

CHAPTER 6.0

CUMULATIVE IMPACTS

6.1 PROJECTS IN VICINITY OF PROPOSED ACTION

Planned, pending, and/or reasonably foreseeable projects in the area of the Proposed Action include:

- A foreseeable proposal to construct an approximately five-story, 60,000 gsf office building near LBNL's Blackberry Gate entrance ("50X Building"). This project would be a "decompression" building envisioned to provide relief for overcrowded office facilities elsewhere on-site; it would not result in an increase of LBNL's population nor increase traffic impacts. Construction would be anticipated to take place between 2004 and 2006. Should this proposal move forward, an environmental analysis of and decision regarding this project is expected to occur in early 2003.
- A foreseeable proposal to design and implement a new Long Range Development Plan (LRDP) for LBNL; this LRDP would guide LBNL's development for approximately 20 years. The proposed new LRDP is anticipated to identify new population and space growth projections for LBNL, although growth would be projected to occur at approximately the same rate as has been experienced at LBNL during its recent history (approximately 1.3 percent per year). The main differences between the current LRDP and the upcoming proposed new LRDP would be realized during the later phases of the planning period, sometime after 2010. Should this proposal move forward, an environmental analysis of and decision regarding this project is expected to occur in late 2003.
- Development in the surrounding area includes growth and development within the City of Berkeley as envisioned in the 2001 Berkeley General Plan and EIR; within the northeastern portion of the UC Berkeley campus as described in the *Northeast Quadrant Science and Safety Projects and 1990 Long Range Development Plan*, January 2002 (NEQSS Project); and as expected to be projected for the overall UC Berkeley campus in the forthcoming UC Berkeley Long Range Development Plan and EIR. The 2001 City of Berkeley General Plan allows for steady growth and development, but, given a lack of substantial undeveloped space in the City, at a relatively even pace with an emphasis on infill development. Projections include a population increase of approximately 7,000 people (a roughly six percent increase), approximately 3,300 new household units (a roughly eight percent increase), and approximately 3,700 new jobs (a roughly five percent increase) by the year 2020. The NEQSS project would construct approximately 324,400 gsf of buildings (demolition of existing 100,000 gsf, construction of 430,000 gsf) 140 parking spaces and approximately 400 full-time equivalent (FTE) employees to the northeastern quadrant of the UC Berkeley

campus after a construction period projected to last from approximately 2002 to 2005. The forthcoming UC Berkeley LRDP revision and EIR would likely project increases in population and built space by the year 2020.

The UC Berkeley NEQSS project and the forthcoming LRDP revision are scheduled to gradually begin to take effect after 2005, as UC Berkeley has agreed with the City of Berkeley that it will not begin to substantially increase its population prior to that time, and the NEQSS project will not be completed and operational until after 2005.

6.2 CUMULATIVE IMPACT AREAS

Areas where there would be no reasonably foreseeable substantial cumulative impacts include: Geology, Soils, and Seismicity; Historic and Archaeological Resources; Land Use; Socioeconomics; and Environmental Justice.

6.2.1 HYDROLOGY AND WATER QUALITY

The Proposed Action would result in an approximately 1.5-acre loss of permeable surface. The proposed 50X building proposal would likely result in a similar loss of permeable surface; however, these two projects would take place in different watersheds and would represent only an incremental change in each. The proposed City of Berkeley and UC Berkeley projects would generally be in-fill on existing paved surfaces.

6.2.2 BIOLOGICAL RESOURCES:

The Proposed Action and the proposed 50X Building would not likely affect any special status species. However, each project would take place in an area that theoretically could be traversed by a member of the state- and Federally-designated threatened Alameda whipsnake species. On the other hand, neither project would take place in or reduce designated Critical Habitat of the Alameda whipsnake, and the Proposed Action and proposed Building 50X project would employ appropriate whipsnake avoidance measures. Other identified projects would likely take place in currently developed areas.

6.2.3 VISUAL QUALITY

Implementation of the Proposed Action would result in a visual change to the LBNL and surrounding hillside environment. The proposed 50X building would have a similar project-specific result. However, both projects would be visible from limited and mutually exclusive vantage points, and neither would take place in an area that is not currently surrounded by development. None of the other projects identified would noticeably add to a visual quality cumulative impact with the Proposed Action.

6.2.4 TRAFFIC AND CIRCULATION

The most acute increases in NEQSS construction-related traffic would occur between 2002 and 2005. The Proposed Action and the proposed 50X Building project construction would take place between 2004 and 2006. Buildout of the proposed LBNL and UC Berkeley LRDPs would take place mostly after 2006. Most construction-related traffic effects of these projects, then, would be staggered over a period of several years.

Construction traffic generated by the proposed NEQSS and UC Berkeley LRDP development would increase truck and heavy equipment vehicles and staging along Hearst Avenue and Gayley Road, two prime access routes to LBNL's main Blackberry Gate entrance. These routes would be further used by construction-related traffic accessing the LBNL site. Because LBNL would only use those routes for access to Berkeley Lab and not for staging purposes, and because LBNL can accommodate parking of heavy equipment on site and thus would not require daily commuting of heavy construction vehicles, and due to the fact that LBNL currently intends to reuse excavated material on-site (thus sparing truck trips necessary to provide and/or dispose of excavation fill), and because the Proposed Action construction would be staged during generally different time periods than the City and UCB Campus projects, LBNL would represent only a minor contribution to construction traffic related impacts on these roadways, and within the levels anticipated and discussed in the 1997 Addendum.

Operational traffic from the Proposed Action would be distributed over a wide commute period (and would not be as concentrated during the peak hour as would be typically expected of office workers, for example) and would be further distributed over LBNL's three entrance gates. The proposed 50X Building project would not add to new traffic burdens at LBNL as it would draw exclusively on existing on-site workers. The proposed NEQSS and other UCB Campus and City projects would be expected to add incrementally to traffic in the area that leads to LBNL's Blackberry Canyon entrance (but not likely the other two entrances), although the Proposed Action would not likely pose a considerable contribution to any peak-hour commute impacts in concert with them.

6.2.5 AIR QUALITY

The Proposed Action would not result in any significant cumulative air quality impacts, nor would it pose any individually significant air impacts. It would be consistent with the LBNL LRDP, and would neither conflict with nor obstruct implementation of the Ozone Attainment Plan, the Bay Area 2000 Clean Air Plan, nor the Carbon Monoxide Maintenance Plan. The Proposed Action would not violate any applicable air quality standard or contribute substantially to any existing or projected air quality violations. It would not result in a cumulatively considerable net increase of any criteria pollutant, including ozone and its precursors (i.e., ROG and oxides of Nitrogen), or PM-10. No construction or operational emissions—either criteria pollutants or toxic air contaminants—would be expected to exceed any regional, state, or federal thresholds of significance. As operational details and estimates are further developed, the Molecular Foundry project would undergo review and permitting processes from BAAQMD for operational emissions and potential emergency diesel generator emissions. The Proposed Action

would implement feasible measures to further reduce construction and operational air impacts of construction and operations and would prohibit significant health risks through its discretionary permitting authority.

The Proposed Action would not create or substantially contribute to a significant TAC impact. Project emissions of TACs are expected to be very low in general and negligible at the distance of the nearest residential areas. Moreover, there are no nearby significant ambient TAC concentrations to which the Proposed Action might cumulatively contribute, and any contribution by the Proposed Action would not be cumulatively considerable in any event.

6.2.6 NOISE

Noise effects from the Proposed Action construction could combine with noise from other construction projects to generate cumulative impacts. However, as described in traffic, above, construction of the projects identified in this section would be staggered over a period of years and there would not be a point at which all projects were fully under construction. In addition, the projects are separated physically and by intervening terrain such that noise impacts from the other projects should not be noticeable to the same receptors as noise from construction of the Proposed Action.

6.2.7 PUBLIC SERVICES

LBNL maintains its own primary public services (fire protection, security, health and safety); the proposed 50X project would decompress existing on-site employees and would thus not substantially add to demand for services. Although City and UCB Campus projects would be expected to incrementally increase demand for off-site services over time, Proposed Action-related demand for off-site services would be negligible.

6.2.8 PUBLIC UTILITIES/ENERGY

The Building 50X project, NEQSS, and other City and UCB Campus projects would be expected to increase demand for regional utilities and energy provision. However, these utilities are managed to accommodate region-wide growth and demand increase; these projects would be expected to fit within this long-term planning. Demand for utilities for all projects combined would not represent a substantial increase in demand for regional providers and would thus not be cumulatively significant. LBNL, UC Berkeley, and the City of Berkeley all encourage or mandate water and energy saving devices and practices.

6.2.9 HAZARDS AND HUMAN HEALTH

The Proposed Action would generate relatively small amounts of TAC emissions in the area. The proposed 50X building would not generate TAC emissions, as it would be exclusively an office building and because it would not generate new traffic trips. The proposed NEQSS and UC Berkeley LRDP growth would likely generate TAC emissions. However, because these

projects, when combined, would create or add to any toxic air “hot spots” or other areas of significant impact in the area of effect of the Proposed Action, this would not be a significant impact. Generation of hazardous materials (not air-emissions) would be of relatively small scale and would follow LBNL’s strict handling, storage, and disposal procedures. The proposed buildings would be constructed to modern, state-of-the-art fire and earthquake standards.

**TABLE 5
SUMMARY OF ACTION ALTERNATIVES**

	Proposed Action	No Action	Different Building Configuration	Alternate Building Site (on-site)
PROJECT DESCRIPTION				
Location	Project Site: southeastern area of LBNL.	No impact.	Project Site: southeastern area of LBNL.	LBNL Site: Central “Old Town” Lab area.
Size (approx)	90,000 gsf.	No impact.	30,000 gsf.	90,000 gsf.
Number of Occupants	137	No impact.	50 – 90	137
Number of New Traffic Trips	94 new drivers.	No impact.	34 – 62 new drivers	94 new drivers
PROJECT IMPACTS				
Geology, Soils, and Seismicity	Project built on slopes. (LTS)	No impact.	Similar impact. Project built on slopes (LTS)	Decreased impact. Project would be built on relatively flat area.
Hydrology and Water Quality	Project excavation. Increased impermeable surface. Increased parking. (LTS)	No impact.	Decreased impact. Project excavation. Increased impermeable surface. Increased parking. (LTS)	Decreased impact. No substantial increase in impermeable surface. However, excavation of contaminated soil may be necessary.
Biological Resources	Project built near Alameda whipsnake habitat. Potentially significant. (LTS after Mitigation)	No impact.	Similar impact. Project built near Alameda whipsnake habitat. Potentially significant. (LTS after Mitigation)	No impact. Site is currently developed.
Historic and Archaeological Resources	Project could disturb archaeological resources, though none are expected on this site. (LTS)	No impact.	Similar impact. Project could disturb archaeological resources, though none are expected on this site. (LTS)	Different impact. While archaeological resources could be disturbed, these areas have previously been disturbed by construction.

TABLE 5 (Continued)
SUMMARY OF ACTION ALTERNATIVES

	Proposed Action	No Action	Different Building Configuration	Alternate Building Site (on-site)
Visual Quality	Project would remove trees and introduce new building to hillside. (LTS)	No impact.	Decreased impact. Project would remove fewer trees and smaller building profile would be less noticeable. (LTS)	Different impact. While screening trees wouldn't have to be removed and the project would be centered in a developed area, it could interfere with the appearance and views of the ALS building. (LTS)
Traffic and Circulation	Project would introduce estimated 94 potential new drivers to LBNL site. (LTS)	No impact.	Decreased impact. Project would introduce estimated 34 – 62 potential new drivers to LBNL site. (LTS)	Similar/increased Impact. Project would introduce estimated 94 potential new drivers to LBNL site. “Old Town” site would require additional truck trips to haul away demolition debris and soil (LTS)
Air Quality	Project would create construction dust and exhaust, increase criteria pollutant emissions from commute trips, and introduce new TACs sources from operations. (LTS)	No impact.	Decreased impact. Project would create construction dust and exhaust, increase criteria pollutant emissions from commute trips, and introduce new TACs sources from operations. (LTS)	Similar impact. Project would create construction dust and exhaust, increase criteria pollutant emissions from commute trips, and introduce new TACs sources from operations. (LTS)
Noise	Project would create construction noise. (LTS)	No impact.	Similar impact. Project would create construction noise. (LTS)	Similar impact. Project would create construction noise. (LTS)
Public Services	Project would use police, fire, and emergency medical services. (LTS)	No impact.	Slightly decreased impact. Project would use police, fire, and emergency medical services. (LTS)	Similar impact. Project would use police, fire, and emergency medical services. (LTS)
Public Utilities	Project would use water and would generate waste and wastewater. (LTS)	No impact.	Decreased impact. Project would use water and would generate waste and wastewater. (LTS)	Similar impact. Project would use water and would generate waste and wastewater. (LTS)

TABLE 5 (Continued)
SUMMARY OF ACTION ALTERNATIVES

	Proposed Action	No Action	Different Building Configuration	Alternate Building Site (on-site)
Energy	Project would use electrical, gas, and diesel energy. (LTS)	No impact.	Decreased impact. Project would use electrical, gas, and diesel energy. (LTS)	Similar impact. Project would use electrical, gas, and diesel energy. (LTS)
Hazards and Human Health	Project would use small amounts of hazardous materials. (LTS)	No impact.	Decreased impact. Project would use small amounts of hazardous materials. (LTS)	Similar impact. Project would use small amounts of hazardous materials. (LTS)
Land Use	Project would increase development in area. (LTS)	No impact.	Similar impact. Project would increase development in area. (LTS)	No impact.
Socioeconomics: Population, Employment, and Housing	No Impact.	No impact.	No Impact.	No Impact.
Environmental Justice	None of the above impacts would substantially and disproportionately impact any particular racial or socioeconomic demographic. (LTS)	No impact.	Similar impact. None of the above impacts would substantially and disproportionately impact any particular racial or socioeconomic demographic. (LTS)	Similar Impact. None of the above impacts would substantially and disproportionately impact any particular racial or socioeconomic demographic. (LTS)
Cumulative Impacts	No substantial cumulative contributions. Small or negligible contribution to less-than-significant cumulative impacts.	No impact.	Similar impacts. Slightly decreased contribution to less-than-significant cumulative impacts.	Similar impacts. Small or negligible contribution to less-than-significant cumulative impacts.

NOTES: "gsf" is "gross square feet."
"LTS" is "less-than-significant."