

APPENDIX C  
*REGULATORY CONTEXT*

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This appendix contains the federal, state, and local regulations that apply to the Airport Expansion and Development Project (Proposed Action) at Austin-Bergstrom International Airport. These regulations are provided for each resource category that may have potential impacts associated with the Proposed Project or alternatives as identified in FAA Order 1050.1F. For those resource categories that would not be affected by the Proposed Project or alternatives (coastal resources, farmlands, visual effects, and wild and scenic rivers), no regulatory context is provided.

## C.1 AIR QUALITY

### C.1.1 Federal Regulations

#### C.1.1.1 Clean Air Act

The Clean Air Act (CAA) of 1963 was the first federal legislation to regulate air pollution; the CAA has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990. The U.S. Environmental Protection Agency (U.S. EPA) is responsible for implementing certain portions of the CAA, including requirements on mobile sources of air pollutants (e.g., motor vehicles, airplanes, or equipment that can be moved from one location to another). State and local agencies implement other portions of the CAA, such as requirements on stationary sources of air pollutants (e.g., factories, refineries, boilers, and power plants).

The CAA establishes federal air quality standards, known as National Ambient Air Quality Standards (NAAQS), and specifies dates for achieving compliance. The primary standards were established at levels sufficient to protect public health with a satisfactory margin of safety. The secondary standards were established to protect public welfare from other adverse effects of air pollution. The State of Texas must submit and implement a State Implementation Plan (SIP), in accordance with the CAA, for areas that fail to meet these standards. The SIP must include pollution control measures that demonstrate how the national standards will be met. The 1990 CAA amendments identify specific emission-reduction goals for areas that fail to meet the NAAQS. The state must demonstrate within their SIP reasonable progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones.

The most applicable CAA requirements involve attainment of the NAAQS for the following "criteria pollutants": ozone (O<sub>3</sub>); nitrogen dioxide (NO<sub>2</sub>); carbon monoxide (CO); sulfur dioxide (SO<sub>2</sub>); particulate matter, with particles less than 10 microns in diameter (PM<sub>10</sub>); and lead (Pb). The NAAQS were amended in July 1997 to include

an 8-hour standard<sup>1</sup> for O<sub>3</sub> and to adopt a national standard for PM<sub>2.5</sub> (fine particulate matter, with particles less than 2.5 microns in diameter). **Table C-1** shows the NAAQS currently in effect for each criteria pollutant.

**TABLE C-1**  
**AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time <sup>/x/</sup>	California Standards <sup>/a/</sup>		National Standards <sup>/b/</sup>		
		Concentration <sup>/c/</sup>	Method <sup>/d/</sup>	Primary <sup>/c, e/</sup>	Secondary <sup>/c, f/</sup>	Method <sup>/g/</sup>
Ozone (O <sub>3</sub> ) <sup>/h/</sup>	1 Hour	0.09 ppm (180 µg/m <sup>3</sup> )	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m <sup>3</sup> )		0.070 ppm (137 µg/m <sup>3</sup> )		
Nitrogen Dioxide (NO <sub>2</sub> ) <sup>/i/</sup>	1 Hour	0.18 ppm (339 µg/m <sup>3</sup> )	Gas Phase Chemiluminescence	100 ppb (188 µg/m <sup>3</sup> )	None	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m <sup>3</sup> )		53 ppb (100 µg/m <sup>3</sup> )	Same as Primary Standard	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m <sup>3</sup> )	Non-dispersive Infrared Photometry	35 ppm (40 mg/m <sup>3</sup> )	None	Non-dispersive Infrared Photometry
	8 Hour	9.0 ppm (10 mg/m <sup>3</sup> )		9 ppm (10 mg/m <sup>3</sup> )		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m <sup>3</sup> )		-		
Sulfur Dioxide (SO <sub>2</sub> ) <sup>/j/</sup>	1 Hour	0.25 ppm (655 µg/m <sup>3</sup> )	Ultraviolet Fluorescence	75 ppb (196 µg/m <sup>3</sup> )	-	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method) <sup>/j/</sup>
	3 Hour	-		-	0.5 ppm (1300 µg/m <sup>3</sup> )	
	24 Hour	0.04 ppm (105 µg/m <sup>3</sup> )		0.14 ppm (for certain areas) <sup>/j/</sup>	-	
	Annual Arithmetic Mean	-		0.030 ppm (for certain areas) <sup>/j/</sup>	-	
Particulate Matter (PM <sub>10</sub> ) <sup>/k/</sup>	24 Hour	50 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	150 µg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>		-		

<sup>1</sup> The 8-hour standard is the average concentration over 8 hours for a criteria air pollutant.

Pollutant	Averaging Time <sup>/x/</sup>	California Standards <sup>/a/</sup>		National Standards <sup>/b/</sup>		
		Concentration <sup>/c/</sup>	Method <sup>/d/</sup>	Primary <sup>/c, e/</sup>	Secondary <sup>/c, f/</sup>	Method <sup>/g/</sup>
Particulate Matter (PM <sub>2.5</sub> ) <sup>/k/</sup>	24 Hour	No Separate State Standard		35 µg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	12.0 µg/m <sup>3</sup> <sup>/k/</sup>	15 µg/m <sup>3</sup>	
Lead (Pb) <sup>/l, m/</sup>	30-Day Average	1.5 µg/m <sup>3</sup>	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m <sup>3</sup> (for certain areas) <sup>/m/</sup>	Same as Primary Standard	
	Rolling 3-Month Average <sup>/m/</sup>	–		0.15 µg/m <sup>3</sup>		

Notes:

µg/m<sup>3</sup> = micrograms/per cubic meter

ppb = parts per billion

ppm = parts per million

/a/ California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility-reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the California Code of Regulations, Title 17, Section 70200, Table of Standards.

/b/ National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once per year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms/per cubic meter (µg/m<sup>3</sup>) is equal to or less than 1. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

/c/ Concentration expressed first in units in which the standard was promulgated.

/d/ Any equivalent procedure that can be shown to the satisfaction of the California Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

/e/ National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

/f/ National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

/g/ Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

/h/ On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

/i/ To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.

/j/ On June 2, 2010, a new 1-hour SO<sub>2</sub> standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO<sub>2</sub> national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated "nonattainment" for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

/k/ On December 14, 2012, the national annual PM<sub>2.5</sub> primary standard was lowered from 15 µg/m<sup>3</sup> to 12 µg/m<sup>3</sup>.

/l/ The California Air Resources Board has identified lead and vinyl chloride as "toxic air contaminants," but has not determined a threshold level of exposure for adverse health effects.

/m/ The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m<sup>3</sup> as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Source: CARB Ambient Air Quality Standards, 2015.

The CAA sets deadlines for meeting the NAAQS, including the following: 1-hour O<sub>3</sub> by the year 2010; 8-hour O<sub>3</sub> by the year 2024<sup>2</sup>; PM<sub>10</sub> by the year 2006; and PM<sub>2.5</sub> by the year 2015. States must submit and implement a SIP to demonstrate attainment with the NAAQS. The SIP must include pollution-control measures that demonstrate how the state will attain the federal standards in Title II of the CAA pertaining to mobile sources of air pollutants, such as cars, trucks, buses, and planes. The U.S. EPA recommends various mechanisms for regulating mobile air-emission sources, such as the use of reformulated gasoline, automobile pollution-control devices, and vapor recovery nozzles on gas pumps.

#### D.1.1.2 General Conformity Rule

In November 1993, the U.S. EPA promulgated a set of regulations, Title 40 Code of Federal Regulations Part 93, known as the General Conformity rule, which applies to federal actions related to airports. A responsible federal agency is required to determine if the action “conforms” to the applicable SIP by ensuring that the action does not:

- » Cause or contribute to any new violations of any NAAQS
- » Increase the frequency or severity of any existing violations of any NAAQS
- » Delay the timely attainment of any NAAQS or any required interim emission reductions or other milestones

General conformity applies to any criteria pollutants for which an area is categorized as nonattainment or maintenance. An applicability analysis under general conformity consists of preparing an emissions inventory for all project-related direct and indirect emissions and comparing those results with the respective de minimis thresholds. The regulation defines the thresholds based on pollutant and attainment/nonattainment designation.

40 CFR Part 93.159(d) notes that when comparing emissions to de minimis thresholds, the following scenarios must be considered:

- » Emissions in the year of attainment or the farthest year for which emissions are projected in the maintenance plan.
- » The year in which the total of direct and indirect emissions from the action are expected to be the greatest on an annual basis.

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<sup>2</sup> The 8-hour ozone attainment deadline for the 1997 standard of 80 parts per billion is 2024. The 8-hour ozone attainment deadline for the 2008 standard of 75 parts per billion is 2032.

- » Any year for which the SIP has an applicable emissions budget. If emissions in all of these scenarios are less than de minimis, no further analysis is needed. If emissions are above de minimis, a conformity determination is required.<sup>3</sup>

## C.2 BIOLOGICAL RESOURCES

### C.2.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects plants and wildlife that are listed by the U.S. Fish and Wildlife Service (U.S. FWS) and National Marine Fisheries Service (NMFS) as Federally listed as endangered or threatened.

Section 9 of FESA prohibits the “take” of endangered wildlife, where take is defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct.”<sup>4</sup> For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on Federal land, as well as removing, cutting, digging up, damaging, or destroying any endangered plant on non-Federal land in knowing violation of state law.

Section 7 of FESA requires agencies to consult with the U.S. FWS or NMFS if their actions, including permit approvals or funding, could adversely affect an endangered species (including plants) or its critical habitat. Through consultation and the preparation of a biological opinion, the U.S. FWS or NMFS may issue an incidental take statement allowing the take of an endangered species that is incidental to another authorized activity, provided the action will not jeopardize the continued existence of the endangered species.

In cases where the Federal agency determines its action may affect a Federally listed species, but that such effects would not likely be adverse, the agency informally consults with the U.S. FWS and/or NMFS. This informal consultation typically involves incorporating measures to ensure that project effects would not be adverse. Concurrence from the U.S. FWS and/or NMFS concludes the informal process. Without such concurrence, the Federal agency must formally consult to ensure full compliance with FESA.

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<sup>3</sup> Environmental Protection Agency. (2010, March 24). Revisions to the General Conformity Regulations. Retrieved June 2019, from EPA: <https://www.epa.gov/sites/production/files/2016-03/documents/20100324rule.pdf>.

<sup>4</sup> 50 C.F.R. § 17.3.

### C.2.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the take of nearly all native birds. Under the MBTA, take means to kill, directly harm, or destroy individuals, eggs, or nests, or to otherwise cause failure of an ongoing nesting effort.

## C.3 CLIMATE

FAA Order 1050.1F requires that NEPA documents, evaluate potential climate impacts separately from air quality impacts. According to FAA Order 1050.1F, the environmental document must present a qualitative or quantitative assessment of greenhouse gas (GHG) emissions if the proposed action or alternative(s) would result in an increase in such emissions.<sup>5</sup> There are currently no significance thresholds for aviation-related GHG emissions, and the NEPA analysis need not attribute specific climate impacts to the proposed action or alternative(s) given small percentage of emissions that proposed aviation actions contribute to the overall GHG levels. For example, the Intergovernmental Panel on Climate Change estimates that aviation accounted for 4.1 percent of global transportation GHG emissions in 2015.<sup>6</sup>

Scientific measurements show that the Earth's climate is warming, resulting in warmer air temperatures, sea level rise, increased storm activity, and more intense precipitation events. Research has shown a direct correlation between fuel combustion and emissions of GHGs, which are known to trap heat in the atmosphere. The GHGs that contribute to potential climate impacts include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and fluorinated gases such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>).<sup>7</sup>

Not all GHGs possess the same ability to induce climate change; as a result, GHG contributions are commonly quantified in units of "carbon dioxide equivalents" (CO<sub>2</sub>e). The Intergovernmental Panel on Climate Change calculated greenhouse gas

<sup>5</sup> Federal Aviation Administration. (2015, July 16). *Order 1050.1F, Environmental Impacts: Policies and Procedures*, Chapter 4: Impact Categories, Significance, and Mitigation. Retrieved September 2018, from Federal Aviation Administration: [https://www.faa.gov/documentLibrary/media/Order/FAA\\_Order\\_1050\\_1F.pdf](https://www.faa.gov/documentLibrary/media/Order/FAA_Order_1050_1F.pdf).

<sup>6</sup> Federal Aviation Administration. (2015, July). *1050.1F Desk Reference*, Chapter 3, *Climate*. Retrieved June 2019, from Federal Aviation Administration: [https://www.faa.gov/about/office\\_org/headquarters\\_offices/apl/enviro\\_policy\\_guidance/policy/faa\\_nepa\\_order/desk\\_ref/media/desk-ref.pdf](https://www.faa.gov/about/office_org/headquarters_offices/apl/enviro_policy_guidance/policy/faa_nepa_order/desk_ref/media/desk-ref.pdf).

<sup>7</sup> U.S. Environmental Protection Agency. (2018). Overview of Greenhouse Gases. Retrieved September 2018, from U.S. Environmental Protection Agency: <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>.

potential (GWP) ratios and published them in its Fourth Assessment Report.<sup>8</sup> The GWP represents the amount of heat captured by a mass of GHG compared to a similar mass of CO<sub>2</sub>. Emitters apply the appropriate GWP ratios to convert pollutant-specific emissions to CO<sub>2</sub>e emissions.<sup>9</sup> By applying the GWP ratios, a project's mass CO<sub>2</sub>e emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of CO<sub>2</sub> over a 100-year period is used as a baseline.

### C.3.1 Federal Regulations

The U.S. Environmental Protection Agency (U.S. EPA) is responsible for implementing federal policies to address GHGs. The federal government administers a wide array of public-private partnerships to reduce the quantity of GHGs generated in the United States. These programs focus on energy efficiency, renewable energy, methane and other non-CO<sub>2</sub> gases, agricultural practices, and technologies to achieve GHG reductions. The U.S. EPA implements numerous voluntary programs that contribute to the reduction of GHG emissions. These programs (e.g., the Energy Star labeling system for energy-efficient products) play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

On December 7, 2009, the U.S. EPA administrator signed two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act. The U.S. EPA adopted a Final Endangerment Finding for the six defined GHGs (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>). The U.S. EPA also adopted a Cause or Contribute Finding in which the U.S. EPA administrator found that GHG emissions from motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. These findings do not in themselves impose any requirements on industry or other entities but were prerequisites for implementing GHG emissions standards for vehicles.

On September 27, 2019, the U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) published the SAFE Part One (84 Fed. Reg. 51,310). On

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<sup>8</sup> The Intergovernmental Panel on Climate Change (IPCC) developed the global warming potential (GWP) and associated CO<sub>2</sub>e values and published them in its Second Assessment Report (SAR) in 1996. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's SAR. The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The California Air Resources Board (CARB) reports GHG emission inventories for California using the GWP values from the IPCC AR4. Therefore, the impact analysis in this EIS reflects the GWP values from the IPCC's AR4. Although the IPCC has released AR5 with updated GWPs, CARB reports the statewide GHG inventory using the AR4 GWPs, which is consistent with international reporting standards.

<sup>9</sup> Intergovernmental Panel on Climate Change. (2007). *Fourth Assessment Report, Working Group I Report: The Physical Science Basis*. Retrieved October 2018, from Intergovernmental Panel on Climate Change: [https://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4\\_wg1\\_full\\_report.pdf](https://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4_wg1_full_report.pdf).

March 31, 2020, the U.S. EPA and NHTSA released the final SAFE regulation, known as SAFE Part II, and submitted it for publication in the Federal Register. SAFE Part II is expected to be effective 60 days after being published in the Federal Register. The new regulation sets CO<sub>2</sub> emissions standards and CAFE standards for passenger vehicles and light duty trucks, covering model years 2021-2026. Under the final regulation, both CAFE and CO<sub>2</sub> emissions standards will decrease. Thus, implementation of the SAFE Rule Part II would increase the emission factors of mobile source gasoline fueled vehicles model year 2021 or newer by a small margin, as compared to ARB emission factors developed prior to the passage of the SAFE Rule.

### C.3.2 City of Austin Regulations

The City of Austin has set community-wide GHG goals through its recently adopted Austin Climate Equity Plan<sup>10</sup> and several City of Austin Council Resolutions that require City-owned facilities to reduce their GHG emissions.

## C.4 U.S. DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F)

Section 4(f) of the U.S. DOT Act<sup>11</sup> provides protection for special properties, including publicly owned parks, recreation areas, wildlife and waterfowl refuges, and historic and archaeological sites. Section 4(f) of the U.S. DOT Act provides that: the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned park, recreational area, or wildlife or waterfowl refuge of national, state, or local significance or land from a historic site of national, state, or local significance, as determined by the officials having jurisdiction thereof, unless there is no feasible and prudent alternative to the use of such land and such program, and the project includes all possible planning to minimize harm resulting from the use.

Section 6(f) of the Land and Water Conservation Fund (LWCF) Act<sup>12</sup> protects lands that were either purchased or developed as recreational areas using LWCF funds. LWCF resources are managed by the National Park Service (NPS) and coordinated with each state. The NPS must approve projects that propose to acquire or convert Section 6(f) resources, including airport development projects, and the project proponent must replace any acquired or converted LWCF resources with lands that are equal to or greater in value, equivalent in recreational usefulness, and equivalent in location.

<sup>10</sup> City of Austin, *Austin Climate Equity Plan*, September 2021.

<sup>11</sup> 49 U.S.C. § 303.

<sup>12</sup> 16 U.S.C. §§ 4601-4604 et seq.

## C.5 HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

Hazardous materials, solid waste, and pollution prevention methods are subject to Federal, state, and local regulations intended to protect health, safety and the environment as discussed below.

### C.5.1 Federal Regulations

#### C.5.1.1 Comprehensive Environmental Response, Compensation, and Liabilities Act

The U.S. EPA is in charge of administering all or part of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which provides a framework for the remediation of hazardous waste disposal sites, provides funding for remediation and creates a list of national priority sites (Superfund sites), and provides standards and practices for conducting a Phase I Environmental Site Assessment.<sup>13</sup>

#### C.5.1.2 Emergency Planning and Community Right-to-Know Act

The U.S. EPA is in charge of administering all or part of the Emergency Planning and Community Right-to-Know Act (EPCRA) that was passed by Congress in 1986 in response to concerns regarding the environmental and safety hazards posed by the storage and handling of toxic chemicals.<sup>14</sup> EPCRA improved community access to information regarding chemical hazards and facilitated the development of business chemical inventories and emergency response plans. The EPCRA also established reporting obligations for facilities that store or manage specified chemicals.

#### C.5.1.3 Federal Facilities Compliance Act

The U.S. EPA is in charge of administering all or part of the Federal Facilities Compliance Act (FFCA) that was enacted in 1992 to clarify that Federal facilities may be penalized and receive administrative enforcement orders if found to not be in compliance with Federal, state, interstate, and local requirements, for disposal of hazardous waste and underground storage tank (UST) requirements.

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<sup>13</sup> 42 U.S.C. § 96011 et seq.

<sup>14</sup> 42 U.S.C. chapter 116.

#### C.5.1.4 Hazardous Materials Transportation Act

The U.S. Department of Transportation (U.S. DOT) is in charge, under the Office of the Secretary, of administering all or part of the Hazardous Materials Transportation Act (HMTA) published in 1975. Its primary objective is to provide adequate protection against the risks to life and property inherent in the transportation of hazardous material in commerce by improving the regulatory and enforcement authority of the Secretary of Transportation. The HMTA establishes procedures, reporting requirements, and approval processes for the transport of hazardous materials.

#### C.5.1.5 Pollution Prevention Act

The U.S. EPA is in charge of administering all or part of the Pollution Prevention Act of 1990 focuses on reducing the amount of pollution through cost-effective changes in production, operation, and raw material use. Pollution prevention includes practices that increase efficiency in the use of energy, water, or other natural resources, and protect our resource base through conservation.<sup>15</sup>

#### C.5.1.6 Resource Conservation and Recovery Act

The U.S. EPA is in charge of administering all or part of the Federal Resource Conservation and Recovery Act (RCRA),<sup>16</sup> which regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. Under RCRA regulations, generators of hazardous waste must register and obtain a hazardous waste activity identification number. RCRA allows states to develop their own programs for the regulation of hazardous waste as long as it is at least as stringent as RCRA.

USTs are regulated under Subtitle I of RCRA and its regulations, which establish construction standards for new UST installations (those installed after December 22, 1988), as well as standards for upgrading existing USTs and associated piping. Since 1998, all nonconforming tanks were required to be either upgraded or closed.

#### C.5.1.7 Toxics Substances Control Act

The U.S. EPA is in charge of administering all or part of the Toxic Substances Control Act (TSCA), which addresses the production, importation, use, and disposal of specific chemicals, including polychlorinated biphenyls (PCBs), asbestos, and lead-based paint (LBP). These regulations ban the manufacture of PCBs although

<sup>15</sup> U.S. EPA. (2018). Summary of Pollution Prevention Act. Retrieved November 2018, from U.S. EPA: <https://www.epa.gov/laws-regulations/summary-pollution-prevention-act>.

<sup>16</sup> 42 U.S.C. § 6901-6992k.

the continued use of existing PCB-containing equipment is allowed. The TSCA also contains provisions controlling the continued use and disposal of existing PCB-containing equipment. The disposal of PCB wastes is also regulated by TSCA,<sup>17</sup> which contains life cycle provisions similar to those in RCRA.

#### C.5.1.8 Executive Order 12088, Pollution Control Standards

These standards direct federal agencies to comply with “applicable pollution control standards” in the prevention, control, and abatement of environmental pollution as well as consult with the U.S. EPA, state, interstate, and local agencies concerning the best techniques and methods available for the prevention, control, and abatement of environmental pollutions.

#### C.5.1.9 Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management

This Executive Order set goals for federal agencies to achieve legal requirements in environment, transportation, and energy with sustainable economic efficiency. This Executive Order has been replaced with *Planning for Federal Sustainability in the Next Decade* (Executive Order 13693) as of March 19, 2015, which instructs federal agencies to conduct their environmental, transportation, and energy-related activities under the law in support of their respective missions in an environmentally, economical, and fiscally sound, integrated, continuously improving, efficient, and sustainable manner. This Executive Order sets goals in the following areas: energy efficiency, acquisition, renewable energy, toxic chemical reduction, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation. Additionally, this Executive Order requires more widespread use of Environmental Management Systems (EMS) as the framework in which to manage and continually approve these sustainable practices.<sup>18</sup>

#### C.5.1.10 Executive Order 13514, Leadership in Environmental, Energy, and Economic Performance

This Executive Order has been replaced by Executive Order 13834, *Efficient Federal Operations*, as of May 17, 2018, which states that Congress has enacted a wide range of statutory requirements related to energy and environmental performance of executive departments and agencies, including with respect to facilities, vehicles, and overall operations. Agencies shall meet such statutory requirements in a

<sup>17</sup> 40 C.F.R. § 761.

<sup>18</sup> Office of the Press Secretary. (2015, March 19). Executive Order Planning for Federal Sustainability in the Next Decade. Retrieved November 2018, from Office of the Press Secretary: <https://obamawhitehouse.archives.gov/the-press-office/2015/03/19/executive-order-planning-federal-sustainability-next-decade>.

manner that increases efficiency, optimizes performance, eliminate unnecessary use of resource, and protects the environment. In implementing the policy set forth in Section 1 of the Executive Order, the head of each agency shall meet the following goals, which are based on statutory requirements, in a cost-effective manner: achieve and maintain annual reductions in building energy use and implement energy efficiency measures that reduce costs; meet statutory requirements relating to the consumption of renewable energy and electricity; reduce potable and non-potable water consumption, and comply with stormwater management requirements; ensure that new construction and major renovations conform to applicable building energy efficiency when renewing or entering into leases, implement space utilization and optimization practices, and annually assess and report conformance to sustainability metrics; implement waste prevention and recycling measures and comply with all Federal requirements with regard to solid, hazardous, and toxic waste management and disposal; acquire, use, and dispose of products and services, including electronics, in accordance with statutory mandates for purchasing preference, Federal Acquisition Regulation requirements, and other applicable procurement policies, and track and, as required by Section 7(b) of this Executive Order, report on energy management activities, performance improvements, cost reductions, greenhouse gas emissions, energy and water savings, and other appropriate performance measures.<sup>19</sup>

#### C.5.1.11 Council on Environmental Quality Memorandum, Pollution Prevention and the National Environmental Policy Act

In 1993 a memorandum was published addressed to all federal agencies requesting the implementation of pollution prevention considerations to meet policy goals under Section 101 and 102 under all their activities, where appropriate.<sup>20</sup>

#### C.5.1.12 Federal Occupational Safety and Health Administration

The Federal Occupational Safety and Health Act of 1970, implemented by the Federal Occupational Safety and Health Administration (OSHA), contains provisions with respect to hazardous materials handling. Federal OSHA requirements are

<sup>19</sup> Federal Register. (2018, May 17). Executive Order Efficient Federal Operations. Retrieved July 2019, from Federal Register: <https://www.federalregister.gov/documents/2018/05/22/2018-11101/efficient-federal-operations>.

<sup>20</sup> Council on Environmental Quality. (1993, January 12). *Memorandum to Heads of Federal Departments and Agencies Regarding Pollution Prevention and the National Environmental Policy Act*. Retrieved November 2018, from U.S. Department of Energy: <https://www.energy.gov/nepa/downloads/memorandum-heads-federal-departments-and-agencies-regarding-pollution-prevention-and>.

designed to promote worker safety, worker training, and a worker's right-to-know.<sup>21</sup>

## C.6 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Numerous laws and regulations require federal, state, and local agencies to consider the effects an action may have on historical, architectural, archaeological, and cultural resources. These laws and regulations stipulate a process, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies.

### C.6.1 Federal Regulations

#### C.6.1.1 National Environmental Policy Act

The National Environmental Policy Act (NEPA) establishes national policy for the protection and enhancement of the environment. Part of the function of the federal government in protecting the environment under NEPA is to "preserve important historic, cultural, and natural aspects of our national heritage"<sup>22</sup> and to provide for public participation in the consideration of cultural resource issues, among others, during agency decision-making. Under NEPA, federal lead agencies must consider the unique characteristics of the affected geographic area, such as proximity to "historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas",<sup>23</sup> or the degree to which the action may adversely affect "districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places" or may cause loss or destruction of "significant scientific, cultural, or historical resources."<sup>24</sup>

#### C.6.1.2 National Historic Preservation Act

The principal federal law addressing historic properties is the National Historic Preservation Act (NHPA), as amended,<sup>25</sup> and its implementing regulations.<sup>26</sup> Section 106 of the NHPA<sup>27</sup> requires a federal agency with jurisdiction over a proposed federal action (referred to as an "undertaking") to take into account the

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<sup>21</sup> U.S. Department of Labor. (2018). About OSHA. Retrieved November 2018, from U.S. Department of Labor: <https://www.osha.gov/about.html>.

<sup>22</sup> 42 U.S.C. § 4331(b)

<sup>23</sup> 40 C.F.R. Part 1508.27(b)(3)

<sup>24</sup> 40 C.F.R. Part 1508.27(b)(8)

<sup>25</sup> 54 U.S.C. § 300101 et seq.

<sup>26</sup> 36 C.F.R. Part 800

<sup>27</sup> 36 C.F.R. Parts 800.3 through 800.16

effects of the undertaking on historic properties and to provide the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on the undertaking.

The term “historic properties” refers to “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register.”<sup>28</sup> The implementing regulations<sup>29</sup> describe the processes for identifying and evaluating historic properties, assessing the potential adverse effects of federal undertakings on historic properties, and developing measures to avoid, minimize, or mitigate adverse effects. The Section 106 process does not require the preservation of historic properties; instead, it is a procedural requirement mandating that, prior to granting approval, federal agencies take into account the direct and indirect impacts on historic properties that could result from federal actions.

The Section 106 process is accomplished through consultation among the federal agency proposing the undertaking, the State Historic Preservation Officer (SHPO), federally recognized Indian tribes, local governments, and other interested parties. The goal of consultation is to identify potentially affected historic properties in both the direct and indirect study areas, assess effects such properties, and seek ways to avoid, minimize, or mitigate any adverse effects on such properties. The federal agency must also provide an opportunity for public involvement.<sup>30</sup> Consultation with Indian tribes regarding issues related to Section 106 and other regulations (such as NEPA and Executive Order No. 13007, *Indian Sacred Sites*) must recognize the government-to-government relationship between the federal government and Indian tribes, as set forth in Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments* and Presidential Memorandum, *Memorandum for the Heads of Executive Departments and Agencies on Tribal Consultation*, signed November 2009.

#### C.6.1.3 National Register of Historic Places

The NHPA established the National Register of Historic Places (NRHP) as an authoritative guide for use by governments, private groups, and citizens to identify the nation’s historic resources and to indicate which properties should be considered for protection from destruction or impairment.<sup>31</sup> The NRHP recognizes a broad range of cultural resources as significant at the national, state, and local levels; these resources can include historic districts, buildings, structures, and objects; prehistoric and historic-period archaeological sites; traditional cultural

<sup>28</sup> 36 CFR Part 800.16(1)

<sup>29</sup> 36 CFR Part 800

<sup>30</sup> 36 CFR 800.1(a)

<sup>31</sup> U.S. Department of the Interior. National Park Service. *National Register of Historic Places: Effects of Listing under Federal Law*. Code of Federal Regulations, Title 36 § 60.2(2012): 332.

properties; and cultural landscapes. As noted above, Section 106 of the NHPA considers a resource listed in or eligible for listing in the NRHP to be a historic property.

To be eligible for listing in the NRHP, a property must be significant in terms of American history, architecture, archaeology, engineering, or culture. Properties of potential significance must meet one or more of the following four established criteria:

- A. Are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. Are associated with the lives of persons significant in our past; or
- C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.<sup>32</sup>

In addition to meeting one or more of these significance criteria, a property must maintain integrity, which is defined as “the ability of a property to convey its significance.” The NRHP recognizes seven qualities that, in various combinations, contribute to integrity: location, design, setting, materials, workmanship, feeling, and association. To retain historical integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance.

Ordinarily, religious properties, moved properties, birthplaces or graves, cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years are not eligible for the NRHP unless they meet one of the following Criteria Considerations (A through G), in addition to meeting at least one of the four significance criteria listed above and possessing integrity.<sup>33</sup>

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<sup>32</sup> U.S. Department of the Interior. (1997). National Park Service. *National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation* (Washington D.C.: Government Printing Office, 1997), p. 44.

<sup>33</sup> U.S. Department of the Interior. (1997). National Park Service. *National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation* (Washington D.C.: Government Printing Office, 1997), p. 11.

- A. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or
- B. A building or structure removed from its original location, but which is primarily significant for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
- C. A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building associated with his or her productive life; or
- D. A cemetery that derives its primary importance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or
- E. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or
- F. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or
- G. A property achieving significance within the past 50 years if it is of exceptional importance.

## C.7 LAND USE

### C.7.1 Federal Regulations

#### C.7.1.1 The Airport and Airway Improvement Act of 1982

The Airport and Airway Improvement Act of 1982, as amended,<sup>34</sup> states that no airport project receiving federal funding may be approved unless the Secretary of Transportation receives written assurances that the project will be consistent with existing land use plans and will not "...restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including the landing and takeoff of aircraft." Additionally, Council on Environmental Quality Regulations<sup>35</sup> require that National Environmental Policy Act (NEPA) documents disclose any conflicts between an agency's proposed action and approved local plans, and, where inconsistencies exist, that the NEPA

<sup>34</sup> 49 U.S.C. § 47107(a)(10).

<sup>35</sup> 40 C.F.R. § 1506.2(b).

document state the extent to which the agency would reconcile the proposed action with the plan.

#### C.7.1.2 Airport Improvement Program

The Airport Improvement Program,<sup>36</sup> like the Airport and Airway Improvement Act of 1982, as amended, also states that no airport project receiving federal funding may be approved unless the Secretary of Transportation receives written assurances that the project will be consistent with existing land use plans.

## C.8 NATURAL RESOURCES AND ENERGY SUPPLY

### C.8.1 Federal Regulations

Council on Environmental Quality regulations, 40 C.F.R. §§ 1502.14 and 1502.16(e) and (f), require that an EIS consider energy consumption and the use of natural or depletable resources. The federal government encourages airport development that minimizes demands on energy supplies and consumable natural resources. FAA policy also encourages developers to incorporate sustainability measures into facility designs. The following section describes the existing conditions for natural resources and energy supply at the Airport.

## C.9 NOISE AND NOISE-COMPATIBLE LAND USE

### C.9.1 Federal Aviation Regulations, Part 136

Federal Aviation Regulations (FAR), Part 36, "Noise Standards: Aircraft Type and Airworthiness Certification," sets noise standards for issuance of new aircraft type certificates. Aircraft are certified as Stage 1 through Stage 5 depending on their noise level, weight, and number of engines. Stage 1 and Stage 2 aircraft, which are the noisiest aircraft, are no longer permitted to operate in the continental U.S. Although aircraft meeting Part 36 standards are noticeably quieter than many of the older aircraft, the regulations make no determination that such aircraft are acceptably quiet for operations at any given airport.

### C.9.2 Federal Aviation Noise Abatement Policy

The Federal Aviation Noise Abatement Policy establishes the noise abatement authority and responsibilities of the federal government, airport proprietors, state and local governments, air carriers, air travelers, shippers, and airport area residents and prospective residents. It emphasizes that the FAA's role is primarily one of regulating noise and its source (the aircraft), plus supporting local efforts to

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<sup>36</sup> 49 U.S.C. § 47106(a)(1).

develop airport noise abatement plans. The FAA gives high priority in the allocation of Airport Development Aid Program (ADAP) funds to projects designated to ensure compatible use of land near airports, but it is the role of state and local governments and airport proprietors to undertake the land use and operational actions necessary to promote compatibility.

### C.9.3 Aviation Safety and Noise Abatement Act of 1979

The Aviation Safety and Noise Abatement Act of 1979 establishes funding for noise compatibility planning and sets the requirements by which airport operators can apply for funding. This is also the law by which Congress mandated that the FAA develop and airport community noise metric to be used by all federal agencies assessing or regulating aircraft noise. The result was DNL. Because California already had a well-established airport community noise metric in CNEL, and because CNEL and DNL are so similar, FAA expressly allows CNEL to be used in lieu of DNL in noise assessments performed for California airports. The ACT does not require an airport to develop a noise compatibility program, rather, that is accomplished through the Code of Federal Regulations (CFR) Part 150. CFR Part 150 sets forth standards for airport operators to use when documenting noise exposure around airports and for establishing programs, subject to FAA approval, to reduce noise-related noncompatible land use.

### C.9.4 Airport Noise and Capacity Act of 1990

The Airport Noise and Capacity Act of 1990 (ANCA) sets forth several provisions related to the regulation of aircraft activities at airports. One of the most notable aspects of ANCA is that it precludes the local imposition of noise and access restrictions that are not otherwise in accordance with the national noise polity unless the restrictions are “grandfathered” under ANCA, in which case the restrictions are free from the restrictions that ANCA otherwise would impose. ANCA established two broad directives to the FAA: 1) establish a method to review aircraft noise, airport use, or airport access restrictions proposed by airport proprietors; and 2) institute a program to phase-out Stage 2 aircraft over 75,000 pounds by December 21, 1999. ANCA applies to all new local noise restrictions and amendments to existing restrictions proposed after October 1990.

For aviation noise analysis, the FAA has determined that the cumulative noise energy exposure of individuals to noise resulting from aviation activities must be established in terms of yearly day/night average sound level (DNL<sup>25</sup>) as FAA’s primary metric. Per *FAA Order 1050.1F Desk Reference* (July 2015), a significant noise impact is defined as an increase in noise of the Day-Night Average Sound Level (DNL) 1.5 dB or more over a noise sensitive area that is exposed to noise at

or above the DNL 65 dB noise exposure level, when compared to the no action alternative for the same timeframe.

## C.10 SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

### C.10.1 Socioeconomics

The Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970,<sup>37</sup> is the primary statute related to socioeconomic impacts.

### C.10.2 Surface Traffic

There are no federal statutory or regulatory requirements that apply to surface traffic impacts. The following sections describe the applicable state, regional, county, and local regulations governing surface traffic.

### C.10.3 Environmental Justice

#### *Civil Rights Act of 1964*

Title VI of the Civil Rights Act of 1964, as amended,<sup>38</sup> states that, "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance." This law applies to all federally funded programs and projects, including those sponsored by the Federal Aviation Administration (FAA).

#### *Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires federal agencies to identify and address, as appropriate, the potential for their programs, policies, and activities to cause disproportionately high adverse human health or environmental effects on minority and low-income populations.

#### *U.S. Department of Transportation Order 5610.2(a)*

U.S. Department of Transportation (U.S. DOT) Order 5610.2(a) defines a minority population as any readily identifiable group of minority people living in geographic proximity or subject to a proposed U.S. DOT program, activity, or subject to a

<sup>37</sup> 42 U.S.C. § 61 et seq., implemented by 49 CFR Part 24.

<sup>38</sup> 42 U.S.C. §§ 2000d-2000d-7.

policy, including—if circumstances warrant—geographically dispersed or transient people, such as migrant workers or Native Americans, who would also be affected by the proposed program, policy, or activity.

Order 5610.2(a) defines a low-income population as any readily identifiable group of low-income people living in geographic proximity or subject to a proposed U.S. DOT program, policy, or activity, including—if circumstances warrant—geographically dispersed or transient persons people who would also be affected by the proposed program, policy, or activity. The order defines “low-income” as a median household income at or below the Department of Health and Human Services poverty guidelines.

U.S. DOT Order 5610.2(a) states that the public involvement process must allow minority and low-income populations to provide feedback on the environmental justice analysis and the potential impacts identified in an EIS, which also needs to disclose disproportionately high and adverse effects on the potentially affected populations resulting from the proposed action and alternative(s).

#### C.10.4 Children’s Environmental Health and Safety Risks

*Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks*

Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*,<sup>39</sup> is the primary Executive Order related to children’s environmental health and safety risks. The Executive Order directs federal agencies to identify and assess environmental health risks and safety risks that may disproportionately affect children, consistent with the agency’s mission.

## C.12 WATER RESOURCES

### C.12.1 Floodplains

*National Flood Insurance Program*

The National Flood Insurance Act of 1968 established the National Flood Insurance Program, which made flood insurance available for the first time. The program aims to reduce the impact of flooding on private and public structures by providing affordable insurance to property owners, renters, and businesses and by encouraging communities to adopt and enforce floodplain management regulations.

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<sup>39</sup> 62 *Federal Register* 19885, April 23, 1997.

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program, which is designed to minimize flood damage within special flood hazard areas delineated on FEMA maps, known as Flood Insurance Rate Maps (FIRM). FEMA provides subsidized flood insurance to communities that comply with the FEMA regulations that impose limits on development within these identified floodplains.

Special flood hazard areas are areas that have a 1-percent chance of flooding within a given year—also referred to as the base flood, 100-year flood, or 100-year floodplain. Communities or entities insured under the National Flood Insurance Program must follow the program’s floodplain management regulations for development placed within these flood hazard areas.

*Executive Order 11988, Floodplain Management*

Executive Order 11988, *Floodplain Management* directs federal agencies to take actions to: reduce the risk of property damage or loss due to flooding, restore and preserve the floodplain’s natural and beneficial values, and minimize flood impacts on human safety, health, and welfare. To accomplish this goal, the order bans activities in a floodplain unless: no practicable alternative exists, or measures are incorporated into the proposed activity to minimize adverse impacts on the floodplain’s natural and beneficial values.

*U.S. Department of Transportation Order 5650.2, Floodplain Management and Protection*

U.S. DOT Order 5650.2, *Floodplain Management and Protection* contains policies and procedures for carrying out Executive Order 11988. If a proposed action involves development within a floodplain, the environmental analysis must indicate whether the encroachment would be “significant”—that is, whether it would cause one or more of the following impacts:

- » The action would have a considerable probability to cause the loss of human life.
- » The action would likely result in substantial encroachment-associated costs or effects, including the interruption of aircraft service or the loss of a vital transportation facility (e.g., flooding a runway or taxiway or removing an important navigational aid from service due to flooding).
- » The action would cause notable adverse impacts on natural and beneficial floodplain values.

## C.12.2 Surface Waters

### C.12.2.1 Federal Regulations

#### *Clean Water Act*

The 1972 Clean Water Act (CWA) is the primary federal law that governs and authorizes the U.S. EPA and the states to implement activities to control water quality (United States Code, Title 33, sec. 1251 et seq., 1972). Section 303 of the Clean Water Act requires states to adopt water quality standards approved by the U.S. EPA for all surface waters of the United States including lakes, rivers, and coastal wetlands. It is based on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit. Permit review is the CWA's primary regulatory tool. As defined by the CWA, water quality standards consist of the designated beneficial uses of the water body in question (e.g., wildlife habitat, agricultural supply, fishing etc.) and criteria that protect the designated uses. Water quality criteria are prescribed concentrations, or levels, of constituents – such as lead, suspended sediment, and fecal coliform bacteria – or narrative statements, which represent the quality of water that support a particular use.

As part of the CWA, when monitoring data indicate that a concentration level for a pollutant has been exceeded, the receiving water is classified as impaired and placed on the CWA Section 303(d) List of Water Quality–Limited Segments Requiring Total Maximum Daily Loads (TMDLs), which is then developed for the pollutant(s) that caused the impairment. A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (plus a “margin of safety”). The purpose of the TMDL is to limit the volume of pollutants discharged into the receiving water from all sources (i.e., storm water runoff, wastewater, agriculture).

#### *National Pollution Discharge Elimination System*

The National Pollutant Discharge Elimination System (NPDES) was established per 1972 amendments to the Federal Water Pollution Control Act to control discharges of pollutants from point sources.<sup>2 3</sup> The 1987 amendments to the CWA created a section devoted to storm water permitting (Section 402[p]), with individual states designated for administration and enforcement of the provisions of the CWA and the NPDES permit program.

#### *Safe Drinking Water Act*

The Safe Drinking Water Act (SDWA) created the Sole Source Aquifer Program, which requires the U.S. EPA to evaluate any federally funded project with the

potential to impact a sole source aquifer. Potential impacts to a sole source aquifer would require the FAA to consult with the U.S. EPA regional office, Tribal, state, or local official.

#### *Federal Aviation Administration Guidance*

The FAA also administers regulations related to airport drainage. FAA Advisory Circular, AC 150/5320-5C, *Surface Drainage Design* regulates the design and maintenance of airport surface drainage systems. The FAA sets minimum standards, though each facility may be designed to a higher standard as required by local and/or state regulations. For public-use airports, the FAA recommends a minimum 5-year design storm with no encroachment of runoff on taxiway and runway pavement (including paved shoulders).

#### C.12.2.2 State and Local Regulations

The City of Austin (COA), the State of Texas, through the Texas Commission on Environmental Quality (TCEQ), and the United States Government (through FEMA, and the Corps of Engineers) all have regulatory authority over waters bordering the airport. The United States Environmental Protection Agency enforcement of the Clean Water Act is remanded to the TCEQ in the State of Texas. The project will be required to conform to COA regulations covering drainage (LDC Chapter 25-7) and environment (LDC Chapter 25-8) through the acquisition of a site development permit. To obtain a COA site development permit, the project design must demonstrate compliance with the drainage and environmental criteria specified in the COA Land Development Code (LDC), which includes design requirements to prevent flooding, protect the environment and prevent off-site impacts. The site development permit process will include local approvals necessary to address work in and adjacent to the locally defined floodplain (distinct from the FEMA floodplain). The TCEQ enforces the federal Clean Water Act through the Texas Pollution Discharge Elimination System (TPDES). For construction activities, the project will be required to prepare a storm water pollution prevention plan (SWPPP) and file for coverage under the TPDES Construction General Permit (TXR150000). Austin-Bergstrom International Airport has storm water discharge coverage under the TPDES Multi-Sector General Permit (TXR050000) for industrial activities. Once the project is complete, TPDES regulations will require the airport to update the existing SWP3 to incorporate new project areas and implement measures to protect storm water from airport operational activities. FEMA and the Corps of Engineers have jurisdiction over work in the regulatory floodplain, however, no work is proposed that would involve ground disturbance in the FEMA defined floodplain.

### C.12.3 Groundwater

Regulatory context for groundwater is the same as the regulatory context for Surface Water, **Section D.12.2**, above.

## C.13 CUMULATIVE IMPACTS

Cumulative impacts are the total combined impacts on the environment from a proposed action and other known or reasonably foreseeable actions. Significance of cumulative impacts is determined in the same manner as the significance of direct and indirect impacts of each environmental category in the environmental consequences section.