Finding of No Significant Impact

Programmatic Environmental Assessment for the
NASA Jet Propulsion Laboratory Facility Master Plan Updates
January 2012

INTRODUCTION

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508), and NASA policy and procedures (14 CFR Part 1216, Subpart 1216.3), NASA has made a finding of no significant impact (FONSI) with respect to the proposed NASA Jet Propulsion Laboratory (JPL) Facility Master Plan Updates. NASA has reviewed the Programmatic Environmental Assessment (PEA) prepared for the JPL Master Plans and determined that it presents an accurate and adequate analysis of the scope and level of associated environmental impacts. NASA hereby incorporates the PEA by reference in this FONSI.

The PEA considers the individual Facility Master Plan updates (Master Plans) for each of the three NASA facilities programmatically assigned to the Jet Propulsion Laboratory (JPL): (1) the main NASA JPL facility in Pasadena, California; (2) the Table Mountain Facility (TMF) in Wrightwood, California; and (3) the Goldstone Deep Space Communications Complex (GDSCC), Fort Irwin National Training Center, California. Each Facility Master Plan would serve as a comprehensive facility planning strategy, which would cover the next two decades through the concurrent implementation of Master Plans for the three NASA facilities managed by JPL.

Each of the Master Plans will guide and coordinate physical development at their respective NASA JPL site in terms of buildings, utilities, roadways, landscaping and amenities over the next 20 years. The Master Plans do not commit NASA to any of the projects proposed since implementation of any project would depend on funding, and some projects may ultimately not be selected for implementation. Nonetheless, the Master Plans are intended to be flexible to meet NASA needs at the three facilities. Proposed facilities and planning criteria and guidelines for each of the three NASA JPL sites are detailed within their respective Master Plan documents.

When NASA has determined that NEPA analysis would be required for a proposed facility action at either NASA JPL, TMF, or GDSCC, that Proposed Action would be evaluated for adequate coverage under the PEA through the use of an environmental checklist. If the Proposed Action is accurately and adequately covered under the PEA, a Record of Environmental Consideration (REC) would be prepared documenting the determination and no further NEPA documentation would be required.

If the checklist indicates the need for additional analysis, and if based upon that additional analysis and any appropriate mitigation measures, a determination of no substantial impact to environmental resources can be made, it would be documented in a REC and no further NEPA documentation would be required. If a specific action is expected to create impacts greater in magnitude, extent, or duration than those described in the PEA, then separate NEPA documentation would be prepared for that action.

PROPOSED ACTION

The NASA JPL, TMF, and GDSCC facilities are unique NASA assets, which directly support multiple NASA programs and can be classified as critical to the success of NASA programs. The

purpose of the proposed actions are to affirm NASA's mission at JPL and provide a physical framework for implementing this mission over the next 20 years, while at the same time remaining consistent with NASA's Strategic Plan. The Master Plans identify facility and infrastructure needs and develop an implementation strategy that helps guide facilities renewal related to NASA research, building construction, administrative services, and security. The Master Plan alternatives analyzed for each of the three NASA JPL sites including TMF and GDSCC are the result of agency and internal scoping input. The proposed activities at NASA JPL, TMF, and GDSCC are described below.

Main NASA JPL Site in Pasadena, CA

On-site operations were organized into conceptual zones which correspond to NASA JPL operational and mission functions. Conceptual Alternatives A, B, and C were created to test various configurations for redeveloping the NASA JPL site. Based on a number of factors related to NASA JPL's operational efficiency and effectiveness of mission implementation, Composite Conceptual Alternative A was chosen as the preferred alternative. This preferred alternative incorporates the parking structure location of Conceptual Alternative A, the open space concepts of Conceptual Alternatives A and C, and the layout of other capital projects as determined by subsequent studies and discussions between the NASA JPL Master Planning team.

NASA JPL is proposing construction of approximately 78,914 square meters (sq m) (849,428 sq feet [ft]) of new or rehabilitated building space, plus parking areas. The consolidation envisioned anticipates an associated reduction in building area of about 9,569 sq m (103,000 sq ft). Constructing the facilities and projects that make up the 20-year focus period of the Master Plan would involve a continual and progressive process of more detailed project planning, project definition, project phasing, and project funding categorization. The proposed action includes the following major recapitalization building projects:

1) A new Flight Electronics Facility Class with class 100K clean rooms for the fabrication, assembly, and functional testing of flight hardware;
2) A new Advanced Robotics Research and Development Facility for the fabrication and field testing of robotic components;
3) A new Mechanical Development Facility for the research and fabrication of materials and storage of ground support equipment;
4) A new Research and Technology Development Facility that would include a laboratory and office space supporting a variety of science and engineering programs;
5) A new System Level Testing Facility that would drastically improve NASA JPL's ability to accurately and efficiently test components at all stages of development; and
6) Underground Utility Infrastructure upgrades needed to replace major utility systems that experience periodic failures, threaten facility safety, or are needed to accommodate and support the proposed new recapitalization buildings.

The principle features of the Master Plan include other capital projects including a new parking structure and surface parking, on-site traffic circulation, enhanced open space, and landscaping.

Table Mountain Facility in Wrightwood, CA

Three conceptual alternatives were developed: Conceptual Alternatives A, B, and C. While each of these conceptual alternatives accommodates future development, Conceptual Alternative C was identified as the preferred alternative because it affords the best sky view cone so that the

proposed OCTL-2 project instruments can 'see' various deep and near space objects. Further, Alternative C would allow the pad spaces identified for placement of the new OCTL facility in Alternatives A and B to be used for other projects, if needed.

The TMF Master proposes up to 465 sq m (5,010 sq ft) for Optical Communications Telescope Laboratory- 2 (OCTL-2), and a Remote Sensing Facility of approximately 279 gross sq m (3,000 gross sq ft) within a 20-year planning horizon. Also proposed is an estimated 186 sq m (2,000 sq ft) of future use building space that could be accommodated in an area identified as 'NASA JPL Reserve'. This area could accommodate a to-be- determined user potentially having greater independence from the use of the core TMF activity area. Various site upgrades and support infrastructure such as a new perimeter fence, pavement, power, water, and sewer improvements would be needed to render the NASA JPL Reserve site usable.

Goldstone Deep Space Communication Complex in Fort Irwin National Training Center, CA
The future plan for GDSCC maintains the basic functional characteristics of the complex. Beyond this broad planned approach to the long term development of GDSCC, two specific projects have been identified for potential future NASA needs. The Master Plan divides the Proposed Action into two construction projects: 1) construct a 34-m (111.5 ft) Beam Wave Guide antenna at Apollo Site to meet the goals of the Deep Space Network Robustness Project; and 2) provide infrastructure improvements as necessary to maintain antenna reliability and comply with Federal and state regulations, including water, power, communications, and sewer.

ALTERNATIVES
One alternative to the Proposed Action was evaluated in detail in each of the three NASA JPL site Master Plans - the No Action Alternative. The No Action Alternative assumes that the employee population and overall facility area would remain approximately the same as exists currently, with no redevelopment. Facilities would be renovated or replaced in kind to meet building, operating, sustainability, and safety codes. There would be no changes to public thoroughfares or to any of the existing security checkpoints.

ANTICIPATED ENVIRONMENTAL IMPACTS
In addition to fulfilling the requirements of NEPA, its associated regulations, and the regulations of NASA, this PEA complies with all applicable environmental, natural resource, and cultural resource statutes, regulations, and guidelines. Such additional statutes, regulations, and guidelines may require permits, approvals, consultations with outside agencies, or implementation of mitigation measures. Those considerations are included in the separate analyses set forth in the PEA for NASA JPL, TMF, and GDSCC. Any additional statutes, regulations, and guidelines are included below, by resource area.

Land Use: The Proposed Actions would result in no off-site short or long-term adverse impacts because no changes to land use would occur outside of NASA JPL, TMF, or GDSCC. Negligible to minor on-site adverse impacts are anticipated because of demolition, construction, and infrastructure redevelopment. Minor beneficial impact to on-site land use at NASA JPL would result from a more cohesive setting.

Socioeconomics: The Proposed Actions would result in negligible short-term beneficial impacts at NASA JPL, TMF, and GDSCC due to temporary employment during construction. No long-term on-site or off-site adverse impacts to population, housing, or employment are anticipated at NASA JPL, TMF, or GDSCC

Environmental Justice: Under the Proposed Actions, and in accordance with Executive Order (EO) 12898, there would be no short- or long-term adverse impacts to low-income or minority populations due to land use not changing.

Traffic and Transportation: Under the Proposed Actions at NASA JPL, TMF, and GDSCC, negligible to minor short-term adverse impacts are anticipated on- and off-site from construction activities on traffic generation, traffic congestion, traffic volume, and parking availability. Minor long-term beneficial impacts are expected as current parking issues would be addressed with improvements to available parking at NASA JPL and TMF.

Utilities and Services: Under the Proposed Actions for NASA JPL, TMF, and GDSCC, there would be negligible short-term adverse impact from construction due to temporary disruptions in electrical power, natural gas supplies, and water, sanitary, and storm sewer lines. Long-term, there would be minor beneficial effects because of more reliable grid connections and updated technologies for greater efficiency and increases in safety.

Air Quality: General Conformity under the Clean Air Act Section 176(c) (as amended) has been evaluated for the Proposed Actions according to the requirements of 40 CFR 93, Subpart B. Analyses for NASA JPL, TMF, and GDSCC shows that the total direct and indirect emissions associated with the Proposed Actions were below the *de minimis* threshold levels, as promulgated in 40 CFR 93.153(b). Therefore, the Proposed Actions will not have an adverse impact in the regions ability meet the National Ambient Air Quality Standards.

Under the Proposed Actions, there would be minor short-term adverse impacts at the regional and local scale to air quality during construction. Impacts from construction activities include the generation of fugitive dust and particulates from the removal and grading of soil, excavation operations, and other associated construction activities. In addition, there would be minor, short-term emissions from vehicles that would travel in the construction area. During construction, dust suppression measures will be used to minimize fugitive dust emissions. No long-term adverse impacts are anticipated.

Noise and Vibration: Under the Proposed Actions, there would be minor adverse impacts on ambient noise from site preparation, excavation, and construction activities. Impacts would be short-term and minor because these activities would be carried out during normal working hours. No long-term adverse impacts are anticipated.

Geology and Soils: As a result of the Proposed Actions, short-term negligible adverse impacts would occur because construction activities would occur in developed areas. Negligible adverse impacts to soils, topography, and physiographic features would also occur. No adverse impacts to natural hazards or effects on pre-existing seismic conditions are anticipated. Erosion and sedimentation control measures would be implemented in accordance with base specifications for construction projects.

Water Resources: Under the Proposed Actions, there would be minor adverse impact to surface water during construction as the proposed activities would primarily be conducted in areas of existing facilities. The Proposed Actions would not pose new risks; however, minor adverse effects on groundwater would occur as a result of construction activities. Negligible adverse impacts on floodplain resources would occur under the Proposed Actions for NASA JPL, TMF,

and GDSCC. In accordance with EO 11988, contractors at NASA JPL would avoid adverse impacts on the 100-year floodplain associated with the Arroyo Seco by limiting construction activities to the elevated ground above Arroyo Seco embankments.

Erosion and sedimentation controls will be implemented as a Best Management Practice (BMP) and National Pollutant Discharge Elimination System (NPDES) requirements will be met for soil disturbances. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared to ensure low impact disturbances from proposed construction activities.

Biological Resources: Under the Proposed Actions, it is anticipated that there would be negligible to minor short-term adverse impact to vegetation and wildlife during construction activities. In accordance with EO 11990, no adverse impacts to wetlands are anticipated. No long-term adverse impacts are anticipated at NASA JPL, TMF, or GDSCC.

Threatened, Endangered, and Other Sensitive Species: Under the Proposed Actions at NASA JPL, TMF, and GDSCC, no short- or long-term adverse impacts to Federally-listed threatened, endangered or sensitive plants or animals within the project area are anticipated. No further consultation with the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act is required for NASA JPL or TMF. Since critical habitat for the gopher tortoise is located on GDSCC, coordination with the USFWS would take place according to the terms of the *Programmatic Biological Opinion* prior to the start of any major on-site construction activity.

Further, if the endangered status of the Mojave Ground Squirrel is confirmed, the USFWS would subsequently make a determination on suitable critical habitat, which could affect areas of GDSCC. GDSCC would monitor this determination as to the potential effect of the proposed project on the Mojave Ground Squirrel's critical habitat determination.

Cultural Resources: Under the Proposed Actions, it is anticipated that there would be no short- or long-term adverse impact to cultural or historic resources at TMF or GDSCC. Minor short-term adverse impacts would result from the potential removal of seven structures determined to be eligible under Section 106 of the National Historic Preservation Act. NASA has initiated consultation through the Section 106 process with the California State Historic Preservation Office. As a result of this consultation, a Programmatic Agreement is being developed that identifies any mitigation measures to be implemented as well as preservation design guidelines for the defined character areas in NASA JPL, TMF, and GDSCC. Until such time that the Programmatic Agreement with the California State Historic Preservation Office is completed and implemented, any and all actions with potential impacts on historic properties will be addressed on a case by case basis.

Hazardous Materials and Waste: With proper housekeeping and maintenance, the Proposed Actions for NASA JPL, TMF, and GDSCC would have a negligible adverse impact on hazardous materials used during construction. Hazardous materials used would not be expected to increase. Minor adverse impacts on hazardous wastes would be generated from facility demobilization and demolition. Therefore, it is anticipated that the volume, type, classifications, and sources of hazardous wastes would be similar in nature with the baseline condition waste streams.

PUBLIC AVAILABILITY

NASA JPL issued the draft PEA for public comment on December 5, 2011 and made it available for public review at the following locations:

NASA Headquarters, Library, Room 1J
10300 E Street, SW
Washington, DC 20546

Jet Propulsion Laboratory, Visitors Lobby, Building 249
4800 Oak Grove Drive
Pasadena, CA 91109

NASA Headquarters Library,
1120 E. Street, SW
Washington, DC 20546

Altadena Public Library
East Mariposa
Altadena, CA 91001

Pasadena Public Library
285 East Walnut
Pasadena, CA 91101

La Canada Flintridge Public Library
4545 West Oakwood Avenue
La Canada, CA 91011

Wrightwood Public Library
6011 Pine Street
Wrightwood, CA 92397

Barstow Library
304 East Buena Vista Street
Barstow, CA 92311

Jet Propulsion Laboratory Library
Building 111
4800 Oak Grove Drive
Pasadena, CA 91109

NASA JPL also sent a draft PEA to Federal, State and local agencies and interested individuals. NASA JPL published a Notice of Availability (NOA) announcing the availability of the Draft PEA in the Pasadena Star News, La Canada Valley Sun, Desert Barstow Desert Dispatch, and Wrightwood Mountaineer Progress. The public review and comment period ended on January 6, 2012. NASA JPL received one comment from an agency. The Draft EA was modified to include the comment letter.

CONCLUSIONS

On the basis of the PEA for the proposed implementation of Master Plans for JPL, TMF, and GDSCC, and underlying Facility Master Plan Update reference documents, NASA has determined that the environmental impacts associated with the proposed action will not individually or cumulatively have a significant effect on the quality of the human environment.

Therefore, an environmental impact statement is not required and NASA JPL is issuing this FONSI.

E. Trinh

Dr. Eugene Trinh
Director NASA Management Office

01/25/12

Date