APPENDIX B
Environmental Impact Assessment Criteria

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Environmental Impact Assessment Criteria

Table of Contents

1.1 INTRODUCTION

The U.S. Army Corps of Engineers (USACE) has identified a broad spectrum of general and project-specific criteria, the "environmental impact analysis criteria" with which to analyze the potential effects from implementation of each of the action alternatives. These criteria, organized into four groups, serve as the basis for the impact analysis presented in Chapter 4:

- Institutional Criteria;
- Public Criteria;
- Technical Criteria; and
- Scientific Criteria.

1.2 INSTITUTIONAL CRITERIA

Institutional criteria include those criteria required by the National Environmental Policy Act (NEPA) for federal agencies to take into consideration when assessing the potential environmental consequences of proposed actions in their decision-making process. The intent of NEPA is to protect, restore, or enhance the environment through well-informed federal decisions. The USACE has prepared this Environmental Impact Statement (EIS) in accordance with the requirements as outlined in the following sections.

1.2.1 National Environmental Policy Act

This EIS was prepared by the USACE in accordance with the NEPA of 1969 (42 U.S. Code [USC] § 4321), as implemented by Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations [CFR] §§ 1500-1508), and USACE Engineer Regulations (ER) 200-2-2. This EIS analyzes the potential impacts of the Proposed Action and reasonable alternatives, and aims to provide sufficient evidence for a Record of Decision (ROD), should the decision maker choose to sign a ROD.

1.2.2 Council on Environmental Quality Regulations

The CEQ, established under NEPA, implements and oversees federal processes. The CEQ regulations implement the procedural provisions of NEPA to ensure that federal programs comply with the guidelines of NEPA. Congress established the CEQ within the Executive Office of the President as part of NEPA. The Environmental Quality Improvement Act of 1970 provides additional authority for CEQ regulations. The CEQ has issued the *Regulations for Implementing Procedural Provisions of NEPA* (40 CFR §§ 1500-1508).

1.2.3 U.S. Army Corps of Engineers Engineering Regulation 200-2-2

USACE ER 200-2-2, *Procedures for Implementing NEPA*, dated 4 March 1988, establishes USACE procedures for implementing NEPA and CEQ regulations. The implementing procedures in ER 200-2-2 provide a framework for complying with NEPA and CEQ requirements for all applicable USACE actions.

1.2.4 Clean Air Act

The Clean Air Act (CAA) of 1970, as amended, (42 USC §§ 7401-7671q) including the 1990 General Conformity Rule, sets National Ambient Air Quality Standards for sulfur dioxide, carbon monoxide, nitrogen dioxide, lead, and ozone, and particulate matter with a diameter less than or equal to 10 microns and 2.5 microns. The CAA regulates construction and operation of new stationary sources and modifications of existing stationary sources in its New Source Review program. Non-attainment areas require permitting of all major pollution sources, attainment areas require the installation of the best

available control technology for all major sources, and major pollution sources require an air quality permit before construction.

1.2.5 Clean Water Act

The Clean Water Act (CWA) of 1972, as amended (33 USC §§ 1251 et seq.), is the primary federal law that protects the nation's waters, including lakes, rivers, and coastal areas. The primary objective of the CWA is to restore and maintain the integrity of the nation's waters. Jurisdictional waters of the U.S. are regulated resources and are subject to federal authority under Section 404 of the CWA.

The USACE broadly defines jurisdictional waters to include navigable waters, intermittent streams, impoundments, tributary streams, and wetlands. Areas meeting the "waters of the U.S." definition are under the jurisdiction of the USACE. Anyone proposing to conduct a project that requires a federal permit or involves dredge or fill activities that may result in a discharge to U.S. surface waters and/or waters of the U.S. is required to obtain a CWA Section 401 Water Quality Certification, verifying that the project activities will comply with water quality standards.

1.2.6 Comprehensive Environmental Response, Compensation, and Liability Act

Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 USC §§ 9601-9675) on December 11, 1980. This law created a tax on the chemical and petroleum industries and provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA also established "Superfund" to aid in the rehabilitation of polluted sites in which responsible parties cannot be determined or are no longer in existence.

1.2.7 Endangered Species Act

The Endangered Species Act (ESA) of 1973, as amended (16 USC §§ 1531 et seq.), establishes a process for identifying and listing plant and animal species as "threatened" or "endangered." It requires all federal agencies to carry out programs for the conservation of federally listed endangered or threatened plants and animals. It also prohibits actions by federal agencies that would likely jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of designated critical habitat.

Section 7 of the ESA requires federal agencies proposing actions that may affect listed species or critical habitats to consult with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service to ensure that they do not jeopardize listed species or destroy critical habitat. Section 9 of the ESA prohibits the "taking" of listed species. The ESA (§ 3[19]) defines the term "take" to mean to "pursue, hunt, shoot, wound, kill, trap, capture, or collect" any listed species, or to attempt those activities.

1.2.8 Executive Order 11988 – Floodplain Management

Executive Order (EO) 11988 requires federal agencies to avoid "to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative." In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities" for the following actions:

- Acquiring, managing, and disposing of federal lands and facilities;
- Providing federally-undertaken, financed, or assisted construction and improvements; and
- Conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.

USACE ER 1165-2-26 contains the USACE's policy and guidance for implementing EO 11988. Per ER 1165-2-26, the USACE must first determine whether there are practicable alternatives to placing a proposed project in a floodplain. In addition, ER 1165-2-26 specifies that all reasonable factors should be taken into consideration when determining practicability. These factors are: conservation; economics; visual; natural and beneficial values served by floodplains; impact of floods on human safety; locational advantage; the functional need for locating the development in the floodplain; historic values; fish and wildlife habitat values; endangered and threatened species; federal and state designations of wild and scenic rivers, refuges, etc.; and in general the needs and welfare of the people.

1.2.9 Executive Order 11990 – Protection of Wetlands

The purpose of EO 11990, dated May 24, 1977, is to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands." To meet these objectives, EO 11990 requires federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. The Order applies to:

- Acquisition, management, and disposition of Federal lands and facilities construction and improvement projects which are undertaken, financed or assisted by federal agencies;
- Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.

1.2.10 Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations

EO 12989, dated February 11, 1994, aims to: 1) focus the attention of federal agencies on the human health and environmental conditions in minority communities and low-income communities with the goal of achieving environmental justice; 2) foster non-discrimination in federal programs that substantially affect human health or the environment; and 3) give minority communities and low-income communities greater opportunities for public participation in, and access to public information on, matters relating to human health and the environment.

1.2.11 Executive Order 13045 - Protection of Children from Environmental Health Risks and Safety Risks

Issued on April 21, 1997, EO 13045 requires each federal agency to "…make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children and shall…ensure that its policies, programs, activities, and standards address disproportionate risks to children…"

1.2.12 Executive Order 13112 – Invasive Species

EO 13112, issued on February 3, 1999, 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, and established the Invasive Species Council. The intent of EO 13112 is to prevent the introduction of

invasive species; provide for their control; and minimize the economic, ecological, and human health impacts that invasive species cause.

1.2.13 Executive Order 13175 - Consultation and Coordination with Indian Tribal Governments

EO 13175, dated November 6, 2000, directs federal agencies to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, to strengthen the U.S. government-to-government relationships with Indian tribes, and to reduce the imposition of unfunded mandates upon Indian tribes.

1.2.14 Executive Order 13186 - Responsibilities of Federal Agencies to Protect Migratory Birds

EO 13186, dated January 10, 2001, directs executive departments and agencies to take certain actions to advance the provisions of the Migratory Bird Treaty Act (MBTA). The U.S. recognized the critical importance of this shared resource by ratifying international, bilateral conventions for the conservation of migratory birds. These migratory bird conventions impose substantive obligations on the U.S. for the conservation of migratory birds and their habitats. Through the MBTA, the U.S. has implemented these domestic obligations under these migratory bird conventions.

1.2.15 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA, 16 USC §§ 661-667(e)) provides the basic authority for the USFWS's involvement in evaluating impacts to fish and wildlife from proposed water resource development projects. It requires that fish and wildlife resources receive equal consideration to other project features. It also requires Federal agencies that construct, license or permit water resource development projects to first consult with the USFWS and state fish and wildlife agency regarding the impacts on fish and wildlife resources and measures to mitigate these impacts.

1.2.16 Historic Sites Act of 1935

The Historic Sites Act (HSA) of 1935, as amended (16 USC §§ 461-467), establishes a national policy for the preservation of historic resources, including sites and buildings. The HSA led to the establishment of the National Historic Landmarks program and forms the basis for the Historic American Building Survey/Historic American Engineering Record, the program that establishes standards for conducting architectural and engineering documentation.

1.2.17 Memorandum of Agreement between the U.S. Army and the Federal Aviation Administration to Address Aircraft-Wildlife Strikes

The Memorandum of Agreement (MOA) service to establish awareness among the signatory agencies (which also include the U.S. Air Force, USEPA, USFWS, and U.S. Department of Agriculture) of the risks that aircraft-wildlife strikes pose to safe aviation. This MOA establish procedures necessary to coordinate agency missions to more effectively address existing and future environmental conditions contributing to aircraft-wildlife strikes throughout the United States. These efforts are intended to minimize wildlife risks to aviation and human safety, while protecting environmental resources. The MOA relies on FAA Advisory Circular (AC) 150/5200-338 (August 2007) to provide siting criteria for developments that may attract wildlife that is hazardous to aviation. The MOA was signed by the U.S. Army on 9 December 2002 and by the FAA on 17 December 2002.

1.2.18 Memorandum of Agreement between the U.S. Army and the USEPA Discussing the Determination of Mitigation under the Clean Water Act Section 404(b)(1) Guidelines

The MOA provides guidance to the USACE and the EPA for implementing CWA Section 404(b)(1) when considering mitigation requirements for standard permit applications. The USACE uses this MOA when making determinations of compliance with CWA Section 404(b)(1) with respect to mitigation for standard permit applications. The EPA uses this MOA in developing its position on compliance with the CWA Section 404(b)(1) for proposed discharges and will reflect this MOA when commenting on standard permit applications. This MOA also specifically emphasizes the requirement that the least environmentally damaging practicable alternative be selected when planning actions subject to CWA Section 404(b)(1). The MOA was signed by the U.S. Army and the USEPA on 6 February 1990.

1.2.19 Migratory Bird Treaty Act

The MBTA of 1918, as amended (16 USC §§ 703 et seq.), is the main regulatory mechanism for protecting migratory birds in the U.S. Migratory birds generally include all native birds in the U.S., except non-migratory species such as quail and turkey. Under the provisions of the MBTA, it is unlawful "by any means or manner to pursue, hunt, take, capture [or] kill" any migratory birds except as permitted by regulations issued by the USFWS.

1.2.20 National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966, as amended (16 USC § 470), recognizes the nation's historic heritage and establishes a national policy for the preservation of historic properties as well as the National Register of Historic Places. Section 106 of the NHPA requires federal agencies to take into account the effects of federal undertakings on historic properties, and affords the Advisory Council on Historic Preservation and State Historic Preservation Officer a reasonable opportunity to comment on such undertakings. The Section 106 process, as defined in 36 CFR § 800, provides for identifying and evaluating historic properties, for determining the effects of proposed projects on such properties, and for developing ways to resolve adverse effects through consultation with interested parties.

1.2.21 Noise Control Act

The Noise Control Act (NCA) of 1972 (42 USC §§ 4901-4918) initiated a regulatory program with the intent of protecting human health and minimizing annoyance of noise to the general public. The NCA established mechanisms of setting emission standards for noise, including motor vehicles. The regulatory authority of the NCA requirements lies with the USEPA.

1.2.22 Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976, as amended (42 USC §§ 6901 et seq.), authorizes the U.S. Environmental Protection Agency (USEPA) to manage hazardous waste. This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled the USEPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

1.2.23 Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act of 1899 (as amended; 33 USC § 403) regulates structures or work that would affect navigable waters of the U.S. Structures include any pier, wharf, bulkhead, etc. Work includes dredging, filling, excavation, or other modifications to navigable waters of the U.S. The USACE issues permits for work or structures in navigable waters of the U.S.

1.2.24 Safe Drinking Water Act

Congress originally passed the Safe Drinking Water Act in 1974 (42 USC §§ 300 et seq.) to protect public health by regulating the nation's public drinking water supply. The law, amended in 1986 and 1996, requires many actions to protect drinking water and its sources.

1.3 PUBLIC CRITERIA

Public Criteria include those criteria deemed important by the public. These criteria include things such as flood risk management, visual corridors, and recreational opportunities. As part of the public involvement process, the USACE solicited input from the public as to public areas of concern. The following areas were identified by the public as being of concern and worthy of consideration during the public scoping period:

- Aquatic Recreation (canoeing);
- River Morphology;
- Wildlife and Plant Diversity;
- Geological and Paleontological Resources;
- Preservation and Conservation of Natural Resources;
- Flood Risk Management;
- Wetland Restoration; and
- Cultural Resources.

At the conclusion of the Public Scoping Period, the USACE prepared a report capturing all received comments.

1.4 TECHNICAL CRITERIA

Technical Criteria include those criteria developed by the USACE that demonstrate consistency with the technical aspects of the USACE mission, namely, flood risk management. These criteria will assist in determining the “technical soundness” of the project. A project must meet the following technical criteria:

1. Proposed modifications function per intended technical purposes
2. Project complies with all relevant laws
3. Geotechnical Criteria:
    a. Technical data must be provided to validate and verify side slope stability, stability of slope protection, and constructability of excavations.
4. Civil Criteria:
    a. Demolition Plans: Provide sufficient data to describe items to be removed.
    b. Layout Plans: Provide adequate horizontal and vertical controls for all new project features.

c. Grading Plans: Provide grading limits with proposed contour lines, spot elevations, finished elevations of structures and match to adjacent existing ground surfaces.

d. Utility and Bridge Relocations: Assure that all pertinent utility or bridge details are properly cross-referenced to be removed or relocated and not impede the function of the project.

e. Construction Phasing and Traffic Control: Procedures and coordination for the integration of several work items, other work in progress, utility service disconnections, methods, and equipment for each sequence of operation, a traffic control plan complying with local, state, and federal criteria for haul routes and existing traffic.

f. Outfall Modification Criteria: Provide adequate location of the outfall structures to convey the local runoff flow discharging laterally into the flood damage reduction project.

g. Right-of-Way, Disposal, Access, and Staging Area: Right-Of-Way will be described in sufficient detail in order for accurate project land acreage to be developed and quantified for the local sponsors to determine the real estate requirements for this project.

h. Care of Water Criteria: Control of water in the construction area regardless of its source or quantity, up to the project limits.

5. Hydrology and Hydraulics Criteria:

    a. The project does not degrade the stream system by causing stream bank instability, increasing sediment deposition in stream channels, increasing lateral erosion of stream banks causing widening of the channel, or causing vertical erosion of the channel bed leading to channel incision and head cutting.

1.4.1 1988 Upper Trinity River Environmental Impact Statement Record of Decision Criteria

Based on the Trinity River Environmental Impact Statement (TREIS) findings, the USACE issued a ROD in April 1988 specifying criteria the USACE would use to evaluate Section 408 permit applications in the Trinity River Corridor (TRC), specifically, projects located within the standard project flood (SPF) floodplain of the Elm Fork, the West Fork, and the main stem of the Trinity River. The criteria as presented in the ROD are as follows:

1. Hydraulic Impacts: No rise in the 100-year or SPF elevation for the proposed condition will be allowed;
2. Storage Capacity: The maximum allowable loss in storage capacity for the 100-year and SPF discharges will be 0 percent and 5% respectively; and
3. Water Velocity: Alterations in the floodplain may not create or increase an erosive water velocity on or off-site.

In addition, the ROD further states that an action proponent must consider the cumulative impacts of other projects in the vicinity:

> "Cumulative Impacts - The upstream, adjacent, and downstream effects of the applicant's proposal will be considered. The proposal will be reviewed on the assumption that adjacent projects will be allowed to have an equitable chance to be built, such that the cumulative impacts of both will not exceed the common criteria."

The USACE has used the Upper Trinity River ROD hydrologic and hydraulic (H&H) criteria since the signing of the ROD in 1988 as a measure to evaluate the impacts of proposed developments in the TREIS study area for Section 408 permit actions. These criteria are applicable to the Dallas Floodway Project (DFP) EIS.

1.4.2 Regional Trinity River Corridor Development Certificate Process

In response to the TREIS and ROD, the cities and counties in the TRC formed the Trinity River Steering Committee (Steering Committee), facilitated by the North Central Texas Council of Governments (NCTCOG). The Steering Committee adopted a Draft Statement of Principles for Common Permit Criteria (January 1988), a Resolution for a Joint Trinity River Corridor Development Certificate (CDC) Process (December 1988), and a Regional Policy Position on the Trinity River Corridor (January 1989).

In addition to the policy-oriented Steering Committee, a technically oriented Flood Management Task Force comprised of city and county staff developed a process and manual based on the criteria outlined in the USACE TREIS ROD. The result was the publication of the 1st Edition of the CDC Manual on May 23, 1991. Nearly two years later, all participating cities and counties had officially amended their floodplain ordinances to adopt the CDC Common Regional Criteria and process. This Common Regional Criteria is nearly identical to the H&H criteria established in the 1988 TREIS ROD with the only difference being the statement: "No increase in the 100-year flood water surface elevation and no significant increase in the SPF water surface elevation."

The NCTCOG uses the Common Regional Criteria for CDC permit actions to evaluate proposed projects within the Regulatory Zone of the Upper Trinity watershed. Although the CDC Manual serves as a guide for the H&H analysis required for CDC development activity permit applications, the H&H technical portions of the CDC Manual can also be used to describe the H&H evaluation and analysis procedure for USACE Section 408 permit actions as the H&H aspects of the two programs are similar. Thus, prior to initiation, a project must apply for and obtain a CDC from the NCTCOG.

1.4.3 Levee Stability

A project in or adjacent to the DFP must not potentially decrease levee stability and thus the protection of areas behind the levees from riverine flooding. Components of levee stability include ensuring no levee penetration, no ground-disturbances within 50 feet of the toe of the levee(s), and no actions that would result in the increased potential for levee erosion, and therefore decrease the existing level of riverine flood risk management.

1.4.4 Operational Costs

A project should minimize resulting operational costs under design conditions with the assumption that staff will perform recommended maintenance activities.

1.4.5 Hydrologic and Hydraulic Modeling and Evaluation Process

The TREIS ROD criteria are used to ensure that projects are designed in such a way that there would be 1) no flood rises in the water surface profile, and 2) no valley storage losses for the 100-year flood and less than 5% valley storage loss for the SPF event. The evaluation process for the hydraulic impacts of a proposed project requires that a permit applicant secure the services of an engineer capable of preparing a Hydrologic Engineering Center – River Analysis System (HEC-RAS) hydraulic model using the current CDC HEC-RAS model as a base condition. The CDC HEC-RAS model is maintained and usually

distributed by the USACE to be used for evaluation of all projects that require a Section 408 Permit or a CDC Permit.

1.4.5.1 Modeling

Often the development of a With-Project HEC-RAS model requires that additional cross sections be added to the CDC Model to approximate the proposed floodplain geometry changes due to a proposed project. In these instances, a new base model is developed with the addition of cross sections to the original CDC HEC-RAS model. This newly developed model is referred to in the CDC Manual as the "Revised CDC Model" and is then used for comparison to the With-Project Model to evaluate the project's hydraulic impacts. The Revised CDC Model and the With-Project Model are then used to compute water surface profiles through the river reach affected by the proposed development and make a comparison of the water surface elevations on a cross section by cross section basis.

1.4.5.2 Valley Storage

The second part of the evaluation is the valley storage computation. Valley storage is defined as the water volume that occupies the floodplain during the passing of the flood event and in this evaluation only the volume at the flood event peak is computed. Essentially, valley storage is a measure of floodplain volume capacity. Changes in floodplain volume due to developments can result in changes in the timing of flood peaks and potentially increase the flood event peak flow. A significant loss of valley storage may in turn increase the risk of flood damage downstream of the proposed development. Valley storage change is necessary to determine if a loss of valley storage would occur due to the project implementation, and to quantify the magnitude of the change. As the hydraulic impact evaluation is a peak flow analysis for the 100-year and the SPF events, the valley storage evaluation is also a peak flow determination.

Valley storage change resulting from a proposed project is based on a comparison of the valley storage or water volume that originally exists on a project site to the valley storage with the project in place for both on-site and off-site areas (if a valley storage change occurs off-site). On-site valley storage is the peak flow water volume below the 100-year and the SPF water surface that exists only on the project site. All other areas upstream, downstream, and on the opposite side of the river from the project site must be excluded in the on-site valley storage computation in order to afford adjacent property owners the same opportunity for development.

While the ROD criteria limit the impacts of proposed projects to no rise in the water surface profile, it does not preclude a lowering of the water surface profile. However, if a proposed project results in a lowering of the water surface profile off-site, this would be regarded as a loss in valley storage and must be computed in the total valley storage change.

In some cases, valley storage losses occurring on one project site may be compensated at another site if it is within a reasonable distance with consideration for hydrologic impacts. Both sites would then be regarded as one project and permit conditions would be contingent on both sites for as long as the permit is valid. In this case, both sites would be used to compute the on-site valley storage. This is the normal process for smaller projects or projects that involve one or two disconnected sites; however, for more complex projects that involve multiple sites or may be spread out over a long river reach, defining the on-site conditions becomes more complex.

1.4.6 Structure Stability

Facilities constructed as part of a project must demonstrate the potential to have an expected service life of approximately 50 years under expected conditions and with regular maintenance, without failure or significant interruption of service.

1.5 SCIENTIFIC CRITERIA

Scientific Criteria include those criteria that represent the recognized scientific or environmental qualities specific to the study area that will assist in determining the "environmental acceptability" of the project. These include criteria that are important to local and state interests.

1.5.1 Texas Endangered Species

The State of Texas passed species legislation in 1973 (amended in 1981, 1985, and 1987) that established a state regulatory mechanism for the management and protection of state listed threatened and endangered species (in 1975 and 1981) and to regulate the taking or possession of these species. The Texas Parks and Wildlife Department regulates the taking, possession, transport, export, processing, selling or offering for sale, or shipping of state listed threatened or endangered fish, wildlife, or plant species.

1.5.2 Section 26 of the Texas Water Code

Section 26 of the Texas Water Code requires that a project develop and implement a Stormwater Pollution Prevention Plan prior to and during construction activities, as required by the CWA.

1.5.3 State of Texas Water Quality Certification

A project must obtain a water quality certification from the State of Texas prior to the start of construction, as required by the CWA.

1.5.4 No Net Negative Impact to Fish and Wildlife

A project should ensure that there are no net negative impacts to known federally or state listed fish and wildlife within the study area. If a project cannot avoid negative impacts to a biological resource, the project must mitigate for potential impacts at a level determined through agency coordination. Criteria include the following:

1. Riparian Habitat Criteria: No net loss of annual habitat units as compared to the baseline conditions.
2. Aquatic Habitat Criteria: No net loss of annual habitat units based on a reference reach using physical attributes.

1.5.5 Acceptable Environmental Cost/Benefit Ratio

A project should ensure that the expected benefits gained from the action are worth the anticipated costs, or impacts, to the environment.

1.5.6 Environmental Value

A project should accommodate or at least not negatively affect publicly desired features of recreation, water quality, and habitat benefits in a safe and healthful environment.

1.5.7 Global System

A project should consider the potential long-term consequences to global environmental conditions and strive to minimize potential impacts to the global climate.

1.5.8 Environmental Stewardship

A project should encourage users of proposed facilities to respect the resulting and surrounding environment with appropriate measures such as signs, interpretive displays, and trash disposal facilities.

1.5.9 Green Design

A project should include elements that incorporate “green” features such as recycling, minimization of uses of irretrievable resources and energy, and energy-reducing design elements.