

## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

**Table 2-3  
University of California, Davis  
LRDP Mitigation Monitoring Program**

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
<b>4.1 AESTHETICS</b>					
<b>4.1-1</b>	<i>The campus Design Review Committee shall consider scenic views while planning for projects under the 2003 LRDP to maintain scenic views to the extent feasible. Design considerations could include establishing open landscaping and deciduous trees along important view corridors.</i>	Review project plans and design for obstruction of scenic views. Revise plan and design, if necessary, to maintain the scenic view to the extent feasible.	SS, DE	Prior to final design approval	Design Review Committee, Resource Management & Planning
<b>4.1-2</b>	<i>(a) New structures, roads, and landscaping at UC Davis shall be designed to be compatible with the visual elements and policies identified in the 2003 LRDP.</i>	Review project design for compatibility. Revise design, if necessary, to ensure compatibility.	DE	Prior to final design approval	Design Review Committee, Resource Management & Planning
	<i>(b) Prior to design approval of development projects under the 2003 LRDP, the campus Design Review Committee must determine that project designs are consistent with the valued elements of the visual landscape identified in the 2003 LRDP, applicable planning guidelines, and the character of surrounding development so that the visual character and quality of the project area are not substantially degraded.</i>	Review project design for consistency. Revise design, if necessary, to ensure consistency.	DE	Prior to final design approval	Design Review Committee, Resource Management & Planning
<b>4.1-3</b>	<i>(a) Design for specific projects shall provide for the use of textured nonreflective exterior surfaces and nonreflective glass.</i>	Review project design for use of nonreflective exterior surfaces and glass. Revise design, if necessary.	DE	Prior to final design approval	Design Review Committee, Resource Management & Planning
	<i>(b) Except as provided in LRDP Mitigation 4.1-3(c), all new outdoor lighting shall utilize directional lighting methods with shielded and cutoff type light fixtures to minimize glare and upward directed lighting.</i>	Review project design for use of directional lighting methods. Revise design, if necessary.	DE	Prior to final design approval	Design Review Committee, Resource Management & Planning

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# Volume I

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<i>(c) Non-cutoff, non-shielded lighting fixtures used to enhance nighttime views of walking paths, specific landscape features, or specific architectural features shall be reviewed by the Campus Design Review Committee prior to installation to ensure that: (1) the minimum amount of required lighting is proposed to achieve the desired nighttime emphasis, and (2) the proposed illumination creates no adverse effect on nighttime views.</i>	Review project design to ensure that the minimum required lighting is proposed and for effects on nighttime views. Revise design, if necessary.	DE	Prior to final design approval	Design Review Committee, Resource Management & Planning
	<i>(d) The campus will implement the use of the specified lighting design and equipment when older lighting fixtures and designs are replaced over time.</i>	Review lighting replacements on campus.	OP	Ongoing, as older exterior lighting fixtures are replaced	Operations & Maintenance
4.1-4	<i>(a) Implement LRDP Mitigation 4.1-1.</i>	Review project location and design for potential cumulative contribution to obstruction of scenic vistas. Revise project design, if necessary, to maintain scenic vista to the extent feasible.	SS, DE	Prior to final design approval	Design Review Committee and Resource Management & Planning
	<i>(b) The City of Davis, Yolo County, and Solano County can and should implement the General Plan policies that support the long-term establishment and preservation of scenic vistas.</i>	Outside the jurisdiction of UC Davis.	SS, DE	Ongoing	*City of Davis, Yolo County, and Solano County
4.1-5	<i>(a) Implement LRDP Mitigation 4.1-2(a) and (b).</i>	Review project design for cumulative effects upon valued visual elements, landscape, visual character, policies. Revise design as needed to minimize effects.	SS, DE	Prior to final design approval	Resource Management & Planning, Design Review Committee
	<i>(b) The cities of Davis, Woodland, Winters, and Dixon, and Yolo and Solano counties can and should implement policies in their plans that address the protection of scenic resources and maintenance of visual quality.</i>	Outside the jurisdiction of UC Davis.	SS, DE	Ongoing	*Cities of Davis, Woodland, Winters, and Dixon, and Yolo and Solano counties

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4.1-6	<i>(a) Implement LRDP Mitigation 4.1-3(a) and (b).</i>	Review project design for potential contribution to light and glare that could affect views. Revise design, if necessary, to ensure that minimum lighting necessary is used.	DE	Prior to final design approval	Design Review Committee, Resource Management & Planning
	<i>(b) The City of Davis and other surrounding jurisdictions can and should adopt (if necessary) and implement development standards and guidelines that support the minimal use of site lighting for new developments.</i>	Outside the jurisdiction of UC Davis.	DE	Ongoing	*Cities of Davis, Woodland, Winters, and Dixon, and Yolo and Solano counties
<b>4.2 AGRICULTURAL RESOURCES</b>					
4.2-1	<i>Prior to conversion of prime farmland to nonagricultural uses under the 2003 LRDP, the campus shall preserve approximately 525 acres of prime farmland either at the Russell Ranch within the area designated for Teaching and Research Fields or the Kidwell and McConeghy parcels, for agricultural purposes (including agricultural teaching and research). The campus will preserve prime farmland at a one-to-one (1:1) mitigation ratio for prime farmland converted to developed uses and a one-third-to-one (1/3:1) ratio for prime farmland converted to habitat at Russell Ranch.</i>	Designate land in amounts of at least the ratios identified to be preserved for agricultural purposes through overlay on 2003 LRDP Land Use Diagram, by recording agricultural conservation easement/ deed restriction or other equivalent mechanism.	CO	Prior to start of construction of any project that would convert farmland to nonagricultural uses	Resource Management & Planning
4.2-3	<i>Implement LRDP Mitigation 4.2-1.</i>	See Mitigation 4.2-1, above.	SS	See Mitigation 4.2-1, above	See Mitigation 4.2-1, above
<b>4.3 AIR QUALITY</b>					
4.3-1	<i>(a) Vehicular Sources. The following measures will be implemented to reduce emissions from vehicles, as feasible.</i> <ul style="list-style-type: none"> <li>• <i>The campus shall continue to actively pursue Transportation Demand Management to reduce reliance on private automobiles for travel to and from the campus.</i></li> </ul>	Document Transportation Demand Management efforts and progress.	OP	At least every three years	Transportation and Parking Services, in cooperation with other responsible jurisdictions including the City of Davis and Caltrans.

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<ul style="list-style-type: none"> <li>Provide pedestrian-enhancing infrastructure to encourage pedestrian activity and discourage vehicle use.</li> <li>Provide bicycle facilities to encourage bicycle use instead of driving.</li> <li>Provide transit-enhancing infrastructure to promote the use of public transportation.</li> <li>Provide facilities to accommodate alternative-fuel vehicles such as electric cars and CNG vehicles.</li> </ul>	Ensure that facilities listed are included in project design as applicable: verify construction of pedestrian-enhancing infrastructure, bicycle facilities, transit-enhancing infrastructure, facilities to accommodate alternative-fuel vehicles.	DE	Prior to approval of final design of applicable projects	Resource Management & Planning
	<ul style="list-style-type: none"> <li>When the campus purchases new vehicles, the campus will evaluate the practicality and feasibility of acquiring low-pollution vehicles that are appropriate for the task and will purchase these types of vehicles when practical and feasible. When replacing diesel engines in existing equipment, the campus will install up-to-date technology.</li> </ul>	Develop policy to ensure low-polluting vehicles are considered and purchased when feasible and up to date diesel engines are used when replacements occur.	OP	On a continuing basis	Office of Administration
	<ul style="list-style-type: none"> <li>Improve traffic flows and congestion by timing of traffic signals to facilitate uninterrupted travel.</li> </ul>	Monitor traffic at affected intersections and adjust timing of traffic signals as appropriate to facilitate uninterrupted travel.	OP	At least yearly	Transportation and Parking Services
	<p>(b) Area Sources. The following measures will be implemented to reduce emissions from area sources, as feasible.</p> <ul style="list-style-type: none"> <li>Use solar or low-emission water heaters in new or renovated buildings.</li> <li>Orient buildings to take advantage of solar heating and natural cooling and use passive solar designs.</li> <li>Increase wall and attic insulation in new or renovated buildings.</li> <li>For fireplaces or wood-burning appliances, require low-emitting EPA certified wood-burning appliances, or residential natural-gas fireplaces.</li> </ul>	Adopt standard specifications or design guidelines that include area source reduction measures to be required for construction projects. Ensure that where feasible applicable measures are included in each project.	DE OP	During project design/prior to final design approval	Architects & Engineers, Resource Management & Planning

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	<ul style="list-style-type: none"> <li>Provide electric equipment for landscape maintenance.</li> </ul>	Develop policy that requires that where feasible new landscape equipment purchased is electric.	OP	Prior to purchase of new landscape equipment	Purchasing, Grounds Division
	(c) The campus will work with the YSAQMD to ensure that emissions directly and indirectly associated with the campus are adequately accounted for and mitigated in applicable air quality planning efforts. The YSAQMD can and should adopt adequate measures consistent with applicable law to ensure that air quality standard violations are avoided.	Monitor changes in Air Quality regulations. Attend YSAQMD meetings on changing regulations. Meet with YSAQMD to discuss air quality planning efforts. Document meeting results.	OP	As changes in standards and procedures occur	Resource Management & Planning, Environmental Health & Safety
4.3-3	(a) The campus shall include in all construction contracts the measures specified below to reduce fugitive dust impacts, including but not limited to the following:	Continue to require standard dust control measures as part of every construction project contract.	DE	Prior to construction	Architects & Engineers
	<ul style="list-style-type: none"> <li>All disturbed areas, including storage piles, which are not being actively utilized for construction purpose, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.</li> <li>All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.</li> <li>All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.</li> <li>When demolishing buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.</li> <li>When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least two feet of freeboard space from the top of the container shall be maintained.</li> </ul>	Inspect construction site at regular intervals during construction to verify compliance with specified dust control measures.	CO	Regular intervals throughout construction period	Architects & Engineers

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<ul style="list-style-type: none"> <li>All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices also is expressly forbidden.</li> <li>Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions by utilizing sufficient water or chemical stabilizer/suppressant.</li> </ul>				
	<p>(b) The campus shall include in construction contracts for large construction projects near receptors the following control measures:</p> <ul style="list-style-type: none"> <li>Limit traffic speeds on unpaved roads to 15 mph;</li> <li>Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent; and</li> <li>To the extent feasible, limit area subject to excavation, grading, and other construction activity at any one time.</li> </ul>	Continue to require contract specifications for dust and erosion control measures as part of every construction project contract.	DE	Prior to construction	Architects & Engineers
		Inspect construction site at regular intervals during construction to verify compliance with specified dust and erosion control measures.	CO	At regular intervals throughout the construction period	Architects & Engineers
	<p>(c) The campus shall implement the following control measures to reduce emissions of ozone precursors from construction equipment exhaust:</p> <ul style="list-style-type: none"> <li>To the extent that equipment is available and cost effective, the campus shall encourage contractors to use alternate fuels and retrofit existing engines in construction equipment.</li> <li>Minimize idling time to a maximum of 5 minutes when construction equipment is not in use.</li> <li>To the extent practicable, manage operation of heavy-duty equipment to reduce emissions.</li> </ul>	Adopt standard specifications that include the specified measures to reduce emissions of ozone precursors from construction equipment exhaust as part of every construction project contract.	DE	Prior to construction	Architects & Engineers

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	<ul style="list-style-type: none"> <li>To the extent practicable, employ construction management techniques such as timing construction to occur outside the ozone season of May through October, or scheduling equipment use to limit unnecessary concurrent operation.</li> </ul>	Inspect equipment at construction site to verify that program's measures are being carried out.	CO	At least once during each phase of construction	Architects & Engineers
4.3-6	Implement LRDP Mitigation 4.3-1(a-c).	Adopt and implement standards specified in Mitigation 4.3-1 (a-c) to reduce campus contribution to impact.	OP	As specified for Mitigation 4.3-1(a-c), for each campus project	Architects & Engineers
4.3-8	EPA and CARB are expected to continue the development and implementation of programs to reduce air toxics, and UC Davis will continue its efforts in this area.	Monitor EPA, CARB and YSAQMD regulations/programs for reduction of air toxics; implement appropriate changes on campus. Document programs implemented.	OP	On a continuous basis	Resource Management & Planning, Environmental Health & Safety
<b>4.4 BIOLOGICAL RESOURCES</b>					
4.4-1	(a) During the project planning phase, the campus shall conduct a rare plant survey if the site is previously undeveloped and is in a valley-foothill riparian, open water pond, riverine, wetland or ruderal/annual grassland or habitat. Surveys shall be conducted by qualified biologists in accordance with the most current CDFG/USFWS guidelines or protocols and shall be conducted during the blooming period of the plant species with potential to occur in the area, as listed in Table 4.4-2. If these surveys reveal no occurrences of any species, then no further mitigation would be required.	Ensure that rare plant survey of proposed and any alternate site is conducted, and findings documented, by qualified biologist.	SS, DE	During appropriate season, as specified in measure, prior to final project design approval	Resource Management & Planning

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.4-1	<p><i>(b) Should surveys determine that special-status plant species are present, measures will be taken to avoid the plants and the associated habitat necessary for long-term maintenance of the population. If avoidance is not feasible the campus will provide off-site compensation at a 1:1 ratio. Off-site compensation will include preservation of existing populations at other sites and/or enhancement of the affected species. The campus will preserve either an equal number of the affected plants or an equal area of the affected species habitat. The campus shall also develop and fund the implementation of a plan to manage and monitor the preserve to ensure the long-term survival of the preserved population.</i></p>	<p>Prepare and implement a plan for avoiding special-status plants and the associated habitat if any are found under Mitigation Measure 4.1(a). This plan shall include performance criteria for avoidance and minimization measures and contingency measures if performance criteria are not met.</p>	DE	<p>Prior to final project design approval</p>	<p>Resource Management &amp; Planning</p>
		<p>Monitor implementation of avoidance measures if any through inspection of the project site during and after construction.</p>	CO	<p>Periodically during construction</p>	<p>Architects &amp; Engineers</p>
		<p>Monitor on-site avoidance and minimization if any for a minimum of five years following completion of construction.</p>	OP	<p>Annually</p>	<p>Resource Management &amp; Planning</p>
		<p>If necessary, designate area for off-site compensation. Develop and fund the implementation of a management and monitoring plan. Monitor the performance of off-site compensation for a minimum of five years.</p>	DE, OP	<p>Prior to final design approval and ongoing for five years following implementation of compensation</p>	<p>Resource Management &amp; Planning</p>

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.4-2	<p><i>The campus shall mitigate the loss of foraging habitat due to development through the establishment of 650 acres of mitigation lands on or near the Putah Creek Riparian Reserve. Approximately 370 acres of this area shall be converted from existing agricultural uses to restored Valley-Foothill Riparian Woodland and Valley Grassland at Russell Ranch. An additional 280 acres of agricultural land will be protected with a habitat and farmland conservation mechanism either at the Russell Ranch or Kidwell and McConeghy parcels. These grassland and agricultural lands would be available as foraging habitat for Swainson's hawk and other special-status species such as prairie falcon, golden eagle, wintering or migrating birds and birds of prey that may occasionally forage on campus lands. Restored Valley-Foothill Riparian Habitat would be available as nesting habitat for Swainson's hawk and other birds of prey.</i></p> <p><i>An additional 15-acre mitigation area shall be established along the North Fork Cutoff. This area shall be restored as an oak-grassland and would be a nesting and foraging site for Swainson's hawk and other birds of prey.</i></p>	<ol style="list-style-type: none"> <li>1) Establish Russell Ranch Habitat Mitigation Area and commit on-going funding for the preservation and management of the mitigation area.</li> <li>2) Develop habitat and farmland conservation mechanism.</li> <li>3) Restore oak-grassland habitat in North Fork Cutoff area.</li> </ol>	OP	<p>Begin within 1 year of adoption of 2003 LRDP and before construction of a specific project that converts habitat. Habitation mitigation areas will be established commensurate with area converted from habitat.</p>	Resource Management & Planning
		<ol style="list-style-type: none"> <li>4) Verify conversion of land from agricultural uses to restored Valley-Foothill Riparian Woodland and Valley Grassland and oak-grassland. Monitor performance of habitat restoration.</li> </ol>	OP	<p>Within 5 years of adoption of 2003 LRDP</p>	Resource Management & Planning

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		5) Prepare map and memo documenting establishment of mitigation areas and the number and types of credits available for future projects. Mitigation acreage will be established in proportion to acreage converted. Submit the map and memo to the California Department of Fish and Game for verification of the available mitigation credits.	OP	Within 5 years of adoption of 2003 LRDP	Resource Management & Planning
		6) Submit documentation of conservation credits and debits to the California Department of Fish and Game.	DE	Prior to final project design approval	Resource Management & Planning

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.4-3	<i>(a) The Russell Ranch Mitigation Area shall include at least 195 acres of grassland habitat suitable for use by burrowing owls. Ground squirrels in the mitigation area shall not be subject to control measures and will be allowed to fluctuate in response to local conditions. Artificial burrows may be installed if ground squirrel populations are not providing a sufficient number of burrows to support burrowing owls.</i>	Prepare and implement a burrowing owl habitat mitigation plan for the 195 acres at the Russell Ranch Mitigation Area. This plan shall include performance criteria for establishment and maintenance of habitat suitable for use by burrowing owls and contingency measures if performance criteria are not met. Monitor the area for burrowing owl utilization. Document results of monitoring in annual memo.	OP	Begin mitigation plan preparation within 1 year of adoption of 2003 LRDP and annually thereafter for 10 years. Mitigation area will be established in acreage commensurate with acreage converted due to LRDP projects.	Resource Management & Planning
	<i>(b) The campus shall survey proposed development areas with potential habitat for the presence or absence of burrowing owls.</i>	Conduct survey. Document results in environmental documentation for project.	SS, DE	During project siting and project design of specific projects	Resource Management & Planning
	<i>(c) The campus shall conduct a pre-construction survey of proposed project sites during the breeding season (from approximately February 1 through August 31), consistent with CDFG guidelines, in the same calendar year that construction is planned to begin. The survey shall be conducted by a qualified biologist to determine if any burrowing owls are nesting on or directly adjacent to any proposed project site. If phased construction procedures are planned for the proposed project, the results of the above survey shall be valid only for the season when it is conducted. If the pre-construction breeding season survey does not identify any nesting raptor species on the project site, then no further mitigation would be required. However, should any burrowing owls be found nesting on the project site, then LRDP Mitigation 4.4-3(d) shall be implemented.</i>	Conduct survey. Verify survey was conducted and document results. Include mitigation specifications in construction contract as necessary.	DE, CO	During the breeding season prior to start of construction or of each construction phase	Resource, Management, and Planning, Architects & Engineers

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	<p>(d) During the breeding season, the campus, consistent with CDFG guidelines, shall not disturb an occupied burrow while there is an active nest and/or juvenile owls are present. Avoidance shall include the establishment of a nondisturbance buffer zone around the nest site consistent with CDFG guidelines. The buffer zone shall be delineated by highly visible temporary construction fencing. The occupied nest site shall be monitored by a qualified biologist to determine when the juvenile owl is fledged and independent. Disturbance of an occupied burrow shall only occur outside the breeding season and when there is no nest or juvenile owl based on monitoring by a qualified biologist.</p> <p>Based on approval by CDFG, pre-construction and pre-breeding season exclusion measures may be implemented to preclude burrowing owl occupation of the project site prior to project-related disturbance. These include the following measures:</p> <ul style="list-style-type: none"> <li>• Obviously inactive burrows in the project area will be closed. Active or potentially active ground squirrel burrows will be monitored to confirm use by ground squirrels and not by burrowing owls before ground squirrels are removed and the burrow is closed. One-way doors will be used on active burrows if use by ground squirrels cannot be confirmed.</li> <li>• The owls will be displaced from the occupied burrows according to the CDFG burrowing owl guidelines. The owls will be displaced from their burrows by installing one-way exit doors in occupied or potential burrows within the area of disturbance. After 48 hours with the doors in place, the burrows will then be closed to prevent reoccupation by owls.</li> <li>• Where feasible, artificial burrows will be provided in adjacent suitable habitat consistent with CDFG guidelines.</li> </ul>	<p>Develop a plan to avoid active nest sites during construction, establish buffer zone, and monitor active nests. Verify that plan is implemented. Identify inactive burrows. Monitor active ground squirrel burrows; confirm ground squirrel use. Follow CDFG guidelines to implement exclusion/displacement measures using one-way doors as needed. Verify exclusion. Document in memo. Construct two artificial burrows for each active burrow removed. Verify performance of artificial burrows.</p>	<p>CO</p> <p><u>Plan:</u> prior to construction</p> <p><u>Monitor:</u> pre-breeding season prior to construction and weekly during construction</p> <p><u>Nests:</u> Construct artificial burrows prior to final design approval.</p> <p><u>Memo:</u> At conclusion of exclusion action and annually for five years after construction of artificial burrows</p>	<p>Resource Management &amp; Planning</p>

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4.4-4	<p><i>The campus shall conduct a pre-construction survey of trees on and adjacent to a project site during the raptor breeding season (approximately March 1 to August 31). Additionally, the campus shall conduct surveys within a ½-mile radius of the site to determine the presence or absence of any nesting Swainson’s hawks. The surveys shall be conducted by a qualified biologist during the same calendar year that the proposed activity is planned to begin to determine if any nesting birds-of-prey would be affected. If phased construction procedures are planned for the proposed activity, the results of the above survey shall be valid only for the season when it is conducted.</i></p> <p><i>(a) If any Swainson’s hawks are nesting within a one-half-mile radius of the project site or if other raptors are nesting in, on or adjacent to the project site, a qualified biologist shall determine the potential for disturbance to nesting raptors, including Swainson’s hawks. If the biologist determines that there is a significant potential for disturbance, the campus shall implement feasible changes in the construction schedule or make other appropriate adjustments to the project in response to the specific circumstances. If feasible project changes are not readily identifiable, the campus will consult with CDFG to determine what actions should be taken to protect the nesting efforts.</i></p> <p><i>If after five years, a previously recorded nest site remains unoccupied by a Swainson’s hawk, it will no longer be considered as a Swainson’s hawk nest site subject to this mitigation.</i></p>	<p>Conduct survey and document findings. If nests are found, determine the potential for disturbance. If the potential is significant, revise construction schedule or otherwise adjust project appropriately.</p>	CO	<p>Prior to project construction, during breeding season</p>	Resource Management & Planning

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	<p><i>(b) The campus shall continue to conduct annual surveys to determine the location of nesting Swainson’s hawks and other birds of prey on the campus outside the Putah Creek corridor. If nesting Swainson’s hawks are found during the survey at a previously unknown location within one-half mile of a project site and/or at a location closer to the project or more visually exposed to the project site than a nearby previously documented site, a qualified biologist shall, prior to project construction, determine the potential for disturbance to nesting Swainson’s hawks. If the biologist determines that there is a significant potential for disturbance, the campus shall implement feasible changes in the construction schedule or make other appropriate adjustments to the project in response to the specific circumstances (e.g. relocating noisy equipment or creating temporary sound barriers).</i></p>	<p>Conduct survey and maintain an updated inventory list/map of active nests.</p>	OP	Annually during breeding season	Resource Management & Planning
	<p><i>For proposed projects, if active nests are found within a half-mile of a project site, determine the potential for disturbance. If the potential is significant, revise construction schedule or otherwise adjust project appropriately.</i></p>		DE, CO	Prior to approval of final design	Resource Management & Planning
	<p><i>The implementation of LRDP Mitigations 4.4-4(a) and (b) shall be conducted under the supervision of a biologist whose qualifications include:</i></p> <ul style="list-style-type: none"> <li><i>• A bachelor’s degree in biology or related field;</i></li> <li><i>• Two years of field experience related to nesting raptors; and.</i></li> <li><i>• Prior construction monitoring experience.</i></li> </ul> <p><i>Further:</i></p> <ul style="list-style-type: none"> <li><i>• All decisions of the qualified biologist shall be made in consultation with the California Department of Fish and Game;</i></li> <li><i>• Monitoring shall be conducted for a sufficient time (minimum of 3 consecutive days following the initiation of construction) to verify that the nesting pair does not exhibit significant adverse reaction to construction activities (i.e., changes in behavioral patterns, reactions to construction noise, etc.); and</i></li> </ul> <p><i>Nest site monitoring will continue for a minimum of once a week through the nesting cycle at that nest.</i></p>	<p>See Mitigations 4.4-4(a-b), above. Document qualifications of biologist.</p>	DE, CO, OP	See Mitigations 4.4-4(a-b), above.	See Mitigations 4.4-4(a-b), above.

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4.4-5	<p><i>Mitigation 4.4-4(a) and (b) will be implemented, including pre-construction survey of trees on and adjacent to a project site during the raptor breeding season (approximately March 1 to August 31). If a Swainson's hawk nest tree is present, the tree will be removed outside the nesting season (March-May).</i></p>	<p>Conduct survey of potential active nest trees on and adjacent to project site during breeding season prior to construction.</p>	DE, CO	During breeding season (Mar. 1 to Aug. 1) prior to completion of construction	Resource Management & Planning
		<p>If active nests are found in a tree that must be removed, document findings. Remove the tree outside the nesting season.</p>	SS, DE, CO	Outside of nesting season (March to May)	Resource Management & Planning
4.4-6	<p>(a) <i>During the project design stage and as a condition of project approval, the campus shall:</i></p> <ul style="list-style-type: none"> <li>• <i>Conduct a project-specific survey for all potential VELB habitat, including a stem count and an assessment of historic or current VELB use; and</i></li> <li>• <i>Avoid and protect all potential VELB habitat within a natural open space area where feasible</i></li> </ul>	<p>Conduct survey and document findings. Prepare and implement a plan to avoid and protect potential VELB habitat within open space where feasible.</p>	SS, DE	During project siting or design stage, prior to final project approval	Resource Management & Planning
		<p>(b) <i>For those areas where avoidance is infeasible, the Russell Ranch Mitigation Area shall include approximately 20 acres within and adjacent to the riparian corridor of Putah Creek and within and adjacent to the existing drainage in the northeast corner of the site that will be used as a receptor site for transplanted elderberry shrubs and the associated elderberry seedlings and other native plant seedlings required to be planted in accordance with the USFWS VELB Mitigation Guidelines (USFWS 1996). The site is estimated to support between 100 and 500 transplanted elderberry shrubs, depending on the size and number of stems on the shrubs at the time they are transplanted.</i></p>	<p>Identify approximately 20 acres for receptor site at Russell Ranch Mitigation Area.</p>	OP	Within 1 year of approval of 2003 LRDP
		<p>Transplant elderberry shrubs that cannot be avoided by projects.</p>	DE	Prior to project construction that would result in VELB impacts	Resource Management & Planning

Project stage at which implementation of the measure is required: SS=during site selection; DE=during detailed project planning or project design prior to project approval; CO=during construction; OC=prior to occupancy; OP=during operation

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
		Monitor/document survival and performance of transplanted shrubs at receptor site.	OP	Annually for 10 years or semiannually for 15 years as specified in the 1996 USFWS VELB Mitigation Guidelines	Resource Management & Planning
4.4-7	<p><i>The campus shall implement avoidance and minimization measures for the northwestern pond turtle, including but not limited to:</i></p> <ul style="list-style-type: none"> <li>• <i>Pre-construction surveys prior to any disturbance of the project site</i></li> <li>• <i>Installation of silt fencing to prevent any pond turtles from entering the construction area</i></li> <li>• <i>If work is performed in the water, seining of the area surrounding the site to relocate any northwestern pond turtles present.</i></li> </ul>	Conduct survey and document findings. Include specified avoidance and control measures in construction contract.	DE	Prior to construction	Resource Management & Planning
		Monitor construction for compliance.	CO	At intervals during construction in sensitive areas	Architects & Engineers
4.4-8	<p><i>(a) During the project design phase, the campus shall conduct a wetlands delineation of the project site if wetlands are potentially present. The wetland delineation shall be verified by the ACOE. Should no wetland habitats or natural drainages be delineated on the site then no further mitigation shall be required. However, if any jurisdictional wetland habitats or natural drainages are delineated on a project site, then LRDP Mitigation 4.4-8(b) shall be required.</i></p>	Conduct wetlands delineation and submit to the ACOE for verification.	SS, DE	During project siting or design phase	Resource Management & Planning

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## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<i>(b) For projects that involve the fill of jurisdictional wetlands, the campus shall implement the following mitigation program that will ensure no net loss of wetland functions and values. To the extent feasible, the campus will avoid filling wetlands by redesigning the project to promote environmentally sensitive siting and design. If avoidance is not feasible, the campus shall minimize the fill acreage. If neither of these options is feasible, the wetlands will be mitigated at a 3:1 ratio. This ratio will include both creation and preservation, with creation equaling at least a 1:1 ratio. To ensure no net loss of wetlands, the mitigation should include wetland enhancement as well. This would include monitoring, cleanup, and maintenance of preserved wetland habitats within and adjacent to the campus, as necessary.</i>	Verify that project has been redesigned as needed to avoid or minimize filling of wetlands, or require creation and enhancement of new wetlands at required ratios.	SS, DE	During project siting or design phase; Prior to project approval	Resource Management & Planning
		Verify that monitoring, cleanup, and maintenance for wetlands enhancement has been conducted.	DE, CO	Prior to or concurrent with project construction	Resource Management & Planning
	<i>(c) The campus shall obtain the necessary ACOE, CDFG, and RWQCB permits prior to filling or other adverse modifications of any verified jurisdictional water of the U.S., or alteration, filling or modification of the channel, bed or bank of Putah Creek, South Fork of Putah Creek, Arboretum Waterway or any other natural drainage regulated under Section 1600 of the CDFG code.</i>	Obtain permits.	DE	Prior to construction	Resource Management & Planning
		Inspect during construction to verify that permit conditions have been met.	CO	At least once during construction period	Architects & Engineers
<b>4.4-10</b>	<i>(a) Any work conducted within the creek will be constructed outside of the migration season (September 1 and October 15) to the extent feasible.</i>	Adjust construction schedule if necessary.	DE, CO	Prior to and during construction	Resource Management & Planning, Architects & Engineers
	<i>(b) If construction activities are to be conducted in the water during the migration season:</i>	Include in construction contract specifications.	CO	Prior to construction	Architects & Engineers

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<ul style="list-style-type: none"> <li>• <i>Silt curtains will be used at the construction location.</i></li> <li>• <i>Water quality will be evaluated during and after all in-water construction activities. The performance criteria shall be no degradation of downstream water quality compared to upstream water quality. Water quality shall be evaluated by a qualified environmental monitor using appropriate qualitative or quantitative measurements. Remedial measures shall be implemented if downstream water quality is degraded. Remedial measures shall include the following:</i> <ul style="list-style-type: none"> <li>– <i>Modification or suspension of in-water construction activities as appropriate;</i></li> <li>– <i>Installation of additional sediment control devices; and</i></li> <li>– <i>Additional monitoring to evaluate the water quality degradation and identify corrective measures.</i></li> </ul> </li> <li>• <i>The University shall coordinate with the California Department of Fish and Game, the Regional Water Quality Control Board, and the U.S. Army Corps of Engineers as appropriate to determine whether additional remedial measures are required.</i></li> </ul>	Verify that silt curtains are in place by monitoring during construction.	CO	Weekly during construction	Architects & Engineers
	(c) <i>Silt fencing will be installed as appropriate along the edges of the creek to prevent excess fill from entering the water. All silt fences will be maintained and checked for efficacy as necessary, but not less frequently than one time per week.</i>	Include in construction contract specifications.	CO	Prior to award of construction contract	Architects & Engineers
Monitor construction to verify that required silt fencing is in place and maintained.		CO	At least weekly during construction	Architects & Engineers	

Project stage at which implementation of the measure is required: SS=during site selection; DE=during detailed project planning or project design prior to project approval; CO=during construction; OC=prior to occupancy; OP=during operation

## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.4-11	<i>Before a project is approved under the 2003 LRDP, the campus will perform a tree survey of the project site. Grounds, the Office of Resource Management and Planning, and the Office of Architects and Engineers will provide input about tree classifications and will modify project design to avoid important trees if feasible. If a project cannot avoid an important tree, the following will apply:</i>	Perform tree survey. Determine classes of affected trees. Modify project design if feasible to avoid important trees.	DE	During project design	Resource Management & Planning, Grounds Division, Architects & Engineers
	<i>a. If a project would necessitate removal of a <b>Heritage Tree</b>, no mitigation would be available to fully mitigate the impact, and the impact would be significant and unavoidable. However, implementation of Mitigation 4.4-2 would restore Valley Foothill Riparian Woodland habitat at Russell Ranch, and plantings in this area would include valley oaks.</i>	See Mitigation 4.4-2, above.	OP	See Mitigation 4.4-2, above.	See Mitigation 4.4-2, above.
	<i>b. If a project would necessitate removal of a <b>Specimen Tree</b>, the project would relocate the tree if feasible, or would replace the tree with the same species or species of comparable value (relocation or replacement should occur within the project area if feasible). This would reduce the impact to a less-than-significant level.</i>	Relocate or replace tree, if feasible.	DE, CO	Prior to construction activities that would affect the tree	Resource Management & Planning and Architects & Engineers
4.4-12	<i>Implementation of LRDP Mitigations 4.4-1(a), (b), and (c); 4.4-2(a) and (b); 4.4-3(a) and (b); and 4.4-7(a) in combination with the Yolo County NCCP and Solano County HCP, including compliance with the regulatory and permitting requirements imposed by the USFWS and the CDFG.</i>	Monitor permit conditions and compliance at the project stages listed above.	SS, DE, CO, OP	Throughout project planning and implementation	Resource Management & Planning, Architects & Engineers
4.4-13	<i>Implementation of LRDP Mitigation Measures 4.4-1(a)-(b) and 4.4-8(a)-(c) in combination with the Yolo County NCCP and Solano County HCP, including compliance with the regulatory and permitting requirements imposed by the USFWS and the CDFG.</i>	Monitor permit conditions and compliance at the project stages listed above.	SS, DE, CO, OP	Throughout project planning and implementation	Resource Management & Planning, Architects & Engineers
4.4-14	<i>Implementation of LRDP Mitigations 4.4-6(a) and (b), in combination with the Yolo County NCCP and Solano County HCP, including compliance with the regulatory and permitting requirements imposed by the U.S. Fish and Wildlife Service and the California Department of Fish and Game.</i>	Monitor permit conditions and compliance at the project stages listed above.	SS, DE, CO, OP	Throughout project planning and implementation	Resource Management & Planning, Architects & Engineers

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
<b>4.5 CULTURAL RESOURCES</b>					
4.5-1	<i>(a) As early as possible in the project planning process, the campus shall define the project's area of potential effects (APE) for archaeological resources and, if structures are present on the site, for historic structures. The campus shall determine the potential for the project to result in cultural resource impacts, based on the extent of ground disturbance and site modification anticipated for the proposed project. Based on this information, the campus shall:</i>	Define APE. Determine potential for cultural resources. Determine appropriate level of investigation.	SS, DE	During site selection and/or project design	Resource Management & Planning
	<i>(i) Prepare an inventory of all buildings and structures within the APE that will be 50 years of age or older at the time of project construction for review by a qualified architectural historian. If no structures are present on the site, there would be no impact to historic built environment resources from the project. If potentially historic structures are present, LRDP Mitigation 4.5-1(c) shall be implemented.</i>	Inventory all potential historic structures in APE. Implement LRDP mitigation 4.5-1(c) if applicable.	SS, DE	During site selection or project design	Resource Management & Planning
	<i>(ii) Determine the level of archaeological investigation that is appropriate for the project site and activity, as follows:</i> <ul style="list-style-type: none"> <li>• <i>Minimum: excavation less than 18 inches deep and in a relatively small area (e.g., a trench for lawn irrigation, tree planting, etc.). Implement LRDP Mitigation 4.5-1(b)(i).</i></li> <li>• <i>Moderate: excavation below 18 inches deep and/or over a large area on any site that has not been characterized and is not suspected to be a likely location for archaeological resources. Implement LRDP Mitigation 4.5-1 (b)(i) and (ii).</i></li> <li>• <i>Intensive: excavation below 18 inches and/or over a large area on any site that is within 800 feet of the historic alignment of Putah Creek, or that is adjacent to a recorded archaeological site. Implement LRDP Mitigation 4.5-1 (i), (ii) and (iii).</i></li> </ul>	(a)(ii), (b)(ii-vi) Determine appropriate level of archaeological investigation. Retain qualified archaeologist to perform work as specified.	SS, DE	During site selection or project design	Resource Management & Planning

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## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<p><i>(b) During the planning phase of the project, the campus shall implement the following steps to identify and protect archaeological resources that may be present in the APE:</i></p> <p><i>(i) For project sites at all levels of investigation, contractor crews shall be required to attend an informal training session prior to the start of earth moving, regarding how to recognize archaeological sites and artifacts. In addition, campus employees whose work routinely involves disturbing the soil shall be informed how to recognize evidence of potential archaeological sites and artifacts. Prior to disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify the campus if any are found. In the event of a find, the campus shall implement item (vi), below.</i></p>	<p>(b)(i)and (vi) Continue to include archaeological identification and stop work provisions in any contract involving earth moving.</p>	CO	Prior to construction	Architects & Engineers, Operations & Maintenance
		<p>(b)(i)and (vi) Conduct training sessions for contractor crews and relevant campus employees.</p>	CO	At start of construction	Resource Management & Planning
	<p><i>(ii) For project sites requiring a moderate or intensive level of investigation, a surface survey shall be conducted by a qualified archaeologist during project planning and design and prior to soil disturbing activities. For sites requiring moderate investigation, in the event of a surface find, intensive investigation will be implemented, as per item (iii), below. Irrespective of findings, the qualified archaeologist shall, in consultation with the campus, develop an archaeological monitoring plan to be implemented during the construction phase of the project. The frequency and duration of monitoring shall be adjusted in accordance with survey results, the nature of construction activities, and results during the monitoring period. In the event of a discovery, the campus shall implement item (vi), below.</i></p>	<p>(b)(ii) Review archaeological monitoring plan and incorporate appropriate specifications in project plan and construction contract.</p>	DE, CO	Prior to the beginning of construction	Architects & Engineers, Operations & Maintenance, Resource Management & Planning

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<p><i>(iii) For project sites requiring intensive investigation, irrespective of subsurface finds, the campus shall retain a qualified archaeologist to conduct a subsurface investigation of the project site, to ascertain whether buried archaeological materials are present and, if so, the extent of the deposit relative to the project's area of potential effects. If an archaeological deposit is discovered, the archaeologist will prepare a site record and file it with the California Historical Resource Information System.</i></p>				
	<p><i>(iv) If it is determined through step (iii), above, that the resource extends into the project's area of potential effects, the resource will be evaluated by a qualified archaeologist, who will determine whether it qualifies as a historical resource or a unique archaeological resource under the criteria of CEQA Guidelines § 15064.5. If the resource does not qualify, or if no resource is present within the project area of potential effects (APE), this will be noted in the environmental document and no further mitigation is required unless there is a discovery during construction (see (vi), below).</i></p>	<p>In the event of a discovery, consult with archaeologist to determine whether resource qualifies as a historical resource or a unique archaeological resource.</p>	DE, CO	Upon discovery of a resource in the APE	Resource Management & Planning
	<p><i>(v) If a resource within the project APE is determined to qualify as an historical resource or a unique archaeological resource (as defined by CEQA), the campus shall consult with the qualified archaeologist to consider means of avoiding or reducing ground disturbance within the site boundaries, including minor modifications of building footprint, landscape modification, the placement of protective fill, the establishment of a preservation easement, or other means that will permit avoidance or substantial preservation in place of the resource. If avoidance or substantial preservation in place is not possible, the campus shall implement LRDP Mitigation 4.5-2(a).</i></p>	<p>(b)(v) For a significant resource, consider project modifications to avoid or preserve the historic resource and incorporate into project design. If no measures feasible, implement LRDP Mitigation 4.5-2(a).</p>	DE, CO	Upon establishing that resource is significant	Resource Management & Planning

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## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<i>(vi) If a resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease. The campus shall contact a qualified archaeologist to provide and implement a plan for survey, subsurface investigation as needed to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project. LRDP Mitigation 4.5-1(b), steps (iii) through (vii) shall be implemented.</i>	(b)(vi) Verify that work is halted. Contact archaeologist to assess find. If significant, implement additional mitigation as specified. Document project effects to resource.	DE, CO	Upon discovery of a resource during construction	Resource Management & Planning
	<i>(vii) A written report of the results of investigations will be prepared by a qualified archaeologist and filed with the appropriate Information Center of the California Historical Resources Information System.</i>	(b)(vii) Require contracted archaeologist to prepare and file written report.	DE, CO	At conclusion of archaeological fieldwork and analysis	Resource Management & Planning
	<i>(c) (i) Before altering or otherwise affecting a building or structure 50 years old or older, the campus shall retain a qualified architectural historian to record it on a California Department of Parks and Recreation DPR 523 form or equivalent documentation. Its significance shall be assessed by a qualified architectural historian, using the significance criteria set forth for historic resources under CEQA Guidelines Section 15064.5. The evaluation process shall include the development of appropriate historical background research as context for the assessment of the significance of the structure in the history of the University system, the campus, and the region. For historic buildings, structures or features that do not meet the CEQA criteria for historical resource, no further mitigation is required and the impact is less than significant.</i>	Retain qualified architectural historian to record and evaluate buildings and structures as specified.	SS, DE	Prior to project approval	Resource Management & Planning

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<p>(ii) For a building or structure that qualifies as a historic resource, the architectural historian and the campus shall consult to consider measures that would enable the project to avoid direct or indirect impacts to the building or structure. These could include preserving a building on the margin of the project site, using it “as is,” or other measures that would not alter the building. If the project cannot avoid modifications to a significant building or structure, the campus shall implement LRDP Mitigation 4.5-2.</p>	<p>Consider measures to avoid impacts and incorporate into the project if feasible. If avoidance is not feasible, implement LRDP Mitigation 4.5-2.</p>	DE, CO	<p>During project design; prior to altering building or structure</p>	<p>Resource Management &amp; Planning</p>
4.5-2	<p>(a) For an archaeological site that has been determined by a qualified archaeologist to qualify as an historical resource or a unique archaeological resource through the process set forth under LRDP Mitigation 4.5-1(b), and where it has been determined under LRDP Mitigation 4.5-1(b) that avoidance or preservation in place is not feasible, a qualified archaeologist, in consultation with the campus, shall:</p> <p>(i) Prepare a research design and archaeological data recovery plan for the recovery that will capture those categories of data for which the site is significant, and implement the data recovery plan prior to or during development of the site.</p> <p>(ii) Perform appropriate technical analyses, prepare a full written report and file it with the appropriate Information Center, and provide for the permanent curation of recovered materials.</p>	<p>(a)(i-ii) Retain a qualified archaeologist to prepare and implement a data recovery plan, perform technical analyses, and prepare and file report. Require that recovered materials be curated.</p>	DE, CO	<p>During project design, construction</p>	<p>Resource Management &amp; Planning</p>
	<p>(iii) If, in the opinion of the qualified archaeologist and in light of the data available, the significance of the site is such that data recovery cannot capture the values that qualify the site for inclusion on the CRHR, the campus shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications to the proposed project that would allow the site to be preserved intact, such as project redesign, placement of fill, or project relocation or abandonment. If no such measures are feasible, the campus shall implement LRDP Mitigation 4.5-3.</p>	<p>(a)(iii) For a highly significant site, develop additional protection measures in consultation with archaeologist and implement if feasible. If none feasible, implement LRDP Mitigation 4.5-3.</p>	DE, CO	<p>During project design, construction</p>	<p>Resource Management &amp; Planning</p>

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## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<i>(b) For a structure or building that has been determined by a qualified architectural historian to qualify as an historical resource through the process set forth under LRDP Mitigation 4.5-1(c), and where it has been determined under LRDP Mitigation 4.5-1(c) that avoidance is not feasible, documentation and treatment shall be carried out as described below:</i>	(b) Determine whether significant building or structure can be preserved in place.	SS, DE	Prior to approval of final design	Resource Management & Planning
	<i>(i) If the building or structure can be preserved on site, but remodeling, renovation or other alterations are required, this work shall be conducted in compliance with the “Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings” (Weeks and Grimmer 1995).</i>	(b)(i) For alteration of a significant building, require stipulated renovation standards in the construction contract. Retain architectural historian to monitor for compliance.	DE, CO	Prior to the beginning of construction, during construction	Resource Management & Planning, Architects & Engineers
	<i>(ii) If a significant historic building or structure is proposed for major alteration or renovation, or to be moved and/or demolished, the campus shall ensure that a qualified architectural historian thoroughly documents the building and associated landscaping and setting. Documentation shall include still and video photography and a written documentary record of the building to the standards of the Historic American Building Survey (HABS) or Historic American Engineering Record (HAER), including accurate scaled mapping, architectural descriptions, and scaled architectural plans, if available. A copy of the record shall be deposited with the University archives, Shields Library Special Collections. The record shall be accompanied by a report containing site-specific history and appropriate contextual information. This information shall be gathered through site specific and comparative archival research, and oral history collection as appropriate.</i>	(b)(ii) For substantial impacts as described, retain a qualified architectural historian to conduct documentation and research, reporting as stipulated.	CO	Prior to work that will alter the building or structure	Resource Management & Planning
	<i>(iii) If preservation and reuse at the site are not feasible, the historical building shall be documented as described in item (ii) and, when physically and financially feasible, be moved and preserved or reused.</i>	(b)(iii) Arrange for building to be removed or reused if feasible.	DE, CO	Prior to work that will alter the building or structure	Resource Management & Planning, Architects & Engineers

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.5-2	<i>(iv) If, in the opinion of the qualified architectural historian, the nature and significance of the building is such that its demolition or destruction cannot be fully mitigated through documentation, the campus shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications to the proposed project that would allow the structure to be preserved intact. These could include project redesign, relocation or abandonment. If no such measures are feasible, the campus shall implement LRDP Mitigation 4.5-3.</i>	(b)(iv) For highly significant building or structure, consider and document project redesign measures for preservation. If none feasible, implement LRDP Mitigation 4.5-3.	DE	During final design	Resource Management & Planning
4.5-3	<i>If a significant historic resource or unique archaeological resource cannot be preserved intact, before the property is damaged or destroyed the campus shall ensure that the resource is appropriately documented, as follows. (i) For a built environment feature, appropriate documentation is described under LRDP 4.5-2(b)(iii). (ii) For an archaeological site, a program of research-directed data recovery shall be conducted and reported, consistent with LRDP Mitigation 4.5-2(a).</i>	Retain qualified architectural historian and/or archaeologist to conduct documentation/data recovery and reporting.	DE, CO	During final design, during construction	Resource Management & Planning
4.5-4	<i>(a) Implement LRDP Mitigation 4.5-1, 4.5-2 and 4.5-3 to minimize the potential for disturbance or destruction of human remains in an archaeological context and to preserve them in place if possible.</i>	Consider and document measures taken to keep human remains discovered on campus in place.	DE, CO, OP	During planning, and upon discovery of human remains in an archaeological context	Resource Management & Planning
	<i>(b) Provide a representative of the local Native American community an opportunity to monitor any excavation (including archaeological excavation) within the boundaries of a known Native American archaeological site.</i>	Retain Native American representative to monitor archaeological excavation.	DE, CO	During archaeological excavation on Native American archaeological site	Resource Management & Planning, Architects & Engineers, Operations & Maintenance

Project stage at which implementation of the measure is required: SS=during site selection; DE=during detailed project planning or project design prior to project approval; CO=during construction; OC=prior to occupancy; OP=during operation

## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.5-4	<p>(c) <i>In the event of a discovery on campus of human bone, suspected human bone, or a burial, all excavation in the vicinity will halt immediately and the area of the find will be protected until a qualified archaeologist determines whether the bone is human. If the qualified archaeologist determines the bone is human, or if a qualified archaeologist is not present, the campus will notify the Yolo or Solano County Coroner (depending on the county of the find) of the find before additional disturbance occurs. Consistent with California Health and Safety Code §7050.5(b), which prohibits disturbance of human remains uncovered by excavation until the Coroner has made a finding relative to PRC 5097 procedures, the campus will ensure the remains and vicinity of the find are protected against further disturbance. If it is determined that the find is of Native American origin, the campus will comply with the provisions of PRC § 5097.98 regarding identification and involvement of the Native American Most Likely Descendant (MLD).</i></p>	Contact archaeologist and County Coroner in the event of discovery of suspected human bone.	CO, OP	Upon discovery of suspected human bone	Resource Management & Planning, Architects & Engineers, Operations & Maintenance
	<p>(d) <i>If human remains cannot be left in place, the campus shall ensure that the qualified archaeologist and the MLD are provided opportunity to confer on archaeological treatment of human remains, and that appropriate studies, as identified through this consultation, are carried out prior to reinterment. The campus shall provide results of all such studies to the local Native American community, and shall provide an opportunity of local Native American involvement in any interpretative reporting. As stipulated by the provisions of the California Native American Graves Protection and Repatriation Act, the campus shall ensure that human remains and associated artifacts recovered from campus projects on state lands are repatriated to the appropriate local tribal group if requested.</i></p>	Confer with archaeologist and MLD on appropriate treatment. Incorporate treatment as stipulations in archaeological contract. Implement Native American involvement program to disseminate analysis results and provide opportunity to participate in interpretation. Document repatriation or reinterment.	CO, OP	Upon discovery of human remains in archaeological context	Resource Management & Planning

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.5-5	<i>Implement LRDP Mitigations 4.5-1 through 4.5-4.</i>	Document implementation of LRDP Mitigation 4.5-1 through 4.5-4.	SS, DE, CO, OP	During campus activities that have a potential for ground disturbance or alteration of buildings and structures	Resource Management & Planning
<b>4.6 GEOLOGY, SOILS, AND SEISMICITY</b>					
4.6-4	<i>Site-specific percolation testing or test borings shall be performed as part of the site analysis process at sites where septic tank disposal systems are proposed to determine if the soils are capable of adequately supporting them. The campus shall follow guidelines for septic system design provided in the Uniform Plumbing Code.</i>	Perform testing and document results. Review proposed septic system design for consistency with Uniform Plumbing Code. Revise design if necessary.	DE	During project design, before project approval, for projects that propose septic tank disposal systems	Architects & Engineers, Operations & Maintenance, Environmental Health & Safety
<b>4.7 HAZARDS AND HAZARDOUS MATERIALS</b>					
4.7-1	<i>The campus shall continue to implement the same (or equivalent) safety plans, programs, practices, and procedures related to the use, storage, and disposal of hazardous chemical materials during the 2003 LRDP planning horizon, including, but not necessarily limited to, the Business Plan, Hazardous Materials Communication Program, Chemical Inventory System, CUPA Self-Audit program, Injury and Illness Prevention Program, Chemical Hygiene Plans, Medical Surveillance Program, Chemical Safety Advisory Committee, Chemical Carcinogen Safety Program, and EH&amp;S audits and safety training. These programs may be replaced by other programs that incorporate similar health and safety measures.</i>	Monitor and document continued implementation of the same or equivalent plans.	OP	Annually	Environmental Health & Safety

Project stage at which implementation of the measure is required: SS=during site selection; DE=during detailed project planning or project design prior to project approval; CO=during construction; OC=prior to occupancy; OP=during operation

## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.7-2	<p>(a) <i>Implement LRDP Mitigation 4.7-1.</i></p> <p>(b) <i>The campus shall continue to implement the same (or equivalent) hazardous waste management programs during the 2003 LRDP planning horizon, including, but not necessarily limited to, hazardous waste storage and handling procedures, the waste minimization program, the pretreatment program, and the Waste Exclusion Program. These programs may be subject to modification as more stringent standards are developed or if the programs become obsolete through replacement by other programs that incorporate similar health and safety protection measures.</i></p>	Monitor and document continued implementation of the same or equivalent plans.	OP	Annually	Environmental Health & Safety
4.7-3	<p>(a) <i>Implement LRDP Mitigation 4.7-1.</i></p> <p>(b) <i>The campus shall continue to implement the same (or equivalent) Health Physics Program during the 2003 LRDP planning horizon. This program may be subject to modification as more stringent standards are developed or if the program becomes obsolete through replacement by other programs that incorporate similar health and safety protection measures</i></p>	Monitor and document continued implementation of the same or equivalent plans.	OP	Annually	Environmental Health & Safety
4.7-4	<p>(a) <i>Implement LRDP Mitigation 4.7-1.</i></p> <p>(b) <i>Implement LRDP Mitigation 4.7-3(b).</i></p>	Monitor and document continued implementation of the same or equivalent plans.	OP	Annually	Environmental Health & Safety
	<p>(c) <i>The campus shall continue to implement measures to reduce the generation of radioactive waste, including the requirement that employees working with radioactive materials be trained in radioactive waste minimization, EH&amp;S on-line information about radioactive waste minimization, and exploration of waste minimization techniques by EH&amp;S staff.</i></p>	Monitor and document continued implementation of radioactive waste minimization measures.	OP	Annually	Environmental Health & Safety
4.7-5	<p>(a) <i>Implement LRDP Mitigation 4.7-1.</i></p> <p>(b) <i>The campus shall continue to implement the same (or equivalent) Biosafety Program during the 2003 LRDP planning horizon. This program may be subject to modification as more stringent standards are developed or if the program becomes obsolete through replacement by other programs that incorporate similar health and safety protection measures.</i></p>	Monitor and document continued implementation of the same or equivalent programs.	OP	Annually	Environmental Health & Safety

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.7-6	(a) <i>Implement LRDP Mitigation 4.7-1.</i> (b) <i>Implement LRDP Mitigation 4.7-5(b).</i>	Monitor and document continued implementation of the same or equivalent programs.	OP	Annually	Environmental Health & Safety
4.7-7	(a) <i>Implement LRDP Mitigation 4.7-1.</i> (b) <i>Implement LRDP Mitigation 4.7-5(b).</i> (c) <i>The campus shall continue to implement the same (or equivalent) programs related to laboratory animal use during the 2003 LRDP planning horizon, including, but not necessarily limited to, inspections of animal facilities and study areas by the Campus Veterinarian, requiring investigators to prepare Animal Use and Care Protocols, review of Animal Use and Care Protocols by the AUCAAC and EH&amp;S, employee training in animal handling, and the campus animal health program. These programs may be subject to modification as more stringent standards are developed or if the programs become obsolete through replacement by other programs that incorporate similar health and safety protection measures.</i>	Monitor and document continued implementation of the same or equivalent programs.	OP	Annually	Environmental Health & Safety, Office of the Campus Veterinarian
4.7-8	<i>The campus shall continue to require that packaging of chemicals to be transported on public roads conform with all legal requirements.</i>	Monitor and document continuation of campus policy.	OP	Annually	Environmental Health & Safety
4.7-9	<i>Implement LRDP Mitigations 4.7-1 through 4.7-8.</i>	Monitor and document continuation of campus policy.	OP	Annually	Environmental Health & Safety

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## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
<b>4.7-10</b>	<p><i>For projects proposed by non-UC entities on campus that involve laboratory space, non-UC entities shall be required, through contracts and agreements, to implement programs and controls that provide the same level of protection required of campus laboratories and departments.</i></p> <p><i>The following project-specific mitigation measures would be implemented for non-UCD tenants:</i></p>	Include stipulated requirements in contract or agreement. Require and verify receipt of required documentation.	DE	Prior to project approval	Environmental Health & Safety, Resource Management & Planning
	<p><i>i. Non-UC entities shall submit the qualifications of designated laboratory directors to UC Davis EH&amp;S Office prior to commencing laboratory operations. Such documentation shall be in the form of educational and professional qualifications/experience</i></p> <p><i>ii. Non-UC entities shall submit certification of compliance with NIH biosafety principles to the UC Davis EH&amp;S Office prior to commencing on-site research or pilot plant manufacturing activities. Non-UC entities shall submit copies of completed medical waste management plans, biosafety management plans, inventories of infectious or genetically modified agents, applicable permits and updates.</i></p>	(i-iv) Verify that management plans and other documentation required have been submitted by non-UC entity, and that applicable permits have been received and are up to date. Review all documentation for completeness and adequacy.	OC, OP	Before non-UCD entity commences operations	Environmental Health & Safety
	<p><i>iii. If hazardous material quantities are proposed to be increased above applicable threshold quantities as defined in California Code of Regulations, Title 19, Division 2, Chapter 4.5, non-UC entities shall implement a Risk Management Plan/California Accidental Release Prevention Plan (RMP/Cal-ARP), which discusses the handling and storage of acutely hazardous materials on site. The RMP/Cal-ARP shall be approved by the CUPA and filed with the UC Davis EH&amp;S Office prior to commencing proposed operations.</i></p>	(iii) Perform regular additional reviews of documentation, and whenever operational changes are proposed.	OP	Before non-UC entity increases quantities above thresholds	Environmental Health & Safety
	<p><i>iv. Non-UC entities shall submit certification to the UC Davis EH&amp;S to verify that applicable requirements for handling and disposal of hazardous wastes have been met prior to commencing on-site research or pilot plant manufacturing activities. Non-UC entities shall submit copies of management plans for handling and disposal of hazardous wastes, and written verification of contracts with licensed waste disposal firms.</i></p>	(iv) Require certification from non-UC entities and verify that CUPA approval has been received and filed.	OP	Before non-UC entity commences proposed operations	Environmental Health & Safety

Project stage at which implementation of the measure is required: SS=during site selection; DE=during detailed project planning or project design prior to project approval; CO=during construction; OC=prior to occupancy; OP=during operation

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	v. <i>Non-UC entities shall provide to campus EH&amp;S copies of all required environmental reports to local, state, and federal environmental and safety regulators.</i>	(v) Review reports for required conditions and verify that operations meet conditions. Maintain log of all reporting.	OP	Ongoing	Environmental Health & Safety
4.7-12	<i>The campus shall perform due diligence assessments of all sites where ground-disturbing construction is proposed.</i>	Conduct assessment and document findings. Conduct cleanup as necessary.	SS, DE	During project siting or planning phase	Resource Management & Planning, Environmental Health & Safety
4.7-13	<i>The campus shall survey buildings for potential contamination before any demolition or renovation work is performed.</i>	Conduct survey and document findings. Conduct cleanup as necessary.	DE	During project planning phase	Architects & Engineers, Operations & Maintenance
4.7-15	<i>(a) The UC Davis Airport flight pattern for Runway 16 shall be changed to a right-hand approach.</i>	Submit notification to FAA and receive approval.	DE	Prior to construction of NMP facilities that would lie under existing flight pattern	University Airport, Resource Management & Planning
	<i>(b) Lighting for recreation fields in the NMP will be tested by night flights, and adjusted as necessary to eliminate glare that could pose a hazard for aircraft.</i>	Perform flight, make adjustments, and document.	CO	Prior to completion of construction	Architects & Engineers, University Airport
	<i>(c) UC Davis or a developer acting on behalf of UC Davis shall include disclosure statements in marketing and sales materials for the NMP informing potential owners of property in the NMP of the presence of the University Airport.</i>	Prepare standard disclosure language and include resident information package.	OC	Verify annually	Research Management and Planning

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## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.7-17	<i>To the extent feasible, the campus shall maintain at least one unobstructed lane in both directions on campus roadways. At any time only a single lane is available due to construction-related road closures, the campus shall provide a temporary traffic signal, signal carriers (i.e., flagpersons), or other appropriate traffic controls to allow travel in both directions. If construction activities require the complete closure of a roadway, the campus shall provide appropriate signage indicating alternative routes. To ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures, the campus shall inform emergency services, including the UC Davis Police and Fire Departments, and American Medical Response, of the closures and alternative travel routes.</i>	Develop and implement policy and standard contract language regarding lane closures and notification of emergency services.	OP, CO	Prior to construction of first project under 2003 LRDP, and ongoing	Office of Administration, Resource Management & Planning
<b>4.8 HYDROLOGY AND WATER QUALITY</b>					
4.8-1	<i>The campus shall continue to comply with the NPDES state-wide General Permit for Discharge of Storm Water Associated with Construction Activity by implementing control measures and BMPs required by project-specific SWPPPs and with the Phase II SWMP to eliminate or reduce non-storm and storm water discharges to receiving waters.</i>	Continue to comply with campus SWPPP and submit updated information to the CVWRQCB as required.	CO	Prior to construction	Environmental Health & Safety
		Inspect construction site to verify that contractor prepares and complies with SWPPP and permit requirements.  Document implementation of BMPs in compliance with Phase II SWMP.	CO	Inspect construction site for compliance during each phase of construction	Architects & Engineers, Operations & Maintenance
		File Notice of Termination.	OC	At conclusion of construction	Environmental Health & Safety

Project stage at which implementation of the measure is required: SS=during site selection; DE=during detailed project planning or project design prior to project approval; CO=during construction; OC=prior to occupancy; OP=during operation

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.8-2	<i>The campus shall comply with the measures in the Phase II SWMP to ensure that project design includes a combination of BMPs, or equally effective measures as they become available in the future, to minimize the contribution of pollutants to receiving waters.</i>	Review project design for BMPs to minimize the contribution of pollutants to receiving waters. Revise project design if necessary.	DE	Prior to final project design approval.	Architects & Engineers, Operations & Maintenance
4.8-3	<i>(a) Prior to approval of specific projects under the 2003 LRDP, the campus shall perform a drainage study to evaluate each specific development to determine whether project runoff would exceed the capacity of the existing storm drainage system, cause ponding to worsen, and/or increase the potential for property damage from flooding.</i>	Prepare drainage study and document findings.	DE	During project design and prior to project approval	Architects & Engineers
4.8-3	<i>(b) If it is determined that existing drainage capacity would be exceeded, ponding could worsen, and/or risk of property damage from flooding could increase, the campus shall design and implement necessary and feasible improvements. Such improvements could include, but would not be limited to, the following: (i) The expansion or modification of the existing storm drainage system. (ii) Single-project detention or retention basins incorporated into project design with features including but not limited to: small onsite detention or retention basins; rooftop ponding; temporary flooding of parking areas, streets and gutters; landscaping designed to temporarily retain water; and gravel beds designed to collect and retain runoff. (iii) Multi-project storm water detention or retention basins.</i>	Review study. If runoff would exceed capacity of existing campus storm drainage system, implement necessary and feasible improvements.	DE	Prior to final project design approval.	Architects & Engineers
		Verify that improvements have been implemented.	CO	During construction	Architects & Engineers, Operations & Maintenance
		Monitor and document drainage conditions.	OP	At least annually, during storm period	Architects & Engineers, Operations & Maintenance
	<i>(c) Campus development west of County Road 98 shall incorporate single- or multi-project basins in order to reduce storm event drainage flows to the Covell Drain.</i>	Incorporate detention basins into project design. Document that adequate detention has been provided.	DE	Prior to final project design approval	Resource Management & Planning, Architects & Engineers

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## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.8-4	<i>(a) The campus shall continue to monitor and modify its pretreatment program, WWTP operation, and/or treatment processes as necessary to comply with WDRs.</i>	Monitor effluent discharge. Document monitoring and compliance record. Implement modifications to pretreatment program and treatment operations.	OP	On a continuous basis per the WDRs	Operations & Maintenance
	<i>(b) The campus shall implement a monitoring program specifically targeted at the following constituents: copper, cyanide, iron and nitrate + nitrite, and make appropriate modifications as necessary to the campus pretreatment program to avoid exceedance of permit limits for these constituents.</i>	Monitor effluent discharge for listed constituents. Document monitoring and compliance record. Implement modifications to pretreatment program and treatment operations.	OP	On a continuous basis per the WDRs	Operations & Maintenance
4.8-5	<i>(a) The campus shall continue to implement water conservation strategies to reduce demand for water from the deep aquifer. Domestic water conservation strategies shall include the following or equivalent measures:</i> <i>(i) Install water efficient shower heads and low-flow toilets that meet or exceed building code conservation requirements in all new campus buildings, and where feasible, retrofit existing buildings with these water efficient devices.</i> <i>(ii) Continue the leak detection and repair program.</i> <i>(iii) Continue converting existing single-pass cooling systems to cooling tower systems.</i> <i>(iv) Use water-conservative landscaping on the west and south campuses where domestic water is used for irrigation.</i> <i>(v) Replace domestic water irrigation systems on the west and south campuses with an alternate water source (shallow/intermediate or reclaimed water), where feasible.</i>	<i>(a)(i, iv) Review project design for water efficient shower heads and low-flow toilets, and water conservative landscaping on the south and west campuses.</i>	DE	Prior to final project design approval	Architects & Engineers, Operations & Maintenance, Grounds Division
		<i>(a)(ii, iii, v, vii) Document leak detection and repair activities, progress toward conversion of single-pass cooling systems, and implementation of additional water conservation strategies and programs.</i>	OP	Annually	Operations & Maintenance, Grounds Division, Resource Management & Planning, Student Housing

Project stage at which implementation of the measure is required: SS=during site selection; DE=during detailed project planning or project design prior to project approval; CO=during construction; OC=prior to occupancy; OP=during operation

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<p>(vi) Install water meters at the proposed neighborhood to encourage residential water conservation.</p> <p>(vii) Identify and implement additional feasible water conservation strategies and programs including a water awareness program focused on water conservation.</p>	(a)(vi) Review NMP specific residential project designs for water meters.	DE	Prior to final specific design approval of NMP projects	Resource Management & Planning
	(b) The campus shall continue hydrogeologic monitoring and evaluation efforts to determine the long-term production and quality trends of the deep aquifer.	Monitor deep aquifer water elevation and document results.	OP	Document efforts annually.	Operations & Maintenance
	(c) To the extent feasible, new water supply wells in the deep aquifer should be located on the west campus in sands and gravels that are not used by or available to the City of Davis for deep water extraction.	Evaluate feasibility of establishing new wells on the west campus. Contract with a licensed hydrogeologist and/or engineer to review well locations and construction details.	DE	Prior to installation of new wells	Operations & Maintenance
	(d) If continued hydrogeologic monitoring and evaluation efforts identify constraints in the deep aquifer's ability to provide for the campus' long-term water needs, the campus will treat shallow/intermediate aquifer and/or surface water from the Solano Project to serve domestic water demand.	Develop and implement plan to treat shallow/intermediate aquifer water or surface water to serve domestic demand.	OP	If constraints on deep aquifer are identified.	Operations & Maintenance, Architects & Engineers, Resource Management & Planning

Project stage at which implementation of the measure is required: SS=during site selection; DE=during detailed project planning or project design prior to project approval; CO=during construction; OC=prior to occupancy; OP=during operation

## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
<b>4.8-6</b>	<p><i>(a) The campus shall continue to implement water conservation strategies to reduce demand for water from the intermediate aquifer. Utility water conservation strategies shall include the following or equivalent measures:</i></p> <p><i>(i) Landscape, where appropriate, with native, drought resistant plants and use lawns only where needed for pedestrian traffic, activity areas, and recreation.</i></p> <p><i>(ii) Install efficient irrigation systems including centrally-controlled automatic irrigation systems and low-flow spray systems.</i></p> <p><i>(iii) Apply heavy applications of mulch to landscaped areas to reduce evaporation.</i></p> <p><i>(iv) Use treated wastewater for landscape irrigation where feasible.</i></p>	Review project design for incorporation of utility water conservation strategies.	DE	Prior to final project design approval	Architects & Engineers, Operations & Maintenance, Grounds Division
		Verify that utility water conservation elements are included in project design.	CO	During construction	Architects & Engineers
	<p><i>(b) The campus shall continue to monitor shallow/intermediate aquifer water elevations at existing campus wells to ascertain whether there is any long-term decline in water levels</i></p>	Monitor shallow/intermediate aquifer water elevations and document results.	OP	Document at least annually	Operations & Maintenance, Agricultural Services
	<p><i>(c) The campus shall continue to participate in regional subsidence monitoring, including by installing an extensometer, to determine the vertical location of local subsidence.</i></p>	Conduct monitoring and document results.	OP	Ongoing monitoring; document annually	*Resource Management & Planning in cooperation with other regional entities
<p><i>(d) If shallow/intermediate aquifer monitoring or subsidence monitoring indicate that campus water use from the intermediate aquifer is contributing to a net deficit in aquifer volume and/or significant subsidence, the campus will reduce use of water from the aquifer by using surface water and/or treated wastewater effluent to irrigate campus recreation fields.</i></p>	Develop and implement plan to use surface water and/or treated wastewater effluent for irrigation.	OP	If monitoring indicates campus water use is impacting intermediate aquifer volume and/or contributing to significant subsidence	Resource Management & Planning	

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.8-6	<p>(a) The campus shall incorporate the following or equally effective measures into project designs under the 2003 LRDP where feasible, to increase percolation and infiltration of precipitation into the underlying shallow/intermediate aquifers:</p> <ul style="list-style-type: none"> <li>(i) Minimize paved surfaces.</li> <li>(ii) Use grassy swales, infiltration trenches, or grass filter strips to intercept storm water runoff.</li> <li>(iii) Implement LRDP Mitigation 4.8-2(b), which specifies construction of detention and infiltration facilities in those areas that do not discharge storm water to the Arboretum.</li> </ul>	Review project design for measures that increase percolation and infiltration of precipitation. Revise design as necessary.	DE	Prior to final project design approval	Design Review Committee, Architects & Engineers
4.8-9	<p>(b) Prior to final design, the campus will review the plans for all structures to be constructed in the 100-year floodplain for compliance with the following FEMA requirements for non-residential structures:</p> <ul style="list-style-type: none"> <li>(i) Elevate the lowest floor (including the basement) to or above the base flood level; or</li> <li>(ii) Together with attendant utility and sanitary facilities, design so that below the base flood level, the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and</li> <li>(iii) Require that fully enclosed areas below the lowest floor that are subject to flooding be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for entry and exit of flood waters.</li> </ul>	Review project design for compliance with FEMA requirements.	DE	Prior to final design approval	Architects & Engineers, Operations & Maintenance
		Verify that construction is consistent with requirements.	OC	Prior to occupancy	Architects & Engineers
	<p>(b) For structures placed within the 100-year floodplain, flood control devices will be designed to direct flows toward areas where flood hazards will be minimal.</p>	Review project design for redirection of flows. Revise design if necessary.	DE	Prior to final design approval	Architects & Engineers, Operations & Maintenance
		Verify that construction is consistent with requirements.	OC	Prior to occupancy	Architects & Engineers, Operations & Maintenance

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## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
<b>4.8-10</b>	<i>(a) Implement LRDP Mitigation 4.8-1 and 4.8-2.</i>	Document compliance with mitigations 4.8-1 and 4.8-2.	DE, CO, OC	During design and construction of each project	Architects & Engineers, Environmental Health & Safety
	<i>(b) Jurisdictions within the Putah Creek watershed should comply with Phase II NPDES Municipal Storm Water Permit requirements for small municipalities in order to minimize the contribution of sediment and other pollutants associated with development in the region.</i>	Monitor and document compliance UC Davis compliance. *Compliance by municipalities is outside UC jurisdiction.	OP	On a continuing basis	Environmental Health & Safety; Yolo County, Solano County, City of Winters, and City of Davis
	<i>(c) Comprehensive SWPPPs and monitoring programs should be implemented by all storm water dischargers associated with specified industrial and construction activities, in compliance with the state's General Permits. Such plans shall include BMPs or equally effective measures.</i>	Monitor and document UC Davis compliance. *Compliance by municipalities is outside UC jurisdiction.	OP	On a continuing basis	Environmental Health & Safety; Yolo County, Solano County, City of Winters, and City of Davis
<b>4.8-11</b>	<i>The campus shall implement LRDP Mitigation 4.8-3(a-c) in order to prevent flooding on campus.</i>	As noted above.	DE, OP	During project design and construction and ongoing	Resource Management & Planning, Architects & Engineers
<b>4.8-12</b>	<i>The campus shall implement LRDP Mitigation 4.8-4(a) and (b) to minimize the potential for degradation of receiving water quality</i>	As noted above.	DE, OP	At project design and ongoing	Operations & Maintenance, Architects & Engineers
<b>4.8-13</b>	<i>(a) Implement LRDP Mitigation 4.8-5(a-d).</i>	As noted above.	DE, OP	Prior to project design approval and ongoing	Resource Management & Planning, Architects & Engineers, Operations & Maintenance, Grounds

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.8-13	<p><i>(b) The City of Davis is expected to implement measures to reduce the amount of water withdrawn from the deep aquifer consistent with policies adopted in its General Plan.</i></p> <ul style="list-style-type: none"> <li>• <i>Give priority to demand reduction and conservation over additional water resource development (Policy WATER 1.1)</i></li> <li>• <i>Require water conserving landscaping (Policy WATER 1.2)</i></li> <li>• <i>Provide for the current and long-range water needs of the Davis Planning Area, and for protection of the quality and quantity of groundwater resources (Policy WATER 2.1)</i></li> <li>• <i>Manage groundwater resources so as to preserve both quantity and quality (Policy WATER 2.2)</i></li> <li>• <i>Research, monitor and participate in issues in Yolo County and the area of origin of the City's groundwater that affect the quality and quantity of water (Policy WATER 4.1)</i></li> </ul>	Outside jurisdiction of UC Davis	DE, OP	On a continuing basis	*City of Davis
4.8-14	<p><i>(a) The campus should implement LRDP Mitigation 4.8-6(a-e) to minimize its withdrawal from the shallow/intermediate aquifer and maximize the potential for infiltration.</i></p>	Document compliance with LRDP Mitigation 4.8-6, above.	DE, CO, DE	Prior to design approval, during construction, ongoing	Resource Management & Planning, Architects & Engineers, Operations & Maintenance, Agricultural Services
	<p><i>(b) Consistent with current water planning policies, the City of Davis is expected to implement measures to reduce impervious surfaces and reduce the amount of water withdrawn from the shallow/intermediate aquifer, consistent with, but not limited to, the water policies listed in LRDP Mitigation 4.8-13(b).</i></p>	Outside jurisdiction of UC Davis	OP	On a continuing basis	*City of Davis

Project stage at which implementation of the measure is required: SS=during site selection; DE=during detailed project planning or project design prior to project approval; CO=during construction; OC=prior to occupancy; OP=during operation

## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
<b>4.10 NOISE</b>					
<b>4.10-1</b>	<p><i>Prior to initiation of campus construction, the University shall approve a construction noise mitigation program including but not limited to the following:</i></p> <ul style="list-style-type: none"> <li>• <i>Construction equipment shall be properly outfitted and maintained with feasible noise reduction devices to minimize construction-generated noise.</i></li> <li>• <i>Stationary noise sources such as generators or pumps shall be located 100 feet away from noise sensitive land uses as feasible.</i></li> <li>• <i>Laydown and construction vehicle staging areas shall be located 100 feet away from noise-sensitive land uses as feasible.</i></li> <li>• <i>Whenever possible, academic, administrative, and residential areas that will be subject to construction noise shall be informed a week before the start of each construction project.</i></li> <li>• <i>Loud construction activity (i.e., construction activity such as jackhammering, concrete sawing, asphalt removal, and large-scale grading operations) within 100 feet of a residential or academic building shall not be scheduled during finals week.</i></li> <li>• <i>Loud construction activity as described above within 100 feet of an academic or residential use shall, to the extent feasible, be scheduled during holidays, Thanksgiving breaks, Christmas break, Spring break, or Summer break.</i></li> <li>• <i>Loud construction activity within 100 feet of a residential or academic building shall be restricted to occur between 7:30 AM and 7:30 PM.</i></li> </ul>	Develop construction noise mitigation program and adopt as part of standard construction contract specifications.	DE, CO	Prior to initiation of construction under the 2003 LRDP	Architects & Engineers
		Inspect construction site to verify that measures are being implemented.	CO	During construction	Architects & Engineers
<b>4.10-2</b>	(a) <i>For noise-sensitive uses adjacent to Russell Boulevard between Arlington Boulevard and Arthur Street, the existing soundwall (approximately 6.5 feet in height) could be increased slightly in height and extended to include the daycare center to the east.</i>	Reimburse City for fair share of the cost of implemented noise abatement measures along Russell Boulevard.	OP	As required	*Resource Management & Planning, City of Davis

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<p><i>For noise-sensitive uses adjacent to Russell Boulevard between Arthur Street and SR 113, and from SR 113 to La Rue/Anderson Road and from La Rue Road to Oak Street, soundwalls may be constructed for exterior residential and recreational land uses within approximately 100 feet of the centerline of Russell Boulevard, where construction of such walls would not interfere with driveway access.</i></p> <p><i>The campus shall reimburse the City of Davis the campus' fair share of the cost of a City of Davis noise abatement program for reducing interior noise levels in homes along Russell Boulevard that are significantly affected by noise from 2003 LRDP-related growth. The campus' contribution to the City's noise abatement program could be used to extend soundwalls as described above or for other noise abatement measures such as retrofit of homes. The campus' fair share shall be determined based on the volume of traffic added to Russell Boulevard by the campus as a result of 2003 LRDP implementation and the percentage that 2003 LRDP-related traffic increases constitute of the average daily traffic on the roadway.</i></p>				
	<p><i>(b) For components of the 2003 LRDP having future noise-sensitive land uses such as the Neighborhood and Research Park, building and area layouts shall incorporate noise control as a design feature; including increased setbacks, landscaped berms, and using building placement to shield noise-sensitive exterior areas from direct roadway views.</i></p>	<p>Review project design and revise as needed to incorporate noise control features.</p>	DE	Prior to final project approval	Resource Management & Planning, Architects & Engineers
4.10-4	<p><i>Residential and academic uses within 750 feet of the centerline of a rail line shall be evaluated using the Federal Transit Administration Noise and Vibration Guidelines. Following the evaluation, as appropriate, facilities shall be designed and constructed to achieve an interior noise and vibration level within the standards recommended by the guidelines.</i></p>	<p>Conduct evaluation and document results.</p>	DE	During project design phase	Resource Management & Planning
		<p>Review project design for compliance with standards.</p>	DE	Prior to final project approval	Architects & Engineers
		<p>Verify that construction meets the standards.</p>	CO	During construction	Architects & Engineers

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## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.10-5	<i>Implement LRDP Mitigations 4.10-1 and 4.10-2</i>	Document compliance with LRDP Mitigations 4.10-1 and 4.10-2.	DE	During project design phase	Resource Management & Planning
			DE	Prior to final project approval	Architects & Engineers
			CO	During construction	Architects & Engineers
<b>4.12 PUBLIC SERVICES</b>					
4.12-3	<i>If documented unmitigated significant environmental impacts are caused by construction of facilities for the City of Davis Fire Department that are needed in part to provide service to the proposed University Neighborhood, UC Davis shall negotiate with the City of Davis to determine the campus' fair share (as described in Section 4.12.2.3) of the costs to implement any feasible and required environmental mitigation measures so long as the unmitigated significant adverse impacts have not been otherwise reduced to less-than-significant levels through regulatory requirements, public funding, or agreements. This mitigation measure shall not apply to any other costs associated with implementation of public service facilities.</i>	Negotiate with City of Davis to determine fair share contribution toward feasible and required environmental mitigation measures for new fire facility.	OP	Implemented if City of Davis Fire Dept. requires new facilities to provide service to NMP, and if mitigation costs are identified following completion of the environmental review process for new City of Davis Fire Dept. facilities	*Resource Management & Planning, City of Davis

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.12-6	<i>If documented unmitigated significant environmental impacts are caused by the construction of police or fire facilities in the Cities of Davis, Dixon, Woodland, and/or Winters that are needed in part due to implementation of the 2003 LRDP, UC Davis shall negotiate with the appropriate local jurisdiction to determine the campus' fair share (as described in Section 4.12.2.3) of the costs to implement any feasible and required environmental mitigation measures so long as the unmitigated impacts have not been otherwise reduced to less-than-significant levels through regulatory requirements, public funding, or agreements. This mitigation measure shall not apply to any other costs associated with implementation of public service facilities.</i>	Negotiate with cities to determine an appropriate fair share contribution for feasible and required environmental mitigation measures for new police or fire facilities.	OP	If cities require police or fire facilities because of the 2003 LRDP and if mitigation costs are identified, following completion of the environmental review process for police and fire facilities	*Resource Management & Planning, Cities of Davis, Dixon, Woodland, and Winters
4.12-7	<i>If documented unmitigated significant environmental impacts are caused by the construction of school facilities in the Cities of Davis, Dixon, Woodland, and/or Winters that are needed in part due to implementation of the 2003 LRDP, UC Davis shall negotiate with the appropriate local jurisdiction to determine the campus' fair share (as described in Section 4.12.2.3) of the costs to implement any feasible and required environmental mitigation measures so long as the unmitigated impacts have not been otherwise reduced to less-than-significant levels through regulatory requirements, public funding, or agreements. This mitigation measure shall not apply to any other costs associated with implementation of public service facilities.</i>	Negotiate with cities to determine an appropriate fair share contribution for feasible and required environmental mitigation measures for new school facilities.	OP	Following completion of the environmental review process for new school facilities, if mitigation costs are identified in connection with those facilities proposed because of the implementation of the 2003 LRDP	*Resource Management & Planning, Cities of Davis, Dixon, Woodland, and Winters

Project stage at which implementation of the measure is required: SS=during site selection; DE=during detailed project planning or project design prior to project approval; CO=during construction; OC=prior to occupancy; OP=during operation

## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
<b>4.13 RECREATION</b>					
4.13-2	<i>If documented unmitigated significant environmental impacts are caused by the construction of recreation facilities in the Cities of Dixon, Woodland, and/or Winters that are needed in part due to implementation of the 2003 LRDP, UC Davis shall negotiate with the appropriate local jurisdiction to determine the campus' fair share (as described in Section 4.12.2.3) of the costs to implement any feasible and required environmental mitigation measures so long as the unmitigated impacts have not been otherwise reduced to less-than-significant levels through regulatory requirements, public funding, or agreements. This mitigation measure shall not apply to any other costs associated with implementation of recreation facilities.</i>	Negotiate with cities to determine an appropriate fair share contribution for feasible and required environmental mitigation measures for new recreation facilities.	OP	If cities require new recreation facilities and if mitigation costs are identified in connection with those facilities proposed because of the implementation of the 2003 LRDP	*Resource Management & Planning, Cities of Davis, Dixon, Woodland, and Winters
<b>4.14 TRAFFIC, CIRCULATION, AND PARKING</b>					
4.14-1	<i>(a) UC Davis shall continue to actively pursue Transportation Demand Management strategies to reduce vehicle-trips to and from campus.</i>	Document campus Transportation Demand Management efforts and progress. Detail any needed improvements to program.	OP	At least every three years	Transportation and Parking Services
	<i>(b) UC Davis shall continue to monitor AM and PM peak hour traffic operations at critical intersections and roadways on campus.</i>	Monitor intersections and document results.	OP	At least every three years	Resource Management & Planning
	<i>(c) UC Davis shall review individual projects proposed under the 2003 LRDP as they advance through the environmental clearance phase of development to determine if intersection or roadway improvements are needed with the additional traffic generated by the proposed project. If intersection operations are found to degrade to unacceptable levels, UC Davis shall construct physical improvements such as adding traffic signals or roundabouts at affected study intersections, as described below.</i>	Review project impacts on intersection operations.	DE	During project planning	Resource Management & Planning

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<ul style="list-style-type: none"> <li>• Orchard Road/La Rue Road intersection. Widen the Orchard Road approaches to include an exclusive left-turn lane and a shared through/right-turn lane on the eastbound approach, and an exclusive left-turn, a through lane, and a separate right-turn lane on the westbound approach.</li> <li>• Hutchison Drive/SR 113 SB Ramp intersection. Install a traffic signal.</li> <li>• Hutchison Drive/SR 113 NB Ramp intersection. Install a traffic signal.</li> <li>• Hutchison Drive/Extension Center Drive intersection. Modify the southbound Extension Center Drive approach to eliminate left-turns from Extension Center Drive to Hutchison Drive and improve Orchard Park Drive to provide a continuous roadway between Extension Center Drive and Orchard Road.</li> <li>• Hutchison Drive/La Rue Road intersection. Widen the southbound La Rue Road approach to include an exclusive right-turn lane.</li> <li>• Old Davis Road/A Street intersection. Construct a roundabout or install a traffic signal or realign Old Davis Road as proposed in the 2003 LRDP.</li> <li>• New Davis Road/Beau Vine Lane intersection. Construct a roundabout or install a traffic signal.</li> <li>• New Davis Road/California Avenue intersection. Install a traffic signal or construct the new roadway proposed in the 2003 LRDP between Old Davis Road and La Rue Road.</li> <li>• WB I-80 Ramps/Old Davis Road intersection. Install a traffic signal.</li> <li>• EB I-80 Ramps/Old Davis Road intersection. Install a traffic signal.</li> </ul>	Construct necessary intersection improvements.	OC	Prior to project occupancy	Architects & Engineers
4.14-2	(a) UC Davis shall continue to actively pursue Transportation Demand Management strategies to reduce vehicle-trips to and from campus.	Document Transportation Demand Management efforts and progress. Detail any needed improvements to program.	OP	At least every three years	Transportation & Parking Services.

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## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<i>(b) UC Davis shall continue to monitor AM and PM peak hour traffic operations at critical intersections and roadways in the campus vicinity at least every three years to identify locations operating below UC Davis, City of Davis, Yolo County, Solano County, or Caltrans LOS thresholds and to identify improvements to restore operations to an acceptable level.</i>	Monitor intersections, document results, and identify any needed improvements.	OP	At least every three years	Resource Management & Planning
	<p><i>(c) UC Davis shall review individual projects proposed under the 2003 LRDP as they advance through the environmental clearance phase of development to determine if intersection or roadway improvements are needed with the additional traffic generated by the proposed project. If intersection operations are found to degrade to unacceptable levels, UC Davis shall contribute its fair share towards roadway improvements at affected study intersections.</i></p> <ul style="list-style-type: none"> <li>• <i>Russell Boulevard/Orchard Park Drive intersection. Restrict access to right-turns in/out only at the Russell Boulevard/Orchard Park Drive intersection, or widen the northbound approach to include separate left and right-turn lanes and provide a 50-foot refuge area in the median on Russell Boulevard.</i></li> <li>• <i>First Street/A Street intersection. Construct a roundabout or install a traffic signal.</i></li> <li>• <i>Richards Boulevard/I-80 Ramps intersection. Reconstruct the north side of the interchange to remove the loop on and off ramps and replace with new ramps in diamond configuration, including traffic signals at ramp terminal intersections</i></li> <li>• <i>Richards Boulevard/Research Park Drive intersection. Widen the eastbound Richards Boulevard approach to provide an exclusive left-turn lane, a through lane, and a shared through/right-turn lane.</i></li> <li>• <i>Weave section on northbound SR 113 between Hutchison Drive and Russell Boulevard. Widen the SR 113 Northbound off-ramp onto Russell Boulevard to provide two lanes. One off-ramp lane would serve the auxiliary lane between Hutchison Drive and Russell Boulevard and the second off-ramp lane would serve the SR 113 mainline.</i></li> </ul>	Review project impacts on intersection operations. Negotiate with the appropriate jurisdiction to determine an appropriate fair share contribution towards necessary roadway improvements.	DE	During project planning following completion of the environmental review process for new traffic facilities, if mitigation costs are identified in conjunction with those facilities proposed because of 2003 LRDP implementation	*Resource Management & Planning. City of Davis, Yolo County, Solano County

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<ul style="list-style-type: none"> <li>Ramp junctions at the I-80/Pedrick Road interchange. Widen I-80 to provide four travel lanes in each direction in the vicinity of the Pedrick Road interchange.</li> <li>I-80 mainline east of Mace Boulevard. Widen I-80 to provide a high occupancy vehicle (HOV) lane in each direction between Richards Boulevard and Mace Boulevard and east of Mace Boulevard.</li> </ul>				
4.14-3	(a) UC Davis shall continue to actively pursue Transportation Demand Management strategies to reduce parking demand.	Document Transportation Demand Management efforts and progress and identify any needed program improvements.	OP	At least every three years	Transportation & Parking Services
	(b) UC Davis shall continue to monitor parking demand on a quarterly basis to identify campus parking areas with a parking utilization over 90 percent. UC Davis shall provide additional parking if a proposed project is expected to increase the winter utilization rate to over 90 percent on the central campus, Health Sciences District, and/or major facilities of the west and south campus.	Monitor parking demand. Identify areas with over 90% utilization.	OP	Once every quarter	Transportation and Parking Services
		Assess project parking needs.	DE	During project planning	Resource Management & Planning
		Provide additional parking for projects that will increase utilization.	OC	Prior to project occupancy	Architects & Engineers
4.14-4	UC Davis shall monitor transit ridership to identify routes operating over capacity with increased campus growth. UC Davis shall work with transit providers to identify additional service required with campus growth or new transit routes needed to serve future development areas.	Monitor transit ridership and document results; confer with providers to identify necessary improvements.	OP	Annually	Transportation and Parking Services, Unitrans and Yolo Bus
		Increase service as needed.	OP	As needed	Unitrans

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## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
4.14-5	<i>UC Davis shall monitor core area pedestrian and bike activity and accidents. UC Davis shall improve bike and pedestrian facilities or alter transit operations to avoid increased bicycle accident rates or safety problems.</i>	Monitor pedestrian and bike activity and accidents and assess need for operation improvements.	OP	Annually	Transportation and Parking Services, UC Davis Police Dept, Resource Management & Planning
		Improve facilities/operations as needed.	OP	As needed	Resource Management & Planning, Architects & Engineers
<b>4.15 UTILITIES</b>					
4.15-1	<i>(a) Once preliminary project design is developed, the campus shall review each project to determine if existing domestic/fire water supply is adequate at the point of connection. If domestic/fire water is determined inadequate, the campus will upgrade the system to provide adequate water flow and pressure to the project site before constructing the project.</i>	Review project design relative to adequacy of water supplies at point of connection.	DE	Prior to final project design approval	Architects & Engineers
		Upgrade the system, if necessary.	OC	Prior to occupancy	Architects & Engineers
	<i>(b) Implement domestic water conservation strategies as indicated in LRDP Mitigation 4.8-5(a) (Section 4.8 Hydrology and Water Quality).</i>	As noted for LRDP Mitigation 4.8-5(a)	DE OP	As noted for LRDP Mitigation 4.8-5(a)	Architects & Engineers, Operations & Maintenance, Grounds Division
4.15-2	<i>(a) Once preliminary project design is developed, the campus shall review each project to determine if existing utility water supply is adequate at the point of connection. If the utility water supply is determined to be inadequate, the campus will upgrade the system to provide adequate water flow to the project site prior to occupation or operation.</i>	Review project design to determine if water supplies are adequate at point of connection.	DE	Prior to final project design approval	Architects & Engineers
		Upgrade the system, if necessary.	OC	Prior to construction	Architects & Engineers

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<i>(b) Implement utility water conservation strategies as indicated in LRDP Mitigation 4.8-6(a) (Section 4.8 Hydrology and Water Quality, Volume II).</i>	As noted for LRDP Mitigation 4.8-6(a)	DE CO OP	As noted for LRDP Mitigation 4.8-6(a)	Architects & Engineers, Operations & Maintenance, Grounds, Agricultural Services Division, Student Housing
4.15-3	<i>Once preliminary project design is developed, the campus shall review each project to determine whether existing capacity of the sanitary sewer line at the point of connection is adequate. If the capacity of the sewer line is determined inadequate, the campus will upgrade the system to provide adequate service to the project site prior to occupation or operation.</i>	Review project design to determine if sanitary sewer capacity is adequate at point of connection.	DE	Prior to final project design approval	Architects & Engineers
		Upgrade the system, if necessary.	OC	Prior to construction	Architects & Engineers
4.15-4	<i>Once preliminary project design is developed, the campus shall review each project to determine whether existing storm drainage system is adequate at the point of connection. If the storm drainage system is determined inadequate, the campus will upgrade the system to provide adequate storm water drainage and/or detention prior to occupation or operation.</i>	Review project design to determine if storm drain capacity is adequate at point of connection.	DE	Prior to final project design approval	Architects & Engineers
		Upgrade the system, if necessary.	OC	Prior to construction	Architects & Engineers
4.15-6	<i>(a) Once preliminary project design is developed, the campus shall review each project to determine whether the existing electrical system is adequate at the point of connection. If the electrical system is determined inadequate, the campus will upgrade the system to provide adequate service to the project prior to occupation or operation.</i>	Review project design to determine if electrical system is adequate at point of connection.	DE	Prior to final project design approval	Architects & Engineers
		Upgrade the system, if necessary.	OC	Prior to construction	Architects & Engineers

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## 2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
	<i>(b) The campus would continue to meet or exceed Title 24 energy conservation requirements for new buildings, and it would continue to incorporate energy efficient design elements outlined in the UC Davis Campus Standards &amp; Design Guide in new construction and retrofit projects. These energy conservation standards may be subject to modification as more stringent standards are developed.</i>	Review project design for compliance with Title 24 and the Standards and Design Guide. Revise project design, if necessary.	DE	Prior to final project approval	Architects & Engineers
4.15-7	<i>(a) Once preliminary project design is developed, the campus shall review each project to determine whether existing capacity of the natural gas supply pipeline at the point of connection is adequate. If the capacity of the pipeline is determined inadequate, the system will be updated to provide adequate service to the project site prior to occupation or operation.</i>	Review project design to determine if natural gas supply is adequate at point of connection.	DE	Prior to final project design approval	Architects & Engineers
		Upgrade the system, if necessary.	OC	Prior to construction	Architects & Engineers
	<i>(b) To minimize disturbance to archaeological resources associated with CA-Yol-118, PG&amp;E can and should implement directional drilling or other alternative means to trenching, or should have a qualified archaeological monitor present and provide a representative of the local Native American community an opportunity to monitor during construction.</i>	PG&E should implement site avoidance measures.	CO	During construction	*PG&E
4.15-8	<i>Once preliminary project design is developed, the campus shall review each project to determine whether existing capacity of the chilled water and/or steam system at the point of connection is adequate. If the capacity of the pipelines is determined inadequate, the campus will upgrade the system to provide adequate service to the project site prior to occupation or operation.</i>	Evaluate the adequacy of the chilled water and steam systems at point of connection.	DE	During project design phase	Architects & Engineers
		If necessary, update the systems to provide adequate service.	OC	Prior to occupation or operation	Architects & Engineers
4.15-9	<i>Once preliminary project design is developed, the campus shall review each project to determine whether existing capacity of the telecommunications system is adequate. If the capacity is determined to be inadequate, the campus will upgrade the system to provide adequate service to the project site prior to occupation or operation.</i>	Evaluate the adequacy of the telecommunications system for each project.	DE	During project design phase	Architects & Engineers, Information and Educational Technology

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Number	Mitigation Measures	Monitoring and Reporting Procedure	Mitigation Timing		Monitoring and Reporting Responsibility
		Update the system as needed to provide adequate service.	OC	Prior to occupation or operation	Architects & Engineers
4.15-10	<i>If documented unmitigated significant environmental impacts are caused by the construction of wastewater treatment facilities in the Cities of Davis, Dixon, Woodland, and/or Winters that are needed in part due to implementation of the 2003 LRDP, UC Davis shall negotiate with the appropriate local jurisdiction to determine the campus' fair share (as described in Section 4.12.2.3) of the costs to implement any feasible and required environmental mitigation measures so long as the unmitigated impacts have not been otherwise reduced to less-than-significant levels through regulatory requirements, public funding, or agreements. This mitigation measure shall not apply to any other costs associated with implementation of utilities or service systems.</i>	Negotiate with the cities to determine an appropriate fair share contribution for feasible and required environmental mitigation measures.	DE	Following completion of environmental review process for new wastewater facilities, if mitigation costs are identified	*Resource Management & Planning, Cities of Davis, Dixon, Woodland and Winters

\* Denotes mitigation measure that requires implementation and/or monitoring by an agency other than the University.

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