

FINAL

COMMUNITY RELATIONS PLAN: AMENDMENT 1

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
JET PROPULSION LABORATORY
PASADENA, CALIFORNIA**

EPA ID# CA9800013030



PREPARED FOR:



**National Aeronautics and Space Administration
Management Office, Jet Propulsion Laboratory
4800 Oak Grove Drive
Pasadena, California 91101**

January 23, 2003

CONTENTS

Figures	iii
Tables	iii
Community Relations Summary Sheets	iii
Acronyms and Abbreviations	iv
1.0 Introduction	1
2.0 Overview of the CERCLA Process	2
3.0 Site Description	5
4.0 Community Background	8
4.1 Community Profile	8
4.2 Key Community Concerns	12
5.0 Community Relations Activities and Timing	13
5.1 Direct Mailings	13
5.2 E-Mail Notification	13
5.3 Meetings with Local Officials and Concerned Groups	13
5.4 News Releases	14
5.5 Fact Sheets	14
5.6 Public Meetings	14
5.7 Web-Based Administrative Record and Community Outreach	15
5.8 Other Potential Community Relations Activities	15
5.9 Summary of Community Relations Activities	15
6.0 References	24
Appendix A: Information Repository Locations	
Appendix B: Glossary of Terms	
Appendix C: The Superfund Enforcement Process: How it Works (EPA, 1988)	
Appendix D: Community Relations Activities Required Under CERCLA	
Appendix E: List of Key Contacts and Interested Parties	
Appendix F: Example of a Direct Mailing	
Appendix G: Examples of News Releases	

FIGURES

Figure 1. Phases of the CERCLA Process	2
Figure 2. Map of JPL and the Surrounding Area	6
Figure 3. Map of the Raymond Basin	7

TABLES

Table 1. Population Data for the City of Pasadena	9
Table 2. Population Data for the Town of Altadena	10
Table 3. Population Data for the City of La Cañada Flintridge	11

COMMUNITY RELATIONS SUMMARY SHEETS

Community Relations Activities During Removal Actions	16
Community Relations Activities During the Proposed Plan and Public Comment Period	18
Community Relations Activities During the Record of Decision	19
Community Relations Activities During Remedy Design and Implementation	22
Community Relations Activities During NPL De-Listing	23

ACRONYMS AND ABBREVIATIONS

Cal-EPA	California Environmental Protection Agency
CalTech	California Institute of Technology
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (of 1980)
CFR	Code of Federal Regulations
CRP	Community Relations Plan
DTSC	Department of Toxic Substances Control
EE/CA	Engineering Evaluation/Cost Analysis
EPA	United States Environmental Protection Agency
ERA	Ecological Risk Assessment
ESD	Explanation of Significant Differences
FS	Feasibility Study
FWEC	Foster Wheeler Environmental Corporation
HHRA	Human Health Risk Assessment
HRS	Hazard Ranking System
JPL	Jet Propulsion Laboratory
NASA	National Aeronautics and Space Administration
NAVFAC	Naval Facilities Engineering Command
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priority List
OU	operable unit
PA	Preliminary Assessment
R&D	Research and Development
RA	Remedial Action
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI	Remedial Investigation
ROD	Record of Decision
RWQCB	Regional Water Quality Control Board – Los Angeles Region
SARA	Superfund Amendments and Reauthorization Act (of 1986)
SI	Site Investigation
TAG	Technical Assistance Grant
USC	United States Code
VOC	volatile organic compound

This document is an amendment to the *Community Relations Plan (CRP)* published in 1994 for the National Aeronautics and Space Administration (NASA) Jet Propulsion Laboratory (JPL) *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)* program in Pasadena, California. CERCLA, commonly known as “*Superfund*,” was established in 1980 to address risks to human health and the environment posed by hazardous waste sites. The CRP has been amended based on community concerns and experience gained from the May and June 2001 public meetings, as well as updated demographic data from the U.S. Census 2000. The activities described in this amendment are consistent with federal guidance for implementing community relations efforts (*Superfund Amendments and Reauthorization Act of 1986 [SARA]* §113 and §117; Emergency Planning and Community Right-to-Know Act [SARA Title III] §§301-330, 40 Code of Federal Regulations [CFR] Parts 350-374; *National Oil and Hazardous Substances Pollution Contingency Plan [NCP]* §300) and the United States Environmental Protection Agency (EPA) guidance documents titled *Community Relations in Superfund: A Handbook* and *Superfund Community Involvement Handbook* (EPA, 1992; 2001b). This amendment to the CRP is intended to serve as a plan for community activities during the remaining stages of remediation at JPL.

NASA, the lead federal agency at JPL, is responsible for overall management and funding of the remedial activities at the CERCLA site. Primary regulatory agencies include the EPA, the California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances

Control (DTSC), and the Regional Water Quality Control Board – Los Angeles Region (RWQCB). The Naval Facilities Engineering Command (NAVFAC) is providing technical assistance to NASA on cleanup decisions at JPL. The California Institute of Technology (CalTech) operates JPL for NASA.

This amendment to the CRP summarizes the CERCLA process, provides a brief site description, identifies current community demographics, summarizes community involvement, identifies potential community concerns regarding the project, and summarizes site-specific activities to involve the community in the process. Detailed site and project data pertaining to JPL are available from the *information repositories*, which include technical reports and reference documents. Four information repositories have been established for the JPL CERCLA site at the Altadena Public Library, the Pasadena Central Library, the La Cañada Flintridge Public Library, and the JPL Repository (JPL employees only). The information repositories established by JPL comply with Section 508 of the Rehabilitation Act of 1973, and the Rehabilitation Act Amendments of 1998 (29 United States Code [USC] §794d). Section 508 requires that electronic information technology developed, procured, maintained, or used by the federal government be accessible to people with disabilities. The locations of the information repositories for the JPL site are provided in Appendix A. Terms appearing in the text in italicized typeface are defined in Appendix B, Glossary of Terms.

2.0 OVERVIEW OF THE CERCLA PROCESS

In 1980, Congress established CERCLA, commonly known as “Superfund,” to address risks to human health and the environment posed by hazardous waste sites. Modifications to CERCLA were enacted through SARA. The NCP, codified in 40 CFR Part 300, provides procedures that must be followed when implementing a CERCLA program. More information regarding the enforcement aspect of the CERCLA process may be found in the EPA fact sheet entitled “The Superfund Enforcement Process: How it Works” (EPA, 1988), located in Appendix C. Additional information on the CERCLA response process is available from the EPA (EPA, 1998).

An overview of the CERCLA process is provided to assist community members in understanding the various phases of work associated with the regulations. Figure 1 is a diagram identifying the major phases of the CERCLA process. Each phase is described in more detail in the following subsections.

Site Discovery

Potential CERCLA sites are typically identified through state and county inspections and reports from concerned citizens. Federal facilities, such as JPL, were required to conduct investigations of past waste management activities, in response to SARA Section 120(d) (Federal Facilities).

Preliminary Assessment and Site Investigation

The first step in the CERCLA process for a federal facility involves two initial studies known as the *Preliminary Assessment (PA)* and *Site Investigation (SI)*. Both studies include collecting and reviewing available information to determine the magnitude of the problem posed by the site. At the conclusion of the SI, the site is scored by the EPA using a standard system called the *Hazard Ranking System (HRS)*. The HRS considers potential risks to public health and the environment from the release or threatened release of site chemicals.

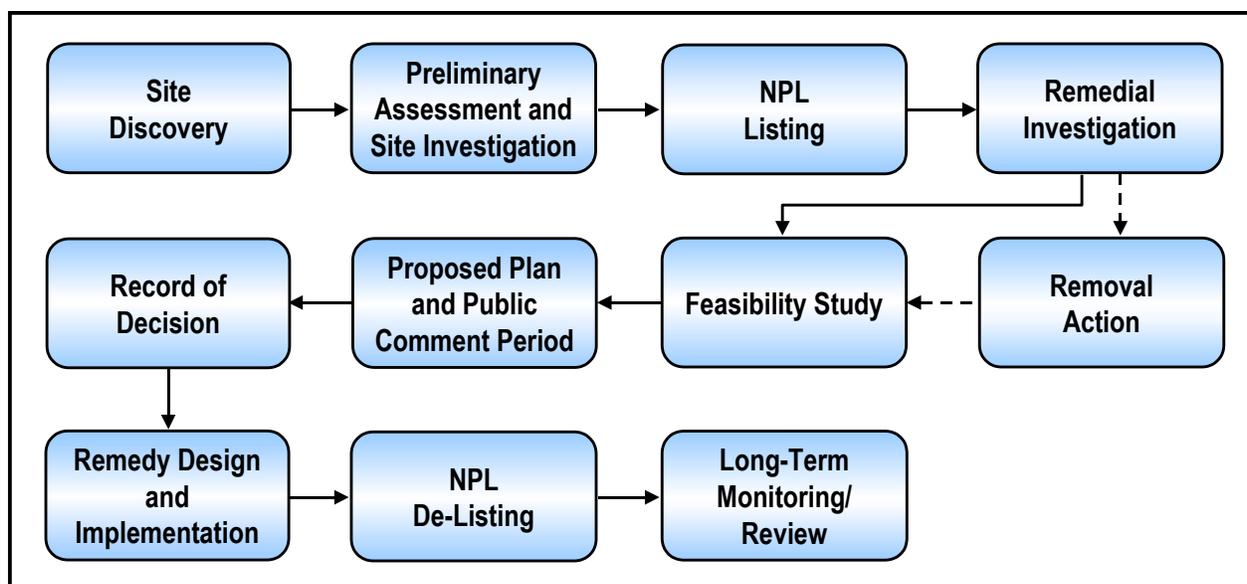


Figure 1. Phases of the CERCLA Process

NPL Listing

If the overall potential risks at a site are determined to be significant based on its HRS score, the site will be nominated for placement on the *National Priority List (NPL)*. The NPL is a listing by the EPA of the top-priority sites that are eligible for investigation and remediation under the federal CERCLA program.

Remedial Investigation

After a site has been placed on the NPL, a *Remedial Investigation (RI)* is planned and conducted. An RI may take several years to complete depending on the size and scope of the site. This phase includes comprehensive sampling and data collection to evaluate the nature, extent, and magnitude of impacts both on- and off-facility. As part of the RI, a *risk assessment* may be performed to identify and quantify the risks that the site poses to public health, welfare, and the environment. The human health risk assessment (HHRA) identifies and quantifies the risks posed by the site to public health and welfare. The ecological risk assessment (ERA) evaluates whether the site poses a risk to the environment. The risk assessments evaluate present and future risks in the absence of any remediation and help to determine the need for and extent of remediation required.

Removal Action(s)

A *Removal Action* is an interim (i.e., short-term) action, such as the implementation of a temporary alternative water supply, which is taken to safeguard public health or the environment. A removal action may be conducted at any time during the CERCLA process. However, a removal action typically is conducted during or after the RI in order to address an immediate threat to public health or the environment. In cases where more than a six-month planning period exists before a removal action will begin, an *Engineering Evaluation/Cost Analysis (EE/CA)* is prepared in order to identify the objectives of the removal action and evaluate various alternatives with

respect to cost, effectiveness, and implementability. After the removal action is completed, the environmental investigation or remediation process resumes according to the appropriate step in the CERCLA process.

Feasibility Study

The *Feasibility Study (FS)* is a document that uses the data collected during the RI and removal actions, if any, to identify potential remedial alternatives for the site. The remedial alternatives are evaluated based on technical feasibility, protectiveness, effectiveness, impacts to the community, institutional concerns, conformance with other applicable relevant and/or appropriate environmental laws, and costs. A *preferred alternative* is proposed as part of the FS.

Proposed Plan and Public Comment Period

Upon completion of the FS, a *Proposed Plan* is published, which summarizes the *remediation* alternatives evaluated in the FS. The Proposed Plan describes the preferred cleanup strategy proposed by the lead agency and the primary regulatory agencies. The Proposed Plan generally is available for public comment for a 30-day period, which may be extended by the lead agency as appropriate. During the public comment period, a public meeting is held to present the information in the Proposed Plan and provide community members the opportunity to comment on the proposed actions.

Record of Decision

At the conclusion of the public comment period and following consideration of all community comments, the lead agency (with regulatory approval) makes the final remedy selection. This final remedy selection is issued in a *Record of Decision (ROD)*, a legal public document that sets forth and explains the remediation alternatives to be used at a CERCLA site. The ROD includes a Responsiveness Summary that contains responses to all public comments received during the public comment period on the Proposed Plan.

Remedy Design and Implementation

After the ROD is signed, the *Remedial Design (RD)* phase of work is initiated. The RD includes preparation of engineering reports, technical drawings, and specifications to describe implementation of the selected remedy. Upon approval of the RD by the primary regulatory agencies, the *Remedial Action (RA)*, or the actual construction and implementation of the selected cleanup alternative, is initiated. The final long-term remedial action may take one to two years to construct, although treatment may take several more years. The RA is implemented until cleanup objectives are achieved.

NPL De-Listing

A site, in whole or part, may be removed from the NPL upon determination that no further response is required to protect human health or

the environment. Under Section 300.425(e) of the NCP (*55 Federal Register* 8845, March 8, 1990), a site may be de-listed after all appropriate response actions are completed. Partial deletions can also be conducted at NPL sites. For example, soil remediation may be completed and the vadose zone de-listed prior to de-listing groundwater at the same NPL site. Additional information on NPL de-listing is available from the EPA (2001a).

Periodic Long-Term Monitoring/Review

After RD/RA activities have been completed, the site is periodically monitored to ensure the effectiveness of the response. Typically, CERCLA sites undergo reviews every five years after implementation of the remedy to evaluate the continued protectiveness at the site.

3.0 SITE DESCRIPTION

JPL (EPA ID# CA9800013030) is located within the eastern boundary of La Cañada Flintridge, west of Altadena, and north of Pasadena, California. Figure 2 shows the location and boundaries of the JPL site. JPL is located on approximately 156 acres of federally owned land. An additional area of approximately 20 acres is leased for parking from the City of Pasadena and the Flintridge Riding Club. The surrounding area is primarily residential with some light commercial operations. The site is bordered by the San Gabriel Mountains to the north, an equestrian club and a Fire Station to the southwest, residential neighborhoods to the west, and the Arroyo Seco wash to the east and southeast. JPL is located in the Raymond Basin Watershed, which serves as a source of drinking water for several communities in the area (see Figure 3). Based on data from the United States Census 2000, an estimated 44,000 people reside within three miles of JPL.

The Army developed and operated JPL between 1939 and 1958 as a Research and Development (R&D) laboratory. On December 3, 1958, jurisdiction was transferred to NASA. During historical operations at JPL, various chemicals (including chlorinated solvents, solid rocket fuel propellants, cooling tower chemicals, sulfuric acid, Freon™, and mercury) and other materials were used at the site. During the 1940s and 1950s, some buildings at JPL maintained subsurface areas, or “seepage pits,” used for disposal of sanitary wastes and laboratory chemical wastes collected from drains and sinks within the buildings. The RI identified 40 seepage pits, five waste pits, and four discharge points at the site that were used during historic operations (FWEC, 1999). In the late 1950s and early 1960s, a sanitary sewer system was installed at JPL to handle sewage and wastewater, and the use of seepage pits for sanitary and chemical waste disposal was discontinued. Today, laboratory chemical

wastes are either recycled or sent off-site for treatment and disposal at Resource Conservation and Recovery Act (RCRA)-permitted hazardous waste facilities.

In 1980, the analyses of groundwater revealed the presence of *volatile organic compounds* (VOCs) in City of Pasadena water supply wells located southeast of JPL in the Arroyo Seco. At about the same time, VOCs were detected in two water-supply wells used by the Lincoln Avenue Water Company, located east of the Arroyo Seco (FWEC, 1999). In 1992, JPL was placed on the NPL of sites subject to regulation under CERCLA (47189-47187 Federal Register, 1992, Vol. 57, No. 199). Basic historical, geographical, and technical details associated with JPL being listed on the NPL are provided in the CRP (NASA, 1994).

JPL was divided into three *operable units* (OUs) to facilitate a more focused effort to characterize the site, including the site conditions, the nature and extent of chemicals, and the development of an appropriate remedial response. JPL property boundaries are used to separate on-facility and off-facility investigations. The rationale for this separation is that VOC fate and transport in off-facility groundwater can only be fully understood once on-facility fate and transport has been characterized. Description of the three OUs are as follows:

- OU-1 is on-facility groundwater at JPL. It includes all groundwater located within JPL property boundaries.
- OU-2 is on-facility vadose zone soil at JPL. It includes all soils located within JPL property boundaries.
- OU-3 is off-facility groundwater adjacent to JPL. It includes groundwater located outside of the JPL property boundaries.

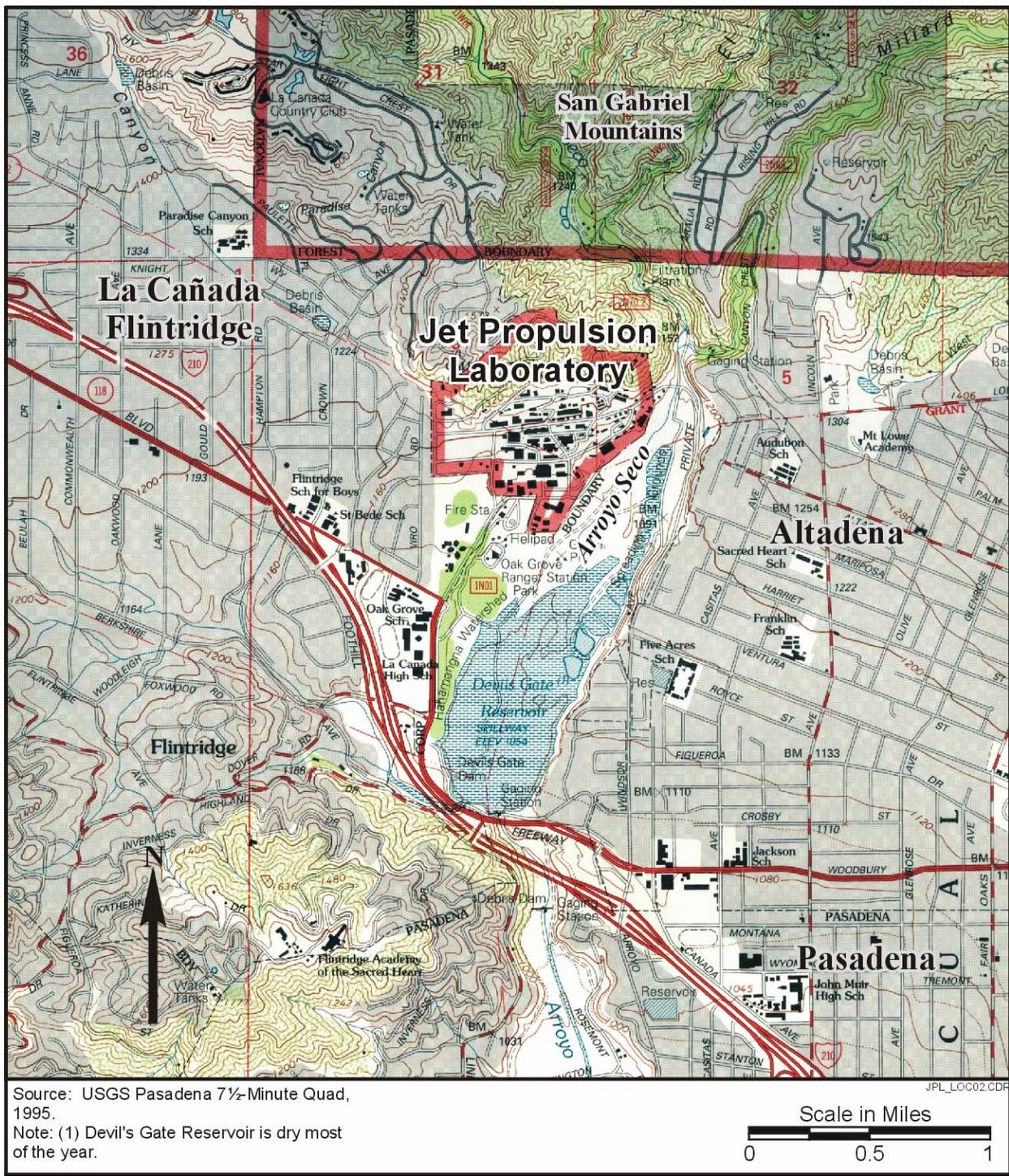


Figure 2. Map of JPL and the Surrounding Area

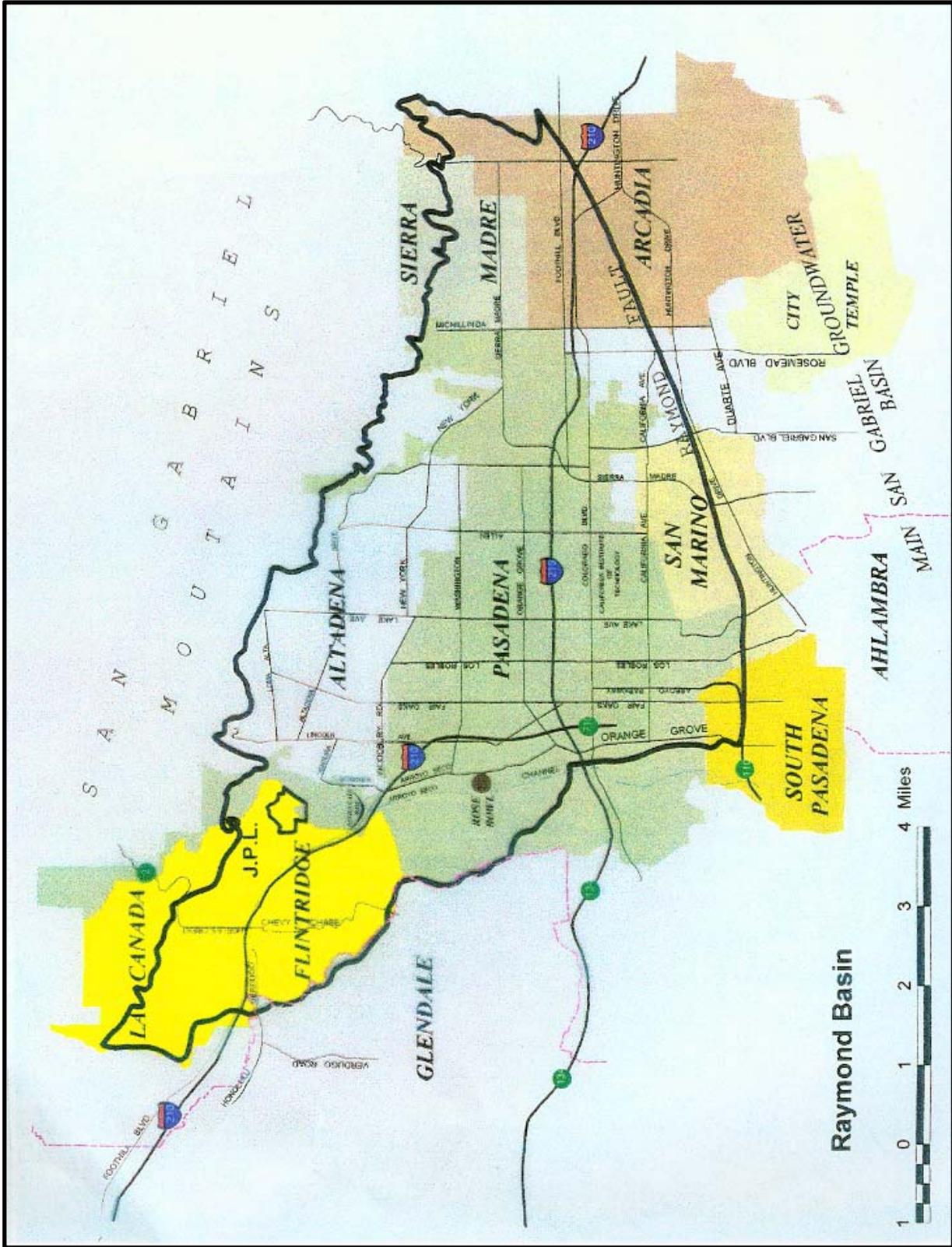


Figure 3. Map of the Raymond Basin

4.0 COMMUNITY BACKGROUND

This section describes the communities surrounding JPL and identifies the concerns and issues these communities expressed regarding the site during the May and June 2001 public meetings. Demographic data has been updated using the U.S. Census 2000.

4.1 Community Profile

The three primary communities surrounding JPL include Pasadena, Altadena, and La Cañada Flintridge. All three communities are in the politically appointed Fifth District of Los Angeles County. An estimated 9,500 residents live within a 1-mile radius of JPL. Within a 2- and 3-mile radius of JPL, there are approximately 22,500 and 44,000 residents, respectively.

Major sources of employment in the area are office, retail and service centers, primarily located in Pasadena. JPL maintained a workforce of about 5,175 employees and on-site contractors in 2001 (NASA, 2001). Residents of Altadena and La Cañada Flintridge generally are employed outside their home community, except those conducting retail businesses or professional services for their respective communities.

Three major freeways serve the Pasadena, Altadena, and La Cañada Flintridge communities. The Pasadena freeway (California

Highway 110) connects Pasadena to Los Angeles. The Foothill Freeway (Interstate 210) links communities to the north and east of Pasadena. The Ventura Freeway (U.S. Route 134) leads to Ventura County and beyond. The Burbank-Glendale-Pasadena airport and the Los Angeles International Airport service all three of the communities. The Burbank-Glendale-Pasadena airport is approximately 20 minutes from downtown Pasadena. Public bus transportation throughout Pasadena, Altadena, and La Cañada Flintridge is provided by Southern California Rapid Transit District, Greyhound, and Trailways. In addition, railroad transportation provided by Amtrak can be accessed in Pasadena.

Approximately eight hospitals and medical centers service the Pasadena, Altadena, and La Cañada Flintridge communities. Five are located in Pasadena (two hospitals, three medical/ healthcare centers), and two are located in Altadena (medical centers). La Cañada Flintridge is served by the facilities in Pasadena and Glendale. The eighth hospital has a Glendale address but is located closest to JPL, approximately 5 miles to the southwest. There are approximately 60 paramedic squads/rescue teams in Los Angeles County. The county maintains eight fire stations in Pasadena, two fire stations in Altadena, and two stations in La Cañada Flintridge.

Table 1. Population Data for the City of Pasadena (Census 2000 data)

Race	Number	Percent
<i>Total Population</i>	133,936	100.0
White	71,469	53.4
Black or African American	19,319	14.4
American Indian and Alaska Native	952	0.7
Asian	13,399	10.0
Native Hawaiian or Other Pacific Islander	132	0.1
Some other race/two or more races	28,655	21.4
Hispanic or Latino Origin⁽¹⁾	Number	Percent
<i>Total Population</i>	133,936	100.0
Hispanic or Latino (of any race)	44,734	33.4
Not Hispanic or Latino	89,202	66.6

(1) Due to a change in the Census 2000 questions, people had the option of indicating whether or not they were of Hispanic or Latino origin. According to the Census Bureau, people of Hispanic origin may be of any race and should have indicated their origin in the Hispanic origin question, not in the race question. In the federal statistical systems, ethnic origin was considered to be a separate concept from race (United States Census Bureau, 2001).

Pasadena Community Profile

The population of Pasadena was 133,936 (Census 2000) with a 1.8% growth of 2,345 since the 1990 Census. Table 1 contains the demographics data on the population of Pasadena from Census 2000.

The median income level was \$46,012 (household) and \$53,639 (family) (Census 2000). The Pasadena Unified School District consists of 30 public schools and 24 private and parochial schools. Of the 30 public schools, 22 are elementary, three are middle, and five are high schools. There are also nine colleges and universities in the Pasadena community. Additional community services within Pasadena include 48 day-care centers and 20 nursing homes.

The City of Pasadena has a city council-city manager form of government. Pasadena has seven City Council districts, each of which elects a council member for a 4-year term. Beginning in 1999, the Mayor of Pasadena is elected in a citywide election for a 4-year term rather than being chosen by the city council from among its members. However, the vice-mayor is a council member selected by the council, traditionally for two 1-year terms. Several city departments have a role in environmental issues, including the Departments of Public Health, Public Works and Transportation, Water and Power, Housing and Development, and the Department of Human Services, Recreation, and Neighborhoods.

Table 2. Population Data for the Town of Altadena (Census 2000 data)

Race	Number	Percent
<i>Total Population</i>	42,610	100.0
White	20,156	47.3
Black or African American	13,388	31.4
American Indian and Alaska Native	247	0.6
Asian	1,807	4.2
Native Hawaiian or Other Pacific Islander	56	0.1
Some other race/two or more races	6,956	16.3
Hispanic or Latino Origin⁽¹⁾	Number	Percent
<i>Total Population</i>	42,610	100.0
Hispanic or Latino (of any race)	8,690	20.4
Not Hispanic or Latino	33,920	79.6

(1) Due to a change in the Census 2000 questions, people had the option of indicating whether or not they were of Hispanic or Latino origin. According to the Census Bureau, people of Hispanic origin may be of any race and should have indicated their origin in the Hispanic origin question, not in the race question. In the federal statistical systems, ethnic origin was considered to be a separate concept from race (United States Census Bureau, 2001).

Altadena Community Profile

The population of Altadena was 42,610 (Census 2000) with a 0.11% decrease of 48 people since the 1990 Census. Table 2 contains the demographics data on the population of Altadena from Census 2000.

The median income level was \$60,549 (household) and \$66,800 (family) (Census 2000). Altadena is included in the Pasadena Unified School District. Of the 30 public schools in the Pasadena Unified School District, eight are located in Altadena (seven elementary and one middle school). There are also four private

and parochial schools within the borders of Altadena. Additional community services within Altadena include 12 day-care centers and two nursing homes.

Although unincorporated, there is an Altadena Town Council made up of 16 representatives and eight alternates elected by residents of the town's eight census tracts. The representatives are elected for two-year terms, and the alternates serve a one-year term. The town council elects a chair and a vice-chair from among its members. The Land Use Committee may have an interest in environmental issues.

Table 3. Population Data for the City of La Cañada Flintridge (Census 2000 data)

Race	Number	Percent
<i>Total Population</i>	20,318	100.0
White	15,142	74.5
Black or African American	73	0.4
American Indian and Alaska Native	36	0.2
Asian	4,180	20.6
Native Hawaiian or Other Pacific Islander	9	0.0
Some other race/two or more races	878	4.3
Hispanic or Latino Origin⁽¹⁾	Number	Percent
<i>Total Population</i>	20,318	100.0
Hispanic or Latino (of any race)	976	4.8
Not Hispanic or Latino	19,342	95.2

(1) Due to a change in the Census 2000 questions, people had the option of indicating whether or not they were of Hispanic or Latino origin. According to the Census Bureau, people of Hispanic origin may be of any race and should have indicated their origin in the Hispanic origin question, not in the race question. In the federal statistical systems, ethnic origin was considered to be a separate concept from race (United States Census Bureau, 2001).

La Cañada Flintridge Community Profile

The population of La Cañada Flintridge is 20,318 (Census 2000) with a 3.8% increase of 740 people since Census 1990. Table 3 contains the demographics data on the population of La Cañada Flintridge from Census 2000.

The median income level was \$109,989 (household) and \$122,779 (family) (Census 2000). The La Cañada Unified School District consists of six public schools and 11 private and parochial schools. Of the six public schools, there are three elementary, one middle school, and three high schools (includes one for special needs). Additional community services within La Cañada Flintridge include eight day-care centers.

La Cañada Flintridge operates with a city council-city manager form of government. Five members of the community are elected at large to four-year overlapping terms. Every year the City Council selects one of its members to serve as mayor of La Cañada Flintridge. The city manager is appointed by the City Council. There are five citizen commissions to advise the council on matters within specific areas of responsibility. Of these, the Public Safety, Public Works, and the Parks and Recreation commissions may have an interest in environmental issues. The Departments of Public Works and Planning/Community Development also may have an interest in environmental issues.

4.2 Key Community Concerns

In May and June 2001, three public meetings were held to present the Proposed Plan to cleanup soils (OU-2) to the public, and provide the public an opportunity to comment on the selected remedy in the Proposed Plan. As a result of these meetings, three key community concerns were identified: communication, financing remedial work, and health issues.

Previously identified community concerns are documented in the CRP (NASA, 1994). Future amendments to the CRP will include any community concerns that are identified as a result of comments received during future public meetings or comment periods.

Communication

Public meeting attendees identified communication between NASA and the public as a key concern. Some community members indicated that not enough information was being conveyed to the public regarding the CERCLA-related environmental activities at JPL. Other community members believed there was not

enough notice given in the newspapers and community newsletters before the May 2001 public meetings (this concern was directly addressed by providing an additional public meeting in June 2001).

Financing Remedial Work

Several attendees of the public meetings wondered how the investigation, cleanup, and other environmental activities at the JPL site were being financed. Additionally, concerns regarding the stability of NASA CERCLA program resources were expressed.

Health Issues

Citizens of the communities surrounding JPL expressed concern over the potential health issues arising from remediation of chemicals in the soil and groundwater at the JPL site. In general, people appeared more concerned about the groundwater covered under OU-1 and OU-3 than the on-facility soils addressed under OU-2.

5.0 COMMUNITY RELATIONS ACTIVITIES AND TIMING

This section presents the types of community relations activities that may be employed during the remainder of the CERCLA remediation process at JPL. Activities are intended to provide opportunities for the community to obtain information and participate in the CERCLA process. Brief reference summaries of NASA community relations activities are included at the end of this section to address the remaining phases of the CERCLA process required at JPL. These phases include: Removal Actions, Proposed Plan and Public Comment Period, Record of Decision, Remedy Design and Implementation, and NPL De-Listing. Specific community relations activities and timing are described in the following subsections.

Appendix D contains tables that summarize the community relations activities required by CERCLA. A list of key contacts and interested parties, including NASA officials, public officials, and media representatives, is provided in Appendix E.

The community relations activities will be evaluated throughout the remainder of the CERCLA process to assess their effectiveness. By monitoring the concerns of the nearby community members, community relations activities can be targeted as the needs and concerns of citizens change. Those activities that are not effective or no longer relevant may be dropped from the CRP pending input from the primary regulatory agencies. If the CRP is amended, the amended text will be placed in both the Information Repositories and *Administrative Record*.

5.1 Direct Mailings

Direct mailings may include fact sheets, newsletters, Proposed Plans, or public meeting announcements. Direct mailings would be sent to groups and individuals on the mailing list for JPL, which was started in 1991. The mailing list includes all residences and businesses within ½ mile of the JPL facility as well as community

members and groups that have requested to be on the list. The mailing list has been updated based on the attendance roster of the May and June 2001 public meetings, and on the Proposed Plans that were sent out prior to the public meetings and returned as undeliverable. An example of a direct mailing from the June 2001 public meeting is included in Appendix F.

Community members can request to be added to the direct mailing list by contacting Peter Robles, Jr., the Community Relations and Technical Information Contact for the NASA-JPL CERCLA project:

Peter Robles, Jr.
NASA Management Office, Jet Propulsion
Laboratory
4800 Oak Grove Drive
Pasadena, CA 91101
Phone: (818) 393-2920
Fax: (818) 393-2607
E-mail: probles@nmo.jpl.nasa.gov

5.2 E-Mail Notification

NASA and CalTech employees and contractors working at JPL may be notified via e-mail of environmental activities conducted during the CERCLA program. Community members who provide their e-mail addresses also may receive e-mail notification. Similar to the direct mailings, the e-mail notifications may include fact sheets, newsletters, Proposed Plans, or public meeting announcements. E-mail notification is a cost-effective method to distribute information to more than 5,000 JPL employees as well as community members.

5.3 Meetings with Local Officials and Concerned Groups

NASA is interested in working with local government agencies and concerned groups to provide a consistent and direct exchange of

information about community concerns and the status of JPL CERCLA-related environmental activities. Government agencies that have indicated an interest in meeting with NASA include: La Cañada Flintridge City Council, Altadena Town Council, Pasadena City Council, Raymond Basin Management Board, North East Trees, and the Pasadena Public Health Department. Concerned groups will be added to the list of interested parties as they contact NASA for information or express an interest in being kept informed on the status of CERCLA-related environmental activities at JPL. As necessary during the CERCLA process or upon request, discussions and/or formal presentations will be made to public officials or concerned groups.

5.4 News Releases

News releases will be issued at key points in the CERCLA process to convey significant findings and site information. Key points may include: completion of an EE/CA, completion of a Proposed Plan, signing of an ROD, completion of an RD, and de-listing from the NPL. Notices may be included in newspapers of general circulation (e.g., Pasadena Star-News, The News-Press, La Cañada Valley Sun, San Gabriel Valley Tribune, L.A. Times, L.A. Daily News, or other newspapers as needed). In addition, radio announcements may be used at NASA's discretion to announce public meetings. Radio announcements on KPCC were used to announce the June 2001 public meeting. Examples of news releases from the May and June 2001 public meetings are included in Appendix G.

5.5 Fact Sheets

Fact sheets can help inform the public of the investigative findings and progress of the remediation activities at JPL. Fact sheets also can be useful during public meetings to summarize key information associated with the meeting. Fact sheets usually consist of a brief report summarizing technical information needed to understand current or proposed activities of the remediation program. NASA may prepare and distribute fact sheets periodically.

5.6 Public Meetings

Public meetings are useful for distributing information and establishing communication with a large group of citizens. CERCLA requires that a public meeting be held to present the Proposed Plan during the public comment period. NASA may conduct additional public meetings as necessary. Public meetings may be conducted in conjunction with news releases at key technical milestones, such as the completion of an EE/CA or RD. During these meetings, NASA may set up booths to facilitate one-on-one communication with community members prior to formal presentations. In addition to the required public meetings, less formal meetings also may be conducted at NASA's discretion. Public meetings allow NASA to gauge public interest in the site and identify community concerns. Meetings also allow interested citizens an opportunity to comment on proposed response actions.

5.7 Web-Based Administrative Record and Community Outreach

Currently, three paper-based information repositories contain important documents pertaining to the JPL site. These information repositories are located in the Altadena Public Library, the La Cañada Flintridge Public Library, the Pasadena Central Library, and the JPL Repository (see Appendix A for addresses). Additionally, NASA has established a Web-based Administrative Record to provide a more accessible means of obtaining information and documents contained in the information repositories.

Using the Web application, community members will have the ability to search the Administrative Record and retrieve documents in a portable document format (.pdf). In addition to Administrative Record access, the Web site will be used to communicate the most recent information regarding CERCLA-related activities at the JPL site. An up-to-date contacts list will be maintained on the Web page to provide contact information for personnel and groups involved in the JPL remediation activities. Additional information such as recent fact sheets, newsletters, news releases, and public meeting announcements also will be provided.

The Web-based Administrative Record is available through computers located in the information repositories. An informational help sheet is also available at the information repositories to aid community members in accessing the Web-based Administrative Record.

5.8 Other Potential Community Relations Activities

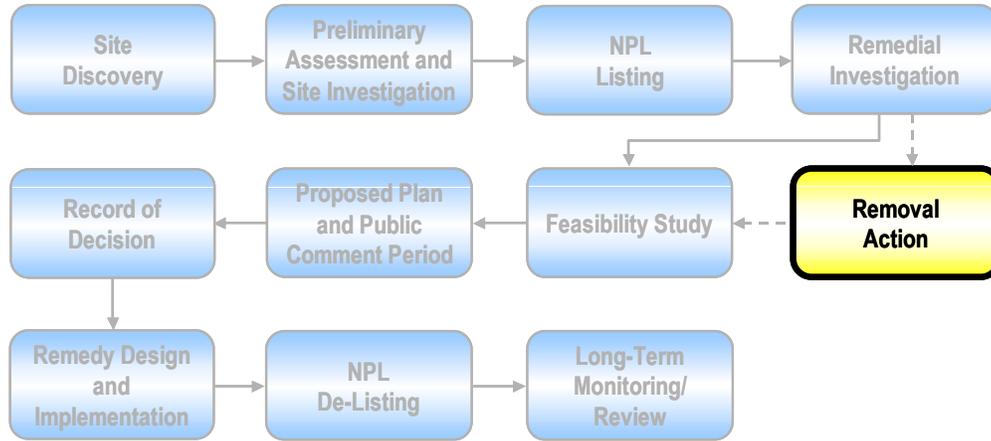
In addition to the items identified in the preceding sections, NASA may utilize additional community outreach methods to ensure effective and timely communication with the community and local officials. These activities may include newsletters, translations, exhibits at the JPL Visitor Center or during the annual JPL Open House, community workshops with a focused group of concerned citizens, small group meetings, one-on-one meetings, and/or establishing a telephone contact number/hotline.

5.9 Summary of Community Relations Activities

The following pages provide summaries of the types of community relations activities that may be conducted during each of the remaining phases of the CERCLA response process at JPL.



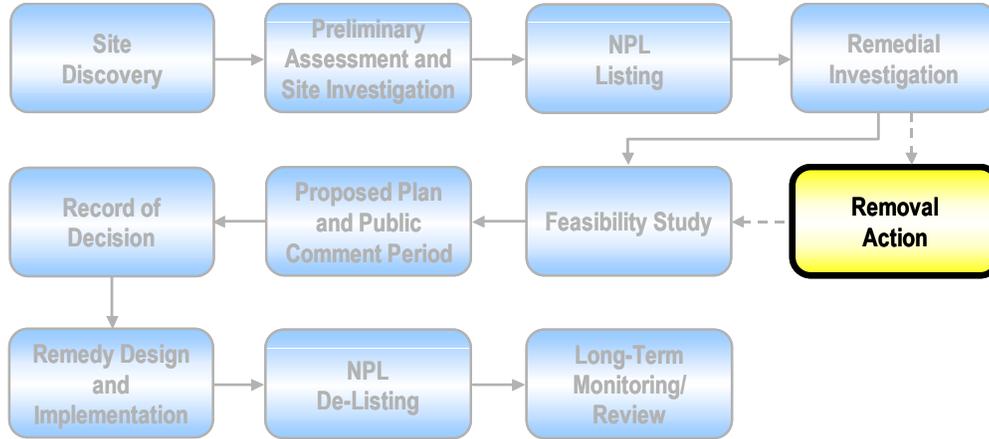
Community Relations Activities During Removal Actions



Activity	Associated Actions
Public Notification	<ul style="list-style-type: none"> • Publish a notice in local newspapers of general circulation (e.g., Pasadena Star-News, The News-Press, La Cañada Valley Sun) announcing a public comment period on the EE/CA and the availability of the EE/CA in the information repositories. The newspaper notice will contain a brief description of the EE/CA. If a public meeting is to be held, the newspaper notice may be published approximately two weeks preceding the meeting. • Additional efforts NASA may pursue: <ul style="list-style-type: none"> ○ Send a fact sheet summarizing the EE/CA to all residences and local businesses on the mailing list. If a public meeting is to be held, mail a meeting notice approximately two weeks in advance of the meeting. ○ E-mail copies of the fact sheet summarizing the EE/CA to JPL (NASA and CalTech) employees. If a public meeting is to be held, send the e-mail approximately two weeks in advance of the meeting.
Public Comment Period	<ul style="list-style-type: none"> • Generally provide at least 30 days for the submission of written and oral comments on the EE/CA. As appropriate, NASA may extend this comment period.
Public Meeting	<ul style="list-style-type: none"> • Additional efforts NASA may pursue: <ul style="list-style-type: none"> ○ Conduct a public meeting at or near JPL during the public comment period. Fact sheets summarizing the EE/CA may be made available at the public meeting. A court reporter may be present during the meeting to prepare a meeting transcript. ○ Presentation slides, booths, posters, fact sheets, answers to frequently asked questions, etc., may be used to facilitate effective communication.
Meeting Transcript	<ul style="list-style-type: none"> • If a public meeting is conducted, NASA may prepare a meeting transcript and make it available to the public via the information repositories.
Responsiveness Summary	<ul style="list-style-type: none"> • Prepare a response to comments received during the public comment period and include in the information repositories. • This document may be mailed to public meeting participants.



Community Relations Activities During Removal Actions (Continued)



Activity

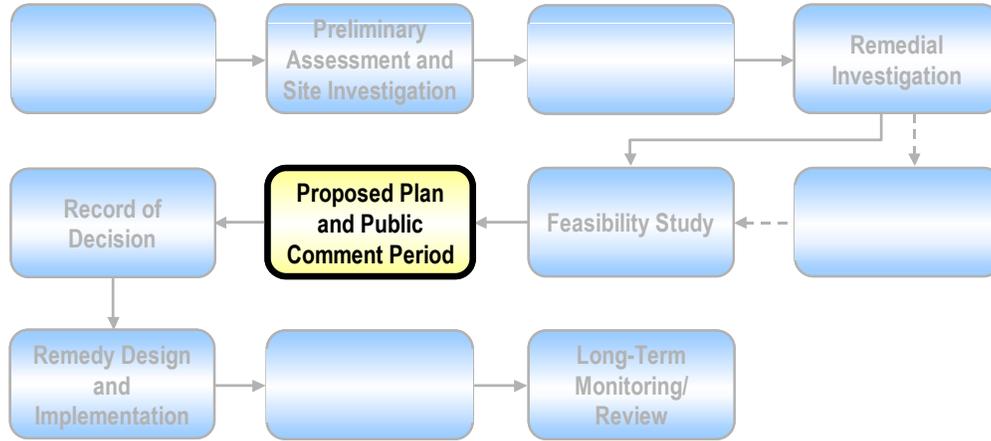
Associated Actions

Removal Action Notification

- Additional efforts NASA may pursue:
 - Issue a fact sheet to the community prior to beginning removal actions to provide information about construction schedules, traffic pattern changes, and the manner in which information will be provided throughout the removal action. Copies of any fact sheet would be placed in the information repositories.
 - Send the fact sheet to all residences and local businesses on the mailing list.
 - E-mail the fact sheet to JPL (NASA and CalTech) employees.



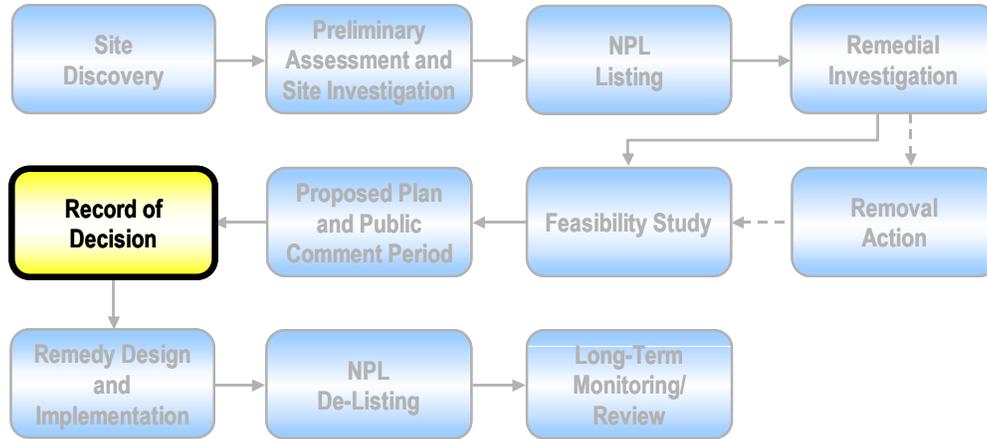
Community Relations Activities During the Proposed Plan and Public Comment Period



Activity	Associated Actions
Public Notification	<ul style="list-style-type: none"> • Publish a notice in local newspapers of general circulation (e.g., Pasadena Star-News, The News-Press, La Cañada Valley Sun) announcing a public meeting and public comment period on the Proposed Plan, as well as the availability of the RI/FS and Proposed Plan in the information repositories. The newspaper notice will contain a brief description of the Proposed Plan and may be published approximately two weeks preceding the public meeting. • Additional efforts NASA may pursue: <ul style="list-style-type: none"> ○ Send copies of the Proposed Plan or a summary of the Proposed Plan to all residences and local businesses on the mailing list approximately two weeks before the public meeting. The Proposed Plan should include the location, date, and time of the public meeting, as well as the dates of the comment period. ○ E-mail copies of the Proposed Plan to JPL (NASA and CalTech) employees approximately two weeks prior to the public meeting. ○ Radio announcements also may be used to announce the public meeting and comment period during the week prior to the meeting.
Public Comment Period	<ul style="list-style-type: none"> • Generally provide at least 30 days for the submission of written and oral comments on the Proposed Plan. As appropriate, NASA may extend this comment period.
Public Meeting	<ul style="list-style-type: none"> • Conduct a public meeting at or near JPL during the public comment period. Copies of the Proposed Plan should be made available at the public meeting. • A court reporter may be present during the meeting to prepare a meeting transcript. • Presentation slides, booths, posters, fact sheets, answers to frequently asked questions, etc., may be used to facilitate effective communication.
Meeting Transcript	<ul style="list-style-type: none"> • Prepare a meeting transcript and make it available to the public via the information repositories.
Responsiveness Summary	<ul style="list-style-type: none"> • Prepare a response to comments received during the public comment period and include in the ROD. • This document may be mailed to public meeting participants.



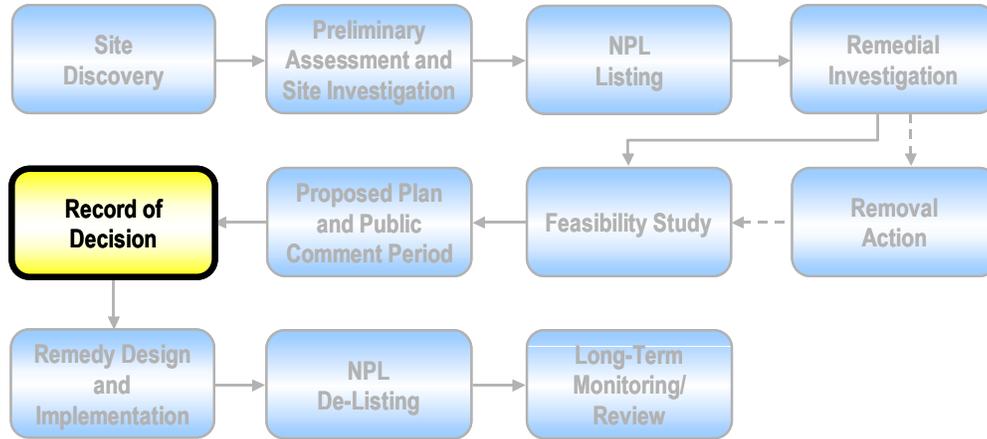
Community Relations Activities During the Record of Decision



Activity	Associated Actions
Upon Finalizing ROD	
ROD Availability and Notification	<ul style="list-style-type: none"> Place copies of the ROD in the information repositories prior to the commencement of remedial action. Publish a notice in local newspapers of general circulation (e.g., Pasadena Star-News, The News-Press, La Cañada Valley Sun) announcing the availability of the ROD. The notice will state the basis and purpose of the selected action.
Revise the CRP	<ul style="list-style-type: none"> If necessary, revise the CRP prior to remedial design in order to reflect community concerns.



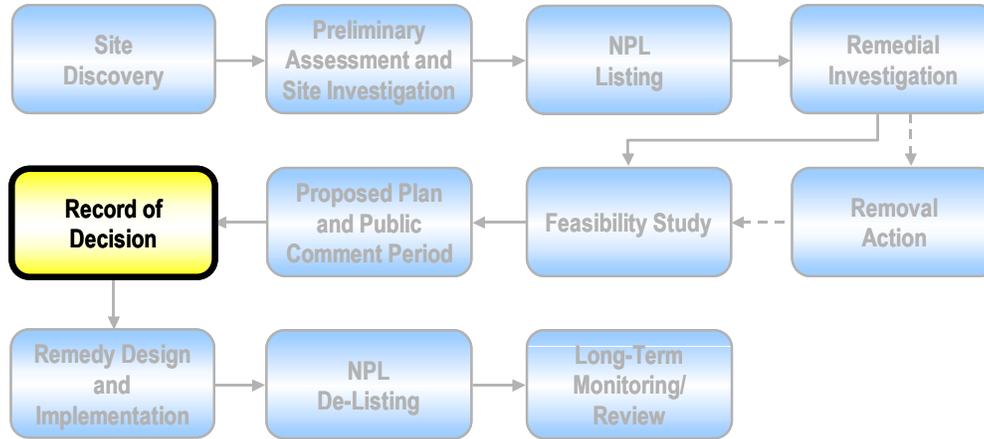
Community Relations Activities During the Record of Decision (Continued)



Activity	Associated Actions
Significant Changes Before the ROD has been Signed	
Discussion of Significant Changes	<ul style="list-style-type: none"> If significant changes to the remedial action identified in the Proposed Plan occur as a result of community involvement or public comment on the Proposed Plan, NASA will determine if these changes could be reasonably anticipated by the public. If NASA determines that the public could reasonably anticipate the changes, then NASA will include in the ROD a discussion of the significant changes to the selected remedial action and the reasons for such changes. Changes that could be reasonably anticipated by the public are those based on information already available in the Proposed Plan, supporting analysis, and Administrative Record. Significant changes are those that affect the scope, performance, and/or cost of the Preferred Alternative in the Proposed Plan. Significant changes generally involve substantially modifying a component of the Preferred Alternative identified in the Proposed Plan, or selecting an alternative from the RI/FS as the remedy rather than the Preferred Alternative identified in the Proposed Plan. An example includes selecting a different soil remediation alternative from those presented as acceptable options in the Proposed Plan.
Revise the Proposed Plan	<ul style="list-style-type: none"> Upon determination that such changes could not have been reasonably anticipated by the public based on information already available in the Proposed Plan, supporting analysis, and Administrative Record, NASA will issue a revised Proposed Plan (refer to Community Relations Activities During the Proposed Plan and Public Comment Period). Significant changes that could not be considered “reasonably anticipated” by the public include: changing a component of the preferred alternative such that the scope, performance, and/or cost of the remedy are changed, or the identification and selection of a new Preferred Alternative is not previously considered. An example includes selecting a new preferred remedy that was not presented in the Proposed Plan or the FS because new information was received indicating the new remedy could be used effectively at the site. In such as case, because the public has not had an adequate opportunity to comment on the new technology, a revised Proposed Plan will be prepared and presented to the public for comment.



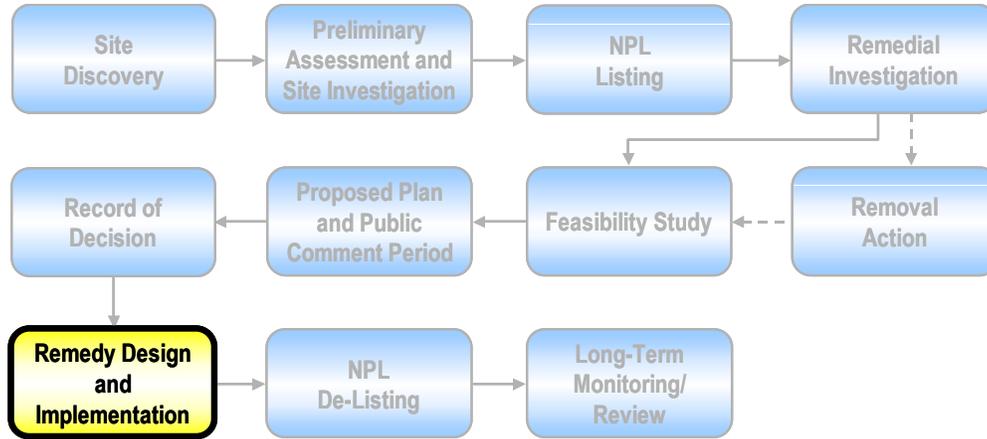
Community Relations Activities During the Record of Decision (Continued)



Activity	Associated Actions
Significant Changes After the ROD has been Signed	
ESD Notice and Availability	<ul style="list-style-type: none"> • Prepare an Explanation of Significant Differences (ESD) if significant changes are made to the remedy selected in the ROD. Significant changes generally involve a change to the scope, performance, and/or cost of the remedy but do not fundamentally alter the overall cleanup approach (e.g., large increases in the volume of chemicals to be treated or the costs involved in treatment, changes in waste disposal locations, and/or changes in the secondary treatment technology). • Publish a notice that briefly summarizes the ESD and the reasons for such differences in local newspapers of general circulation (e.g., Pasadena Star-News, The News-Press, La Cañada Valley Sun). • Make the ESD and supporting information available in the information repositories and the Administrative Record.
ROD Amendment	<ul style="list-style-type: none"> • Propose an Amendment to the ROD if fundamental changes are made to the remedy selected in the ROD. Fundamental changes are those that alter the basic features of the selected remedy (e.g., scope, performance, and/or cost). Examples include changing the primary treatment method and changing from containment to treatment. • Issue a notice of availability and a brief description of the proposed ROD Amendment in local newspapers of general circulation (e.g., Pasadena Star-News, The News-Press, La Cañada Valley Sun). • NASA will follow the same community relations activities as those identified for the Proposed Plan regarding the public comment period, public meeting and transcripts, and the responsiveness summary (refer to Community Relations Activities During the Proposed Plan and Public Comment Period).
Amended ROD Notice and Availability	<ul style="list-style-type: none"> • Publish a notice of availability of the amended ROD in local newspapers of general circulation (e.g., Pasadena Star-News, The News-Press, La Cañada Valley Sun). • Make the amended ROD and supporting information available to the public via the information repositories prior to commencement of the remedial action affected by the amendment.



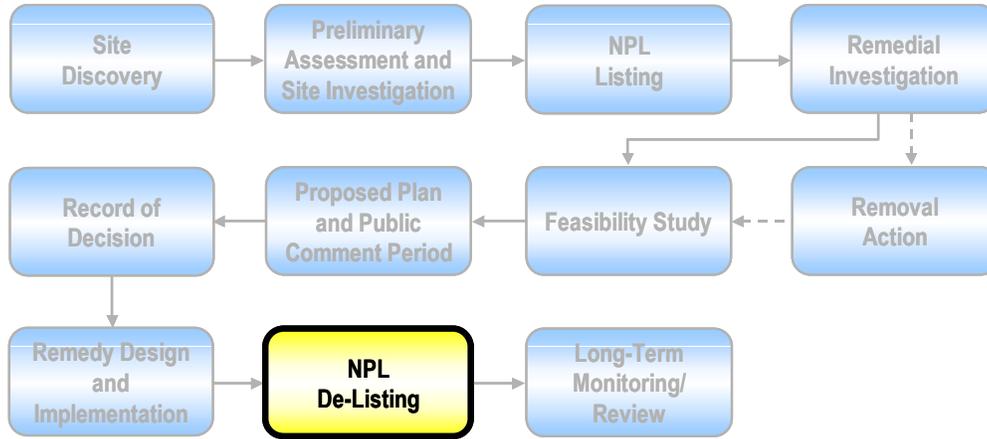
Community Relations Activities During Remedy Design and Implementation



Activity	Associated Actions
Remedy Design and Implementation Notification	<ul style="list-style-type: none"> • Issue a fact sheet to the community prior to beginning remedial actions to provide information about construction schedules, traffic pattern changes, and the manner in which information will be provided throughout the remedial action. Copies of any fact sheet would be placed in the information repositories. • Additional efforts NASA may pursue: <ul style="list-style-type: none"> ○ Publish a notice in local newspapers of general circulation (e.g., Pasadena Star-News, The News-Press, La Cañada Valley Sun) announcing the completion of the remedy design, availability of the design documentation in the information repositories, and fact sheet information. ○ Send the fact sheet to all residences and local businesses on the mailing list. ○ E-mail the fact sheet to JPL (NASA and CalTech) employees.
Remedy Status	<ul style="list-style-type: none"> • Newspaper notices, fact sheets, and informational meetings may be conducted to inform the community of key milestones during remedial operations.



Community Relations Activities During NPL De-Listing



Activity	Associated Actions
Public Notice and Comment Period	<ul style="list-style-type: none"> NASA will provide EPA, DTSC, and RWQCB with a “closeout report” establishing that all appropriate response actions have been taken at the JPL site. EPA is required to publish a notice in the Federal Register of their intent to delete JPL from the NPL, and must also provide notice in local newspapers of general circulation (e.g., Pasadena Star-News, The News-Press, La Cañada Valley Sun). EPA must provide a public comment period of at least 30 days on the proposed deletion.
Public Access to Information	<ul style="list-style-type: none"> EPA must place copies of information supporting the proposed deletion in the information repository for public inspection and copying.
Response to Significant Comments	<ul style="list-style-type: none"> EPA must respond to each significant comment and any significant new data submitted during the comment period and include these responses in the final deletion package.
Availability of Final Deletion Package	<ul style="list-style-type: none"> Place the final deletion package in the information repositories after the notice of final deletion has been published in the Federal Register. The final deletion package contains information supporting the proposed deletion.

6.0 REFERENCES

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