

## 4.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

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### 4.0.1 INTRODUCTION

This section of the EIR presents potential environmental impacts of the proposed Computational Research and Theory (CRT) project. The scope of the analysis and key attributes of the analytical approach are presented below to assist readers in understanding the manner in which the impact analysis has been conducted in this EIR.

### 4.0.2 APPROACH TO IMPACT ANALYSIS

- The preparation of this EIR was preceded by an Initial Study (included in Appendix 1.0), which determined that the CRT project would not result in significant or potentially impacts on certain resource areas. Therefore, this EIR evaluates impacts in 14 of the 16 resource areas on the California Environmental Quality Act (CEQA) checklist.
- For each of the 14 resource areas evaluated in the sections that follow, the EIR describes the existing environmental setting, the potential for the proposed project to significantly affect the existing resources, and recommended mitigation measures that could reduce or avoid potentially significant impacts. Each of the resource sections clearly identifies those impacts that were adequately addressed in the Initial Study to be less than significant and thus not require detailed evaluation in this EIR.
- The analyses of impacts in this EIR are based primarily on three factors, depending on the primary cause of the impact. For example, impacts related to geologic, hydrological, and biological resources are analyzed primarily on the basis of the location and acreage of ground disturbance that is projected to occur as a result of the implementation of the CRT project. Impacts related to traffic, traffic-related air quality and noise, and utilities, on the other hand, are analyzed primarily on the basis of the total population associated with full development of the CRT project. Impacts related to air quality and hazardous materials are analyzed based on the research programs that would be accommodated by the proposed project.
- With respect to those impacts that are population-based, it should be noted that the total adjusted daily population for the project accounts for both employees and visitors. As noted in Section 3.0, Project Description, the proposed project would accommodate a total of 300 people, including 135 existing Lawrence Berkeley National Laboratory (LBNL) staff and 165 persons, including 75 UC Berkeley staff and students, who would be new to the site. The EIR assesses operational environmental impacts in terms of the maximum building occupancy, including guests and employees.
- The extent of the area evaluated for impacts (the study area) differs among resources depending on the locations where impacts would be expected. For example, traffic impacts due to the proposed CRT project are assessed for the regional roadway network, whereas geology and soils

impacts from the proposed project are assessed for the project site only. The settings sections describe both local resources and regional resources that occur throughout the broader geographic area.

- The environmental setting sections describe the baseline environmental conditions. For purposes of the analyses in this EIR, the year 2007 is used to establish the baseline or existing conditions. Impacts are evaluated in terms of environmental changes as a result of implementation of the CRT project as compared to existing conditions in 2007. In the case of near-term traffic impacts (and traffic-related air quality and noise impacts), year 2012 is used as the baseline year because the proposed project is expected to be operational by that year. Evaluation of 2012 conditions with the addition of project traffic presents a more conservative analysis of traffic impacts than year 2007 conditions as it takes into account traffic from other near-term projects that would be constructed by then.
- Because the proposed project is an element of the growth projected under the LBNL 2006 LRDP, relevant mitigation measures in the LBNL 2006 LRDP EIR adopted by The Regents in conjunction with the approval of the LBNL 2006 LRDP have been incorporated into and made part of the CRT project. The analysis presented in the subsequent sections evaluates environmental impacts that would result from project implementation following the application of the LBNL 2006 LRDP mitigation measures.

#### 4.0.3 LEVELS OF SIGNIFICANCE

The EIR uses a variety of terms to describe the levels of significance of adverse impacts identified during the course of the environmental analysis. The following are definitions of terms used in this EIR:

- **Significant and Unavoidable Impact.** Impacts that exceed the defined standards of significance and cannot be eliminated or reduced to a less than significant level through the implementation of feasible mitigation measures.
- **Significant Impact.** Impacts that exceed the defined standards of significance and that can be eliminated or reduced to a less than significant level through the implementation of feasible mitigation measures.
- **Potentially Significant Impact.** Significant impacts that may ultimately be determined to be less than significant; the level of significance may be reduced in the future through implementation of policies or guidelines (that are not required by statute or ordinance), or through further definition of the project detail in the future. Potentially Significant Impacts may also be impacts about which there is not enough information to draw a firm conclusion; however, for the purpose of this EIR, they are considered significant. Such impacts are equivalent to Significant Impacts and require the identification of feasible mitigation measures.
- **Less Than Significant Impact.** Impacts that are adverse but that do not exceed the specified standards of significance.
- **No Impact.** The project would not create an impact.

#### 4.0.4 KEY TO IMPACT ANALYSIS

Table 4.0-1, Key to Impact Analysis, below presents the various project components and identifies the sections of the Draft EIR that address the environmental impacts of the components, to the extent that the project component would result in a particular impact that would not result from the rest of the project.

Table 4.0-1  
Key to Impact Analysis

Project Component	Section of Draft EIR
Office Building	All sections
High Performance Computing Center	All sections, specifically Section 4.2, Air Quality; Section 4.13, Utilities
Cooling Towers and Emergency Generator/Cogeneration	Section 4.2, Air Quality; Section 4.13, Utilities
Stormwater Drainage	Section 4.7, Hydrology and Water Quality; Section 4.13, Utilities
Access Drive and Turnaround	All sections, specifically Section 4.2, Biological Resources; Section 4.6, Hazards and Hazardous Materials; Section 4.7, Hydrology and Water Quality