

INDEX

A

Access roads, 2-1, 2-3, 2-5
 Advisory Council on Historic Preservation, 1-9, 1-10
 Affected environment
 Air quality, 8-3
 Bears, 5.3-2
 Birds, 5.3-4
 Birds of conservation concern, 5.3-13, 5.3-25
 Climate, 8-3
 Cultural and historic resources, 6-6
 Cumulative impacts, 16-1
 Energy resources, 10-1
 Environmental justice, 15-3, 15-4, 15-5
 Fisheries, 5.4-1, 5.4-4, 5.4-6
 Floodplains, 4.4-1
 Furbearers, 5.3-4
 Geology and soils, 3-1, 3-6, 3-15
 Groundwater, 4.3-1
 Hazardous materials and waste sites, 13.4-4
 Land use, 13.1-3
 Landbirds, 5.3-5
 Mammals, 5.3-2
 Marine mammals, 5.3-4
 Moose, 5.3-3
 Navigation, 12-5
 Noise and vibration, 9-4
 Other mammals, 5.3-4
 Parks and recreation resources, 13.2-12
 Permafrost, 3-15
 Raptors and owls, 5.3-5
 Seismic hazards, 3-18
 Socioeconomics, 14-2
 Subsistence, 7-7
 Surface water, 4.2-1
 Threatened and endangered species, 5.5-1
 Topography, 3-2
 Transportation safety and delay, 11-3
 Vegetation resources, 5.2-1
 Visual, 13.3-9
 Waterbirds, 5.3-5
 Wetland resources, 4.5-2
 Wildlife, 5.3-2
 Wolves, 5.3-3
 Air quality, 8-1
 Affected environment, 8-3
 Alaska Ambient Air Quality Standards, 8-3
 Analysis methodology, 8-3
 Class I areas, 8-2
 Environmental consequences, 8-5, 8-9
 National Ambient Air Quality Standards, 8-1
 Regulatory setting, 8-1
 Short-term uses and long-term productivity, 17-1
 Study area, 8-3
 Alaska Coastal Management Act, 4.1-4
 Alaska Heritage Resources, 6-4, 6-6, 6-16
 Alaska National Interest Lands Conservation Act, 7-1
 Alaska Native Claims Settlement Act, 7-2

Alaska Native Regional Corporations, 1-13
 Alaska Pollution Discharge Elimination System, 4.1-5
 Alaska Railbelt Electrical Grid, 10-1
 Alaska Recreational Trails Plan, 13.2-3, 13.2-4
 Alaska Resources and Practices Act, 5.1-2
 Alternatives, 2-1
 Considered in SEA environmental review, 2-13
 Development, 2-1, 2-9, 2-10, 2-13
 Eliminated, 2-9
 Elimination, 2-9
 No-Action, 2-1, 2-23, 2-51
 Reasonable, 2-9, 2-12, 2-13
 American Indian Religious Freedom Act of 1978, 6-1
 Analysis methodology
 Air quality, 8-3
 Cultural and historic resources, 6-4
 Environmental justice, 15-2
 Fisheries, 5.4-1
 Floodplains, 4.4-1
 Geology and soils, 3-2
 Groundwater, 4.3-1
 Hazardous materials and waste sites, 13.4-4
 Land use, 13.1-3
 Navigation, 12-4
 Noise and vibration, 9-4
 Parks and recreation resources, 13.2-12
 Permafrost, 3-15
 Seismic hazards, 3-18
 Socioeconomics, 14-1
 Subsistence, 7-4
 Surface water, 4.2-1
 Threatened and endangered species, 5.5-5
 Topography, 3-2
 Transportation safety and delay, 11-2
 Vegetation resources, 5.2-1
 Visual, 13.3-8
 Wetland resources, 4.5-1
 Wildlife, 5.3-1
 Antiquities Act of 1906, 6-1
 Applicable Regulations
 Cumulative impacts, 16-1
 Archaeological and Historic Preservation Act of 1974, 6-1
 Archaeological and Historic Preservation Act. See
 Archaeological and Historic Preservation Act of 1974
 Archaeological Resources Protection Act of 1979, 6-1

B

Background
 Project, 1-3, 1-4, 1-8
 Bald and Golden Eagle Protection Act, 5.1-2
 Bears, 5.3-2, 5.3-9
 Beluga Power Plant, 10-2
 Beluga-Wasilla natural gas pipeline, 10-2, 10-3
 Big Lake Segment
 Description, 2-21
 Biological resources, 5.1-1
 Regulatory setting, 5.1-1

Short-term uses and long-term productivity, 17-1, 17-4
 Birds, 5.3-5, 5.3-11
 Landbirds, 5.3-1, 5.3-5, 5.3-8, 5.3-12
 Nesting habitat disturbance, 5.3-16, 5.3-20, 5.3-24, 5.3-26, 5.3-27, 5.3-28, 5.3-29, 5.3-30
 Nesting habitat loss, 5.3-16, 5.3-19, 5.3-20, 5.3-24, 5.3-27, 5.3-28, 5.3-29, 5.3-30
 Of conservation concern, 5.3-5
 Raptors and owls, 5.3-5
 Waterbirds, 5.3-5
 Birds of conservation concern, 5.3-5, 5.3-13
 Build alternatives, 1-14

C

Class 4 standards, 2-1
 Clean Air Act, 1-9
 Clean Water Act, 1-9
 Clean Water Act Section 401, 4.1-5
 Clean Water Act Section 404, 4.1-4
 Climate, 8-1
 Affected environment, 8-3
 Greenhouse gas emissions, 8-8
 Coastal Zone Management Act of 1972, 13.1-1
 Comment
 Meetings, public, 1-11, 1-12, 1-13,
 On the Draft EIS, 1-12, 1-13
 Communications towers, 2-8
 Comprehensive Environmental Response, Compensation, and Liability Act, 1-9
 Conceptual engineering, 1-3, 2-3, 2-9
 Connector Segment 1
 Description, 2-16, 2-17
 Connector Segment 2
 Description, 2-16, 2-17
 Connector Segment 2a
 Description, 2-16
 Connector Segment 3
 Description, 2-16, 2-17
 Connector Segment 3 Variant
 Description, 2-16
 Construction
 Access roads. See
 Bridges, 2-5
 Communications towers, 2-8
 Culverts, 2-5
 Facilities, 2-7
 Grade crossings, 2-6
 Proposed rail line, 2-3
 Railbed, 2-3
 Right-of-way, 2-1
 Schedule, 2-6
 Staging areas, 2-5
 Track, 2-4
 Track sidings, 2-8
 Consultation
 Government-to-Government, 1-13
 Government-to-Government Consultation and
 Coordination Plan, 1-13
 Tribal, 1-13
 Cook Inlet beluga whale, 5.1-1

Cooperating agencies, 1-5, 1-6, 1-7, 1-8
 Council on Environmental Quality regulations (40 Code of Federal Regulations Part 1502.16), 18-1
 Cultural and historic resources, 6-1
 Affected environment, 6-6
 Affected environment, Alaska Purchase and Territory, 1867 to 1958, 6-11
 Affected environment, cultural landscapes, 6-16
 Affected environment, cultural resources in, 6-15
 Affected environment, Dena'ina place names and trails, 6-8
 Affected environment, documented historic cultural resources, 6-16
 Affected environment, documented prehistoric cultural resources, 6-16
 Affected environment, early settlement, 6-11
 Affected environment, establishing government, 6-12
 Affected environment, history, 6-8
 Affected environment, prehistoric cultural sequences, 6-7
 Affected environment, prehistoric sites, 6-7
 Affected environment, prehistory, 6-6
 Affected environment, Russian America, 1740 to 1867, 6-10
 Affected environment, statehood, 1959 to 2008, 6-14
 Affected environment, Word War II to statehood, 6-13
 Agriculture, 6-26, 6-27
 Analysis methodology, 6-4
 Dogsledding, 6-18
 Field survey, 6-4
 Homesteading, 6-23
 Impacts, 6-27
 Recreation, 6-20
 Regulatory setting, 6-1
 Study area, 6-2
 Study area map, 6-3
 Cumulative impacts, 1-14
 Cumulative impacts
 Affected environment, 16-1
 Applicable regulations, 16-1
 Biological resources, 16-12
 Climate and air quality, 16-14
 Cultural and historic resources, 16-12
 Energy, 16-17
 Environmental consequences, 16-10
 Environmental justice, 16-19
 Geology and soils, 16-11
 Land use, 16-18
 Methodology, 16-2
 Navigation, 16-17
 Noise and vibration, 16-16
 Socioeconomics, 16-19
 Subsistence, 16-13
 Transportation safety and delay, 16-17
 Water resources, 16-11

D

Decisions, 1-6
 Dena'ina place names and trails, 6-8
 Denali earthquake, 3-18

Department of Transportation Act, 6-1
 Drinking water
 Program, 4.3-2, 4.3-3
 Quality, 4.3-2, 4.3-5, 4.3-7, 4.3-8
 Sources, 4.3-1, 4.3-2, 4.3-3
 Drinking Water Program
 Alaska, 4.1-5

E

Employment, 14-4, 14-6, 14-7
 Endangered Species Act, 1-10, 5.1-1, 5.1-2
 Energy resources, 10-1
 Affected environment, 10-1
 Consumption, 10-2, 10-3
 Environmental consequences, 10-2
 Regulatory setting, 10-1
 Study area, 10-1
 Environmental consequences
 Air quality, 8-5
 Bears, 5.3-9
 Birds, 5.3-11
 Birds of conservation concern, 5.3-13
 Cumulative impacts, 16-10
 Energy resources, 10-2
 Environmental justice, 15-7
 Fisheries, 5.4-7
 Floodplains, 4.4-2
 Furbearers, 5.3-11
 Geology and soils, 3-2
 Hazardous materials and waste sites, 13.4-10
 Land use, 13.1-8
 Marine mammals, 5.3-11
 Moose, 5.3-9
 Navigation, 12-10
 Other mammals, 5.3-11
 Parks and recreation resources, 13.2-19
 Permafrost, 3-16
 Seismic hazards, 3-18
 Socioeconomics, 14-3
 Subsistence, 7-12
 Surface water, 4.2-10
 Threatened and endangered species, 5.5-4
 Topography, 3-2
 Transportation safety and delay, 11-3
 Vegetation resources, 5.2-5
 Visual, 13.3-13
 Wetland resources, 4.5-6
 Wildlife, 5.3-6
 Wolves, 5.3-10
 Environmental documentation, 1-3, 1-4
 Environmental justice, 1-11
 Affected environment, 15-3
 Analysis methodology, 15-2
 Environmental consequences, 15-2
 Regulatory setting, 15-1, 15-2
 Study area, 15-1
 EnvSeismic hazards
 Environmental consequences, 3-18
 Essential Fish Habitat, 1-11, 2-33
 Executive Order 11988

Floodplain Management, 4.1-3
 Executive Order 11990
 Protection of Wetlands, 4.1-3
 Executive Order 13007
 Indian Sacred Sites, 6-1

F

Facilities
 Rail line support, 2-7
 Farmland Protection Policy Act of 1981, 3-1
 Federal Land Policy and Management Act, 13.2-1
 Federal regulations
 Land use, 13.1-1
 Navigation, 12-1
 Fire
 Wildland, 5.2-8
 Wildland fire and fire management, 5.2-10
 Fish and Wildlife Coordination Act, 5.1-2
 Fish Creek Management Plan, 13.2-3, 13.2-5
 Fisheries
 Affected environment, 5.4-4
 Analysis methodology, 5.4-1
 Environmental consequences, 5.4-7
 Study area, 5.4-1
 Floodplains
 Affected environment, 4.4-1
 Analysis methodology, 4.4-1
 Environmental consequences, 4.4-2
 Study area, 4.4-1
 Furbearers, 5.3-4, 5.3-11

G

Geology. See Topography, geology, and soils.
 Geology and soils, 3-1, 3-5
 Affected environment, 3-2
 Analysis methodology, 3-2
 Environmental consequences, 3-2
 Goose Creek, 4.5-18
 Grade crossing delay, 11-6
 Grade crossing safety
 Hazard index, 11-2, 11-5, 11-6
 Predicted accident frequency, 11-2, 11-3, 11-5
 Greenhouse gas emissions, 8-8
 Groundwater
 Affected environment, 4.3-1
 Analysis methodology, 4.3-1
 Environmental consequences, 4.3-7
 Recharge, 4.3-7, 4.3-8, 4.3-9
 Study area, 4.3-1

H

Habitats
 Fish, wildlife, and plant - loss of, 4.5-6, 4.5-7, 4.5-8
 Hazardous materials and waste sites,
 Affected environment, 13.4-14
 Analysis methodology, 13.4-14
 Environmental consequences, 13.4-1

- Regulatory setting, 13.4-1, 13.4-4
- Study area, 13.4-1
- Historic properties
 - Definition, 6-1
- Historic resources. See Cultural and historic resources.
- Houston North Segment
 - Description, 2-19
- Houston Segment
 - Description, 2-19
- Houston South Segment
 - Description, 2-19
- Hydrologic functions, natural
 - Interruption and reduction of, 4.5-8
- Hydrologic environment, 4.2-2

I

- Iditarod National Historic Trail, 13.2-12, 13.2-14
- Iditarod National Historic Trail Comprehensive Management Plan, 13.2-1
- Iditarod Trail, 14-5
- Impacts
 - Archaeological sites, 6-28
 - Cultural and historic resources, 6-27
 - Cultural landscapes, 6-16
 - Direct and indirect, 1-14
 - Historic trails, structures, and sites, 6-15, 6-29
 - Noise and vibration, 9-5, 9-7, 9-8
- Impacts, environmental
 - Comparison, 2-23
- Invasive plants
 - Spread of, 5.2-2, 5.2-4, 5.2-6

L

- Land and Water Conservation Fund, 13.2-1, 13.2-2
- Land Ownership
 - Existing, 13.1-3
- Land use
 - Affected environment, 13.1-1, 13.1-3, 13.1-10
 - Analysis methodology, 13.1-3
 - Environmental consequences, 13.1-1, 13.1-10
 - Existing land use, 13.1-6
 - Existing plans, 13.1-8
 - Federal regulations, 13.1-1
 - Local regulations, 13.1-2
 - Regulatory setting, 13.1-1
 - Short-term uses and long-term productivity, 17-1, 17-2
 - State regulations, 13.1-1
 - Study area, 13.1-3
- Landbirds, 5.3-5
- Lead agency, 1-6
- Little Susitna State Recreation River, 14-6
- Local regulations
 - Land Use, 13.1-2
 - Navigation, 12-4
- Long Range Transportation Plan, 1-3

M

- Mac East Segment

- Description, 2-13, 2-16, 2-17
- Mac East Variant Segment
 - Description, 2-13, 2-16, 2-17
- Mac West Segment
 - Description, 2-13, 2-16, 2-17
- Magnuson-Stevens Fishery Conservation and Management Act, 1-11, 5.1-2
- Maintenance, 2-1, 2-3, 2-7, 2-8
- Marine mammals, 5.3-4, 5.3-7, 5.3-11
- Marine Mammal Protection Act, 5.1-2
- Matanuska-Susitna Borough
 - Long Range Transportation Plan, 1-3
- Matanuska-Susitna Borough Comprehensive Plan, 13.2-5
- Matanuska-Susitna Borough Recreational Trails Plan, 13.2-5
- Materials acquisition, 2-4
- Methodology
 - Cumulative impacts, 16-2
- Migratory Bird Treat Act, 5.1-2
- Mining Law of 1866, 13.2-1
- Mitigation
 - Limits of the Board's Conditioning Power, 19-1
 - Negotiated agreements, 19-2
 - Preliminary, 19-2
 - SEA's approach, 19-1
 - Voluntary, 19-2
- Mitigation measures
 - Preliminary, 19-1
 - Voluntary, 19-2
- Moose, 5.3-2, 5.3-3, 5.3-4
 - Density and generalized movement patterns, 5.3-15

N

- Nancy Lake Recreation Area, 14-5
- Nancy Lakes State Recreation Area Master Plan, 13.2-3
- National Environmental Policy Act (NEPA), 18-1
- National Flood Insurance Act of 1968, 4.1-4
- National Historic Preservation Act, 1-9
- National Marine Fisheries Service, 1-10
- National Pollutant Discharge Elimination System, 4.1-1
- National Trails System Act, 6-1
- Native American Graves Protection and Repatriation Act, 6-1
- Navigation
 - Affected environment, 12-1, 12-5
 - Analysis methodology, 12-1, 12-4
 - Environmental consequences, 12-12, 12-15
 - Federal regulations, 12-1
 - Local regulations, 12-4
 - State regulations, 12-2, 12-11, 12-12
 - Study area, 12-1, 12-4, 12-5
- Navigation resources
 - Regulatory setting, 12-1
- NEPA Section 102 (42 United States Code 4332), 18-1
- NEPA Process, 1-5
- No-Action Alternative, 1-5, 1-6, 1-7, 2-23
- Noise and vibration, 9-1
 - Affected environment, 9-1, 9-4
 - Analysis Methodology, 9-2
 - Impacts, 9-1, 9-2, 9-3

Regulatory setting, 9-1
Northern Segments, 2-13, 2-19

O

Operations, 2-8
Organization of the EIS, 1-13

P

Parks and Recreation resources
Affected environment, 13.2-1
Analysis methodology, 13.2-12
Environmental consequences, 13.2-19
Regulatory setting, 13.2-1
Study area, 13.2-5
Permafrost, 3-15
Affected environment, 3-15
Analysis methodology, 3-15, 3-18
Environmental consequences, 3-15, 3-16, 3-17
Permits
Flood hazard development, 4.1-5
Floodplain development, 4.1-3, 4.1-5
Temporary water use, 4.1-5
Petition, 1-1
For authority to construct and operate, 1-1, 1-5
Plants
Invasive and noxious, 5.2-4, 5.2-5, 5.2-6
Rare, 5.2-6
Rare, impacts to, 5.2-8
Point MacKenzie Agricultural Area, 3-2, 13.1-1, 14-2
Port MacKenzie Agricultural Project, 2-13
Port MacKenzie District, 10-2, 10-3, 14-4, 14-7
Preliminary study, 1-3
Project area, 1-1, 1-10
Project context, 1-4
Proposed action, 1-5, 2-1
Description of, 2-1
Purpose and need, 2-12
Public Involvement, 1-11, 1-13
Public participation, 2-9

Q

Quality Criteria for Water, 1986, 4.2-5

R

Rail bed, 2-1, 2-3, 2-4, 2-5
Raptors and owls, 5.3-5
Recreation resources. See Parks and Recreation Resources.
Red Shirt Lake, 3-2
Regulatory setting
Biological resources, 5.1-1
Climate and air quality, 8-1, 8-9
Cultural and historic resources, 6-1, 6-4
Energy Resources, 10-1, 10-3, 10-4

Environmental justice, 15-1, 15-2, 15-3
Hazardous materials and waste sites, 13.4-1
Land use, 13.1-1, 13.1-2, 13.1-3
Navigation resources, 12-1, 12-4
Noise and vibration, 9-1, 9-2
Parks and recreation resources, 13.2-1
Socioeconomics, 14-1, 14-2, 14-3
Subsistence, 7-1, 7-2, 7-3
Topography, geology, and soils, 3-1
Transportation safety and delay, 11-1
Visual, 13.3-3
Water resources, 4.1-1
Resource Conservation and Recovery Act, 1-9
Right-of-Way, 2-3
Riparian zones
Loss of, 4.5-8, 4.5-10
Rivers and Harbors Act Section 10, 4.1-3
Rivers and Harbors Act Section 9, 4.1-4

S

Safe Drinking Water Act, 4.1-2, 4.1-5
Safety
Grade crossing, 11-3, 11-4, 11-5
Rail, 11-6, 11-7, 11-8
Scoping, 1-11, 1-12
Section 4(f), 2-15, 2-45
Section of Environmental Analysis (SEA)
mitigation, 19-1, 19-2
Segments
rail line
Big Lake, 2-15, 2-16, 2-17, 2-21
Connector 1, 2-15, 2-16, 2-17
Connector 2, 2-15, 2-16, 2-17
Connector 2a, 2-15
Connector 3, 2-15, 2-16, 2-17, 2-19
Connector 3 Variant, 2-15
Connector segments, 2-17
Houston, 2-15, 2-16, 2-17, 2-19
Houston North, 2-15, 2-16, 2-19
Houston South, 2-15, 2-19
Mac East, 2-15, 2-16, 2-17, 2-18
Mac East Variant, 2-15
Mac West, 2-15, 2-16, 2-17, 2-18
Northern segments, 2-19, 2-23
Southern segments, 2-16, 2-17
Willow, 2-15, 2-16, 2-17
Seismic hazards, 3-18
Affected environment, 3-15, 3-18
Analysis methodology, 3-15, 3-18
Short-term uses and long-term productivity
Air quality, 17-6
Biological resources, 17-4
Land use, 17-2
Water resources, 17-3, 17-4
Socioeconomics, 14-1, 14-2, 14-3
Affected environment, 14-3
Analysis methodology, 14-2
Environmental consequences, 14-6, 14-11, 14-12
Regulatory setting, 14-1
Study Area, 14-3

Soils. See Geology and soils, See Topography, geology, and soils.

Soil compaction and erosion, 5.2-7

Soils, hydric

- Loss and degradation of, 4.5-8

Southeast Susitna Area Plan, 13.2-3, 13.2-17

Southern Segments, 2-13, 2-16

Staging areas, 2-1, 2-5

State regulations

- Land use, 13.1-2, 13.1-3
- Navigation, 12-2, 12-3, 12-4

Storm and flood water storage capacity

- Loss of, 4.5-8

Study area

- Air quality, 8-3, 8-4
- Cultural and historic resources, 6-1, 6-4
- Energy resources, 10-3, 10-4
- Environmental justice, 15-1, 15-2, 15-3
- Fisheries, 5.4-1, 5.4-4
- Floodplains, 4.4-1, 4.4-2, 4.4-3
- Groundwater, 4.3-1, 4.3-2, 4.3-3
- Hazardous materials and waste sites, 13.4-3
- Land use, 13.1-1, 13.1-2, 13.1-3
- Navigation, 12-4, 12-5, 12-6
- Parks and Recreation Resources, 13.2-5
- Socioeconomics, 14-1, 14-2, 14-3
- Subsistence, 7-2, 7-3, 7-4
- Surface water, 4.2-1, 4.2-2
- Threatened and endangered species, 5.5-1
- Topography, geology, and soils, 3-1
- Vegetation resources, 5.2-1
- Visual, 13.3-8
- Wetland resources, 4.5-1
- Wildlife, 5.3-1, 5.3-2

Subsistence, 7-1

- Affected environment, 7-7
- Analysis methodology, 7-4
- Environmental consequences, 7-12, 7-15
- Regulatory setting, 7-1
- Study area, 7-4

Subsistence access, 7-11

Subsistence competition, 7-11

Subsistence resource availability, 7-9, 7-14, 7-15

Subsistence use areas, 7-6, 7-7, 7-9

Surface water

- Affected environment, 4.2-2
- Analysis methodology, 4.2-1
- Environmental consequences, 4.2-1, 4.2-10, 4.2-29
- Study area, 4.2-1
- Water quality, 4.2-2, 4.2-5, 4.2-7

Susitna Area Plan, 13.2-3

Susitna Basin Recreation Rivers Management Plan, 13.2-3

Susitna Flats Game Refuge, 14-8

Susitna Flats State Game Refuge Management Plan, 13.2-4

T

Threatened and endangered species

- Affected environment, 5.5-1
- Analysis methodology, 5.5-1
- Environmental consequences, 5.5-1, 5.5-4, 5.5-5

- Study area, 5.5-1, 5.5-2

Topography, 3-1, 3-2

- Affected environment, 3-2
- Analysis methodology, 3-2, 3-5
- Environmental consequences, 3-2, 3-5, 3-6
- Slope analysis, 3-2, 3-4

Topography, geology, and soils, 3-1

- Regulatory setting, 3-1
- Study area, 3-1, 3-2

Toxic Substances Control Act, 1-9

Track Sidings, 2-8

Train traffic

- Anticipated on proposed rail extension, 1-1

Transportation safety and delay, 11-1, 11-8

- Affected environment, 11-1, 11-3
- Analysis methodology, 11-1, 11-2
- Environmental consequences, 11-1, 11-3, 11-8
- Grade crossing delay, 11-6
- Grade crossing safety, 11-4, 11-5
- Regulatory setting, 11-1

Tribes

- Federally recognized, 1-13
- Tribal organizations, 1-11, 1-12, 1-13

U

U.S. Fish and Wildlife Service, 1-10

U.S. Department of Transportation Act

- Section 4(f). See Section 4(f).

V

Vegetation resources, 5.2-1

- Affected environment, 5.2-1
- Analysis methodology, 5.2-1
- Clearing and fill placement, 5.2-7
- Dust deposition, 5.2-7
- Environmental consequences, 5.2-6
- Fragmentation, 5.2-7, 5.2-9
- Impacts to rare plants, 5.2-8
- Impacts to
 - summary, 5.2-21
- Invasive and noxious plants, 5.2-5
- Maintenance clearing, 5.2-10
- Rare plants, 5.2-6
- Runoff and sedimentation, 5.2-11
- Study area, 5.2-1, 5.2-2
- Wildland fire and fire management, 5.2-11
- Wildland fires, 5.2-8, 5.2-9

Vibration. See Noise and vibration.

Visual resources, 13.3-1

- Affected environment, 13.3-9
- Analysis methodology, 13.3-8
- Environmental consequences, 13.3-13
- Regulatory setting, 13.3-2
- Study area, 13.3-8

W

Waterbirds, 5.3-5

- Water quality
 - Degradation, 4.5-7, 4.5-8, 4.5-9
 - Surface water, 4.2-5, 4.2-6, 4.2-7
 - Watersheds, 4.2-2, 4.2-3, 4.2-4
 - Wetland resources, 4.5-1
 - Affected environment, 4.5-2
 - Analysis methodology, 4.5-1
 - Environmental consequences, 4.5-6, 4.5-26
 - Functions and values, 4.5-5, 4.5-7
 - Regulatory setting, 4.1-2
 - Short-term uses and long-term productivity, 17-1
 - Study area, 4.5-1
 - Unique or sensitive, 4.5-3
 - Wetlands
 - Definition, 4.5-2
 - Emergent, 4.5-3, 4.5-5
 - Forested, 4.5-3, 4.5-5
 - Mitigation bank lands, 4.5-3, 4.5-5
 - Riverine, 4.5-3, 4.5-5
 - Scrub/shrub, 4.5-3, 4.5-5
 - Wildlife, 5.3-1
 - Affected environment, 5.3-2
 - Analysis methodology, 5.3-1
 - Study area, 5.3-1
 - Wildlife habitat
 - Fragmentation, 5.3-12, 5.3-22
 - Loss of, 5.3-12, 5.3-14, 5.3-19, 5.3-21
 - Willow Creek State Recreation Area, 14-5, 14-10
 - Willow Segment
 - Description, 2-19
 - Wolves, 5.3-3, 5.3-4, 5.3-8, 5.3-10
- Z**
- Zoning
 - Existing zoning, 13.1-7