water Supplies, it is projected that they will have adequate water supply capability to meet expected demands until the year 2025 under wet, average, dry and multiple-dry years. The expected demand calculated is based upon the Southern California Association of Governments (SCAG) forecasts and expected demand of local retail purveyors. Therefore, since MWD appears to have adequate supplies and capacity to meet the demand generated by planned growth in the area, significant cumulative impacts are not anticipated.

Mitigation Measures

While impacts are not significant, project implementation of mitigation measure WS-1 to WS- would further reduce water service impacts.

[4] Source: Correspondence, Southern California Water Company, May 30, 2003.

WS-1 New landscaping shall utilize automatic sprinkler systems for landscape irrigation which shall be adjusted on a seasonal basis to operate during hours where water loss due to evaporation would be minimized.

WS-2 Landscaping plans shall be designed for the use of drought-tolerant plants that are appropriate for the on-site soil conditions and reduce or eliminate the need for irrigation requirements to the extent feasible.

WS-3 The College shall use lower-volume water faucets and water saving showerheads in all new construction.

WS-4 The College shall consider the use of reclaimed water, if available, for irrigation of athletic fields, and landscaped areas to the extent feasible.

Significant Project Impacts After Mitigation

Neither the completion of the proposed improvements on the campus nor the completion of a second public access road around or through a portion of the Baldwin Hills would result in a significantly adverse impact upon water services.

V.N.4 SOLID WASTE

Existing Conditions

Solid waste in Los Angeles County is managed by the Sanitation Districts of Los Angeles County (LACSD) and by private waste management collectors and disposal facilities. Solid waste generated in the County comprises residential waste, construction wastes, and commercial and industrial wastes. In most cases, solid waste is hauled directly to Class III landfills, with the remainder being taken to transfer stations, resource recovery centers, or refuse-to-energy facilities. According to the Los Angeles County Integrated Waste Management Plan (IWMP) 2000 Annual Report, there are currently twelve active Class III landfills in Los Angeles County, and two refuse-to-energy (transformation) facilities.[5] Of these, LACSD operates three active sanitary landfills, (Calabasas, Puente Hills and Scholl Canyon), and the two refuse-to-energy facilities (Commerce, and SERRF). The LACSD's three landfills and materials recovery and transfer facilities receive approximately 18,500 tons of solid waste per day, of which approximately 15,000 tons per day is disposed, with the remainder being reused or recycled. This disposal represents approximately 40% of the total solid waste disposed of by the residents and businesses of the County. The remaining landfills are privately owned and receive the remaining 60% of disposed materials in the County. According to the IWMP Annual Report, the estimated remaining permitted capacity of Class III landfills within the County as of April 1, 2001 was 93.73 million tons. The report also projects that under current conditions; the cumulative permitted Class III landfill disposal needs would exceed the existing permitted capacity by the year 2009. However, the actual date at which capacity would be exceeded depends on the amount of waste imported and exported, time necessary to develop additional capacity, and future permitted capacity.

Consolidated Disposal Service is the private waste hauler who collects solid waste generated at the campus. Waste is collected 5 days per week Monday through Friday. Consolidated currently delivers the waste to the Chiquita Canyon Sanitary Landfill located in Valencia in the County of Los Angeles. This landfill is a Class II, III landfill accepting solid waste and inert solid waste. This landfill is divided into two Units. Unit 1 collects all solid and inert solid waste and currently has a permitted throughout of 6,000 tons per day. Unit 2 is a composting facility with a permitted throughput of 560 tons per day. According to the most recent capacity information the Chiquita Canyon Sanitary Landfill has a remaining capacity of 18,217,052 tons.[6] The California Integrated Waste Management Board estimates that this landfill will close in November 2019.

Assembly Bill 75 (AB 75), approved by the governor in October 1999, requires that all state agencies and large state facilities meet the 25% and 50% waste reduction mandates similar to the provisions required for jurisdictions subject to AB 939 *Integrated Waste Management Act*. As a California Community College, WLAC is subject to the provisions of AB 75. In accordance with this Bill, Public Resources Code (PRC), Section 4291 provides that each state agency and large state facility must divert at least 25% of all solid waste generated by the facility from landfill disposal or transformation by January 1, 2002 and by at least 50% on and after January 1, 2004 through source reduction, recycling and composting. In addition, to aid in facilitating the waste reduction requirements, AB 75 and PRC Section 42920 requires state agencies develop and adopt an integrated waste management plan (IWMP) on or before July 1, 2000.

In accordance with these requirements, WLAC has adopted an IWMP and has implemented waste reduction, recycling and composting activities. According to WLAC's 2002 Annual Report Summary (ARS), which is submitted to the County Integrated Waste Management Board (CIWMB), several measures have been implemented to reduce landfill waste disposal from the College. This includes the use of white paper only, grasscycling, mulching of green wastes, and recycling of cardboard, aluminum cans, plastic bottles, and inkjet and toner cartridges. According to the 2002 ARS, WLAC has achieved a 50% reduction in waste disposed of at landfills.

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[5] Source: Los Angeles County Integrated Waste Management Plan 2000 Annual Report, Los Angeles County Department of Public Works, September 2001.

[6] Source: California Integrated Waste Management Board, Solid Waste Information System; www.ciwmb.ca.gov/swis/ accessed June 19, 2003.

Thresholds of Significance

The project would create a significant environmental effect if it generated a quantity of solid waste that would exceed existing disposal capacities.

Project Impacts

Future improvements to the campus in accordance with the FMP would generate additional solid waste during construction activities and during the long-term operational activities. Since development under the proposed FMP would occur incrementally until 2022, waste generation from both construction and operations would increase incrementally as well. During construction, existing temporary structures would be removed to make room for the proposed facilities. It is anticipated that 50 percent of materials removed from the project site would be reused and/or recycled. The remaining materials would be disposed of at a landfill. Materials that may be recycled or salvaged include glass, concrete, asphalt steel, doors, and bathroom fixtures. Diversion of demolition materials would be in conformance with the College's waste reduction goals. Further, the impact during construction is temporary, and intermittent. Considering the amount of waste generated and the temporary nature of the impact, the project would generate a less than significant impact on solid waste facilities as a result of construction. While impacts are not significant, project implementation of mitigation measure SW-1 would further reduce construction related solid waste impacts.

Throughout the operation of the expanded campus as proposed in the FMP, solid waste generation would continue to increase. In 2002, the College generated a total of 431.786 tons[7] of waste with a total campus FTE population of 6,770 (6,436 students, and 334 staff). These numbers represent a generation factor of 127.56 pounds per FTE person per year. The FMP anticipates that the on campus population will increase by 9,385 to a total of 16,155 by the year 2022. Based on the generation factor of 127.56 pounds per person per year, the expected waste generation prior to diversion by the year 2022 would be approximately 1,030 tons per year. This is an increase of 598 tons per year over existing generation. The College has plans to expand their waste diversion program to include glass, plastics and on-site composting and mulching. However, assuming the College maintains at least a 50% diversion rate, as required by AB 75, the total increase in solid waste disposed of at landfills would be approximately 299.29 tons per year by the year 2022. This additional solid waste contribution would not exceed existing disposal capacities. Project operation would result in a less than significant impact. While impacts are not significant, project implementation of mitigation measure SW-2 would further reduce operational related solid waste impacts.

Cumulative Impacts

Increased solid waste generation from the proposed project, related projects identified in Table IV-1 and general regional growth will increase the demands for local and regional landfill capacity. Increases in solid waste generation and diminishing landfill capacity may result in an exhausted landfill capacity. The project would implement additional diversion methods, however, due to diminishing landfill capacity in the region, the project, related projects, and other regional growth could have a potentially significant cumulative impact on solid waste facilities.

Mitigation Measures

SW-1 The College shall implement a plan to salvage and recycle construction and demolition materials to the maximum extent feasible. Documentation of the program shall be included in the College's Annual Report to the County Integrated Waste Management Board.

SW-2 The College shall institute on-site recycling/conservation program prior to the operation of the new facilities to reduce the volume of solid waste disposed of in landfills in compliance with the

[7] Value is total waste generated and does not include the 50% of waste that was diverted from disposal.

College's adopted Integrated Waste Management Plan. Documentation of the program shall be included in the College's Annual Report to the County Integrated Waste Management Board.

Significant Project Impacts After Mitigation

While the project would implement mitigation measures to reduce its solid waste contribution to landfills in the region; considering the diminishing landfill capacity in the region, the project, related projects, and other regional growth could have a potentially significant cumulative impact on solid waste facilities.

V.N.5 ELECTRICITY

Existing Conditions

Southern California Edison (SCE) provides electrical service to WLAC. On an average day, SCE provides power for 11 million individuals, 800 communities and cities, 5,000 large businesses, and 280,000 small businesses in Central and Southern California. SCE operates 16 utility interconnections, 4,900 transmission and distribution circuits, to deliver its power.

The State of California has experienced an energy supply crisis over recent years. In response to the crisis, the California Public Utilities Commission (CPUC) has taken action to ensure electricity consumers receive an adequate amount of electricity. These actions include energy rate determinations / stabilization, programs to reduce demand and promote energy efficiency measures, and elimination of transmission constraints that affect the reliability of electric supply. On April 11, 2001, Governor Davis signed into effect an electricity conservation plan that allots $850 million targeted for household and business conservation rebates. Rebates are available for the use of energy efficient appliances, such as lighting, and air conditioning systems. Most recently, on May 8, 2003 the CPUC adopted an Energy Action Plan, which provides the framework for the CUPC to eliminate power outages and promote investments in more efficient uses of energy. Also, In accordance with Senate Bill 1389, passed August 29, 2002, the California energy Commission will provide an integrated energy policy report which will provide supply assessment information and forecasts for demand. The report will be updated every two years and will guide the state policies and goals in ensuring an adequate supply of energy and to promote energy saving technologies and plans.

The electrical service lines are underground within the campus and major electrical lines cross the site to the east and west of the campus. The College electrical system is connected by means of two feeder lines from the service entry point to a vault on Sophomore Drive. One feeder line meets the College's current electrical needs. A second feeder was installed to accommodate future projected expansion of the campus. The existing system consists of a 4160 Volt 1200 Amp electrical distribution gear, which distributes power to the campus buildings through underground duct banks which are interconnected by vaults distributed throughout the campus. Conductors in 4-inch conduit are used for power distribution.

Thresholds of Significance

The project would have a significant environmental effect on the supply of electricity if the project:

- Demands electricity supplies that would exceed the supply of electrical service for the area; and/or
- Results in the construction of new or expanded off-site electrical generation or delivery facilities, the construction of which would cause substantial adverse physical change in the environment.

Project Impacts

WLAC's electricity consumption in 2002 was 4,159,801 kWh. Based on an on campus FTE population of 6,770 (6,436 students, and 334 staff), there was 614.45 kWh of electricity used per person per year. Build-out of the FMP would increase the on campus population by 9,385 to a total of 16,155 by the year 2022. Based on the generation factor of 614.45 kWh per person per year, the expected electrical use by the year 2022 would be 9,926,439 kWh per year. This represents an increase of 5,766,638 kWh.

Upon build-out of the campus in accordance with the proposed FMP, the net on-campus building area will increase by 372,723 square feet (196,528 sf after Phase I and 176,194 sf after Phase II). Accordingly, the Infrastructure Analysis provided in the FMP assumed an additional 500,000 square feet of new structures for purposes of determining the expected increase in electricity usage. Using standard estimation procedures, the Infrastructure Analysis assumed 7 watts per square foot of additional power or 3,500 kilowatts. Based on this calculation new

4160 Volt, 1200 Amp system would be required on campus. This additional electricity would be provided by SCE and would be transmitted to a transformer and supply panel located onsite, which will distribute the additional power to the new buildings. This new system will have a separate shutoff switch from the existing system, but will allow crossover in the event one of the systems fails. Additional duct banks and vaults will be required to accommodate the planned expansion. The installation of the electrical delivery system would be entirely onsite. As discussed above, a spare feeder line was previously installed offsite to accommodate future expansion of the campus. This line will be utilized to meet the needs of the new facilities proposed in the FMP. The project would not result in the construction of new or expanded off-site electrical generation or delivery facilities, therefore, no significant impact would occur.

All proposed facilities to be constructed under the proposed Facilities Master Plan would be required to comply with the State of California Energy Commission Conservation Standards for Non-Residential building. With incorporation of energy efficient designs and technology, WLAC demand on electricity supply can be minimized.

The FMP provides that new buildings should be designed so as to create a more sustainable environment. This is promoted in the FMP by six major design strategies based upon the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) Green Building Rating System and the District's Sustainable Building Principles, Standards and Processes. The LEED program encourages increasing the use of renewable technologies to reduce environmental impacts associated with consumption of a non-renewable materials in the production of electricity. The LACCD energy policy requires that new buildings generate a minimum of 10% of their electrical needs from renewable sources. In order to meet this requirement, Photovaltaic (PV) systems are proposed in the FMP. The implementation of LEED principles and compliance with LACCD energy reduction requirements would further reduce future electrical needs of the College.

The proposed second access road would use electricity for street lights along its length. The system would be designed and installed during the construction of the selected route.

According to SCE, the projected electrical loads required of the proposed expansion are within the parameters of projected load growth which SCE is planning to meet for the subject area.[8] The proposed project would not exceed the supply of electrical service in the area, therefore, no significant impact would occur.

Cumulative Impacts

Cumulative impacts to electricity could occur from the development of the project, and related projects. The cumulative increase in electricity demand throughout the State has led to capacity constraints. However, as described above the proposed increase in electricity demand at WLAC is within the projected service plans of SCE for the area and the LACCD requires that the project produce at least 10% of its energy from renewable sources. Installation of energy efficient structures will help to minimize the College's demand on electrical resources. Related development may require some local site-specific improvements; however, due to the College's energy saving measures, that would help to make the campus partially self sufficient, the project impacts on availability of electrical supply will be less than significant in a cumulative context.

Mitigation Measures

The proposed project does not result in a significant electrical impact. No mitigation measures are proposed or required.

[8] Source: Southern California Edison Correspondence, May 21, 2003.

Significant Project Impacts After Mitigation

Neither the completion of the proposed improvements on the campus nor the completion of a second public access road around or through a portion of the Baldwin Hills would result in a significantly adverse impact upon electricity.