



**APPENDIX D
REGULATORY FRAMEWORK
AND CEQA THRESHOLDS**



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CRENSHAW/LAX TRANSIT CORRIDOR PROJECT

Project No. PS-4330-1968



Appendix D Regulatory Framework and CEQA Thresholds



Prepared for:



Prepared by:
Parsons Brinckerhoff
444 South Flower Street
Suite 3700
Los Angeles, California 90071

In Association with:
Terry A. Hayes Associates
8522 National Boulevard
Suite 102
Culver City, California 90232

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1.0 TRANSPORTATION

The traffic analysis for the Crenshaw/LAX Transit Corridor Project is found in the Traffic Technical Memorandum prepared by Fehr & Peers after Section 20 of this Environmental Technical Report.

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2.0 LAND USE AND DEVELOPMENT

2.1 Regulatory Framework

Land use regulations are articulated in both regional and local plans. The Southern California Association of Governments (SCAG) defines regional planning principles while local municipalities define land uses for specific areas of the Crenshaw/LAX Corridor.

2.1.1 Regional

SCAG Regional Transportation Plan (RTP) and Regional Comprehensive Plan (RCP). SCAG serves as the metropolitan planning organization (MPO) for the region. The RTP, adopted May 8, 2008, and RCP are tools used for identifying the transportation priorities of the Southern California region. (The 2008 RCP was never formally adopted for the region, but nonetheless provides a useful tool for land use planning.) The policies and goals of the RTP and RCP focus on the need to coordinate land use and transportation decisions to manage travel demand within the region.

City of Los Angeles General Plan, Citywide General Plan Framework. The Citywide General Plan Framework (Framework), an element of the City of Los Angeles General Plan adopted in December 1996, is intended to guide the City's long-range growth and development through the year 2010. The Framework establishes citywide planning policies regarding land use, housing development, transportation, and provision of infrastructure and public services. The Framework's transportation policies seek to develop maintenance facilities that maximize transit service in activity centers. Three broad themes run throughout the Framework: sustained mobility with greater accessibility, economic opportunity, and environmental quality.

City of Los Angeles General Plan, Land Use Element. For land use planning purposes, the City of Los Angeles is divided into 35 community planning areas. Each of the community plans discuss goals, objectives, and policies for developing a public transit system that improves mobility with convenient alternatives to automobile travel, fostering transportation demand strategies, developing non-motorized transportation options, and coordinating activities with other jurisdictions. The maintenance site alternatives are located within portions of the LAX and Westchester-Playa Del Rey community plan areas. These community plan areas contain land use and transportation policies that are transit supportive.

LAX Master Plan, LAX Plan. The *LAX Master Plan*, approved in 2004, modernizes the runway and taxiway system, redevelops the terminal area, improves access to the airport, and enhances passenger safety, security, and convenience. The plan is designed to balance the public's desire for no expansion and fewer impacts to surrounding neighborhoods with the airport's need to modernize and focus more on ground access, safety, and security. Two measures contained in the *LAX Master Plan* to improve ground transportation include a proposed people mover and a consolidated rental car facility. The Consolidated Rental Car Facility would consolidate all on-airport rental car operations for LAX for convenience of passengers and efficiencies of rental car companies. While its location has yet to be finalized, it would be connected to the



Central Terminal by a people mover, an automated transit system that would connect outside transit connections to the Central Terminal. The *LAX Plan*, adopted in 2004, establishes a land use policy framework that is the implementation mechanism for the *LAX Master Plan*. The *LAX Plan* promotes the orderly and flexible modernization of LAX.

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City of Inglewood General Plan. The *City of Inglewood General Plan* contains similar goals, objectives, and policies, with regard to transit development, as those described above for the City of Los Angeles. The City of Inglewood is divided into four planning areas, and one of the maintenance site alternatives, the Site #15 – Manchester/Aviation Alternative, is located in the West Inglewood planning area. Currently, the City of Inglewood is in the process of updating its General Plan, which will further define the City's transit-oriented policies. This process is anticipated to be completed by the end of 2012.

City of Hawthorne General Plan. The *City of Hawthorne General Plan* was adopted in 1989 and contains land use and circulation elements that contain policies relevant to the maintenance site alternatives. The *Land Use Element* of the *City of Hawthorne General Plan* identifies freeway related commercial/mixed-use potential and commercial corridor revitalization as the major issues to address. The *Circulation Element* of the *City of Hawthorne General Plan* identifies traffic circulation, alternative transportation modes, and parking as the fundamental issues of concern. The policies encourage expansion of the Metro light rail transit (LRT) system.

City of Redondo Beach General Plan. The *City of Redondo Beach General Plan Land Use Element*, adopted in 1992 contains policies relevant to the maintenance site alternatives. The *Land Use Element* establishes goals, objectives, and policies to accommodate the expansion of public infrastructure required to maintain City services and accommodate future development.

City of Inglewood, La Cienega Redevelopment Area. This redevelopment area was established in August, 1971 to address issues related to land use incompatibilities



between small residential neighborhoods and emerging industrial freight forwarding facilities. As the Los Angeles World Airports (LAWA) operations continued to expand, excessive noise associated with airport operations intensified the land use incompatibility conditions by further impacting remaining residential pockets. Policies are directed towards converting the remaining residential pockets to more compatible industrial uses.

2.2 CEQA Thresholds

According to California Environmental Quality Act (CEQA), land use impacts would be considered significant if the maintenance site alternatives have the potential to result in:

- I. Physical division of an established community;
- II. Inconsistency with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project; or,
- III. Incompatibility with adjacent and surrounding land uses caused by degradation or disturbances that diminish the quality of a particular land use.

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3.0 DISPLACEMENT AND RELOCATION OF EXISTING USES

3.1 Regulatory Framework

Discussed below are the applicable federal, State, and local regulations that govern the property acquisition and relocation process for transportation projects.

3.1.1 Federal

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended (Uniform Act). The Uniform Act, mandates that certain relocation services and payments be made available to eligible residents, businesses, and non-profit organizations displaced as a direct result of projects undertaken by a federal agency or with federal financial assistance. The Uniform Act provides for uniform and equitable treatment for persons displaced from their homes and businesses and establishes uniform and equitable land acquisition policies.

Where acquisition and relocation are unavoidable, owners of private property have federal constitutional guarantees that their property would not be taken or damaged for public use unless they first receive just compensation. Just compensation is measured by the “fair market value” (FMV) of the property taken, where “fair market value” is considered to be the:

“highest price on the date of valuation that would be agreed to by a seller, being willing to sell, but under no particular or urgent necessity for so doing, nor obliged to sell; and a buyer, being ready, willing and able to buy, but under no particular necessity for so doing, each dealing with the other with the full knowledge of all the uses and purposes for which the property is reasonably adaptable and available.” (Code of Civil Procedure Section 1263.320a)

FMV of a property is determined by an outside independent appraiser's opinion of the value of a property that is just and equitable on the open market and confirmed by the acquiring agency's review appraisal.

3.1.2 State

California Relocation Act (California Act). The provisions of the California Act apply if a public entity undertakes a project for which federal funds are not present. In this case, the public entity must provide relocation assistance and benefits. The California Act, which is consistent with the intent and guidelines of the Uniform Act, seeks to:

- (1) Ensure the consistent and fair treatment of owners and occupants of real property,
- (2) Encourage and expedite acquisition by agreement to avoid litigation and relieve congestion in the courts, and
- (3) Promote confidence in the public land acquisitions.

As stated above under federal regulations, owners of private property have similar state constitutional guarantees regarding property takes, damages, and just compensation.

3.2 CEQA Thresholds

According to CEQA, displacement and relocation impacts would be considered significant if the maintenance site alternatives would:

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; and/or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.



4.0 COMMUNITY AND NEIGHBORHOOD IMPACTS

4.1 Regulatory Framework

4.1.1 Federal

There are a variety of social, economic and environmental factors that encompass the concept of community and neighborhood. Federal regulations have been developed to address and evaluate changes to many of the elements that when combined together constitute affects on a community. The Federal- Aid Highway Act of 1970 specifies that decisions made regarding federally funded projects be in the best overall public interest. Similarly, the National Environmental Quality Act (NEPA) of 1969 specifically requires the consideration of social and economic effects of federal actions as well as other physical changes to the environment that affect population groups. The Safe, Accountable, Flexible, Efficient Transportation Act (SAFETEA-LU) enacted in 2005 and amended in 2008 requires among other factors consideration of projects that improve safety, and reduce traffic congestion in communities.

4.1.2 State

At the State level, CEQA also requires a comprehensive review of a wide range of factors that may influence the quality of the physical environment. CEQA specifically indicates that the focus of environmental review is on changes to the physical environment, but social and economic factors can be considered at the discretion of the lead agency. Under CEQA the environmental analysis may trace the chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from possible physical changes to the environment.

4.1.3 Local

At the city level, the explicit purpose of general plans and community plans is to establish the organization of land uses to protect the health, safety and general welfare of communities as well as actualize the public's vision for the direction of growth and development of the community. As discussed in the Land Use portion of this report, the City of Los Angeles Westchester-Playa Del Rey Community Plan, the City of Inglewood General Plan, the City of Hawthorne General Plan, and the City of Redondo Beach General Plan provide this guidance.

4.2 CEQA Thresholds

According to CEQA, community and neighborhood impacts would be considered significant if the maintenance site alternatives have the potential to result in:

- Physical division of an established community (Also Land Use and Development)

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5.0 VISUAL QUALITY

5.1 Regulatory Framework

5.1.1 Federal

There are several federal regulations that govern the assessment and consideration of visual quality and aesthetic character. These regulations consider the protection and enhancement of existing resources and aesthetic character, as well as the incorporation of design considerations in the development and construction of projects. The following federal regulatory policies apply to the evaluation of visual effects for the maintenance site alternatives.

- NEPA (42 *United States Code* (USC) Section 4231)
- Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), *Environmental Impact and Related Procedures (23 Code of Federal Regulations [CFR] 771)*
- FTA Circular 9400.1A, Design and Art in Transit Projects
- The SAFETEA-LU, Sections 6002-6009
- The USDOT Act, Section 4(f), (49 USC 303)
- Section 106 of the Historic Preservation Act of 1966

5.1.2 State and Regional

CEQA requires an evaluation of scenic resources in the consideration of effects to the quality of the environment. The evaluation considers site-specific history, context, and area sensitivity.

5.1.3 Local

Policies contained in local jurisdictional planning documents that apply to the visual effects of a mass transit system are included in Table 5-1. These planning documents focus primarily on the maintenance of visual diversity, definition of urban form and character, protection and management of scenic, historic, and cultural resources, enhancement of existing visual character and quality, and control over development. Table 5-1 provides a general summary of the applicable policy documents, including a general focus of the guidelines and policies specific to each.

5.2 CEQA Thresholds

According to CEQA, the maintenance site alternatives would result in a significant impact to visual resources if it would:

- Adversely affect a scenic resource;
- Substantially damage a scenic resource, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;

Table 5-1. Local Policy Documents

Document	General Policies
City of Los Angeles	
General Plan	Historic Preservation Overlay Zones (HPOZ) Scenic Resource Preservation Scenic Highways Designation Street Tree Preservation
General Plan Framework Element	Strategy for maintaining visual diversity and defining urban form and community character
Hawthorne	
General Plan	Policies to preserve visual character and visual compatibility between land uses
Inglewood	
General Plan	Design guidelines and standards for development
Redondo Beach	
General Plan	Design guidelines and standards for development

Source: TAHA, 2010.

- Substantially degrade the existing visual character or quality of the site and its surroundings; and/or
- Create a new source of light or glare which would adversely affect day or nighttime views in the area.



6.0 AIR QUALITY

This section examines the affected environment related to air quality. The analysis was based on a combination of federal and local guidance. The toxic air contaminant assessment was based on the 2006 Federal Highway Administration (FHWA) Interim Guidance on Air Toxics Analysis in NEPA documents. The transportation conformity analysis was based on a compilation of guidance documents published by the FHWA. The localized analysis was based on South Coast Air Quality Management District (SCAQMD) guidance. Pollutants analyzed in this section include carbon monoxide (CO), volatile organic compounds (VOC), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter 2.5 microns or less in diameter (PM_{2.5}), and particulate matter ten microns or less in diameter (PM₁₀). A complete discussion of criteria air pollutants with established federal and State standards and relevant regulatory framework is provided in Appendix C.

6.1 Pollutants and Effects

Criteria air pollutants are defined as pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and State standards have been set at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from health effects.

Pollutants of concern include: carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter 2.5 microns or less in diameter (PM_{2.5}), particulate matter ten microns or less in diameter (PM₁₀), and lead (Pb).

6.1.1 National and State Ambient Air Quality Standards and Attainment Status

As required by the Federal Clean Air Act and Amendments (CAAA), National Ambient Air Quality Standards (NAAQS) are identified for seven major air pollutants: CO, NO₂, O₃, PM_{2.5}, PM₁₀, SO₂, and Pb. The CAAA requires the U.S. Environmental Protection Agency (USEPA) to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The USEPA has classified the South Coast Air Basin (SCAB) as maintenance for CO and nonattainment for O₃, PM_{2.5}, and PM₁₀. The California Clean Air Act (CCAA) requires the California Air Resources Board (CARB) to designate areas within California as either attainment or non-attainment for each criteria pollutant based on whether the California Ambient Air Quality Standards (CAAQS) have been achieved. Under the CCAA, the Los Angeles County portion of the SCAB is designated as a nonattainment area for O₃, PM₁₀, and PM_{2.5}.

Table 6-1. SCAQMD Daily Operational Emissions Thresholds

Criteria Pollutant	Pounds Per Day
Volatile Organic Compounds (VOC)	55
Nitrogen Oxides (NO _x)	55
Carbon Monoxide (CO)	550
Sulfur Oxides (SO _x)	150
Fine Particulates (PM _{2.5})	55
Particulates (PM ₁₀)	150

Source: SCAQMD, 2010.

As Table 6-1 indicates, the federal standards for CO, O₃, NO₂, and SO₂ were not exceeded from 2006 to 2008. The 24-hour PM₁₀ standard was exceeded twice in 2007 and the 24-hour PM_{2.5} standard was exceeded 6 times in 2006, 12 times in 2007, and 8 times in 2008.

Sensitive Receptors

CARB has identified the following typical groups who are most likely to be affected by air pollution: children under 14, the elderly over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive receptors within 0.25 miles of the maintenance site alternatives are listed below.

Site #14 – Arbor Vitae/Bellanca Alternative

- Residential land uses located approximately 280 feet or further to the north;
- Residential land uses located approximately 350 feet or further to the east;
- Residential land uses located approximately 375 feet or further to the west;
- Bright Star Secondary Charter Academy located approximately 600 feet to the east;
- Animo Leadership Charter High School located approximately 750 feet to the northeast; and
- Residential land uses located approximately 850 feet or further to the south.

Site #15 – Manchester/Aviation Alternative

- Animo Leadership Charter High School located approximately 250 feet to the east;
- Residential land uses located approximately 450 feet or further to the southeast;
- Residential land uses located approximately 750 feet or further to the west; and
- Residential land uses located approximately 1,000 feet or further to the northwest.



Site #17 – Marine/Redondo Beach Alternative

- Lawndale High School located approximately 1,000 feet to the north;
- Residential land uses located approximately 1,200 feet or further to the east; and
- Residential land uses located approximately 1,400 feet or further to the south.

Division 22 Northern Expansion

- Residential land uses located approximately 150 feet or further to the south;
- Residential land uses located approximately 800 feet or further to the north; and
- Residential land uses located approximately 1,000 feet or further to the southwest.

The above sensitive receptors have the greatest potential to be impacted by air emissions. Additional sensitive receptors are located in the surrounding community and may be impacted by air emissions.

6.1.2 Methodology

Operational emissions were based on VMT. Automobile emissions factors were obtained from the CARB’s EMFAC2007 model. EMFAC2007 is the latest emission inventory model that calculates emission inventories and emission rates for motor vehicles operating on roads in California. This model reflects the CARB’s current understanding of how vehicles travel and how much they pollute. The EMFAC2007 model can be used to show how California motor vehicle emissions have changed over time and are projected to change in the future. Construction GHG emissions were estimated using OFFROAD2007 and mobile source GHG emissions were estimated using EMFAC2007. GHG emissions associated with electricity use were provided by Metro for the Division 22 Maintenance Facility and increased by a factor of 1.54 to account for a larger facility.

6.2 CEQA Thresholds

Significance Criteria

SCAQMD Guidance

Based on SCAQMD guidance, a significant impact would result if:

- Daily operational emissions were to exceed SCAQMD operational emissions thresholds for Volatile Organic Compounds (VOC), nitrogen oxides (NO_x), CO, (SO_x), PM_{2.5}, or PM₁₀, as presented in Table 6-1;
- Project-related traffic causes CO concentrations at study intersections to violate the CAAQS for either the one- or eight-hour period. The CAAQS for the one- and eight-hour periods are 20 ppm and 9.0 ppm, respectively;
- The maintenance site alternatives would generate significant emissions of Toxic Air Contaminants (TACs);
- The maintenance site alternatives would create an odor nuisance; and/or

- The maintenance site alternatives would not be consistent with the Air Quality Management Plan (AQMP).

Greenhouse Gas Significance Criteria

CAPCOA completed an assessment of methodologies for determining significance associated with GHG emissions. In the absence of a certified threshold established by the SCAQMD, it has been determined that a 10,000 metric ton per year threshold is appropriate for determining GHG impacts.

The State has mandated a goal of reducing State-wide emissions to 1990 levels by 2020, even though State-wide population and commerce is predicted to grow substantially. To help meet this goal the California Climate Action Team recommended strategies that could be implemented by lead agencies to reduce GHG emissions. The maintenance site alternatives would comply with these strategies which include increasing building energy efficiency and reducing HFC use in air conditioning systems. The maintenance site alternatives would also comply with the Attorney General GHG reduction measures and the CARB Scoping Plan. Metro's Energy and Sustainability Policy would be implemented with the maintenance site alternatives. This Policy includes, at a minimum, constructing the maintenance site alternatives to achieve Leadership in Energy and Environmental Design (LEED) Silver certification as well as conducting energy use audits. The LEED rating system also includes rigorous energy efficiency requirements that can far exceed ASHRAE and Title 24 standards. Specifically, Metro has established the following sustainability goals for the proposed Project:

- Minimum LEED Silver certification
- Building life of 30 to 50 years with potential up to 100 years
- Produce onsite renewable energy with a photovoltaic system through a public-private partnership
- Reduce energy cost by 28 percent as compared to a minimally compliant building
- Utilize stormwater and greywater for bus wash and other non-potable water uses
- 30 percent to 40 percent savings in annual water usage from plumbing fixtures
- Use fly ash and recycled aggregate in concrete in all locations where feasible
- Use Energy Star Cement Plant Manufacturing in procurement process
- 75 percent construction waste recycling
- 10 to 20 percent recycled content materials
- 10 to 20 percent local/regional materials
- 5 percent reused materials
- Provide excellent daylighting and views
- Purchase and use Energy Star labeled equipment
- Track and monitor energy and water usage during occupancy



7.0 NOISE AND VIBRATION

Operational noise sources associated with the maintenance site alternatives include rail movements, exterior cleaning, safety alarms and safety warning device testing, public address systems, general repair activity, parking, and waste disposal. The operation of the maintenance facility is a 24-hour operation. The Federal Transit Administration (FTA) provides guidance for assessing impacts in *Transit Noise and Vibration Impact Assessment* (May 2006).

7.1 Regulatory Framework

Federal

FTA Noise Impact Criteria

FTA has developed standards and criteria for assessing noise impacts related to transit projects. These standards are based on community reactions to noise. The criteria reflect changes in noise exposure using a sliding scale where the higher the level of existing noise, the smaller increase in total noise exposure is allowed. Some land use activities are more sensitive to noise than others, such as parks, churches, and residences, as compared to industrial and commercial uses. Non-sensitive uses do not require noise impact assessment. The FTA Noise Impact Criteria groups sensitive land uses into the following three categories:

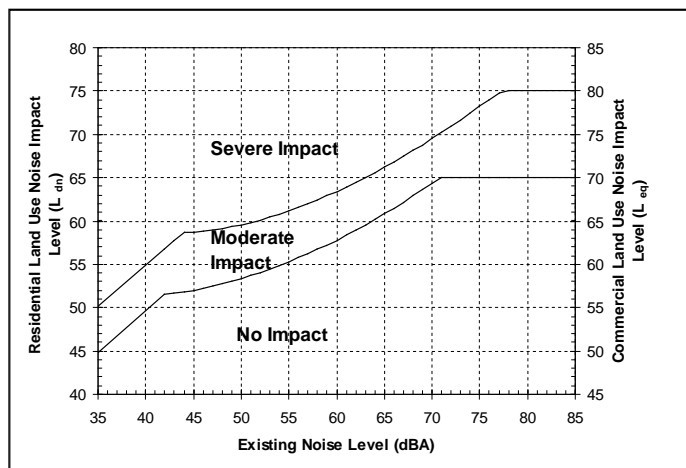
- **Category 1** – Buildings or parks where quiet is an essential element of their purpose
- **Category 2** – Residences and buildings where people normally sleep. This includes residences, hospitals, and hotels, where nighttime sensitivity is assumed to be of utmost importance
- **Category 3** – Institutional land uses with primarily daytime use that depends on quiet as an important part of operations, including schools, libraries, and churches

Day/night noise level (L_{dn}) is used to characterize noise exposure for residential areas (Category 2), and a maximum 1-hour Equivalent noise level (L_{eq}) (during the period that the facility is in use) is utilized for other noise-sensitive land uses such as school buildings (Categories 1 and 3).

The following two impact levels are included in the FTA criteria, as shown in Figure 7-1.

- **Moderate Impact** – In this range, other project-

Figure 7-1. Noise Impact Criteria for Transit Projects



Source: Transit Noise and Vibration Impact Assessment, FTA, May 2006

specific factors must be considered to determine the magnitude of the impact and the need for mitigation. Other factors may include the predicted increase over existing noise levels, the type and number of noise-sensitive land uses affected, existing outdoor-indoor sound insulation, and the cost effectiveness of mitigating noise to more acceptable levels.

- Severe Impact – Noise mitigation will be specified for severe impact areas unless there is no practical method of mitigating the noise.

The noise impact criteria for transit operations are summarized in Table 7-1. The first column shows the existing noise exposure and the remaining columns show the additional noise exposure caused by a rail project that would result in the two impact levels. As the existing noise exposure increases, the amount of allowable increase in noise exposure from the Project alternatives decreases. The future noise exposure would be the combination of the existing noise exposure and the additional noise exposure caused by a rail project.

Table 7-1. FTA Noise Impact Criteria

Existing Noise Exposure L_{eq} or L_{dn}^1	Noise Exposure Impact Thresholds for Transit Projects – L_{dn} or L_{eq}^1 (all noise levels in dBA)			
	Category 1 or 2 Sites		Category 3 Sites	
	Moderate Impact	Severe Impact	Moderate Impact	Severe Impact
<43	Ambient+10	Ambient+15	Ambient+15	Ambient+20
43-44	52	58	57	63
45	52	58	57	63
46-47	53	59	58	64
48	53	59	58	64
49-50	54	59	59	64
51	54	60	59	65
52-53	55	60	60	65
54	55	61	60	66
55	56	61	61	66
56	56	62	61	67
57-58	57	62	62	67
59-60	58	63	63	68
61-62	59	64	64	69
63	60	65	65	70
64	61	65	66	70
65	61	66	66	71
66	62	67	67	72
67	63	67	68	72
68	63	68	68	73
69	64	69	69	74
70	65	69	70	74
71	66	70	71	75
72-73	66	71	71	76
74	66	72	71	77



Table 7-1. FTA Noise Impact Criteria (continued)

Existing Noise Exposure L_{eq} or L_{dn} ¹	Noise Exposure Impact Thresholds for Transit Projects – L_{dn} or L_{eq} ¹ (all noise levels in dBA)			
	Category 1 or 2 Sites		Category 3 Sites	
	Moderate Impact	Severe Impact	Moderate Impact	Severe Impact
75	66	73	71	78
76-77	66	74	71	79
>77	66	75	71	80

Source: Transit Noise and Vibration Impact Assessment, FTA, May 2006.

Note: ¹ L_{dn} is used for land uses where nighttime sensitivity is a factor. Daytime L_{eq} is used for land use involving only daytime activities.

FTA Vibration Impact Criteria

FTA has developed impact criteria for acceptable levels of ground-borne noise and vibration. Table 7-2 summarizes the FTA impact criteria for ground-borne vibration. These criteria are based on previous standards, criteria, and design goals, including noise and vibration guidelines from American National Standards Institute (ANSI) S3.29 (Acoustical Society of America, 1983) and the American Public Transit Association (American Public Transportation Association [APTA], 1981). Some buildings (e.g., concert halls, television and recording studios, and theaters) can be very sensitive to vibration, but do not fit into any of the three FTA sensitive land use categories previously described. Because of these buildings' sensitivity to vibration, they usually warrant special attention during the environmental review of a rail project. Table 7-3 lists criteria for acceptable levels of ground-borne vibration for various types of special buildings.

Table 7-2. FTA Ground-Borne Vibration Impact Criteria

Land Use Category	Ground-Borne Vibration Impact Levels (VdB re 1 Micro-inch/sec)		
	Frequent Events ¹	Occasional Events ²	Infrequent Events ³
Category 1: Buildings where vibration would interfere with interior operations	65 VdB ⁴	65 VdB ⁴	65 VdB ⁴
Category 2: Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use	75 VdB	78 VdB	83 VdB

Source: Transit Noise and Vibration Impact Assessment (FTA, May 2006)

Notes: ¹ "Frequent Events" are defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category.

² "Occasional Events" are defined as between 30 and 70 vibration events of the same source per day. Most commuter rail lines have this many events.

³ "Infrequent Events" are defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.

⁴ This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.

Table 7-3. FTA Ground-Borne Vibration Impact Criteria for Special Buildings

Type of Building or Room	Ground-Borne Vibration Impact Levels (VdB re 11 micro-inch/sec)	
	Frequent Events ¹	Occasional or Infrequent Events ²
Concert Halls	65 VdB	65 VdB
Television Studios	65 VdB	65 VdB
Recording Studios	65 VdB	65 VdB
Auditorium	72 VdB	80 VdB
Theaters	72 VdB	80 VdB

Source: Transit Noise and Vibration Impact Assessment (FTA, May 2006)

Notes: ¹ “Frequent Events” are defined as more than 70 vibration events per day.

² “Infrequent Events” are defined as fewer than 70 vibration events per day and includes most rail systems.

General Vibration Setting

Ambient vibration levels were not measured as part of this study. FTA Vibration Impact Criteria were used to identify locations where potential impacts may occur based on existing land use activities.

The FTA screening guidance is designed to identify locations where a project may cause a vibration impact. The screening distances are 150 feet for Category 2 land uses such as residences and buildings where people sleep and 100 feet for Category 3 land use such as institutional land uses with primarily daytime and evening use. There are no Category 1 land uses near the project sites (e.g., recording studios). The only land use for any of the proposed project sites that requires further analysis is the multi-family residential complex adjacent and to the south of the Division 22 Maintenance Facility.

7.2 CEQA Thresholds

Significance Criteria

The maintenance site alternatives occur within four different jurisdictions. Because there is no threshold common to all of these jurisdictions, a widely-used, acceptable industry standard within the southern California region was used as a CEQA significance threshold. Based on this threshold, a significant operational noise impact would result if:

- The maintenance site alternatives cause the ambient noise level measured at the property line of the affected uses to increase by 3 decibels CNEL to or within the “normally unacceptable” or “clearly unacceptable” categories, as show in State Land Use Noise Compatibility Guidelines, or any 5-dBA or more increase in noise level.

The nearest sensitive receptors to the Project sites are residential and educational land uses. The “normally unacceptable” category begins at 70 dBA for both of these land uses. A significant impact would result if noise levels increase by at least 3 dBA from less than 70 dBA to greater than 70 dBA, or any 5-dBA or more increase in noise level.

The Cities of Los Angeles, Inglewood, Hawthorne, and Redondo Beach have not developed specific CEQA vibration significance thresholds for transportation projects.



8.0 ECOSYSTEMS/BIOLOGICAL RESOURCES

Information in this section is based primarily on the following sources:

- A search of the California Natural Diversity Database (CNDDDB) was conducted to identify sensitive plants and animals with the potential to occur in the study area. The proposed alignments are located within the Inglewood and Venice 7.5-minute quadrangles, and both quadrangles were included in the search.
- A visual review of parks and other public open spaces within 0.25 miles of the maintenance site alternatives.

8.1 Regulatory Framework

Biological resources within 0.25 miles of either side of the proposed alignments, stations, and maintenance facility sites are protected the following federal, state, and local laws and policies.

8.1.1 Federal

Endangered Species Act. The Endangered Species Act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act provides that all migratory birds and their parts (including eggs, nests and feathers) are fully protected.

Wetlands Protection, Executive Order 11990. Executive Order 11990 requires federal agencies to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided.

Invasive Species, Executive Order 13112. Executive Order 13112 requires federal agencies to address invasive species concerns and to not authorize or carry out new actions that would cause or promote the introduction of invasive species.

Coastal Zone Management Act. The Coastal Zone Management Act encourages coastal states to develop and implement coastal zone management programs.

Wild and Scenic Rivers Act. Under the Wild and Scenic Rivers Act no U.S. department or agency may assist by loan, grant, license or otherwise in the construction of a water resources project that would have a direct and adverse effect on the values for which a river is designated.

8.1.2 State

California Endangered Species Act. Projects that result in a take of a State-only listed species require a take permit under the California Endangered Species Act. The federal and/or State acts also lend protection to species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or den locations, communal roosts, and other essential habitat.

California Fish and Game Code Sections 3500 - 3705, Migratory Bird Protection.

Sections 3500 through 3705 of the California Fish and Game Code regulate the taking of migratory birds and their nests.

8.1.3 Local

Los Angeles County General Plan. The *Los Angeles County General Plan* identifies Significant Ecological Areas (SEAs) containing biological resources and sets forth the goal of conserving these areas.

City of Los Angeles Native Tree Protection Ordinance. The City of Los Angeles passed a Native Tree Protection Ordinance (Ordinance No. 177,404), in an effort to slow the decline of native tree habitat.

City of Inglewood General Plan. The *City of Inglewood General Plan* includes a chapter identifying the existing environmental resources in the City of Inglewood.

8.2 CEQA Thresholds

Appendix G of the *CEQA Guidelines* addresses impacts to biological resources under Section IV. The *CEQA Guidelines* state that a project would normally have a significant impact on biological resources if it could:

- Result in the loss of individuals, or the reduction of existing habitat, of a state or federal listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or federally listed critical habitat;
- Result in the loss of individuals or the reduction of existing habitat of a locally designated species or a reduction in a locally designated natural habitat or plant community;
- Interfere with wildlife movement/migration corridors that may diminish the chances for long-term survival of a sensitive species;
- Result in the alteration of an existing wetland habitat; and/or
- Interfere with habitat such that normal species behaviors are disturbed (e.g., from the introduction of noise, light) to a degree that may diminish the chances for long-term survival of a sensitive species.

Because no wildlife corridors or wetlands exist within the maintenance site alternatives, the thresholds described in the third and fourth bullets above are not applicable. However, because species of concern have the potential to occur within 0.25 miles of the maintenance site alternatives, potential impacts to these biological resources were evaluated for each of the maintenance site alternatives.



9.0 GEOTECHNICAL/SUBSURFACE/SEISMIC/HAZARDOUS MATERIALS

9.1 Regulatory Framework

Information on geology, soils, seismicity, and hazardous materials has been identified as a result of a review of available published and unpublished literature from applicable federal, State, and local agencies. Presented below are the resources used which guide the regulatory framework applicable to the jurisdictions located within the study area.

Executive Order 11988 directs all federal agencies to avoid to the extent possible long- and short-term adverse impacts associated with the modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. The Federal Emergency Management Agency (FEMA) is mandated by the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 to evaluate flood hazards and provide Flood Insurance Rate Maps (FIRMs) for local and regional planners to promote sound land use and floodplain development.

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 defines the term hazardous substance as any substance, material, or waste, the exposure to which results in, or may result in, adverse effects on health or safety.

The Resources Conservation and Recovery Act (RCRA) is the principal federal law that regulates the generation, management, and transportation of hazardous materials and hazardous wastes. Hazardous waste management includes the treatment, storage, or disposal of hazardous waste.

9.1.1 State

Geology, Soils, and Seismicity Resources

Principal state guidance relating to geologic hazards is contained in the Alquist-Priolo Act (Public Resource Code [PRC], 2621 et seq.) and the Seismic Hazards Mapping Act of 1990 (PRC 2690-2699.6). The Alquist-Priolo Act prohibits the location of most types of structures for human occupancy across active traces of faults in earthquake fault zones, shown on maps prepared by the state geologist, and regulates construction in the corridors along active faults (earthquake fault zones). The Seismic Hazards Mapping Act of 1990 focuses on hazards related to strong ground shaking, liquefaction, and seismically-induced landslides. Under its provisions, the State is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards. The maps are to be used by cities and counties in preparing their general plans and adopting land use policies to reduce and mitigate potential hazards to public health and safety.

Pursuant to the Surface Mining and Reclamation Act (PRC 2710 et seq.), the State Mining and Geology Board identifies, in adopted regulations, areas of regional significance that are known to contain mineral deposits judged to be important in meeting the future needs of the area (PRC 2426 and 2790; Title 14 PRC 3350, et seq.). The State Mining and Geology Board also adopts State policy for the reclamation of

mined lands and certifies local ordinances for the approval of reclamation plans as being consistent with State policies (PRC 2755-2764, 2774 et seq.).

The California Health and Safety Code (Sections 25316 and 25317) identifies the substances, materials, and wastes that require hazardous substance removal, including petroleum and petroleum by-products, waste oil, crude oil, and natural gas. Other pertinent regulations include the Resource Conservation and Recovery Act (RCRA), the Clean Water Act (CWA), and any Department of Transportation standards.

9.2 CEQA Thresholds

The 2008 CEQA Guidelines use the following questions related to hazards and hazardous materials, and geology and soils to determine whether a significant impact would occur.

Significance Criteria

Hazards and Hazardous Materials

Would the project:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school?
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Geology and Soils

Would the project:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:



- ▶ Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault
- ▶ Strong seismic ground shaking
- ▶ Seismic-related ground failure, including liquefaction?
- ▶ Landslides
- Result in substantial soil erosion or the loss of topsoil
- Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse
- Be located on expansive soil, creating substantial risks to life or property
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater

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10.0 WATER RESOURCES

10.1 Regulatory Framework

10.1.1 Federal

Clean Water Act of 1977 (33 U.S. Code 1251-1376). The CWA is the nation’s primary mechanism for protecting and improving water quality. The Act makes the states and the USEPA jointly responsible for identifying and regulating both point and non-point sources of pollution.

Federal Emergency Management Agency – Executive Order 11988. Executive Order 11988 directs all federal agencies to avoid, to the extent possible, long-and short-term adverse impacts associated with the modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.

Safe Drinking Water Act. Under the Drinking Water Act, the Environmental Protection Agency sets standards for drinking water quality and oversees the states, localities and water suppliers who implement those standards. The Safe Drinking Water Act authorizes standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water.

United States Army Corps of Engineers – Section 404. A section 404 permit is required by the US Army Corps of Engineers (USACE) when a project impacts waters of the U.S.

Fish and Wildlife Coordination Act (16 USC 661-666 or 16 USC 662 S.2). The USFWS Coordination Act requires consultation with the USFWS and the state agency responsible for wildlife resources whenever a stream or other body of water is proposed to be modified for any purpose whatsoever.

Endangered Species Act of 1970 (16 USC 1531-1543). The Endangered Species Act mandates the preservation of endangered species and their habitats.

10.1.2 State and Regional

Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act (1969) established the responsibilities and authorities of the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs).

California Fish and Game Code - Section 1602. Section 1602 of the California Fish and Game Code (CDFG) requires agencies to notify the CDFG of any project that will divert, obstruct, or change the natural flow or bed, channel, or bank of any river, stream, or lake.

10.1.3 Local

Los Angeles Regional Water Quality Control Board. Discharge of construction dewatering activities is regulated under Los Angeles RWQCB Order No. R4-2003-0108

NPDES No. CAG994004 which establishes regulations on the discharge of groundwater from construction and project dewatering.

County of Los Angeles. Order No. 01-182 NPDES Permit No. CAS004001 establishes the waste discharge requirements for municipal storm water and urban runoff discharges within the County of Los Angeles and incorporated cities to ensure water quality is not degraded.

City of Los Angeles. The City of Los Angeles Department of Public Works, Watershed Protection Division is responsible for the development and implementation of storm water pollution abatement projects within the City. The Watershed Protection Division requires developers to develop a SUSMP or Site Specific Mitigation Plan. Regulations are enforced through permitting and site inspection.

10.2 CEQA Thresholds

According to the CEQA, the maintenance site alternatives would result in a significant impact to water resources if it would:

- Conflict with applicable legal requirements related to hydrology or water quality, including a violation of state water quality standards or waste discharge requirements;
- Substantially degrade groundwater quality or interfere with groundwater recharge, or deplete groundwater resources in a manner that would cause water-related hazards, such as subsidence;
- Alter the existing drainage pattern of the site or area in a manner that would cause substantial flooding, erosion, or siltation;
- Create or contribute to runoff that would exceed the drainage and flood control capacity of existing or planned storm water drainage systems; and/or
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows, or otherwise expose people and/or property to water-related hazards, such as flooding.



11.0 ENERGY

11.1 Regulatory Framework

The California Energy Commission is the State's primary energy policy and planning agency. Created by the legislature in 1974, the commission has five major responsibilities: (1) forecasting future energy needs and keeping historical energy data, (2) licensing thermal power plants 50 megawatts or larger, (3) promoting energy efficiency through appliance and building standards, (4) developing energy technologies and supporting renewable energy, and (5) planning for and directing the State's response to energy emergency.

The commission published the *2007 Integrated Energy Policy Report* (IEPR) in October 2007. The IEPR was prepared in response to SB 1389, Chapter 568, Statutes of 2002, which requires that the commission prepare a biennial integrated energy policy report. This report contains an integrated assessment of major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety. The IEPR fulfills the requirement of SB 1389.

The Southern California Association of Governments (SCAG) 2008 Regional Transportation Plan (RTP) describes energy production and consumption throughout the South Coast Air Basin (SCAB) and provides vehicle miles traveled (VMT) by county. SCAB is a subregion of the South Coast Air Quality Management District (SCAQMD), the agency principally responsible for comprehensive air pollution control in the State, and covers an area of 6,745 square miles. SCAB includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. VMT is an indicator of the extent to which vehicles are used, providing a valuable factor in calculating the amount of energy consumed by transportation.

Metro has adopted an Energy and Sustainability Policy to control energy consumption and embrace energy efficiency, energy conservation, and sustainability to avoid unnecessary expenditure; help in protecting the environment; improve cost effectiveness, productivity, and working conditions; and prolong the useful life of fossil fuels by using resources more efficiently. Metro policy requires designing and building structures that are greater than 10,000 square feet in area to meet or exceed the Leadership in Energy and Environmental Design (LEED) Silver rating.

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12.0 HISTORIC, ARCHAEOLOGICAL, AND PALEONTOLOGICAL RESOURCES

12.1 Regulatory Framework

The federal and state regulatory frameworks related to cultural resources are outlined below.

12.1.1 Federal

National Environmental Policy Act. The NEPA of 1969, as amended (42 United States Code [USC] 4321-4347) establishes the federal policy of protecting important historic, cultural, and natural aspects of our national heritage during federal project planning.

Section 106 of the National Historic Preservation Act. NEPA requires that federal agencies integrate the NEPA process with other environmental laws. Section 106 of the National Historic Preservation Act as amended (Section 106, 16 USC 470f) requires that impacts on significant cultural resources, hereafter called historic properties, be taken into consideration in any federal undertaking.

Section 4(f) of the United States Department of Transportation Act of 1966. Section 4.12 Parklands and Community Facilities presents the detailed regulatory framework for Section 4(f) of the Department of Transportation Act. Section 4(f) is also applicable to the use or constructive use of historic properties (i.e., properties listed on or eligible for listing on the National Register of Historic Places (NRHP)).

Antiquities Act. The Antiquities Act of 1906 (16 USC 431-433) was enacted with the primary goal of protecting cultural resources in the United States. As such, it prohibits appropriation, excavation, injury, or destruction of “any historic or prehistoric ruin or monument, or any object of antiquity” located on lands owned or controlled by the federal government, without permission of the secretary of the federal department with jurisdiction.

The Archaeological Resources Protection Act. The Archaeological Resources Protection Act (ARPA) was enacted in 1979 and amended in 1988 and states that archaeological resources on public or Indian lands are an accessible and irreplaceable part of the nation’s heritage.

The American Indian Religious Freedom Act. The American Indian Religious Freedom Act (AIRFA) proclaims that the United States Government will respect and protect the rights of Indian tribes to the free exercise of their traditional religions; the courts have interpreted this as requiring agencies to consider the effects of their actions on traditional religious practices.

Native American Graves Protection and Repatriation Act. The Native American Graves Protection and Repatriation Act (1990) (104 Statutes 3048-3058) (NAGRPA) will also apply to this Project if human remains of Native American origin are discovered on federal land during implementation of the Project.

12.1.2 State

California Environmental Quality Act. According to the CEQA (PRC, Section 21084.1), historical resources include any resource listed, or determined to be eligible for listing, in the California Register of Historical Resources (CR). Properties listed in or determined eligible for listing in the NRHP, such as those identified in the Section 106 process, are automatically listed in the CR.

California Public Resource Code 5097. If human remains of Native American origin are discovered during project construction not on federal land, it will be necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (NAHC) (PRC 5097).

Antiquities Act of 1906. Under this act, paleontological remains are accepted as non-renewable resources significant to our culture.

CEQA13 PRC, 21000 et seq. Requires public agencies and private interests to identify the potential adverse impacts and/or environmental consequences of their proposed project(s) to any object or site important to the scientific annals of California (Division 1, Public Resources Code: 5020.1[b]).

State CEQA Guidelines Sec. 15064.5(a)(3)

This section of CEQA provides protection for historical (or paleontological) resources by requiring that they be identified and mitigated as historical resources under CEQA. The State CEQA Guidelines define historical resources broadly to include any object, site, area, or place that a lead agency determines to be historically significant.

12.2 Compliance Methodology

12.2.1 Federal

Section 106 regulations prescribe the following steps, which are described in this and subsequent sections:

- Determine and document the Area of Potential Effects;
- Identify consulting parties;
- Identify potential historic properties;
- Evaluate significance of potential historic properties by applying NRHP eligibility criteria in consultation with SHPO or Indian tribes, as appropriate;
- Assess effects on historic properties by applying ACHP criteria of adverse effect;
- Develop avoidance and mitigation measures if necessary; and
- Document the process.

**The Area of Potential Effects**

The Project APE was delineated to ensure inclusion of significant cultural resources that may be directly or indirectly affected by the Project, and are listed in or eligible for listing in the NRHP. The proposed direct APE for the four maintenance site alternatives includes areas of direct ground disturbance, as well as areas with permanent site improvements and areas for staging and temporary construction activities.

Identify Consulting and Interested Parties

The Section 106 regulations require that a federal agency evaluate all properties within the APE and identify historic properties by gathering information from consulting parties, applying the NRHP Criteria, and seeking concurrence from the SHPO or Indian tribe, as appropriate. During the preparation of the Crenshaw/LAX LRT Project Draft EIS/EIR, FTA identified 23 consulting parties for historic properties within the APE. FTA sent a letter to the California SHPO on May 22, 2008, initiating Section 106 consultation. In a meeting on July 23, 2008, Metro consulted with the SHPO to discuss the entire Crenshaw/LAX LRT Project, which includes the selection of a maintenance facility to determine the Section 106 identification effort.

Identifying Historic Properties

For the maintenance site alternatives, preliminary research and surveys have been undertaken to identify previously recorded historic properties and potentially eligible historic properties. Preliminary studies have been conducted in accordance with the Secretary of Interior's Standards and Guidelines for Identification of Historic Properties (48 *Federal Register* [FR] 44716), using personnel who meet the Secretary of Interior's Professional Standards (48 FR 22716) in the fields of pre-historic archaeology, historic archaeology, architectural history, and history.

12.2.2 Native American Consultation

The NAHC was contacted by SWCA regarding the entire Crenshaw/LAX LRT Project on June 15, 2010. The NAHC responded on June 28, 2010 and stated that the Sacred Lands File search did indicate the presence of sacred lands within one mile of the Crenshaw/LAX LRT Project area. The NAHC also provided a list of Native American groups and individuals who might have knowledge of cultural resources in the Project area. Letters describing the Crenshaw/LAX LRT Project were sent on July 7, 2010 to the nine Native American contacts provided by the NAHC.

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13.0 PARKLANDS AND COMMUNITY FACILITIES

13.1 Regulatory Framework

A brief discussion of the regulatory framework used to guide development related to parklands and community facilities in each of the study area jurisdictions is provided below.

13.1.1 Federal

USDOT Act of 1966. Section 4(f) of the USDOT Act of 1966 (recodified as amended at 49 USC Section 303) affords special protection to public recreational lands and facilities, including local parks and school facilities, that are open and available to the general public for recreational purposes, significant cultural resources, and natural wildlife refuges.

13.1.2 Local

Parklands, public services (i.e., police and fire protection), libraries, and other community facilities (i.e., educational facilities) are generally regulated by local agencies. The maintenance site alternatives are regulated by the policies and agencies of the Cities of Los Angeles, Hawthorne, Inglewood, and Redondo Beach. Public schools within 0.25 miles of either side of the maintenance site alternatives, are within various school districts (i.e., the Los Angeles Unified School District, the Hawthorne School District, the Inglewood School District, or the Redondo Beach School District), which have their own policies and procedures. Specific policies that pertain to other community facilities are regulated through land use and zoning (refer to Section 3.2, Land Use and Development, of this EA/RDEIR).

City of Los Angeles

Recreational planning is accomplished through various land use plans, including the City of Los Angeles General Plan, and various community plans, specific plans, and recreational use plans, which are developed by the City of Los Angeles Department of Recreation and Parks. While there are no specific local or regional plans that address police services, the City-wide general plan framework and specific community plan documents do contain policies and objectives that deal with ensuring adequate police service infrastructure. The *City of Los Angeles General Plan*, the City of Los Angeles Fire Code (part of the city's municipal code), and the General Plan Safety Element contain the goals, objectives, and policies related to fire prevention and suppression services.

City of Hawthorne

Fire safety policies in the City of Hawthorne are governed by the Uniform Fire Code, the Hawthorne Municipal Code, which includes the City's Fire Prevention Code, and the Los Angeles County Fire Code.

City of Inglewood

Parks and Recreation: The *1995 City of Inglewood General Plan* City guides the City of Inglewood Parks, Recreation, and Community Services Department, police services, and emergency response planning. Fire safety policies in the City of Inglewood are governed by the UFC and the Inglewood Municipal Code, which includes the Los Angeles Fire Code.

City of Redondo Beach

Fire safety policies in the City of Redondo Beach are governed by the Uniform Fire Code and the Redondo Beach Municipal Code, which includes the City's Fire Prevention Code.

Los Angeles County

The Los Angeles County General Plan Public Services and Facilities Element contain policies and objectives that deal with ensuring adequate fire protection and paramedic services and infrastructure. Generally, these include maintaining or establishing service ratios and emergency response plans.

Educational Facilities

Los Angeles Unified School District. The Los Angeles Unified School District (LAUSD) provides public education for kindergarten through grade 12 (K-12) for communities throughout Los Angeles. When the LAUSD proposes a new school, they consider a variety of potential safety factors, such as geological hazards and proximity to airports, high voltage power transmission lines, hazardous land uses (including uses that could pose a threat to the health and safety of students and staff, including, but not limited to, facilities within 0.25 miles of the proposed school sites that might reasonably be anticipated to emit hazardous air emissions), railroad tracks, and major roadways (California Office of Public School Construction, 2006).

Hawthorne School District. The Hawthorne School District (HSD) provides services to the City of Hawthorne. The HSD Facilities Plan guides the construction of new, expansion of existing, and/or modernization of existing facilities within the HSD jurisdiction.

Inglewood Unified School District. The Inglewood Unified School District (IUSD) provides services to the City of Inglewood. The IUSD Facilities Master Plan describes the district's anticipated school facilities needs and priorities, funding sources, and timelines for building. Objectives include the consideration of locating schools within the community, with adequate sound control, and safety.

Redondo Beach Unified School District. The Redondo Beach Unified School District (RBUSD) provides services to the City of Redondo Beach. The RBUSD Facilities Plan guides the construction of new, expansion of existing, and/or modernization of existing facilities within the RUSD jurisdiction.



13.2 CEQA Thresholds

The *CEQA Thresholds* state that a project would normally have a significant impact on public facilities if it could:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection;
- For a project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working within the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands;
- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection;
- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools;
- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities.

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14.0 ECONOMIC AND FISCAL IMPACTS

14.1 Regulatory Framework

Both federal and State regulations and guidance were used in the preparation of this analysis on economic and fiscal impacts.

14.1.1 Federal

The primary federal guidance is provided by the FHWA's Technical Advisory T-6640.8A, "Guidance for Preparing and Processing Environmental and Section 4(f) Documents" dated October 30, 1987. Section 3.14 of this document addresses economic impacts. The guidance directs preparers of EIS documents to discuss foreseeable economic impacts. Potential impacts to be considered include the following topics:

- (1) The economic impacts on the regional and/or local economy such as the effects of the maintenance site alternatives on development, tax revenues and public expenditures, employment opportunities, accessibility, and retail sales;
- (2) The impacts on the economic vitality of existing highway-related businesses and resultant impacts on the local economy; and
- (3) Impacts of the proposed action on established business districts.

14.1.2 State

Pursuant to the CEQA guidelines, economic or social effects of a project that are not related to physical changes in the environment shall not be treated as significant effects on the environment, but may be used to determine the significance of physical changes caused by the project (Section 15131(b)).

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15.0 SAFETY AND SECURITY

15.1 Regulatory Framework

There are both federal and State regulatory requirements that dictate the safety aspects of various facilities and systems. Federal requirements include those published by the Federal Railroad Administration (FRA) and FTA. State requirements include those contained in State laws administered by the California Public Utilities Commission (CPUC). Metro has developed safety criteria and Board adopted policies that will be utilized in designing the elements for the Project. Industry guidelines will also be used in developing the system design features. Local fire and police jurisdictions, general plan policies and ordinances are additional regulatory frameworks related to transit safety and security. The maintenance site alternatives are within several jurisdictions and agencies that have safety and security responsibilities, including Metro, and the Cities of Los Angeles and Inglewood.

15.2 CEQA Thresholds

According to CEQA, project effects on safety and security would be considered significant if they:

- Cause or create the potential for substantial adverse safety conditions or substantially limit the delivery of community safety services, such as police, fire, or emergency services; and/or
- Cause or create the potential for substantial adverse security conditions, including: incidents, offenses, and crimes.

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16.0 CONSTRUCTION IMPACTS

16.1 Regulatory Framework

Regulations identified in Sections 1 through 15 would also apply to the evaluation of construction effects for the maintenance site alternatives.

16.1.1 Air Quality

Construction activity has the potential to create air quality impacts through the use of heavy-duty equipment and through vehicle trips generated by construction workers. Fugitive dust emissions would primarily result from grading activities. NO_x emissions would primarily result from the use of construction equipment and haul trucks. During the finishing phase, the application of architectural coatings (e.g., paints) and other building materials would release VOC. The assessment of construction air quality impacts considers each of these potential sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

This air quality analysis is consistent with the methods described in the SCAQMD CEQA Air Quality Handbook (1993 edition), as well as the updates to the CEQA Air Quality Handbook, as provided on the SCAQMD website. Heavy-duty truck and worker vehicle emission rates were obtained from the EMFAC2007 model. Equipment emission factors were obtained from the OFFROAD2007 model. Fugitive dust and architectural coating emission rates were obtained from the URBEMIS2007 model. The localized construction analysis followed guidelines published by the SCAQMD in the Localized Significance Methodology for CEQA Evaluations (SCAQMD Localized Significance Threshold (LST) Guidance Document). Localized emissions were modeled using the USEPA AERMOD dispersion model.

It was assumed that most intense day of construction activity would be similar for Sites #14, #15, and #17. Key air quality construction assumptions included:

- 8 pieces of heavy-duty construction equipment operating simultaneously for ten hours per day;
- 75 truck trips per day with a round trip distance of 20 miles;
- 30 worker vehicle trips per day with a round trip distance of 26.6 miles;
- 10 acres of land disturbed (e.g., graded) per day.

The Division 22 Northern Expansion is a smaller site and construction activity would be less intense than at the other alternatives. Key air quality construction assumptions included:

- 8 pieces of heavy-duty construction equipment operating simultaneously for ten hours per day;
- 35 truck trips per day with a round trip distance of 20 miles;

- 30 worker vehicle trips per day with a round trip distance of 26.6 miles;
- 3.5 acres of land disturbed (e.g., graded) per day.

It is mandatory for all construction projects in the Basin to comply with SCAQMD Rule 403 for Fugitive Dust. Specific Rule 403 control requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the Project site, and maintaining effective cover over exposed areas. Compliance with Rule 403 would reduce $PM_{2.5}$ and PM_{10} emissions associated with construction activities by approximately 61 percent.

According to the Council on Environmental Quality regulations (40 CFR §§ 1500-1508), the determination of a significant impact is a function of both context and intensity. Context means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Both short- and long-term effects are relevant. Intensity refers to the severity of impact. To determine significance, the severity of the impact must be examined in terms of the type, quality and sensitivity of the resource involved; the location of the maintenance site alternatives; the duration of the effect (short- or long-term) and other consideration of context. Significance of the impact will vary with the setting of the proposed action and the surrounding area. Construction impacts are assessed by comparing localized concentrations of project-related pollutants to federal standards. An adverse impact would also occur if the maintenance site alternatives would result in substantial amounts of toxic air contaminant or odors.

16.1.2 Noise and Vibration

Based on the FTA guidance, construction noise was assessed by estimating the combined noise level in one hour from the two noisiest pieces of equipment, assuming they both operate at the same time. It was assumed that the two noisiest pieces of equipment to be operated simultaneously would be a dozer and a grader, both generating a noise level of 85 dBA at 50 feet. They would combine to generate a noise level of 88 dBA at 50 feet. This analysis assumed that the maintenance site alternatives would not require pile driving. The noise level during the construction period at each receptor location was calculated by (1) making a distance adjustment to the construction source sound level and (2) logarithmically adding the adjusted construction noise source level to the ambient noise level. Vibration levels are also provided in the guidance document, and were estimated using a similar methodology.

Construction noise and vibration are direct impacts associated with construction equipment that are caused by the maintenance site alternatives and occur at the Project site. Construction activity would not result in indirect noise and vibration impacts that would occur later in time or in another region.



The FTA guidance provides daytime and nighttime construction noise criteria. This analysis assumed that all construction activity would occur during the daytime. An adverse noise impact would result if construction noise exceeds:

- 90 dBA one-hour L_{eq} at residential land uses; or
- 100 dBA one-hour L_{eq} at commercial or industrial land uses.

The FTA guidance also provides construction vibration criteria. An adverse vibration impact would result if construction vibration exceeds:

- 0.3 inches per second PPV.

16.2 CEQA Thresholds

The CEQA Guidelines implicitly acknowledge that construction-related changes may be the source of significant impacts to the physical environment even though these effects may be short-term in duration. The preceding discussion has addressed all topic areas of environmental effects as required by CEQA except for air quality and noise, which use separate significance thresholds under CEQA than under NEPA. Typically significant construction effects are identified in CEQA as changes to the physical environment that are particularly disruptive or that have specific health and safety considerations. The construction effects identified above by in large require the development and implementation of a comprehensive array of construction management and abatement measures as described previously under the Mitigation Measures heading. Those environmental changes requiring mitigation would be considered significant for purposes of CEQA and include:

- Air Quality
- Noise and Vibration

16.2.1 Air Quality

16.2.1.1 Significance Criteria

Based on SCAQMD guidance, the maintenance site alternatives would have a significant impact if:

- Regional construction emissions were to exceed SCAQMD emissions thresholds for VOC, NO_x , CO, SO_x , $PM_{2.5}$, or PM_{10} , as presented in Table 16-1;
- Localized concentrations of CO exceed the one-hour standard of 20 ppm or the eight-hour standard of 9.0 ppm;
- Localized concentrations of NO_2 exceed the one-hour standard of 0.18 ppm;
- Localized concentrations of $PM_{2.5}$ or PM_{10} exceed 10.4 ug/m^3 ;

Table 16-1. SCAQMD Daily Construction Emissions Thresholds

Criteria Pollutant	Pounds Per Day
Volatile Organic Compounds (VOC)	75
Nitrogen Oxides (NO _x)	100
Carbon Monoxide (CO)	550
Sulfur Oxides (SO _x)	150
Fine Particulates (PM _{2.5})	55
Particulates (PM ₁₀)	150

Source: SCAQMD, 2010

- The maintenance site alternatives would generate significant emissions of TACs; and/or
- The maintenance site alternatives would create an odor nuisance.

16.2.2 Noise and Vibration

The noise level during the construction period at each receptor location was calculated by (1) making a distance adjustment to the construction source sound level and (2) logarithmically adding the adjusted construction noise source level to the ambient noise level. Vibration levels are also provided in the guidance document, and were estimated using a similar methodology.

16.2.2.1 Significance Criteria

The maintenance site alternatives occur within four different jurisdictions. Because there is no threshold common to all of these jurisdictions, a widely-used, acceptable industry standard within the southern California region was used as a CEQA significance threshold. Based on this threshold, a significant construction noise impact would result if:

- The maintenance site alternatives cause the ambient noise level measured at the property line of the affected uses to increase by 3 decibels CNEL to or within the “normally unacceptable” or “clearly unacceptable” categories, as show in State Land Use Noise Compatibility Guidelines, or any 5-dBA or more increase in noise level.

The Cities of Los Angeles, Inglewood, Hawthorne, and Redondo Beach have not developed specific CEQA vibration significance thresholds for transportation projects.



17.0 GROWTH-INDUCING IMPACTS

17.1 Regulatory Framework

Federal. Implementation of the NEPA requires agencies implementing federal activities and programs to examine the indirect consequences, or secondary impacts, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future (40 CFR 1508.8). Secondary impacts may include changes in land use, economic vitality, and population density. These are all elements of growth.

State. CEQA guidelines, Section 15126.2(d), require that environmental documents “discuss the ways in which the proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.” Growth inducing impacts also include removing obstacles to growth and can include changes in the amount and distribution of growth.

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18.0 CUMULATIVE IMPACTS

“Cumulative impacts” refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects, whereas the cumulative impact is the change in the environment from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time.

An adequate discussion of significant cumulative impacts involves analyzing either (1) “a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency”, or (2) “a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.”

This cumulative impact analysis relies on method (2) described above. This cumulative impact analysis incorporates the regional projections from the RTP. The maintenance site alternatives are within two of the 14 Subregions in SCAG’s planning area that consist of the City of Los Angeles and the South Bay Cities Council of Governments subregions. The RTP reflects transportation, population, employment, and land use data for the six-county SCAG area through the year 2035, and is, thus, an appropriate basis for the analysis of cumulative impacts.

The region wide impact analysis conducted in the RTP PEIR (SCH No. 2007061126, May 2008), serves as the basis for this analysis of cumulative impacts, per Section 15150 of the CEQA guidelines. SCAG states that lead agencies, such as the Los Angeles County Metropolitan Transportation Authority (Metro), may use the region-wide impact analysis contained in the RTP PEIR as the basis of their cumulative impact analysis. The RTP PEIR contains a thorough analysis of environmental impacts resulting from implementation of various transportation projects throughout SCAG’s six county region that encompasses approximately 38,000 square miles. Therefore, the RTP PEIR is used as the basis of this cumulative impact analysis and is hereby incorporated by reference per Section 15150 of CEQA guidelines. The SCAG RTP EIR found that there would be significant cumulative impacts in the following areas:

- Traffic, Circulation, and Parking
- Land Use and Development
- Open Space
- Public Services and Utilities
- Visual and Aesthetic
- Population, Housing, and Employment
- Historic, Archaeological and Paleontological
- Water Resources
- Energy
- Noise and Vibration
- Air Quality
- Ecosystems/Biological Resources
- Geotechnical/Subsurface/Seismic
- Hazards and Hazardous Materials

18.1 Regulatory Setting

The regulations established by the CEQ, regarding the implementation of the NEPA, define cumulative effects as those effects that result from incremental impacts of a proposed action when added to past, present, and reasonably foreseeable future actions, regardless of which agency (federal or nonfederal) or person undertakes such actions.

Section 15355 of the CEQA guidelines (2005) defines cumulative impacts as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative effects can result from individually minor, but collectively significant actions that take place over a period of time (40 CFR 1508.7).

The process used in this cumulative impact analysis follows the guidelines provided in “Considering Cumulative Effects under NEPA” (CEQ, January 1997). The analysis in this chapter is also consistent with CEQA guidelines, Section 15130(b)(1), which directs cumulative impact analyses to include “a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.”



19.0 ENVIRONMENTAL JUSTICE

Environmental justice refers to the potential for disproportionate impacts on minority and low-income communities. This section describes the existing conditions related to environmental justice indicators within the study area. A discussion of the federal and State environmental justice regulations is provided along with demographic and socioeconomic profiles of the maintenance yard areas. The potential impacts to minority, low-income, elderly, and LEP communities will be assessed to determine if a disproportionate share of the proposed Project impacts will be placed on these communities.

19.1 Regulatory Framework

19.1.1 Federal

Executive Order 12898 requires federal agencies to achieve environmental justice by “identifying and addressing the social and economic effects of their programs, policies, and activities on minority populations and low-income populations in the United States.” As Executive Order 12898 applies to the USEPA, environmental justice is the *fair treatment* and *meaningful involvement* of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or policies. Meaningful involvement means that: (1) potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health; (2) the public's contributions can influence the regulatory agency's decision; (3) the concerns of all participants will be considered in the decision-making process; and, (4) the decision-makers shall seek out and facilitate the involvement of those potentially affected groups.

In response to Executive Order 12898, the USDOT issued an Order to Address Environmental Justice in Minority Populations and Low-Income Populations. This order, issued in April 1995, sets guidelines to ensure that all federally-funded transportation-related programs, policies, or activities that have the potential to adversely affect human health or the environment involve a planning and programming process that explicitly considers the effects on minority populations and low-income populations. Also, under Executive Order 12898, minority populations identified should either be: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. Furthermore, the USDOT issued Order 5610.2 and subsequent guidance that defines and provides guidance for environmental justice issues as they apply to projects.

Executive Order 13166 requires federally assisted programs to identify any need for services to those persons with LEP and develop and implement a system to provide those services so LEP persons can have meaningful access to them. Executive Order 13166 has

a two-fold purpose. First, it provides enforcement and implementation of an existing obligation under Title VI of the Civil Rights Act of 1964 which prohibits recipients of federal financial assistance from discriminating based on national origins by failing to provide meaningful access to LEP individuals. Secondly, Executive Order 13166 sets forth a new obligation, which requires that all federal agencies meet the same standards as federal financial assistance recipients to provide meaningful access to LEP individuals to federally conducted programs. Additionally, like Executive Order 12898, each federal agency must develop a plan to provide this access. Meaningful access can include availability of vital documents, printed and internet-based information in one or more languages, depending on the location of the project, and translation services during public meetings. The Age Discrimination Act of 1975 prohibits the discrimination based on age of individuals from having meaningful access and participating in federally funded programs.

19.1.2 State

Following the lead of the environmental justice provisions at the federal level, a series of laws, beginning in 1999, have been enacted in California to implement environmental justice. The OPR has been designated the “coordinating agency in state government for environmental justice programs.” As part of its new environmental justice coordinator role, the OPR must now incorporate environmental justice considerations into local government planning decisions. California law requires the OPR to coordinate with federal agencies regarding environmental justice based on Executive Order 12898.

19.1.3 Local

Metro includes guidelines and planning policies regarding environmental justice issues in its current LRTP. Metro’s 2008 LRTP evaluates how much additional transit service would be provided in areas with high transit dependency and minority and low-income populations. The 2008 LRTP includes extensive transit investments and includes policies about placement of these investments in proximity to areas with minority and lower-income populations and to job opportunities that support those areas.



20.0 ADDITIONAL FEDERAL REQUIREMENTS AND NEPA CONSIDERATIONS

20.1 Regulatory Setting

Short Term Uses vs Long Term Productivity. NEPA requires consideration of the relationship between short-term uses of the environment and long-term productivity associated with a Proposed Action. This involves the consideration of whether a Proposed Action is sacrificing a resource value that might benefit the environment in the long term, or some short-term value to the sponsor or the public.

Irreversible and Irretrievable Resources. NEPA requires that an environmental analysis include identification of any irreversible and irretrievable commitments of resources should a project be implemented. Irreversible and irretrievable commitments of resources are related to the use of non-renewable resources and the effects that the uses of these resources will have on future generations. Irreversible effects result from the use or destruction of a specific resource that cannot be replaced within a reasonable time frame. Such resources include, but are not limited to soils, minerals, wetlands and energy. Irretrievable commitments of resources result from the permanent loss of production or use of a resource that cannot be restored as a result of a decision. Examples include the extinction of a threatened or endangered species or the disturbance of a cultural site.

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