Environmental Handbook

Ecological Resources

This handbook provides a regulatory background for compliance with federal regulations for the management of ecological resources, with the exception of the Endangered Species Act.
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1.0 Introduction

This handbook outlines a regulatory background for complying with the Migratory Bird Treaty Act (MBTA), Executive Order (EO) 13112 on Invasive Species, Executive Memorandum (EM) on Environmentally and Economically Beneficial Landscaping, Fish and Wildlife Coordination Act (FWCA), Bald and Golden Eagle Protection Act (BGEPA), Magnuson-Stevens Fishery Conservation and Management Act (MSA), Marine Mammal Protection Act (MMPA), and National Environmental Policy Act (NEPA). Project sponsors can use the handbook to identify any compliance obligations that may apply to their projects in order to scope the projects appropriately. Anyone with responsibility for developing compliance documentation can use the handbook to identify the general requirements to meet these obligations.

Evaluation of the applicability of these regulations is required for NEPA documentation regardless of classification: categorical exclusion (CE), environmental assessment (EA), or environmental impact statement (EIS).

1.1 TxDOT Policy

It is the Texas Department of Transportation’s (TxDOT’s) policy to follow the requirements in this handbook and the Natural Resources Toolkits.

1.2 FHWA Assignment

Under Section 3.2.1, the Memorandum of Understanding between the Federal Highway Administration and the Texas Department of Transportation Concerning State of Texas’ Participation in the Project Delivery Program Pursuant to 23 U.S.C. 327, the Federal Highway Administration (FHWA) assigned TxDOT the responsibility for ensuring compliance with the following regulations for projects with FHWA as the funding agency.

- Migratory Bird Treaty Act, 16 USC 703 – 712
- EO 13112, Invasive Species
- Fish and Wildlife Coordination Act, 16 USC 661 – 667d
- Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended, 16 USC 1801 et seq., with Essential Fish Habitat requirements at 16 USC 1855(b)(1)(B)
- Marine Mammal Protection Act, 16 USC 1361–1423h

1.4 Public Involvement

None of the federal regulations addressed in this handbook require TxDOT-specific public involvement outside of the NEPA process.

2.0 Responsible Party

Various documentation, compliance, coordination, and approval responsibilities are assigned to the project sponsor and the department delegate for each project. Specific roles and responsibilities may be assigned during scoping.

The project sponsor may be a TxDOT district, division, or local municipality and is responsible for pursuing approval of the project and for providing material for and managing the project file.
The department delegate may be a TxDOT district or the TxDOT Environmental Affairs Division.

3.0 Migratory Bird Protections

3.1 Applicable Project Types

All projects must comply with the Migratory Bird Treaty Act (MBTA), 16 USC 703-711 and Texas Parks and Wildlife Code Title 5, Subtitle B, Chapter 64, Birds.

3.2 Regulatory Overview

The MBTA, enacted in 1918, implements various treaties and conventions between the U.S., Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. It is codified at 16 USC 703-712. Under the act, purposeful taking, killing, or possessing migratory birds (other than game birds during valid hunting seasons) is unlawful. Protections extend to migratory bird nests determined to contain eggs or young. The U.S. Fish and Wildlife Service (USFWS) has regulatory authority over this act.

Texas Parks and Wildlife (TPW) code Title 5, Subtitle B, Chapter 64, Birds prohibits killing or injuring birds and disturbing or destroying the eggs, nest, or young of birds. These restrictions apply to both game and non-game birds except as provided through permitting. Permitting is only available for game birds and there is no current option for a permit to disturb or kill nongame birds. TPW code also does not distinguish between purposeful or non-purposeful killing, or destruction.

3.3 Additional Resources

For further background information and additional guidance regarding the MBTA, refer to the USFWS Migratory Bird Treaty Program.

For additional guidance on TxDOT policy related to compliance with migratory bird laws, refer to Guidance: Complying with Laws Protecting Birds and Managing Potential Violations in the Natural Resources Management Toolkits.

3.4 Documentation Requirements

3.4.1 Project File Documentation

Include the following documentation in the project file:

- For CEs, the project file must include consideration of migratory birds and describe any required compliance activities.
- EAs and EISs must address compliance with the migratory bird law in the environmental document.
- If field investigations are conducted, include a summary identifying the presence or absence of migratory birds in the project area in the project file.
- Include commitments or mitigation measures, if any, to be included on the Environmental Permits, Issues, and Commitments (EPIC) Sheet in the project file.

3.4.2 Environmental Document Content

Include the following statement in the environmental document:
“This project will comply with applicable provisions of the Migratory Bird Treaty Act (MBTA) and Texas Parks and Wildlife Code Title 5, Subtitle B, Chapter 64, Birds. It is the department’s policy to avoid removal and destruction of active bird nests except through federal or state approved options. In addition, it is the department’s policy to, where appropriate and practicable:

- use measures to prevent or discourage birds from building nests on man-made structures within portions of the project area planned for construction, and
- schedule construction activities outside the typical nesting season.”

4.0 Executive Order 13112 on Invasive Species

4.1 Applicable Project Types

Compliance with EO 13112 on Invasive Species is required for projects that are federally funded and result in ground disturbance.

4.2 Regulatory Overview

Executive Order 13112 on Invasive Species, effective February 3, 1999, directs federal agencies to prevent the introduction and control the spread of invasive species. Invasive species are defined by the EO as “an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.” The EO directs federal agencies whose actions affect the status of invasive species to do the following:

- Identify such actions;
- Prevent the introduction of invasive species;
- Detect, respond rapidly to, and control populations of such species in a cost-effective and environmentally sound manner;
- Monitor invasive species populations accurately and reliably;
- Provide for the restoration of native species and habitat conditions in ecosystems that have been invaded;
- Conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species;
- Promote public education on invasive species and the means to address them; and
- Do not authorize, fund, or carry out actions that are believed likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions.

These practices apply to project-related landscaping or other restorative plantings on federally funded projects.
4.3 Additional Resources

For background information and additional guidance regarding EO 13112 on Invasive Species, refer to the following:

- Federal Highway Administration (FHWA) guidance on invasive species
- National Invasive Species Management Plan Website

4.4 Documentation Requirements

4.4.1 Project File Documentation

For CEs with federal funding, EO 13112 on Invasive Species is addressed programmatically through the implementation of the Roadside Vegetation Management Manual and the Landscape and Aesthetics Design Manual. No other documentation of EO 12112 compliance is necessary. For EAs and EISs, document compliance with EO 13112 on Invasive Species in the environmental document.

4.4.2 Environmental Document Content

If a project is federally funded, the environmental document must include the following statement:

“This project is subject to and will comply with federal Executive Order 13112 on Invasive Species. The department implements this Executive Order on a programmatic basis through its Roadside Vegetation Management Manual and Landscape and Aesthetics Design Manual.”

If the project is not federally funded, the environmental document must include the following statement:

“This project is not subject to Executive Order 13112 because it is not a federally funded undertaking. Landscaping will be conducted in accordance with the department's Roadside Vegetation Management Manual and Landscape and Aesthetics Design Manual.”

5.0 Executive Memorandum on Environmentally and Economically Beneficial Landscaping

5.1 Applicable Project Types

Compliance with the Executive Memorandum (EM) on Environmentally and Economically Beneficial Landscaping is required for federal facilities or projects that are federally funded and require reseeding or landscaping.

5.2 Regulatory Overview

The EM on Environmentally and Economically Beneficial Landscaping, effective April 26, 1994, requires environmentally and economically beneficial landscaping practices to be considered at federal facilities and for federally funded projects. Specifically, the following five practices are encouraged:

- Use regionally native plants for landscaping;
- Design, use, or promote construction practices that minimize adverse effects on the natural habitat;
• Seek to prevent pollution by reducing fertilizer and pesticide use, using integrated pest management techniques, recycling green waste, and minimizing runoff;

• Implement water-efficient practices, such as the use of mulches, efficient irrigation systems, and the selecting and siting of plants in a manner that conserves water and controls soil erosion; and

• Create outdoor demonstrations incorporating native plants, pollution prevention techniques, and water conservation techniques to promote awareness of the environmental and economic benefits of implementing this directive.

Final guidance for implementing these practices was published in the Federal Register Volume 60, Number 154 on August 10, 1995 (FR Doc No: 95-19795). These practices apply to project-related landscaping or other restorative plantings on federally funded projects.

5.3 Additional Resources

For further background information and additional guidance regarding the EM on Environmentally and Economically Beneficial Landscaping, refer to the FHWA guidance on implementing the Executive Memorandum on Environmentally and Economically Beneficial Landscaping.

5.4 Documentation Requirements

5.4.1 Project File Documentation

For CEs with federal funding, the EM on Environmentally and Economically Beneficial Landscaping is addressed programmatically through the implementation of the Roadside Vegetation Management Manual and the Landscape and Aesthetics Design Manual. No other documentation of compliance with the EM on Environmentally and Economically Beneficial Landscaping is necessary. For EAs and EISs, document compliance with the EM on Environmentally and Economically Beneficial Landscaping in the environmental document.

5.4.2 Environmental Document Content

The environmental document must include a statement acknowledging the EM on Environmentally and Economically Beneficial Landscaping. If the project is federally funded, the environmental document will include the following statement: “This project is subject to and will comply with the federal Executive Memorandum on Environmentally and Economically Beneficial Landscaping, effective April 26, 1994. The department implements this Executive Memorandum on a programmatic basis through its Roadside Vegetation Management Manual and Landscape and Aesthetics Design Manual.”

If the project is not federally funded, the environmental document will include the following statement: “This project is not subject to this Executive Memorandum because it is not a federally funded undertaking. Landscaping will be conducted in accordance with the department’s Roadside Vegetation Management Manual and Landscape and Aesthetics Design Manual.”

6.0 Fish and Wildlife Coordination Act

6.1 Applicable Project Types

The FWCA applies to projects that result in the control or modification of a natural stream or body of water and require a Section 404 Individual Permit (IP).
6.2 Regulatory Overview

The FWCA of 1934 and subsequent amendments, as codified in 16 USC 661-666(c), were enacted to protect wildlife when federal actions result in the control or modification of a natural stream or body of water. The act requires federal agencies to consider the effect that water-related projects have on fish and wildlife resources; act to prevent loss or damage to these resources; and provide for the development and improvement of these resources. Wildlife is defined broadly in 16 USC 666(b) of the act to include fish, wildlife, and the habitat on which they depend. The applicability of the act is also very broad, as it applies to “any stream or other body of water” that is “impounded, diverted, the channel deepened, or otherwise controlled or modified for any purpose.”

Under the act, federal agencies must consult with resource agencies, “with a view to the conservation of fish and wildlife resources in connection with that project;” this includes the Texas Parks and Wildlife Department (TPWD), the USFWS, and the National Marine Fisheries Service (NMFS) if applicable. This law provides a mechanism for federal agencies to consider measures to avoid impacts to wildlife and any mitigation measures in coordination with resource agencies, but does not require the federal agency to accept conservation recommendations.

The jurisdictional reach of the FWCA is to all waters affected by federal planning and construction, licensing, or permitting authorities. For example, in the case of the Section 404 Program the FWCA follows the U.S. Army Corps of Engineers (USACE) jurisdiction over waters of the United States, including wetlands. For this reason, complying with the terms of a nationwide permit and following required processes and implementation terms when acquiring an IP typically satisfy FWCA coordination requirements.

Coordination under the FWCA is handled by USACE during the permitting process when USACE solicits input from USFWS and/or NMFS. It is preferable to conclude any and all other consultations with USFWS and/or NMFS prior to USACE issuance of an IP. Completing consultation before FWCA coordination streamlines the FWCA process. USFWS and/or NMFS may have additional FWCA concerns that were not addressed during ESA consultation; therefore, any additional FWCA comments would be need to be addressed by USACE and the IP applicant during FWCA coordination.

6.3 Critical Sequencing

To ensure compliance with the FWCA, early coordination with USFWS, NMFS if applicable, and TPWD must be conducted if streams or water bodies would be modified under a Section 404 IP. Conduct early coordination to assess avoidance measures or alternatives to the project, potential permitting requirements, and mitigation for unavoidable impacts.

6.4 Documentation Requirements

Documentation for compliance with the FWCA is only required for projects that require a USACE IP.

6.4.1 Project File Documentation

Include the following in the project file:

- For Categorical Exclusions, the project file must include consideration of FWCA and describe required compliance activities, if applicable. For EAs and EISs, document the determinations and findings regarding the outcome of FWCA compliance in the environmental document;

- Copies of correspondence with USFWS and/or NMFS and TPWD regarding compliance with FWCA, if received during the USACE IP permitting process.
6.4.2 Environmental Document Content

The environmental document must include a statement acknowledging the FWCA and explaining how the project will comply with the act. If applicable, include references in the document to the coordination with USFWS, NMFS, and TPWD.

7.0 Bald and Golden Eagle Protection Act of 2007

7.1 Applicable Project Types

The BGEPA applies to projects with the potential to take Bald Eagles or Golden Eagles. If the project is not within the range and/or suitable habitat for Bald or Golden Eagles and does not otherwise have the potential to take either species, no further action is necessary.

7.2 Regulatory Overview

The BGEPA, enacted in 1940, provides for the protection of the Bald Eagle and the Golden Eagle by prohibiting, except under certain specified conditions, the taking, possession, and sale of such birds. The BGEPA is codified at 16 USC 668a-d. The U.S. Fish and Wildlife Service (USFWS) has regulatory authority over this act. The Texas Bald Eagle population is divided into two populations, breeding birds and non-breeding or wintering birds. For the most part, breeding populations occur in the eastern half of the state and along coastal counties from Rockport to Houston. Non-breeding or wintering Bald Eagle populations are located primarily in the Panhandle, Central, East Texas, and in other areas of suitable habitat throughout the state. There are exceptions to these general statements, and it is advisable to coordinate directly with the TPWD personnel responsible for monitoring Bald Eagle nest locations.

Similarly, the Golden Eagle has resident and wintering populations in the western half of the state. Permanent populations occur in portions of extreme west Texas, including the Big Bend area, and the panhandle. Wintering Golden Eagle populations include those areas and extend into the Edwards Plateau and North Texas west of the Blackland Prairie.

7.3 Critical Sequencing

To ensure compliance with the BGEPA, conduct early coordination with USFWS and TPWD if the project impacts Bald or Golden Eagles or their habitat. Conducting early coordination includes assessing avoidance measures or alternatives to the project, determining potential permitting requirements, and mitigating for unavoidable impacts.

If coordination with USFWS and TPWD determines that the project will result in unavoidable impacts to Bald or Golden Eagles, a Non-Purposeful Take Permit must be acquired from USFWS prior to NEPA clearance.

7.4 Additional Resources

For further background information and additional guidance regarding the BGEPA, refer to the USFWS National Bald Eagle Management Guidelines or the USFWS guidance on non-purposeful take.

7.5 Documentation Requirements

7.5.1 Project File Documentation
For CEs, the project file must include consideration of BGEPA and describe required compliance activities, if applicable. For EAs and EISs, the document must include determinations and findings regarding the outcome of BGEPA compliance. Regardless of the project’s classification, the project file must include copies of correspondence with USFWS and TPWD, including the Non-Purposeful Take Permit, if required.

### 7.5.2 Environmental Document Content

The environmental document must include a statement acknowledging the BGEPA and explaining whether the project is within the range and suitable habitat for Bald or Golden Eagles. If the project is within the range and suitable habitat for Bald or Golden Eagles but will not result in an incidental taking, the environmental document must include a statement that the project will comply with the [National Bald Eagle Management Guidelines](#) of 2007. If the project will result in the incidental taking of Bald or Golden Eagles, the environmental document must include an assessment of impacts as outlined in the [Non-Purposeful Take Permit](#). Additionally, the document must reference coordination with USFWS and TPWD, if applicable.

### 8.0 Magnuson-Stevens Fishery Conservation Management Act

#### 8.1 Applicable Project Types

The MSA applies to projects that are federally funded, located within a county with tidally influenced waters, and affect essential fish habitat (EFH). If the project is not federally funded, not located within a county with tidally influenced waters, or will not impact EFH, no further action is necessary.

#### 8.2 Regulatory Overview

The MSA, first enacted in 1976 then reauthorized in 2006, requires that EFH be identified for all federally managed fisheries. EFH is defined as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” NMFS has regulatory authority over this act. The act further requires projects that are funded, permitted, or implemented by a federal action agency to consult with NMFS regarding potential adverse impacts to EFH. Note that NMFS is also referred to as the National Oceanic and Atmospheric Administration (NOAA) Fisheries.

#### 8.3 Critical Sequencing

To ensure compliance with the MSA, conduct early coordination with NMFS if EFH will be impacted by the project. Conduct early coordination to assess avoidance measures or alternatives to the project, identify potential permitting requirements, and determine mitigation for unavoidable impacts. If it is determined that the project will result in unavoidable impacts to EFH, TxDOT must prepare an EFH assessment to determine whether the effects are adverse. If, through the preparation of this assessment, TxDOT determines that the project will result in adverse effects to EFH, TxDOT must submit the EFH assessment to NMFS and initiate consultation in accordance with the NMFS [Essential Fish Habitat Consultation Guidance](#).

#### 8.4 Additional Resources

For background information and additional guidance regarding MSA and EFH, refer to the following:

- [Essential Fish Habitat Mapper](#)
- [Essential Fish Habitat Consultation Guidance](#)
8.5 Documentation Requirements

8.5.1 Project File Documentation

The project file must include the following:

- For federally funded CE projects located in coastal counties, the project file must include consideration of MSA/EFH and describe required compliance activities, if applicable. Federally funded EAs and EISs for projects located in coastal counties must include a discussion of determinations and findings regarding the outcome of MSA/EFH in the environmental document.

- EFH assessment, if applicable; and

- For projects that will adversely affect EFH, documentation of consultation with NMFS, implementation and completion of NMFS recommendations, including commitments to be added to the EPIC Sheet, and the TxDOT response to NMFS regarding the implementation and satisfaction of recommendations.

8.5.2 Environmental Document Content

If the project is located in a coastal county, the environmental document must include a statement acknowledging the MSA and noting that the project is within a county with tidally influenced waters. The statement also must explain whether or not EFH is in the vicinity of the project and if the EFH will or will not be affected or adversely affected and include justification for any effect determinations. For projects that will affect or adversely affect EFH, the document must reference the EFH assessment and summarize coordination results with NMFS, if applicable. If the project is not federally funded or not located in a coastal county, then the environmental document must include a statement(s) to that effect.

9.0 Marine Mammal Protection Act

9.1 Applicable Project Types

The MMPA applies to projects with the potential to affect marine mammals. If the project will not impact marine mammals, no action is necessary.

9.2 Regulatory Overview

The MMPA, enacted in 1972 and amended in 1994, protects populations of marine mammals from declining beyond that required to maintain a sustainable population. The MMPA is codified at 16 USC Chapter 1361-1423h. The act grants USFWS governing authority over the management of sea otters, walrus, polar bears, dugong and manatees, and the act grants NMFS governing authority over the management of cetaceans and pinnipeds other than the walrus.

9.3 Critical Sequencing

To ensure compliance with federal regulations, conduct early coordination with NMFS and/or USFWS if marine mammals will be impacted by the project. Conduct early coordination to assess avoidance measures or alternatives to the project, determine potential permitting requirements, and provide mitigation for unavoidable impacts.
If coordination with NMFS and/or USFWS determines that the project will result in the incidental harassment or take of marine mammals, an Incidental Harassment Authorization (IHA) or a Letter of Authorization must be obtained from NMFS and/or USFWS prior to the commencement of construction or demolition activities.

9.4 Additional Resources

For background information and additional guidance regarding the MMPA, refer to the following:

- Marine Mammal Protection Act Webpage;
- Incidental Take Authorizations under the MMPA Webpage; and
- Marine Mammal Commission Marine mammal protected species list.

9.5 Documentation Requirements

9.5.1 Project File Documentation

For CEs, the project file must include consideration of MMPA and describe required compliance activities, if applicable. For EAs and EISs, include determinations and findings regarding the outcome of MMPA compliance in the environmental document. If the project impacts marine mammals, then include:

- A copy of correspondence with NMFS and/or USFWS, including the IHA or Letter of Authorization, if required, and
- Any commitments to be included on the EPIC Sheet.

9.5.2 Environmental Document Content

If the project will have the potential to affect marine mammals, the environmental document must include a statement acknowledging the MMPA and a detailed assessment of the action in relation to marine mammals and their habitat. The document must summarize coordination with NMFS and/or USFWS, if coordination occurs. If the project will not have the potential to affect marine mammals, then the environmental document must include a statement to that effect.
10.0 Glossary

**Essential Fish Habitat** – those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.

**EPIC Sheet** – documents any permit, issue, coordination commitment, or mitigation obligation necessary to address, offset, or compensate for social, economic, or environmental impacts of a project – including sole source aquifer coordination, wetland permits, stormwater permits, traffic noise abatement, threatened or endangered species coordination, or archeological permits – and any mitigation or other commitment associated with the project.

**Fish and wildlife** – this term applies to any member of the animal kingdom, without limitation: any mammal, fish, bird (including any migratory, non-migratory, or endangered bird for which protection is also afforded by treaty or other international agreement), amphibian, reptile, mollusk, crustacean, arthropod, or other invertebrate. The term also applies to any part, product, egg, or offspring thereof, or the dead body or parts thereof.

**Harassment** – under the 1994 amendments to the MMPA, harassment is statutorily defined as, any act of pursuit, torment, or annoyance which:

- **(Level A Harassment)** has the potential to injure a marine mammal or marine mammal stock in the wild or
- **(Level B Harassment)** has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering but which does not have the potential to injure a marine mammal or marine mammal stock in the wild.

**Invasive species** – alien species whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

**Marine mammal** – any mammal which:

- is morphologically adapted to the marine environment, including sea otters and members of the orders Sirenia, Pinnipedia, and Cetacea;
- primarily inhabits the marine environment (such as the polar bear); and
- for the purposes of this handbook, any part of any such marine mammal, including its raw, dressed, or dyed fur or skin.

**Native plant** – species that occur naturally in a particular region, ecosystem, and/or habitat without direct or indirect human actions.

**Practicable** – those actions are available and feasible after taking into consideration existing technology, cost, and logistics in light of the overall purpose of the activity.

**Take (as defined under the Bald and Golden Eagle Act)** – A take is an action to pursue, shoot, shoot at, poison, wound, kill, capture, trap, or molest or disturb a Bald or Golden Eagle.

**Take (as defined under the Marine Mammal Protection Act)** – A take is an action to harass, hunt, capture, kill or collect, or an attempt to harass, hunt, capture, kill or collect a marine mammal.

**Threatened species** – species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
## 11.0 Abbreviation and Acronyms

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<tr>
<th>Abbreviation</th>
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<tbody>
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<td>BGEPA</td>
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<td>EPIC</td>
<td>Environmental Permits, Issues, and Commitments</td>
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Appendix A

The following table shows the revision history for this guidance document.

<table>
<thead>
<tr>
<th>Effective Date Month, Year</th>
<th>Reason for and Description of Change</th>
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<tr>
<td>November 2018</td>
<td>Version 3 was released. Documentation requirements updated to reflect current practices for all document types. Obsolete requirements and documentation standards were removed. All hyperlinks were checked and updated.</td>
</tr>
<tr>
<td>July 2015</td>
<td>Version 2 was released. Documentation requirements changed to include the Biological Evaluation Form as a documentation standard for the laws and regulations obsolete requirements and documentation standards were removed. Updated broken hyperlinks and included appropriate USC reference for each regulation</td>
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<tr>
<td>February 2014</td>
<td>Version 1 was released.</td>
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