

New Location Railroad Line

Maverick County, Texas
Draft Environmental Report

2012 April



Surface Transportation Board
Washington, D.C.
Finance Docket No. 35554
Proposed Rail Line Construction and Operation –Maverick County, Tex.

Poznecki-Camarillo, Inc.
5835 Callaghan Road, Suite 200
San Antonio, Texas 78228
210.349.3273

Executive Summary

Eagle Pass Railroad, LLC (EPRR) intends to file a petition with the STB seeking an exemption under 49 U.S. C. 10502 from the prior approval requirements of 49 U.S.C. 10901 for the construction of a new rail line, which includes an international bridge to be located at the U.S.-Mexico border, in Maverick County, Texas. EPRR will also apply to the U.S. Department of State (DoS) for a Presidential Permit to construct the international rail bridge.

The proposed rail line would be built between an existing Union Pacific Railroad (UPRR) line near Eagle Pass, Maverick County, Texas and cross the international boundary at a point near Piedras Negras, Coahuila, Mexico. Here, the line would connect with a Mexican rail line to be constructed, which would in turn be designed to connect with the Mexican rail network on Linea Coahuila-Durango rail line. The proposed rail line within the United States would traverse approximately 7.6 miles, of which 0.4 miles is the U.S.-portion of the international rail bridge (see **Exhibit 1: Project Location Map**).

EPRR has prepared this Environmental Report (ER) to assist the STB with its responsibility under the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) Regulations for Implementing NEPA (40 Code of Federal Regulations (CFR) Part 1500), 42 U.S.C. §§ 4321, *et seq.*, and STB regulations implementing NEPA (49 CFR Part 1105).

The STB, pursuant to 49 U.S.C. 10901, is the agency responsible for granting authority for the construction and operation of new rail line facilities. Under NEPA, the STB is required to consider the environmental impacts of actions requiring STB authorization and complete any required environmental review before making a final decision on a proposed action. The STB's Office of Environmental Analysis (OEA) is the office within the STB that carries out the STB's responsibilities under NEPA and related environmental laws and regulations.

PURPOSE AND NEED

The purpose of the proposed rail line is to increase rail capacity through the region to accommodate current and future demand for rail service, and to provide a rail alternative that bypasses the Eagle Pass downtown area, thereby avoiding the numerous at-grade crossings on the existing UPRR line. Specifically, the proposed line will meet the demand to transport coal from the Eagle Pass Mine near Eagle Pass, at a point near the planned northern terminus of the EPRR line, to points in Mexico where the coal would be used to generate power. The EPRR would also provide capacity to accommodate rail transport of raw materials necessary for Mexico's metallurgical industry from the U.S. to Mexico, as well the transport of other commodities between both the U.S. and Mexico. The proposed EPRR line would additionally be constructed in a relatively remote area with fewer at-grade crossings than the existing rail line in the area, allowing an opportunity for rail traffic to bypass downtown Eagle Pass.

EPRR submits that the proposed EPRR line and international rail bridge at the U.S-Mexico border would serve the national interest by providing additional rail capacity, which would in turn increase opportunities for cross border trade between the U.S. and Mexico in commodities well-suited to rail transport. Currently only one rail line and international bridge, operated by UPRR, serves the Maverick County, Texas area. The increased rail capacity provided by the proposed EPRR rail line, as well as the construction and operation of an international rail bridge at the U.S.-Mexico border, would provide

increased rail capacity, thereby enhancing trade, and the efficiency of trade, between the United States and Mexico. The proposed project would also enhance exports of commodities, including coal, from the United States, consistent with national policy to enhance exports. See National Export Initiative (NEI), available at <http://www.whitehouse.gov/the-press-office/executive-order-national-export-initiative>.

PROPOSED ACTION AND ALTERNATIVES

The proposed project would be located north of the Eagle Pass city-center in Maverick County, Texas, within the northwest section of the Rio Grande Plain in Southwest Texas. The proposed project study area is generally arid, rural, and undeveloped. No residential populations exist near the proposed rail line. One grade-separated highway crossing (a rail underpass), at US 277 would be constructed, along with several additional bridge structures. The purchase of approximately 153 acres would provide for the necessary right-of-way (ROW) of 150-ft minimum to approximately 395-ft maximum width.

The alternatives study area covers approximately 20 square miles outside city limits, but within the extraterritorial jurisdiction of the City of Eagle Pass. Five potentially feasible railroad corridors were identified based upon overall constraints, topography, and railroad alignment geometry, and subsequently assessed based on the requirements identified in the Project's stated Purpose and Need (see **Exhibit 2: Studied Alternatives**). Following a fatal flaw analysis, three of the original five corridors were eliminated from further consideration because such corridors traversed through sensitive archeological sites and/or developed areas. The remaining two corridors were analyzed with regard to overall constraints, feasibility, topography, and railroad alignment geometry. Based upon the potential for fewer impacts to surrounding resources, Corridor 5 was ultimately chosen as the Preferred Alternative.

The environmental impacts of both the Preferred Alternative, No Build Alternative and other alternatives have been assessed in **Chapter 4** of this ER. Under the No Build Alternative, the STB would not grant authority to construct, maintain, or operate a rail line in Maverick County, Texas. Environmental impacts associated with construction of the Preferred Alternative would not occur if the No Build Alternative were chosen, but operational impacts would still occur as a result of transportation of coal and other commodities by way of the existing UPRR rail line, and/or by truck. However, since the No Build Alternative would not provide additional rail capacity between U.S. and Mexico in Maverick County, and would also not provide a rail alternative that bypasses the downtown area of Eagle Pass with fewer at-grade crossings, it would fail to meet the Purpose and Need of the project. For this reason, the No Build Alternative was rejected, and the Preferred Alternative was chosen as the alternative necessary to meet the project's Purpose and Need.

POTENTIAL ENVIRONMENTAL EFFECTS

The proposed EPRR rail line is located in northern Maverick County and extends from the Rio Grande River north of the City of Eagle Pass city center to a point east of the Eagle Pass Mine at the existing UPRR. Analysis of the following resources indicated no substantial direct or indirect effect(s) from the proposed project: socioeconomics, noise, prime farmland, cultural resources, hazardous materials, visual aesthetics, vegetation, or construction.

Land use, air quality, and surface water(s) had direct impacts that were not considered substantial, but were associated with resources that were particularly important to the study area. Cumulative impacts, including the incremental impacts that the project's direct or indirect effects would have on a resource

together with impacts caused by other past, present, and future effects, have also been considered, but are not significant. Preliminary recommended mitigation to address any potential direct, indirect, and/or cumulative impacts has been provided in **Chapter 5**.

Land use

The No Build Alternative would have no direct effects on land use. The Preferred Alternative would require approximately 153 acres of ROW permanently dedicated to transportation uses.

Socioeconomic

No immediate concerns or changes in socioeconomic conditions would result from the No Build Alternative. Under the Preferred Alternative, there would be no relocations or displacements required by the proposed project. Travel patterns and access would not change for area residents since the rail line traverses undeveloped land. Therefore, no disproportionate, adverse impacts are anticipated to occur to the low-income or minority communities in the project area as a result of the project location or project construction.

Noise

Under the No Build Alternative, noise levels would be expected to increase with an associated increase in rail traffic volumes for the transport of coal from the Eagle Pass Mine. Under the Preferred Alternative, some noise impacts due to construction/operation are anticipated; however, there are no sensitive receptors adjacent to the proposed rail line so adverse impacts to sensitive receptors are not anticipated as a result of site location.

Air quality

Under the No Build Alternative, air quality could diminish as a result of unchecked congestion levels. Alternatively, according to the air quality analysis conducted for the project, the Preferred Alternative would not cause or exacerbate a violation of any air quality standards, and has also been found to conform to the State Implementation Plan. During construction of the Preferred Alternative, short-term, localized air quality impacts could occur, but are not significant.

Prime farmland

No prime farmland exists in the proposed project study area. Thus, no direct effects would occur under the Preferred and No Build Alternative.

Groundwater

Under the No Build Alternative, there are no immediate changes in the potential for current conditions to effect groundwater resources. With regard to the Preferred Alternative, there are a few scattered shallow water wells located within the southern portion of Maverick County; however, the proposed project study area does not cover any portion of the Carrizo-Wilcox Aquifer. Adherence to storm water guidelines would minimize and mitigate any potential adverse impacts under the Preferred Alternative.

Surface Waters

No direct effects would occur under the No Build Alternative. There would be minimal impacts to jurisdictional surface waters (streams, creeks, or rivers) under the Preferred Alternative. These resources are not prevalent in the proposed project study area. Known crossings appear to qualify for a United States Army Corps of Engineers (USACE) Nationwide Permit (NWP). Projects entitled to use NWPs are of minimal individual and cumulative effect. Potential impacts are minimized by adherence to TCEQ storm water guidelines.

Vegetation and wildlife

No direct effects would occur under the No Build Alternative. Approximately 168 acres of mixed brush vegetation is located within the proposed ROW and would be removed for construction of the Preferred Alternative. Wildlife would be minimally impacted under the Preferred Alternative during construction/operation.

Threatened and endangered species

There would be no direct impact to endangered species under the Preferred and No Build Alternative. For the ocelot and jaguarundi, no suitable habitat occurs within, or immediately adjacent to the proposed ROW. In addition, no ocelot or jaguarundis were detected in or within 300 feet of the proposed ROW during field investigations.

Cultural resources

There are no known direct effects on historic structures under the Preferred and No Build Alternatives. The Preferred Alternative would result in the destruction of part or all of each of 11 archeological sites recorded in the field survey. The portions of the sites within the APE are not considered contributing resources to NRHP or SAL eligibility; thus, the data loss represented by such destruction would be minor, and the project would have no effect on NRHP-eligible properties. No cemeteries are known from the study corridor, and no impacts are anticipated. No parklands would be affected by the proposed project under the No Build and Preferred Alternative.

Hazardous Materials

No potential hazardous materials sites were identified within or immediately adjacent to the project study area based on a database search and field investigations. Additionally, no potential hazardous materials impacts are anticipated as a result of the proposed project. Any unanticipated hazardous materials and/or petroleum contamination encountered during construction would be handled according to applicable federal and state regulations.

Visual and aesthetic

No direct effects would occur under the No Build Alternative. Under the Preferred Alternative, because there is no residential population near the proposed rail line, impacts to visual resources would be minimal.

Cumulative Impacts

The construction and operation of the proposed EPRR rail line (when implemented with recommended mitigation measures) combined with the construction and operation of the Eagle Pass Mine (when implemented with recommended mitigation measures) are not anticipated to significantly contribute to cumulative impacts to air quality, surface water, groundwater, flooding, and/or land use in the project area. Impacts to other resources are not anticipated.

AGENCY COORDINATION AND PUBLIC INVOLVEMENT

The STB initially met with EPRR on September 8, 2010 to discuss the project location, potential constraints, and preliminary project schedule. On September 23, 2011, EPRR filed with the STB a request for a waiver of the six-month pre-filing notice generally required for projects under 49 C.F.R. § 1105.10(a)(1). On November 10, 2011, the STB granted EPRR's request, thereby waiving the six-month pre-filing notice requirement.

Study team members also conducted one-on-one meetings with several elected officials and local community organization leaders on January 5, 2012 and January 11, 2012. Information was presented that included a detailed overview of the proposed project, including proposed route of the new rail; road, canal, river and stream crossing information; construction cost and schedule; as well as a detailed breakdown of the NEPA process being followed for the proposed project.

Project representatives held several meetings in Eagle Pass, Texas on March 6 and 7, 2012 to discuss the proposed project with affected property owners. Landowners and local elected officials with jurisdiction within the study area for this proposed project were exclusively invited to attend these meetings to receive information about the preliminary results of ongoing environmental studies, status of the proposed project, and general information about the project's design elements. The meeting also provided an opportunity to meet the engineering and environmental staff members who are currently working on the proposed project and to provide an opportunity for meeting attendees to ask questions and provide comments on the proposed project.

Neither elected officials nor landowners attended the March 6th meeting or the March 7th meeting. The second session on March 7th was attended by one invitee, a representative of Venado Grande Ranch Ltd. This representative discussed his approval of the project and expressed interest in connecting a rail spur from his property to the new rail line. He discussed other property owners located along the proposed route and expressed interest in helping facilitate communication between the project team and these landowners. The meeting proceedings can be found in the *Meeting with Affected Property Owners Summary and Analysis Report* located in **Appendix D**.

Table of Contents

1	Introduction	1
1.1	Project Proponents	2
1.2	Purpose and Need.....	2
1.2.1	Additional Rail Capacity and Demand.....	2
1.2.2	National Interest	4
1.3	Federal Approval Process and Authorizing Actions	7
1.3.1	Surface Transportation Board.....	7
1.3.2	Department of State	8
1.3.3	U.S. Army Corps of Engineers	8
1.3.4	U.S. Coast Guard	8
1.3.5	U.S. Fish & Wildlife Service	9
1.3.6	Advisory Council on Historic Preservation	9
1.3.7	International Boundary Commission	9
1.3.8	U.S. Customs & Border Protection.....	10
1.3.9	Federal Emergency Management Agency	10
1.3.10	Natural Resource Conservation Service.....	10
1.4	Permits and Relationship to Non-Federal Policies, Plans, and Programs.....	10
1.5	Right-of-Way Acquisition	11
1.6	Agency Review and Public Outreach	11
1.7	Mexican Approval Process	12
2	Proposed Action and Alternatives	14
2.1	Alternatives Analysis Overview	14
2.2	Alternatives Considered.....	15
2.3	Preferred Alternative Construction/Operation	20
2.3.1	Rail Line Construction	20
2.3.2	Construction of International Rail Bridge	21
2.3.3	Construction of Bridges and Culverts	21
2.3.4	Construction Schedule	21
2.3.5	Operation and Maintenance.....	22
2.3.6	Eagle Pass Mine Project	22
3	Description of the Affected Environment.....	24
3.1	Socioeconomic Setting.....	24

3.1.1	Population	24
3.1.2	Race/Ethnicity	24
3.1.3	Housing	26
3.1.4	Employment, Income, and Poverty.....	26
3.1.5	Ability to Speak English	27
3.2	Physiography.....	28
3.2.1	Geologic History	28
3.2.2	Topography	29
3.2.3	Soils	29
3.3	Water Resources	31
3.3.1	Groundwater.....	31
3.3.2	Surface Water	32
3.4	Wildlife	33
3.4.1	Flora	33
3.5	Transportation	40
3.6	Air Quality	42
3.7	Noise	44
3.8	Cultural Resources	44
3.8.1	Historic Resources.....	45
3.8.2	Archeology	45
3.9	Recreation.....	47
3.10	Hazardous Materials	48
4	Potential Environmental Impacts	51
4.1	Socioeconomic	51
4.1.1	Environmental Justice	51
4.1.2	Community Cohesion.....	52
4.1.3	Land Use and Economic Development	52
4.1.4	Construction Impacts.....	53
4.1.5	Operational Impacts.....	53
4.1.6	No Build Alternative	54
4.2	Physiography.....	54
4.2.1	Construction Impacts.....	54
4.2.2	Operational Impacts.....	55
4.2.3	No Build Alternative	55
4.3	Water Resources	55

4.3.1	Groundwater	55
4.3.2	Surface Water	55
4.3.3	Construction Impacts	58
4.3.4	Operational Impacts.....	65
4.3.5	No Build Alternative	65
4.4	Wildlife	65
4.4.1	Flora	65
4.4.2	Fauna.....	65
4.4.3	Construction Impacts	66
4.4.4	Operational Impacts.....	67
4.4.5	No Build Alternative	67
4.5	Transportation	67
4.5.1	Construction Impacts	67
4.5.2	Operational Effects	68
4.5.3	No Build Alternative	69
4.6	Air Quality	69
4.6.1	Construction Impacts	69
4.6.2	Operational Impacts.....	69
4.6.3	No Build Alternative	72
4.7	Noise	72
4.7.1	Construction Impacts	72
4.7.2	Operational Impacts.....	73
4.7.3	No Build Alternative	73
4.8	Cultural Resources	74
4.8.1	Historic Resources.....	74
4.8.2	Archeological Resources	75
4.8.3	Construction Impacts	75
4.8.4	Operational Effects	75
4.8.5	No Build.....	75
4.9	Recreation	75
4.9.1	Construction Impacts	75
4.9.2	Operational Impacts.....	76
4.9.3	No Build.....	77
4.10	Hazardous Materials	77
4.10.1	Construction Impacts	77

4.10.2	Operational Impacts.....	77
4.10.3	No Build.....	77
4.11	Cumulative Impacts	77
5	Proposed Mitigation Measures.....	85
5.1	Overview of OEA’s Approach to Recommended Mitigation	Error! Bookmark not defined.
5.2	Limits of the STB’s Conditioning Power	Error! Bookmark not defined.
5.3	Cleanup and Restoration	Error! Bookmark not defined.
5.4	Voluntary Mitigation.....	Error! Bookmark not defined.

Appendices

Appendix A: Exhibits

Appendix B: Project Schematics

Appendix C: Eagle Pass Mine Loading System Layouts

Appendix D: Correspondence and Public Involvement

Appendix E: Air Quality Technical Memorandum

Appendix F: Noise Analysis Technical Memorandum

Appendix G: Historic Resources Reconnaissance Survey

Appendix H: Eagle Pass Mine Environmental Impact Statement Documents

Appendix I: List of Preparers

Appendix J: References

List of Tables

Table 1: Texas Border Crossings- Railcars – Northbound by Year	3
Table 2: Texas Border Crossings – Railcars – Southbound by Year.....	3
Table 3: Highway-Rail Accidents at Public and Private Crossings in Texas	4
Table 4: USA Top Trading Partners - Total Trade, Exports, Imports Year-to-Date October 2010	5
Table 5: U.S. Trade in Goods (Imports, Exports, and Trade Balance) with Mexico 2001-2009	5
Table 6: Approvals and Permits Required.....	10
Table 7: Comparison of Corridors 1-5.....	19
Table 8: Quantities of Track Construction Earthwork Needed for the Build Alternative	21
Table 9: Race & Ethnicity for Total Population (2010 Census Redistricting Data).....	25
Table 10: Median Household Income (American Community Survey 2005-2009)	26
Table 11: Income Distribution for Households (American Community Survey 2005-2009)	27
Table 12: Occupation (American Community Survey 2005-2009).....	27
Table 13: Threatened, Endangered, and Rare Species of Potential Occurrence in Maverick County, Texas	36
Table 14: Ambient Noise Measurements	44
Table 15: Hazardous Materials Databases Consulted.....	48
Table 16: Potential Hazardous Materials Sites and Wells	49
Table 17: Economic Impacts of Preferred Alternative Construction	53
Table 18: Impacts to Waters of the U.S.	61
Table 19: Construction Equipment Noise Levels (dBA)	72

List of Figures

Figure 1: U.S. State Trade with Canada and Mexico by All Modes: 2004	6
Figure 2: Feasibility Study Area Boundaries.....	15
Figure 3: Study Corridors	15
Figure 4: Corridor 5 Sub-Alternative Alignments.....	18
Figure 5: Preferred Alternative	20
Figure 6: Aerial view of Maverick County Memorial Airport.....	41
Figure 7: Description of SL 480 Eagle Pass Outer Loop.....	42
Figure 8: Elevation of Bridge at Canal	74

List of Exhibits

Exhibit 1	Project Location Map
Exhibit 2	Studied Alternatives
Exhibit 3	Existing Rail System
Exhibit 4	2010 Census Tracts & Block Groups
Exhibit 5	2010 Census Blocks
Exhibit 6	Geology (Geologic Atlas of Texas)
Exhibit 7	Soils
Exhibit 8	Prime Farmland Soils
Exhibit 9	Aquifers
Exhibit 10	Watersheds
Exhibit 11	Vegetation Types of Texas
Exhibit 12	Natural Regions & Biotic Provinces of Texas
Exhibit 13	FEMA 100-Yr Floodplain
Exhibit 14	Water Resources
Exhibit 15	National Wetlands Inventory
Exhibit 16	Bridged Sections of EPRR Corridor
Exhibit 17	Water Resources Resource Study Area (RSA)

List of Photos

Photo 1: Mixed brush vegetation 35

Photo 2: Vegetation along a project area creek 35

Photo 3: Vegetation along the Rio Grande River, Maverick County..... 36

Photo 4: Eagle Pass International Bridge 41

Photo 5: Constructed portion of SL 480 in Maverick County 42

Photo 6: Typical white-tailed deer 47

Photo 7: Rio Grande River, Maverick County 56

Photo 8: Crossing #2, MCID#1 Main Irrigation Main Canal 59

Photo 9: Crossing #5 – Hediondo Creek 59

Photo 10: Texas Horned Lizard found within project study area 67

Photo 11: Typical feral hog 76

Acronyms

ACS	American Community Survey
AHMSA	Altos Hornos de Mexico S.A.B. de C.V.
AOI	Area of Influence
APE	Area of Potential Effect
ASTM	American Society Testing and Materials
BMP	best management practice
CAA	Clean Air Act
CBP	U.S. Customs and Border Protection
CEQ	Council on Environmental Quality
CFC	Chlorofluorocarbons
CFR	Code of Federal Regulations
CGP	Construction General Permit
CO	carbon monoxide
CO ₂	carbon dioxide
CWA	Clean Water Act
CY	cubic yard
dBA	decibel (A-weight)
DHHS	Department of Health and Human Services
DoS	U.S. Department of State
DOT	U.S. Department of Transportation
DRRC	Dos Republicas Resources Corporation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPP	Electrica Puerto Peñasco, S.A. de C.V.
EPRR	Eagle Pass Railroad Corporation, LLC
ER	Environmental Report
ERNS	Emergency Response Notification System
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FINDS	Facility Index System
FR	Federal Register
FRA	Federal Railroad Administration
FT	feet/foot
FWPCA	Federal Water Pollution Control Act
GAN	Grupo Acerero del Norte, S.A. de C.V.
HCFC	Hydrochlorofluorocarbons
IHW	Industrial Hazardous Waste
ISD	Independent School District
LEP	limited English proficiency
Leq	energy-equivalent sound level
LPST	leaking petroleum storage tank
MCID	Maverick County Irrigation District
NAAQS	National Ambient Air Quality Standards

NAFTA	North American Free Trade Agreement
NEI	National Export Initiative
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NOx	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWP	Nationwide Permit
O ₃	ozone
OEA	Office of Environmental Analysis
OHWM	Ordinary High Water Mark
PA	Programmatic Agreement
PCN	preconstruction notification
PM	particulate matter
PST	petroleum storage tank
RRC	Texas Railroad Commission
ROW	right of way
SAL	State Archeological Landmark
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SL	State Loop
SO ₂	sulfur dioxide
SPCC	Spill Prevention Control and Countermeasures (Plan)
STB	Surface Transportation Board
SWP3	Surface Water Pollution Prevention Plan
TAC	Texas Administrative Code
TARL	Texas Archeology Research Laboratory
TCEQ	Texas Commission on Environmental Quality
THC	Texas Historical Commission
TMDL	total maximum daily load
TPWD	Texas Parks and Wildlife Department
TSS	total suspended solids
TxDOT	Texas Department of Transportation
TSWQS	Texas Surface Water Quality Standards
TXDNN	Texas Natural Diversity Database
TWDB	Texas Water Development Board
UPRR	Union Pacific Railroad
U.S.	United States
USACE	U.S. Army Corps of Engineers
U.S.C.	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USIBWC	U.S. International Boundary and Water Commission

UST underground storage tank

1 Introduction

The project applicant, Eagle Pass Railroad, LLC (EPRR) intends to file a petition with the U.S. Surface Transportation Board (STB) seeking an exemption under 49 U.S.C. 10502 from the prior approval requirements of 49 U.S.C. 10901 for the construction and operation of a new rail line, which includes an international rail bridge to be located at the U.S.-Mexico border in Maverick County, Texas. EPRR will also apply to the U.S. Department of State (DoS) for a Presidential Permit to construct the international rail bridge.

The proposed rail line would be built between an existing Union Pacific Railroad (UPRR) line near Eagle Pass, Maverick County, Texas and cross the international boundary at a point near Piedras Negras, Coahuila, Mexico, where it would connect with a Mexican rail line to be constructed, which would in turn be designed to connect with the Mexican rail network on the rail line, Linea Coahuila-Durango. The proposed rail line within the United States would traverse approximately 7.6 miles, of which 0.4 miles is the U.S.-portion of the international rail bridge (see **Exhibit 1: Project Location Map**). EPRR is preparing this Environmental Report (ER) in accordance with the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) Regulations for Implementing NEPA (40 Code of Federal Regulations (CFR) Part 1500), 42 United State Code (U.S.C.) §§ 4321, *et seq.*, and STB regulations implementing NEPA (49 CFR Part 1105) to study the projected and potential social, economic, and environmental impacts associated with the construction and operation of this new location railroad line in Maverick County, Texas.

The STB, pursuant to 49 U.S.C. 10901, is the agency responsible for granting authority for the construction and operation of new rail line facilities. In this capacity, the STB, through its Office of Environmental Analysis (OEA), is the lead agency responsible under NEPA, 42 U.S.C. § 4321 *et seq.*, for the preparation of an environmental document analyzing the potential impacts associated with the construction and operation of the proposed EPRR rail line. A number of other federal agencies also have permitting, environmental review and/or regulatory roles with respect to the proposed rail line, including: the DoS, the U.S. Army Corps of Engineers (USACE), the U.S. Coast Guard (USCG), the U.S. Fish & Wildlife Service (USFWS), the Advisory Council on Historic Preservation (ACHP), U.S. Customs and Border Protection (CBP), the International Boundary Commission (IBC), the Federal Emergency Management Agency (FEMA), and the Natural Resource Conservation Service. Such agencies may act as cooperating agencies with regard to the issuance of an environmental document consistent with NEPA. In preparing an environmental document, the agencies will be required to solicit comments from the public and take those comments into consideration prior to making their final decision on EPRR's proposal to construct, operate and maintain a new rail line and international bridge.

Consistent with the requirements of NEPA, and the rules and regulations cited above, this ER, prepared in support of a future EA or EIS, documents that the potential environmental effects of the proposed action and alternatives, including the direct, indirect and cumulative impacts that would result from implementation of the proposed improvements, are not significant. Specifically, this ER provides an assessment of the existing environment along the proposed project route; an analysis of human and environmental impacts that could potentially result from construction, operation and/or maintenance of the proposed project; and a summary of any protection and/or restoration measures to be implemented to avoid and/or minimize environmental impacts. Based upon the potential impacts provided and assessed within this document, EPRR submits that the requirements found under 49 C.F.R. § 1105.7(e)

have been satisfied, and the STB may prepare an EA consistent with NEPA in satisfaction of its environmental review obligations.

1.1 Project Proponents

EPRR, the proponent of the Project, is a limited liability company duly organized under the laws of the State of Texas. EPRR is wholly owned by Electrica Puerto Penasco, S.A. de C.V. (EPP), a Mexican corporation. EPP is owned by Minera del Norte, S.A. de C.V., which is a subsidiary of Altos Hornos de Mexico S.A.B. de C.V. (AHMSA). AHMSA is owned by Grupo Acerero del Norte, S.A. de C.V. (GAN), 45% of which is owned by Xavier D. Autrey Maza. Alonso Ancira Elizondo, Manuel Ancira Elizondo, Carlyle Technologies Corp., among other individuals, are the other owners of GAN. None of these entities besides the Project proponent, EPRR, operate and/or control a U.S. railroad.

1.2 Purpose and Need

The purpose of the proposed rail line is to increase rail capacity through the region to accommodate current and future demand for rail service, and to provide a rail alternative that bypasses the Eagle Pass downtown area, thereby avoiding numerous at-grade crossing. Specifically, the proposed rail line will meet the current demand to transport coal from the Eagle Pass Mine near Eagle Pass, Texas, at a point at or near the planned northern terminus of the EPRR line, to points in Mexico where the coal would be used to generate power. Such transportation is set to begin when the coal mine begins operations in 2014. The EPRR would also provide capacity to accommodate rail transport of raw materials necessary for Mexico's metallurgical industry from the U.S. to Mexico, as well provide capacity to accommodate the transport of other commodities between both the U.S. and Mexico. EPRR would hold itself out as a common carrier and provide service to other industries that might require rail service.

The need for the proposed EPRR line is also to provide rail capacity which bypasses the town of Eagle Pass, Texas. As mentioned, the existing rail line in operation in Maverick County, Texas area is operated by UPRR. That rail line currently passes through the downtown of Eagle Pass, requiring numerous at-grade crossings. The proposed EPRR line would be constructed in a relatively remote area with fewer at-grade crossings than the existing UPRR line in the area, allowing an opportunity for rail traffic to entirely bypass downtown Eagle Pass, Texas.

Further, as explained in **Section 1.2.2** below, the proposed 8.2 mile, single-track EPRR line and international rail bridge at the U.S-Mexico border would serve the national interest by providing additional rail capacity, which would in turn increase opportunities for cross border trade between the U.S. and Mexico in commodities well-suited to rail transport. Currently only one rail line and international bridge operated by UP serves the Maverick County, Texas area. The increased rail capacity provided by the proposed EPRR rail line, as well as the construction and operation of an international rail bridge at the U.S.-Mexico border, would provide increased rail capacity, thereby enhancing trade, and the efficiency of trade, between the United States and Mexico consistent with national policy.

1.2.1 Additional Rail Capacity and Demand

Rail transportation is vitally important to domestic economic productivity, the international competitiveness of American businesses, and the economic well-being of all Americans. As the demand for truck transportation presses the capacity of the nation's highway system and the cost of highway congestion increases, public policy makers at all levels of government have begun looking to railroads to carry more freight, while shippers are turning to railroads to increase longer-distance shipments. The growing demand for freight transportation is also pressing the capacity of the nation's aging rail system.

Among the seven rail ports of entry on the U.S.-Mexico border, five are located in Texas: Brownsville-Matamoros; Laredo-Nuevo Laredo; Eagle Pass-Piedras Negras; Presidio-Ojinaga; and El Paso- Ciudad Juárez. According to the 2007 Texas North American Free Trade Agreement (NAFTA) Study Update, Texas crossings collectively accommodated more than 93 percent of the total U.S.-Mexico NAFTA rail trade by value in 2005. Further, according to the Texas Department of Transportation (TxDOT) Texas Rail Plan (November 2010), Laredo has consistently had the highest total of trade value transported by rail. In 2009, Laredo captured 51.4% of the total U.S.-Mexico trade value of imports/exports transported by rail across the Texas border. In the same year, Eagle Pass ranked second, with 29.8% of the total value, followed by El Paso at 14.8% and Brownsville at 3.9%.

The most recent available railcar crossing data available for Texas is depicted in the tables below. The Port of Eagle Pass rail crossing is the second highest crossing in terms of volume among the seven rail crossings along the 2000-mile United States-Mexico border. Eagle Pass also saw the largest percent increase in northbound and southbound railcars (16 percent) from 2009 to 2010 of all rail ports of entry in Texas.

Table 1: Texas Border Crossings- Railcars – Northbound by Year

Crossing Location	2009	2010	Total
Brownsville	36,134	42,453	78,587
Eagle Pass	145,527	169,220	314,747
El Paso	102,240	88,742	190,982
Laredo	202,862	232,135	434,997
Total	486,763	532,550	1,019,313

Table 2: Texas Border Crossings – Railcars – Southbound by Year

Crossing Location	2009	2010	Total
Brownsville	40,981	47,037	88,018
Eagle Pass	144,284	168,286	312,570
El Paso	-	-	-
Laredo	200,720	226,424	427,144
Total	385,985	441,747	827,732

In the region where the proposed EPRR line would be constructed, between the twin cities of Eagle Pass, Texas and Piedras Negras, Coahuila, Mexico, the current Port of Eagle Pass international bridge crossings include only one railroad bridge and two highway toll bridges. (See **Exhibit 1: Project Location Map**). The two highway toll bridges include: (1) Eagle Pass Bridge I, which connects the downtown marketplaces of these two sister cities, and accommodates two lanes of vehicle traffic with pedestrian walkways; and (2) the Camino Real International Bridge (also known as Eagle Pass-Piedras Negras Bridge II), which receives a mix of pedestrians, passenger and commercial vehicles in six lanes. The only existing railroad bridge is the Eagle Pass-Piedras Negras railroad bridge operated by UPRR, one of only seven locations in the U.S. where rail traffic can cross the U.S.-Mexico border (five of these are in Texas) (**Exhibit 3: Existing Rail System**).

The proposed EPRR line, and international rail bridge, would provide additional capacity between Piedras Negras and Eagle Pass to meet current and anticipated increased demand for rail transportation between the U.S. and Mexico, including demand for additional capacity to transport coal from the Eagle Pass Mine to Mexico. The Eagle Pass Mine is expected to receive all necessary approvals in the Fall of

2012, and is anticipated to begin commercial production in early 2014. The coal produced at the Eagle Pass Mine would be most efficiently transported by the EPRR, although it could also be transported by the existing UPRR line. The proposed EPRR rail line would also transport commodities other than coal, including those necessary for Mexico’s metallurgical industry, between the United States and Mexico.

The proposed EPRR would additionally provide increased rail capacity along a line which bypasses downtown Eagle Pass, Texas, and thus, avoid numerous at-grade crossings. The existing UPRR rail line that traverses the City of Eagle Pass city center includes twelve at-grade railroad crossings. The conveyance of coal from the Eagle Pass Mine between the U.S. and Mexico, not including transportation of other potential commodities, would require at least two trains per day (one empty, one full), seven days per week, thereby adding new railway traffic (increasing train frequency) through the existing at-grade railroad crossings. Moving this rail traffic onto the proposed EPRR line would avoid any increased rail traffic through downtown Eagle Pass over the twelve at-grade crossings.

Avoidance of rail traffic through at-grade crossings is important due to the fact that, by far, the biggest safety issue faced by railroads involves accidents with vehicles/persons at highway-rail at-grade crossings. In fact, at-grade rail crossings account for more than 50 percent of all railroad fatalities. According to the Operation Lifesavers website, a train collides with a person or vehicle at such a crossing in the U.S. every 115 minutes. With the most public highway-rail grade crossings in the U.S. (10,045), the state of Texas is both the national leader in at-grade railroad crossing accidents each year. The most recent accident and fatality information for Texas is presented in the table below.

Table 3: Highway-Rail Accidents at Public and Private Crossings in Texas

	2008	2009	2010	2011 (Jan-Mar)
Total Accidents	228	178	214	46
Total fatalities that resulted from accidents	17	23	27	4

In addition, when trains block at-grade intersections, emergency services must find alternate routes around the blocked at-grade crossing. Such a delay increases the response time that may be critical in the outcome of an emergency medical, fire, or police action.

For these reasons, the proposed new rail line would traverse less populous areas and would have no public roadway at-grade crossings, thereby avoiding any increase in at-grade crossing accidents. Further, any coal or other commodities transported by the proposed EPRR line would not add to rail traffic at the existing UPRR international bridge.

1.2.2 National Interest

The construction of the EPRR rail line would serve the national interest by providing additional international rail capacity, which (consistent with national policy) would in turn increase opportunities for cross border trade between the U.S. and Mexico in commodities well-suited to rail transport.

Due to its proximity to the U.S., low labor cost, and favorable trade agreements, Mexico is one of the top three trade partners with the U.S. In fact, over 80 percent of Mexican exports are bound for the U.S. market and over 50 percent of Mexican imports come directly from the U.S. With China also being in the top three trade partners, and with free trade agreements between Mexico, China, and the U.S., the

U.S.-Mexico border is anticipated to continue to see increases in demand for adequate transportation of freight in conjunction with imports and exports between the three nations.

Table 4 shows the ranking of the United States' top three trading partners in relation to the importation and exportation of goods into the U.S.

Table 4: USA Top Trading Partners - Total Trade, Exports, Imports Year-to-Date October 2010

(All figures are in billions of dollars US)

Rank	Country	Exports (Year-to-Date)	Percent of Total U.S. Exports	Imports (Year-to-Date)	Percent of Total U.S. Imports	Total Trade (Year-to-Date)
1	Canada	207.4	19.8%	229.4	14.5%	436.8
2	China	72.3	6.9%	299.0	19.0%	371.3
3	Mexico	134.0	12.8%	190.0	12.0%	323.9

Source: FTDWebMaster, Foreign Trade Division, U.S. Census Bureau, Washington, D.C. 20233

Location: MAIN: STATISTICS:HIGHLIGHTS:

Created: 11 January 2008 Last modified: 10 December 2010 at 08:30:35 AM

Table 5 below shows the current and recent past Trade in Goods between the U.S. and Mexico. The table specifically shows the increasing trade between the U.S. and Mexico in the past decade (with the exception of 2009 during the height of the global recession).

Table 5: U.S. Trade in Goods (Imports, Exports, and Trade Balance) with Mexico 2001-2009

Year	U.S. Exports	U.S. Imports	Balance
2010 (Jan-Oct)	133,961.4	189,987.7	-56,026.4
2009	128,892.1	176,654.4	-47,762.2
2008	151,220.1	215,941.6	-64,721.6
2007	135,918.1	210,714.0	-74,795.8
2006	133,721.7	198,253.2	-64,531.4
2005	120,247.6	170,108.6	-49,861.0
2003	97,411.8	138,060.0	-40,648.2
2002	97,470.1	134,616.0	-37,145.9
2001	101,296.5	131,337.9	-30,041.4

NOTE: All figures are in millions of U.S. dollars on a nominal basis, not seasonally adjusted unless otherwise specified.

'TOTALS' may not add due to rounding.

Tables reflect only those months for which there was trade.

CONTACT: Data Dissemination Branch, U.S. Census Bureau, (301) 763-2311

SOURCE: U.S. Census Bureau, Foreign Trade Division, Data Dissemination Branch, Washington, D.C. 20233

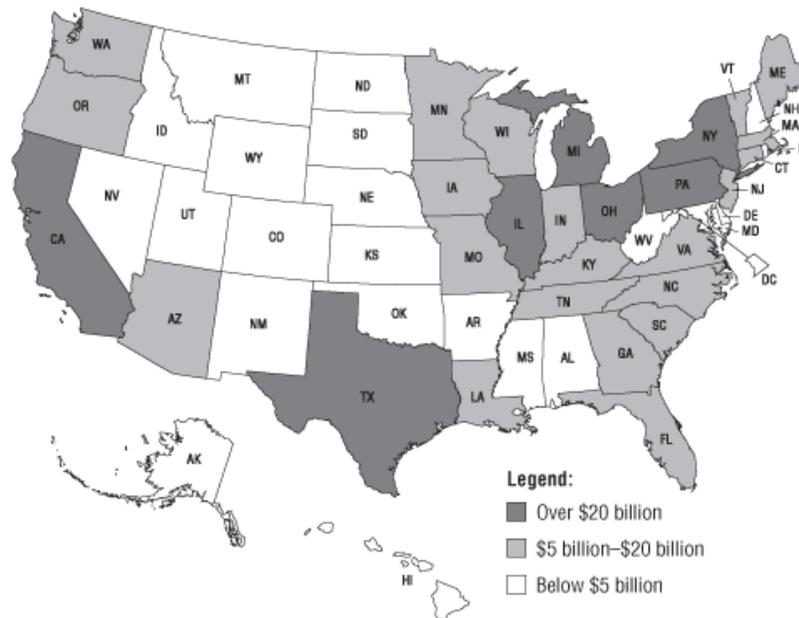
Border regions, such as the ports of entry in Texas therefore provide, and will continue to provide, the necessary links between the international economies of the U.S. and Mexico to foster international trade. As detailed in the 2007 Texas NAFTA Study Update, economic growth is "... directly related to the accessibility of transportation systems to the nation and the connections between trading partners." Freight movements, in particular, affect not only the economies of the border region, but also the labor markets in Mexico, the retail and manufacturing markets in the U.S., and the capital markets on both sides of the border.

For instance, according to the U.S. Embassy to Mexico, the U.S. provides up to 50 percent of all inputs for Mexico's "maquiladora" manufacturing and assembly firms, which translates to over \$41 billion

dollars in sales, annually. These imports from the United States are delivered by truck or rail service. The city of Piedras Negras is home to over 30 maquiladora manufacturing plants (maquilas), which import billions of dollars of raw materials from the U.S. annually to support their manufacturing processes. The state of Coahuila (which Piedras Negras is located in) is also home to Mexico's booming industrial market. The state's capital of Saltillo has a major GM factory and the city of Monclova is the major steel processing center of Mexico. The expected economic growth in the State of Coahuila would call for major infrastructure improvements in the region, especially along U.S. 57 in order to accommodate Mexican imports and exports.

This significant increase in cross-border trade and associated freight movement is placing more demand on area international highways and railroads. In January 1994, the enactment of NAFTA spurred already increasing trade levels between the U.S. and Mexico to unprecedented high levels. The U.S. transportation system in 2002 moved, on average, 53 million tons of freight worth \$36 billion each day. Trucks moved about 60 percent of freight by weight, the same proportion expected in 2035. However, over this same period, the number of overall tons transported is expected to almost double with international shipments growing somewhat faster than domestic shipments. In 2004, Texas was the leading state overall for U.S.-NAFTA merchandise trade moved by all freight modes with over \$114 billion in merchandise moved across the U.S.-Mexico border (see **Figure 1**).

Figure 1: U.S. State Trade with Canada and Mexico by All Modes: 2004



Source: Research and Innovative Technology Administration (RITA) • U.S. Department of Transportation (US DOT)
1200 New Jersey Avenue, SE • Washington, DC 20590 • 800.853.1351 • E-mail RITA

While trade between Mexico and the U.S. continues to grow annually, and is anticipated to continue doing so, the infrastructure for cross border trade has not been able to keep up with this growing demand. For example, wait times at border ports of entry have significant effects not only on the shipping community and regional economies of the various ports of entry, but also on the national economy. Average wait times for Eagle Pass were not included in the above-referenced study; however, wait times at the largest, and generally most congested Texas ports of entry are shown below based on U.S. Customs and Border Protection (CBP) input. These are average estimates, but at times delays at U.S.-Mexico border crossings may be much greater:

- Laredo: Average wait-times of 45-50 minutes for northbound commercial vehicles crossing at the World Trade Bridge.
- El Paso: 25-40 minutes for northbound commercial vehicles crossing at the Bridge of the Americas and Ysleta Bridges.
- Pharr/Hidalgo: 30 minutes for northbound commercial vehicles crossing at the Pharr International Bridge.
- Brownsville: 20 minutes for northbound commercial vehicles crossing at the Veteran's International Bridge.

Therefore, while trade between Mexico and the U.S. continues to grow, so does vehicle and rail congestion at border crossings. This is particularly true in Texas, which has become the hub of international trade between the U.S. and Mexico, according to the TxDOT's Texas Rail Plan, *available at* http://www.txdot.gov/public_involvement/rail_plan/default.htm. This is also particularly true with regard to the Eagle Pass/Piedras Negras trade zone, which is expected to become one of the largest rail ports on the southern border.

Construction and operation of the proposed EPRR line and international bridge will help to serve the national interest by providing the necessary additional capacity to meet the growing demand for trade between the U.S. and Mexico within the Eagle Pass/Piedras Negras trade zone. The new proposed rail line and international bridge would be Class I compatible, allowing accessibility and the potential for future transport of commodities internationally on UPRR/BNSF rail lines as a part of the multi-modal system in the U.S. and Mexico.

Further, the proposed EPRR rail line would also assist in meeting national interests to increase exports. On March 11, 2010, through Executive Order, the President issued a National Export Initiative ("NEI") focused on "ensuring that U.S. businesses can actively participate in international markets by increasing their exports of goods, services and [] products." See NEI, available at <http://www.whitehouse.gov/the-press-office/executive-order-national-export-initiative>. The NEI was issued to help meet the President's "goal of doubling U.S. exports in 5 years by," among others, "helping firms ... overcome the hurdles to entering new export markets." *Id.* In a report issued on September 16, 2010, the Export Promotion Cabinet established by the NEI, recommended to the President that "Canada and Mexico play a special role as the United States' largest export markets," and are therefore "a high priority in terms of broadening the base of exporting U.S. companies." Report, at 23, *available at* http://www.whitehouse.gov/sites/default/files/nei_report_9-16-10_full.pdf. The Cabinet reiterated that increasing U.S. exports to countries, including Mexico, is "good for American business, good for American workers and good for American jobs." *Id.* at 1. The proposed EPRR rail line, including an international bridge, would assist in meeting the goals of the President's NEI by increasing exports of coal and other commodities to Mexico.

1.3 Federal Approval Process and Authorizing Actions

The STB is the lead federal agency reviewing the project in accordance with the requirements of NEPA. A number of additional federal agencies have permitting, environmental review and/or regulatory roles with respect to the construction and/or operation of the EPRR. The role of each is summarized below.

1.3.1 Surface Transportation Board

The STB, pursuant to 49 U.S.C. § 10901, is the agency responsible for granting authority for the construction and operation of new rail line facilities. Accordingly, the STB, through OEA, is responsible

for the preparation and approval of NEPA-compliant environmental documentation. The STB must consider the entire environmental record, all comments, and OEA's final recommendations in making its final decision in this proceeding. The STB will decide whether to approve, approve with conditions (which could include environmental conditions to mitigate impacts), deny the proposed action, or determine that the preparation of an EIS is required.

1.3.2 Department of State

Pursuant to Executive Order (EO) 11423, as amended by EO 12847 and EO 13337, the International Bridge Act of 1972 (86 Stat. 731; 33 U.S.C. § 535 et seq.), the Department of State Delegation of Authority number 118-1 of April 11, 1973, the DoS has authority to issue Presidential Permits authorizing the construction of international railroad bridges. EPRR will be required to file with DoS, a Presidential Permit application for the construction, operation, and maintenance of an international railroad bridge to be constructed at the U.S-Mexico border in Maverick County, Texas.

In evaluating EPRR's Presidential Permit application, the DoS will be acting as a cooperating agency in accordance with the environmental review requirements of NEPA, as well as other applicable statutes. After consideration of the views obtained from various authorities and interested party commenters, the DoS makes a determination as to whether the proposed project would serve the national interest. If it is determined that the project would serve the national interest, the DoS prepares a Presidential Permit that includes terms and conditions as the national interest may, in the DoS's judgment, require.

1.3.3 U.S. Army Corps of Engineers

Section 404 of the Clean Water Act (CWA) establishes a permit program administered by the USACE to regulate the discharge of dredge and fill materials into the waters of the United States, including their adjacent wetlands. The proposed EPRR rail line would be under the jurisdiction of the Fort Worth District of the USACE.

Regulations prescribed in 33 CFR part 320 and procedures of 33 CFR part 325 define the process to be followed by the USACE to issue permits to authorize certain structures or work in or affecting navigable waters of the United States pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) (hereinafter referred to as Section 10). Work in or affecting navigable waters of the United States is also regulated under authorities of the USACE permit(s), including discharges of dredged or fill material into waters of the United States, pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344; see 33 CFR part 323). Nationwide permits are used for authorization for a category or categories of activities on a nationwide or regional basis when those activities are substantially similar in nature and cause only minimal individual and cumulative environmental impacts, or when the general permit would result in avoiding unnecessary duplication of the regulatory control exercised by another federal, state, or local agency provided it has been determined that the environmental consequences of the action are individually and cumulatively minimal.

1.3.4 U.S. Coast Guard

The International Bridge Act of 1972 (86 Stat. 731; 33 U.S.C. § 535 et seq.) governs the U.S. Coast Guard's (USCG) issuance of permits for the construction, maintenance, and operation of bridges over waterways that form the U.S. boundaries with Mexico and Canada, whether or not the waterway at issue carries navigation. EPRR will be required to file an application with the USCG once it has obtained a Presidential Permit from the DoS. In order to satisfy its NEPA obligations, USCG will work jointly with the STB and DoS on technical assistance matters regarding the preparation of environmental documents

for international bridges. This cooperation with the DoS ensures that the environmental documentation for the Presidential Permit required under the International Bridge Act also satisfies environmental documentation requirements for the specific location and plans subject to the later (in time) USCG bridge permit approval process.

1.3.5 U.S. Fish & Wildlife Service

The USFWS is responsible for ensuring compliance with the Endangered Species Act (ESA). The STB, as the lead federal agency, is responsible for initiating informal consultation with the USFWS to determine the likelihood of effects on listed species. The STB, or the applicant as a non-federal party, is required to consult with the USFWS to determine whether any federally listed or proposed endangered or threatened species or their designated critical habitat occur in the vicinity of the proposed project. If, upon review of existing data, the STB determines that these species or habitat may be affected by the proposed project, the STB is required to prepare a Biological Assessment (BA) to identify the nature and extent of adverse impact and to recommend mitigation measures that would avoid the habitat and/or species or that would reduce potential impact to acceptable levels. If, however, the STB determines that no federally listed or proposed endangered or threatened species or their designated critical habitat would be affected by the proposed project, no further action is necessary.

1.3.6 Advisory Council on Historic Preservation

Section 106 of the National Historic Preservation Act (NHPA), as amended, requires the lead federal agency to take into account the effects of its undertakings on historic properties or historic resources that are listed in, or eligible for listing in, the NRHP, and to afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment if there would be adverse effects on NRHP-eligible properties. Historic properties are defined as prehistoric or historic districts, sites, buildings, structures, objects, or properties of traditional religious or cultural importance, which are listed or eligible for listing in the NRHP, including artifacts, records, and material remains related to such a property or resource.

The STB, as the lead federal agency, is responsible for NHPA Section 106 compliance for all lands, both public and private, affected by the EPRR project. The STB will be required to consult with the Texas State Historic Preservation Office (TSHPO) to determine site eligibility for the NRHP and the project's effects on historic properties within the Area of Potential Effect. If the proposed project would adversely affect historic properties, the STB would require the preparation and implementation of treatment plans to mitigate adverse effects. No construction would begin in these areas until the required consultations and approvals are received. As the lead federal agency, the STB is also responsible for complying with Section 101(d) of the NHPA and the American Indian Religious Freedom Act. Compliance involves contacting Native American groups with an interest in the lands affected by the proposed EPRR rail line and ensuring that the requirements of the Native American Graves Protection and Repatriation Act are met.

1.3.7 International Boundary Commission

The International Boundary and Water Commission (USIBWC) is a federal government agency and the U.S. component of the International Boundary and Water Commission (IBWC), which applies the boundary and water treaties of the United States and Mexico and settles differences that may arise in their application. Consultation with the IBWC may be necessary in order to apply the rights and obligations that the United States and Mexico assume under the numerous boundary and water treaties and related agreements, as such treaties or agreement may be applicable to the construction and/or operation of the proposed EPRR rail line and international bridge facilities.

1.3.8 U.S. Customs & Border Protection

The U.S. Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP) is responsible for securing the international borders and ports of entry of the United States, as well as regulating and facilitating international trade, the collection of import duties, and the enforcement of U.S. trade laws. Consultation with CBP is intended to identify measures that may be necessary to maintain tactical infrastructure at the U.S.-Mexico border to facilitate the construction, operation and maintenance of the proposed EPRR rail line and international bridge.

1.3.9 Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) identifies 100-year floodplains. Consultation with FEMA is intended to verify compliance with the National Flood Insurance Act of 1988 and Executive Order 11988, concerning construction in floodplains.

1.3.10 Natural Resource Conservation Service

The Natural Resource Conservation Service (NRCS), formerly the Soil Conservation Service, is charged with protecting farmlands, particularly those classified as prime, unique, or of state or local importance. Consultation with NRCS is intended to take into consideration, and to avoid and/or mitigate, any impacts to such farmlands.

1.4 Permits and Relationship to Non-Federal Policies, Plans, and Programs

A preliminary list of federal, state, and local permits and approvals is provided in **Table 6**.

Table 6: Approvals and Permits Required

Entity	Approval/Permit Required
U.S. Surface Transportation Board	Exemption under 49 U.S.C. § 10502 from the prior approval requirements of 49 U.S.C. § 10901 for the construction and operation of a new rail line
U.S. Department of State	Presidential Permit
U.S. Coast Guard	Section 10 Permit
U.S. Army Corps of Engineers	Section 404 Nationwide Permit/Individual Permit
U.S. Fish and Wildlife Service	Review/Approval of assessment of impacts to threatened/endangered species
Federal Emergency Management Agency	Approval of floodplain crossing
U.S. Customs and Border Protection	Review/Approval of inspection facilities
U.S. International Boundary and Water Commission	Review and approval of bridge plans
Natural Resource Conservation Service	Review/Approval of assessment of impacts to prime farmlands
Maverick County Water Control & Improvement District No. 1	Approval of canal crossings
Texas Commission on Environmental Quality	TPDES/SWPPP
Texas Department of Transportation	Review/Approval of US 277 crossing schematic
Texas Historic Commission	Texas Antiquities Permit
Texas Parks and Wildlife Department	Review/Approval of assessment of impacts to

Entity	Approval/Permit Required
	threatened/endangered species and habitat

1.5 Right-of-Way Acquisition

Construction and operation of the proposed EPRR would require the purchase of approximately 153 acres to provide for a right-of-way (ROW) of 150-ft minimum to approximately 395-ft maximum width. Such property is currently under the ownership of 16 private landowners. EPRR intends to enter into negotiations with the owners to acquire the necessary ROW. No relocations or displacement of homes or businesses will be necessary.

1.6 Agency Review and Public Outreach

State and Federal Agency Coordination

The STB initially met with EPRR on September 8, 2010 to discuss the project location, potential constraints, and preliminary project schedule. On September 23, 2011, EPRR filed with the STB a request for a waiver of the six-month pre-filing notice generally required for projects under 49 C.F.R. § 1105.10(a)(1). On November 10, 2011, the STB granted EPRR's request, thereby waiving the six-month pre-filing notice requirement.

EPRR has also been in preliminary discussions with the DoS, regarding the submission of a Presidential Permit application, requesting authority to construct, operate and maintain an international rail bridge at the U.S. –Mexico border. DoS has indicated that it intends to act as a cooperating agency with regard to NEPA review, and rely on the STB to undertake the lead agency role.

EPRR also intends to file an application with the USACE for a Section 404 and Section 10 permit to conduct construction activities in or near waters of the United States, including construction of an international bridge in the Rio Grande River. Prior to filing such application, EPRR intends to request a pre-application meeting to provide the USACE with information regarding the coordinates to the project and potential impacts to waters based upon initial surveys. The USACE will presumably act as a cooperating agency in the preparation of any NEPA document.

EPRR has also notified the USCG, the USIBWC, and CBP of the proposed EPRR rail line project, informing each agency about the project location, potential constraints, and preliminary project schedule. The USCG will act as a cooperating agency relative to the STB's and DoS's preparation of a NEPA-compliant document. The USIBWC, CBP, FEMA, and NRCS will presumably act as consulting agencies in the preparation of a NEPA document. Consultations with the USFWS, Texas Wildlife Department, ACHP, and the Texas State Preservation Officer will take place to the extent necessary to satisfy Section 7, and Section 106 obligations. Consultations with any Native American Tribes who may attach religious or cultural significance to resources impacted by the proposed EPRR rail line have not yet occurred.

Local and Public Coordination

Local outreach efforts have entailed meeting with potentially affected land owners, local elected officials, community organization leaders, as well as others who may have special concerns in relation to the proposed EPRR line. Study team members prepared:

- A comprehensive stakeholder database consisting of local elected officials, community organization leaders and others who may have special concerns.

- A PowerPoint presentation that included a detailed overview of the proposed project, including proposed route of the new rail; road, canal, river and stream crossing information; construction cost and schedule; as well as a detailed breakdown of the NEPA process that was being followed for the proposed project.
- A one page “leave behind” document to summarize the presentation.

Several meetings were conducted on January 5, 2012. They consisted of individual meetings with elected officials and local community organization leaders. The meetings are summarized as follows:

Name	Title	Organization	Comments
Raul Perez	Executive Director	Maverick County Development Corporation (MCDC)	Supports the project Concerned about long-range plans on transmission line along US 277. Mr. Perez offered to host a presentation to the MCDC board.
Roberto Gonzales	Consultant	Eagle Pass Water Works (EPWW)	Supports the project Concerned about long-range plans on transmission line along US 277.
Hon. David Saucedo	County Judge	Maverick County	No comments.
Daniel Valenzuela	City Manager	City of Eagle Pass	City Manager mentioned we were very thorough in presentation. Mentioned that rail line would benefit the city due to the heavy delays caused by existing train traffic. Asked us to return to meet with mayor. Immediate concerns were addressed in presentation.
Hon. Jose Luis Rosales	County Commissioner Precinct 3	Maverick County	Mr. Rosales supports the project. Mentioned that there is opposition to the mine which the study team should be aware of.

An additional meeting was conducted on January 11, 2012. It consisted of individual meeting with a representative of the Middle Rio Grande Development Council. The meeting is summarized as follows:

Name	Title	Organization	Comments
Leodoro Martinez	Executive Director	Middle Rio Grande Development Council	Mr. Martinez stated that the project has great economic development potential.

Project engineers held several meetings in Eagle Pass, Texas on March 6 and 7, 2012 to discuss the proposed project with affected property owners. Landowners and local elected officials with jurisdiction within the study area for this proposed project were exclusively invited to attend these meetings to receive information about the preliminary results of ongoing environmental studies, status of the proposed project, and general information about the project’s design elements. The meeting also provided an opportunity to meet the engineering and environmental staff members who are currently working on the proposed project and to provide an opportunity for meeting attendees to ask questions and provide comments on the proposed project.

Neither elected officials nor landowners attended the March 6th meeting or the March 7th meeting. The second session on March 7th was attended by one invitee, a representative of Venado Grande Ranch Ltd. This representative discussed his approval of the project and expressed interest in

connecting a rail spur from his property to the new rail line. He discussed other property owners located along the proposed route and expressed interest in helping facilitate communication between the project team and these landowners. The meeting proceedings can be found in the *Meeting with Affected Property Owners Summary and Analysis Report* located in **Appendix D**.

1.7 Mexican Approval Process

The Mexican Railroad Services Law (MRSL) and implementing regulations provide the overall general legal framework for the regulation of railroad services in Mexico. Under the MRSL, the Ministry of Communications and Transportation (Secretaria de Comunicaciones y Transportes) is the agency responsible for granting authority for the construction and operation of new rail line facilities and is principally responsible for regulating railroad services in Mexico.

The Mexican consultant firm, Felipe Ochoa and Associates, is currently assessing authorizations, permits, and/or concessions that may be required for the construction/operation of proposed EPRR rail line in Mexico. A Feasibility Study is also currently being prepared, which will be inclusive of environmental studies and analysis of the proposed project area.

2 Proposed Action and Alternatives

EPRR is proposing to construct a new rail line in Maverick County to meet current and future rail capacity demands across the U.S.-Mexico border, and to provide a rail alternative that bypasses the Eagle Pass downtown area, thereby avoiding numerous grade crossings. The proposed EPRR rail line would be built between an existing UPRR line near Eagle Pass, Maverick County and cross the international boundary at a point near Piedras Negras, Coahuila, where it would connect with a Mexican rail line, to be constructed, which would in turn be designed to connect with the Mexican rail network on the rail line, Linea Coahuila-Durango. The proposed rail line within the United States would traverse approximately 7.6 miles, of which 0.4 miles is the U.S.-portion of the international rail bridge (see **Exhibit 1: Project Location Map**). The increased rail capacity provided by the proposed rail line would be utilized to meet the current demand to transport coal from the Eagle Pass Mine near Eagle Pass, at a point at or near the planned eastern terminus of the EPRR line in Maverick County to points in Mexico where the coal would be used to generate power. The proposed rail line would hold itself out as a common carrier, and transport other commodities between the United States and Mexico.

The proposed EPRR rail line would require construction and operation of the following (see **Appendix B: Project Schematics**):

- approximately 7.6 miles of new location single track rail within Maverick County, Texas, extending from the Eagle Pass Mine southwards towards the U.S.-Mexico border, including a 3,420-foot international rail bridge to be constructed at Rio Grande River Mile 512 across the Rio Grande River;
- one grade-separated highway crossing (a rail underpass) to be constructed at US 277, along with several additional bridge structures for the railroad to traverse a water supply canal and other low areas and tributary channels along its proposed route;
- the purchase of approximately 153 acres to provide a 150-foot minimum width permanent right-of-way (ROW), increasing to approximately 395-foot width where necessary to accommodate grading in deep cut sections.

Below is a discussion of alternatives considered for the proposed EPRR rail line, as well as the alternatives that were excluded from further consideration based upon increased impacts to resources and/or for failure to meet the proposed EPRR rail line's Purpose and Need.

2.1 Alternatives Analysis Overview

The Study Area initially developed in evaluation of potential rail corridors is bounded by the Rio Grande on the west and city limits of the City of Eagle Pass to the south (**Figure 2**). To the east, the Study Area terminates near the Eagle Pass Coal Mine. To the north, the Study Area boundary extends approximately five miles north of the city limits of the City of Eagle Pass. The Study Area is also traversed by the floodplain of Elm Creek and its tributaries (**Appendix A, Exhibit 2**).

The feasibility study, *New Short Line Freight Railroad and International Bridge*, Maverick County, Texas (2010 Study) was used as background data to develop and evaluate potential routes that would meet the proposed project's general goals. The 2010 Study investigated five 1,000-ft wide corridor alternatives, as identified below in **Figure 3**. The study team then performed a fatal flaw analysis in

order to determine any feasible corridors suitable for further analysis. Specifically, any corridors that failed to meet the following criteria were eliminated from further consideration:

- Geometric feasibility/economy compatible with Class I railroad alignments and grades at the Rio Grande River bank;
- Compatibility with existing and proposed development in the project vicinity;
- Minimize impacts to sensitive habitat areas;
- Avoid impacts to developed areas;
- Minimize impacts to environmental constraints including parks and hazardous material sites;
- Minimize the extent and number of natural feature crossings (streams, creeks, and wetland);
- Avoid impacts to cultural and archeological resources;
- Identify significant ROW parcels required (large tracts); and,
- Minimize displacements and relocations.

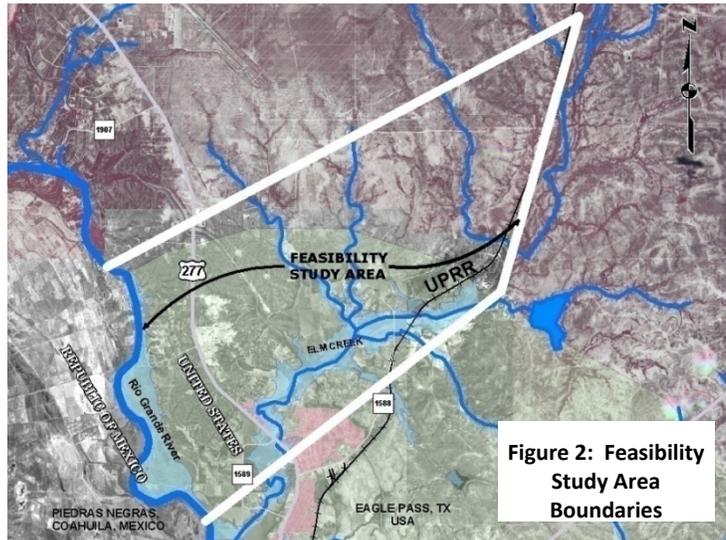


Figure 2: Feasibility Study Area Boundaries

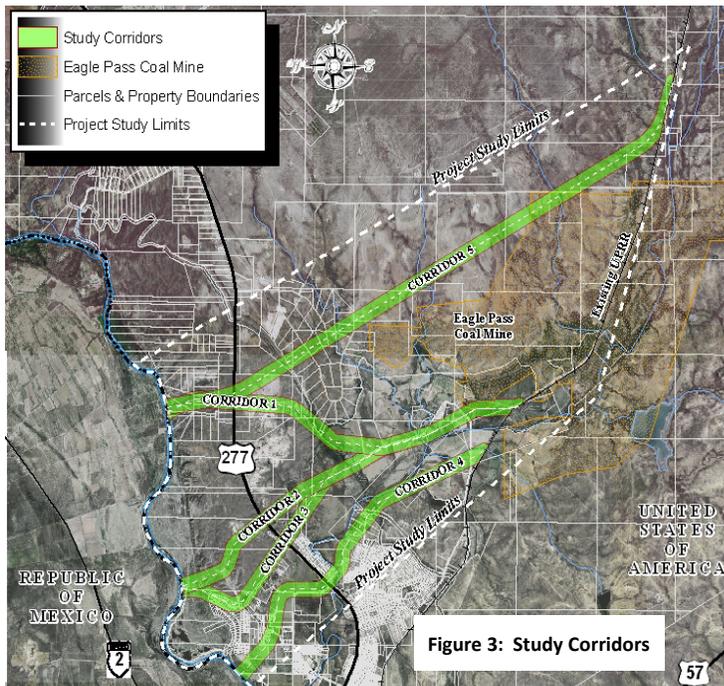


Figure 3: Study Corridors

As explained below in **Section 2.2**, it was determined that Corridors 2, 3, and 4 would encroach upon, or are in proximity to, existing development, rural homesteads and/or identified historical or archeological sites, as well as within close proximity to protected species recorded occurrences. As such, these corridors were eliminated from further study. Corridors 1 and 5 were carried forward as viable rail-route alignments, analyzing each based upon overall constraints, feasibility, topography, and railroad alignment geometry. Based upon the potential for fewer impacts to surrounding resources, Corridor 5 was chosen as the **Preferred Alternative**.

2.2 Alternatives Considered

The following preliminary alternatives were considered:

No Build

The No Build Alternative describes what the baseline condition would be if the proposed project were not constructed. Under the No Build Alternative, the proposed EPRR line and international bridge would

not be constructed and any needed rail service would continue to be provided on the existing UPRR system through Eagle Pass/Piedras Negras. This includes any additional demand from the Eagle Pass Mine for the transportation of coal, since transportation of coal by any other means, including trucking, has been determined to not be feasible. Also, in order to transport coal from the Eagle Pass Mine by truck, additional permitting may be required since the initial Record of Decision (ROD) for the NPDES permit issued to Eagle Pass Mine by EPA in 1995 did not evaluate the trucking of coal as an option (**Appendix H: FEIS ROD, Page 2-30**). For these reasons, any coal produced at the Eagle Pass Mine would likely be transported by rail on the existing UPRR line, requiring the construction of a spur to tie into the UPRR line. The construction of this spur is included within the Mine's current permit (see **Appendix C: Eagle Pass Mine Loading System Layouts**). Operation benefits of the proposed EPRR rail line relative to the UPRR line are addressed elsewhere in this ER.

Other commodities besides coal would likely be transported on the existing UPRR line, or by trucks including iron ore, ferroalloys and coking coal. Existing major roadway facilities, including: US 277, US 57, Eagle Pass Bridge 1, and Eagle Pass-Piedras Negras Bridge II would be available for new and existing truck transport. The use of trucks would bring the transport process into the city of Eagle Pass, utilizing its roadways and placing additional noise and emissions into the vicinity of its residents and commercial establishments. However, no construction impacts would result since these roadways are already constructed and in operation.

It was determined that the No Build alternative would not meet the Purpose and Need of the proposed EPRR line. First, additional rail capacity would not be provided, and rail service would therefore continue to be supplied by the capacity provided by the existing UPRR line. Second, the No Build alternative would not provide a rail line that bypasses the Eagle Pass downtown area, and as such, avoidance of numerous at-grade crossings would not be achieved.

Corridor 1:

Corridor 1 is located below and shares the same western terminus as Corridor 5. It is 4.6 miles in length. Though potentially feasible and shorter in length than Corridor 5, Corridor 1 is less desirable because of its proximity to Elm Creek. Corridor 1 exhibits increased overall impacts to the floodplain, wetlands, and existing development. Additionally, this corridor aligns closer to existing residential development and the alignment of the future Outer Loop highway proposed by TxDOT. In evaluating the drainage, impacts to the Elm Creek could be significant in comparison to Corridor 5. Though this alternative does bypass downtown Eagle Pass, it is still located near developed land and entirely within the Eagle Pass Extra-Territorial jurisdiction (ETJ). Moreover, public concern is a potential issue with the utilization of this route in the future to bypass Eagle Pass with hazardous cargo because of its proximity to Elm Creek. Therefore, Corridor 1 was determined to be an inferior alternative when compared to Corridor 5.

Corridor 2:

Corridor 2 is approximately 4.9 miles in length. It shares the identical eastern terminus as Corridor 3, but has a western terminus two miles south of Corridors 1 and 5. This corridor was eliminated because it is in close proximity (0.15 miles) to existing residential development, traverses six rural homesteads, and is in close proximity (within 500 feet) to archeological sites. Additionally, this corridor is in close proximity (within 500 feet) to Elm Creek, and has 9.2 acres of palustrine wetland impacts. Lastly, the western terminus of this corridor does not share a common terminus with the rail counterpart on the Mexican side of the border, and for this reason, fails to meet the purpose and need of the proposed EPRR rail line.

Corridor 3:

Corridor 3 is approximately 5.2 miles in length. It shares the identical eastern terminus as Corridor 2, but has a western terminus two miles south of Corridors 1 and 5. This corridor was eliminated because it traverses one residential subdivision, is in close proximity (within 500 feet) to another subdivision, and traverses or is in close proximity (within 500 feet) to nine rural homesteads. Additionally, this corridor is in close proximity (within 500 feet) to archeological sites. Further, this alternative is in close proximity (within 500 feet) to Elm Creek, and has 14.1 acres of palustrine wetland impacts. Lastly, the western terminus of this corridor does not share a common terminus with the rail counterpart on the Mexican side of the border, and for this reason, fails to meet the purpose and need of the proposed EPRR rail line.

Corridor 4:

Corridor 4 is approximately 4.4 miles in length. It has a western terminus 3.3 miles south of Corridors 1 and 5, and 1.3 miles south of Corridors 2 and 3. This corridor was eliminated because it traverses one residential subdivision, is in close proximity (within 500 feet) to three additional subdivisions, and traverses or is in close proximity (within 500 feet) to fourteen rural homesteads. Additionally, this corridor is in close proximity (within 500 feet) to archeological sites, and is in close proximity (within 500 feet) to Pete Gallego Elementary. Further, this corridor is in close proximity (within 500 feet) to Elm Creek for a distance of 0.7 miles, has one direct crossing of Elm Creek, and has a disproportionately high amount of 100-yr floodplain impact. Lastly, the western terminus of this corridor does not share a common terminus with the rail counterpart on the Mexican side of the border, and for this reason, fails to meet the purpose and need of the proposed EPRR rail line.

Corridor 5:

Corridor 5 would require construction of approximately 7.6 miles of new location single track rail within the U.S., including an international rail bridge crossing over the Rio Grande River. The southern project terminus would connect to a proposed railroad to be constructed and operated by EPRR affiliates within the country of Mexico. The northern project terminus would be near the Eagle Pass Mine, at which point an eventual physical connection to UPRR would be designed. One grade-separated highway crossing (a rail underpass), at US 277 would be constructed, along with several additional bridge structures for the railroad to traverse a water supply canal and other low areas and tributary channels along its path. A parallel unpaved maintenance road would be graded within the railroad right of way (ROW) throughout the project. The purchase of approximately 153 acres for ROW would provide a swath of 150-ft minimum width, increasing to a maximum of approximately 395-ft where necessary to accommodate grading in deep cut sections. The width of the purchased ROW would also include an area to be preserved for future switchyard operations that may eventually be needed in response to demand. A few private road at-grade crossings would be developed through coordination with each property owner according to his needs. Utilities requiring adjustment generally include gas gathering lines, overhead electric transmission, and underground telecommunication. New utility services would be constructed as required to service customs inspection facilities. The project and study areas are illustrated on **Exhibit 1: Project Location Map**.

Project engineers evaluated several specific alignment sub-alternatives generally following along Corridor 5 to optimize excavation and fill requirements, achieve a suitable design grade and other limiting geometric design criteria, minimize ROW costs and other property impacts, and maximize the suitability of the project for railroading and related future industry uses.

As shown on **Figure 4**, five sub-alternative route alignments were compared within Corridor 5.

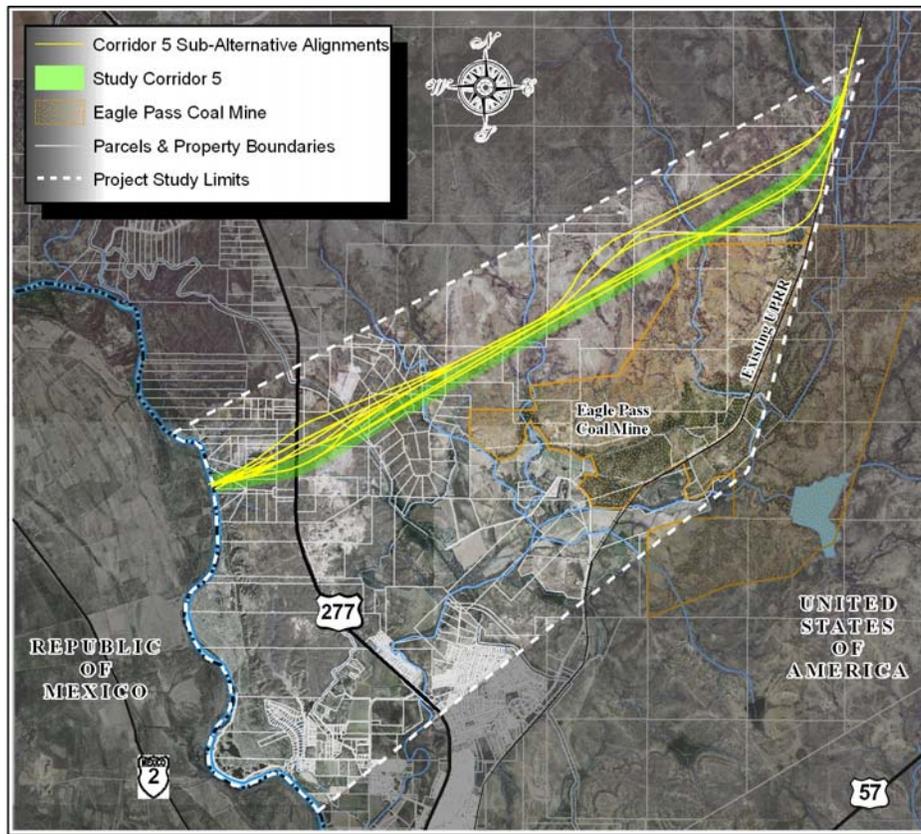


Figure 4: Corridor 5 Sub-Alternative Alignments

None of the sub-alternative route alignments significantly impacted environmental resources. Therefore, the key differentiating factor was geometric feasibility, particularly the magnitude of cuts and fills resulting from superimposing the railroad profile on the existing topography.

Though longer than Corridor 1, Corridor 5 was ultimately chosen as the **Preferred Alternative** since it consists of fewer impacts to surrounding resources, including less impact to existing residential development on the outskirts of Eagle Pass, and also minimal impacts to the surrounding environment, including especially Elm Creek. Specifically, Corridor 5 proposes a route that traverses only 13 streams and will include seven bridged sections. It has minimal floodplain impact, and avoids historical, and protected species resources. It is located 1.8 miles away from the nearest residential development, thus it will have no noise impacts to the surrounding environment. It has minimal wetland impacts of the alternatives evaluated and it avoids Elm Creek. It is also the straightest path from the existing UPRR line to the border crossing adjacent to its Mexican counterpart connecting the rail, and offers suitable terrain for an adjacent switchyard (see **Table 7**).

Further, as opposed to the No Build Alternative, Corridor 5 would also increase rail capacity through the region to accommodate current and future demand for rail service, and would provide a rail alternative that bypasses the Eagle Pass downtown area, thereby avoiding numerous at-grade crossings. For this additional reason, Corridor 5 was chosen as the **Preferred Alternative** necessary to meet the Purpose and Need of the Project.

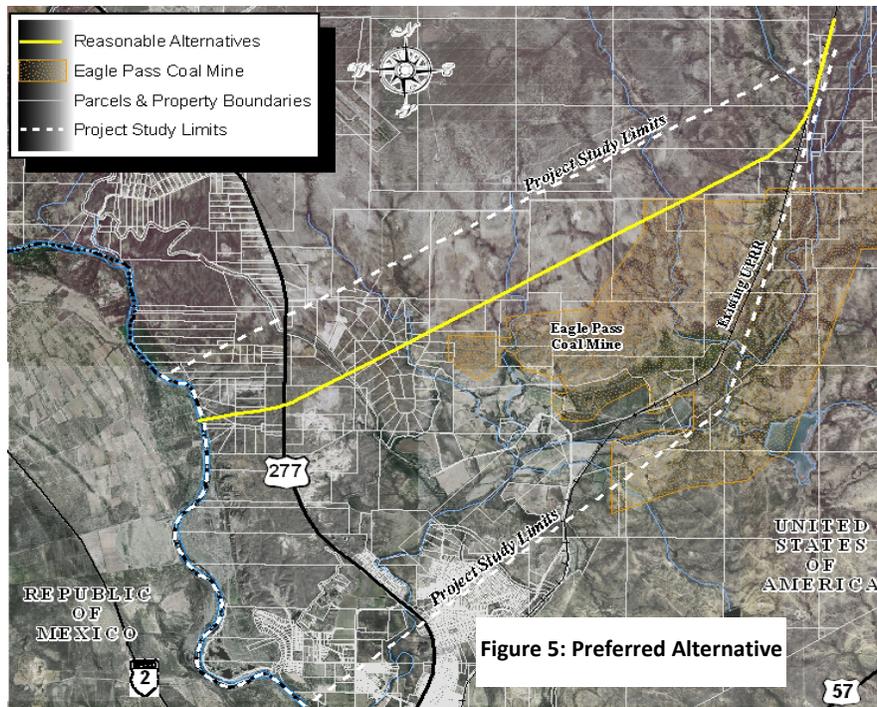
Table 7: Comparison of Corridors 1-5

Screening Criteria	Corridor 1	Corridor 2	Corridor 3	Corridor 4	Corridor 5
Number of stream crossings	8	8	8	5	13
Proximity to known protected species habitat	730'	730'	730'	1250'	210'
Proximity to protected species recorded occurrences	0' - Intersects buffer areas of recorded occurrences	0' - Intersects buffer areas of recorded occurrences	0' - Intersects buffer areas of recorded occurrences	0' - Intersects buffer areas of recorded occurrences	1480'
100yr Floodplain Impact	114 ac	133 ac	141 ac	238 ac	63 ac
Instances of within 500' proximity to Archeological Resources	3	3	3	1	2
Instances of within 500' proximity to Historical Resources	1 (Lamar Mine)	1 (Lamar Mine)	1 (Lamar Mine)	0	0
Proximity to Existing Development	1 mile from development; Traverses or within 500' of 4 rural homesteads	0.15 mile from development; Traverses or within 500' of 6 rural homesteads	Traverses 1 subdivision; Within 500' of 1 subdivision; Traverses or within 500' of 9 rural homesteads	Traverses 1 subdivision; within 500' of 3 subdivisions; Traverses or within 500' of 14 rural homesteads; Within 500' of Pete Gallego Elementary	1.8 miles from development
Proximity to Elm Creek	Within 500' for 0.1 mile	Within 500' for 0.1 mile	Within 500' for 0.1 mile	1 direct crossing; Within 500' for 0.7 miles	1.2 mi at nearest point
Wetlands Impact	9.6 ac Palustrine; 7, 703' Riverine	9.2 ac Palustrine; 4, 515' Riverine	14.1 ac Palustrine; 10, 435' Riverine	1.6 ac Palustrine; 5, 914' Riverine	6, 903' Riverine
Hazmat sites- RRC Nat Gas Wells	2 within 500'	2 within 500'	2 within 500'	1 within 500'	1 within 500'
Hazmat sites- RRC Nat Gas Pipelines	2	2	2	1	3
Length within Eagle Pass Extra-Territorial Jurisdiction	4.6 mi	4.9 mi	5.2 mi	4.4 mi	2.3 mi
Water Well within 500'	2	1	2	0	0
ROW Impact (alignment length)	4.6 miles	4.9 mi	5.2 mi	4.4 mi	7.8 miles

2.3 Preferred Alternative Construction/Operation

2.3.1 Rail Line Construction

Corridor 5 was chosen as the Preferred Alternative, identified in **Figure 5** below. Track construction of the Preferred Alternative would consist of extensive grading to prepare and shape the finished subgrade, sub-ballast material, ballast, wood or concrete ties, and welded or jointed rail. All earthwork would be contained within the project ROW. Fill materials would need to be hauled from one area to another within the project limits. This might be accomplished with dump trucks or small scrapers using the proposed maintenance road and existing access roads as haul roads, where available. For short trips, construction vehicles would stay within the proposed ROW. For longer trips, it might be necessary for construction vehicles to use public roads. Construction equipment would operate primarily within the ROW, except when accessing the earthwork staging and equipment turnaround sites. One or two major staging areas or several minor material staging areas would be used.



For track construction, the top of the existing ground would be cleared and grubbed of trees and vegetation (organic materials would be removed) and a new subgrade constructed. The grading contractor would be required to dispose of excess excavated materials. This material could be used on-site in the form of access roads or landscaping or could be completely removed from the site and used on other construction projects. Subballast material, the roadbase that underlies the ballast (gravel) supporting the ties and track, would either be imported onto the site or would be gleaned from on-site excavations. Subballast would be spread evenly in an approximately six-inch-deep layer and compacted on the newly constructed subgrade. **Table 8** summarizes the general quantities of earthwork and subballast material needed for the Preferred Alternative for track construction.

Table 8: Quantities of Track Construction Earthwork Needed for the Build Alternative

	Track Constructed (miles)	Total Excavation Cut (CY)	Embankment Fill(CY)	Grading Footprint (acres)	Proposed Total Right of Way (acres)	Subballast (CY)
	8.2	1,334,000	420,000	110	153	24,200

Note: All quantities are rounded and approximate
CY = cubic yards

2.3.2 Construction of International Rail Bridge

Construction of the proposed international rail bridge would take place within the Rio Grande floodplain. The international railroad bridge length would be approximately 3,420 ft., including 70 spans of 45 ft. using pre-stressed concrete beams and three spans of 90' using steel plate girders. The bridge would accommodate a single track and walkway on both sides. The bridge low chord elevation would be at least two meters above the 100 year high water elevation of the Rio Grande. To support the heavy loading and the height of the international railroad bridge, the bridge superstructure would be supported by two-column bents with in-line drilled shaft foundations. Round columns would be used to minimize debris accumulation and hydraulic head losses through the structure. Bridge bents would also be spaced such that they straddle the primary river flow of the Rio Grande. Slope protection would be provided under the bridge abutments.

Construction of inspection facilities may be required at or near the international rail bridge per the requirements of the CBP. However, the construction and/or operation of such facilities are not within the Project Description for the proposed EPRR rail line.

2.3.3 Construction of Bridges and Culverts

The proposed EPRR rail line would also include construction of five bridges and ten culvert structures for the railway to cross waterways or low areas along its path. The bridge structures would vary in length from approximately 145-ft to 225-ft and would be composed of generally 45-ft spans using pre-stressed concrete beams. The bridges would accommodate a single track and walkway on both sides, and would be supported on two-column bents with drilled shaft foundations and slope protection under the bridge abutments. The culverts structures would be composed of concrete boxes with concrete headwalls on each end.

Construction of the highway grade separation would take place within the existing ROW of US 277, but would require a temporary easement for construction of a shoe-fly diversion to maintain traffic flow during construction. The US 277 bridge would be constructed in three spans totaling 293 ft. in length and 40 ft. overall deck width using pre-stressed concrete beams. In addition to the earthen materials needed for the railway itself, the construction of the US 277 overpass would require 6300 CY of excavation and 2300 CY of embankment. Hauling of construction materials to the site would be accomplished using US 277.

2.3.4 Construction Schedule

EPRR estimates that the construction of the proposed rail line, together with international bridge, would take approximately 18 months. Construction would begin upon receipt of any federal and state approvals required to initiate construction.

2.3.5 Operation and Maintenance

Based on estimated rail shipments from the Eagle Pass Mine totaling approximately 2.2 million tons per year, EPRR anticipates to operate at the outset of its service approximately one round-trip per day, including both inbound from Mexico (empty) and outbound to Mexico (loaded) traffic, upon full operation of the Eagle Pass Mine intended to commence commercial production in 2014. Train traffic would increase as necessary to increase any future demand, including the potential transport of raw materials necessary for Mexico's metallurgical industry from the U.S. to Mexico, or other commodities.

EPRR intends to use cars with gross weights exceeding 100 tons. The types of cars that would be used would include open gondolas or bottom-dump hopper type with a capacity of up to 120 tons of material. Each car would be approximately 51 to 57 feet long. The typical train would utilize approximately 100 of these cars, extending nearly 5,304 to 5,928 feet in total length, including variable numbers of engines. Other cars may be utilized as needs extend beyond the initial transportation of coal from the Eagle Pass Mine.

Operation of the EPRR rail line is anticipated to require approximately 35 to 47 employees. The proposed rail line would cross only one major highway, US 277.

EPRR would install appropriate grade crossing safety devices at all grade crossings. A maximum speed of 60 mph may be possible for rail operations; however, 25 mph would meet the initial transportation needs of the Eagle Pass Mine.

Like any similar railroad, EPRR would be required to conduct maintenance procedures consistent with the Federal Railroad Administration (FRA) standards at 49 C.F.R. Part 213 to maintain the rail line in good condition. The required track maintenance would include resurfacing and replacing the ties and the damaged rail as needed. EPRR would inspect the track, including switches, periodically in compliance with the FRA's standards. In addition, EPRR would run rail testing equipment over this track to electronically check for defects in the rail. Based upon such inspection, ties and defective rail would be replaced. EPRR would also be required to maintain the track alignment within applicable requirements. Required locomotive maintenance would include changing filters and cleaning the external bodies with water. EPRR also plans to maintain the right-of-way in a manner that would minimize fire hazards consistent with industry and local standards.

The international bridge would also be maintained as appropriate. During operations, the CBP would have authority to conduct inspections at the U.S.-Mexico border crossing for each rail shipment carried on the proposed EPRR rail line. The maintenance of any facilities necessary for purposes of CBP inspections would be provided by CBP. Any such facilities are not within the Project Description for the proposed EPRR rail line.

2.3.6 Eagle Pass Mine Project

The Eagle Pass Mine is owned by Dos Republicas Coal Partnership, a partnership between Eagle Pass Coal Corporation (EPCC) and Maverick County Coal Corporation (MCCC). EPCC and MCCC are both wholly owned by Electrica Puerto Penasco, S.A. de C.V. (EPP), a Mexican corporation. EPP is owned by Minera del Norte, S.A. de C.V., which is a subsidiary of Altos Hornos de Mexico S.A.B. de C.V. (AHMSA). AHMSA is owned by Grupo Acerero del Norte, S.A. de C.V. (GAN), 45% of which is owned by Xavier D. Autrey Maza. Alonso Ancira Elizondo, Manuel Ancira Elizondo, Carlyle Technologies Corp., among other individuals, are the other owners of GAN. Both the proposed EPRR rail line and Eagle Pass Mine are owned by EPP.

The U.S. Environmental Protection Agency (EPA) issued a ROD in May 1995 for the proposed Eagle Pass Mine in Maverick County, Texas. On November 7, 2011, the Texas Commission on Environmental Quality (TCEQ) granted DRCP's application for renewal of the TPDES permit, which was initially issued by EPA in 1995, but subsequently transferred to the regulatory oversight of TCEQ. The Eagle Pass Mine currently has an application pending before the Texas Railroad Commission (TRC) to renew and amend its surface mining permit. Approval of that permit is expected to be provided in the Fall of 2012.

The proposed EPRR rail line would transport the coal from the Eagle Pass Mine from the U.S. into Mexico. The Eagle Pass Mine project would be developed and operated regardless of construction/operation of the proposed EPRR rail line. All permits or permit renewals/amendments necessary for the Mine's operation have been obtained, and/or are expected to be obtained by the Fall of 2012. The development and operation of the Eagle Pass Mine is not within the STB's jurisdiction and requires no authority from the STB for its construction, operation and/or maintenance.

Assuming that the EPRR were not constructed, the Eagle Pass Mine project would seek to transport coal by other means, including rail transport on the existing UPRR line. However, transportation via the UPRR line raises issues addressed in **Section 2.2** above, namely, the transportation of coal through downtown Eagle Pass on the existing UPRR line would exacerbate rail/traffic congestion at existing at-grade crossings, and would also fail to provide additional rail capacity needed for trade between the U.S. and Mexico.

However, because the rail line would serve the Mine, and because development and operation of the Mine has the potential to impact some of the same resources as the rail line at about the same time as the rail line construction and operation, analysis of the Mine has been addressed in the cumulative impacts section of this ER.

3 Description of the Affected Environment

This chapter provides an overview of the existing environment in the area of the proposed EPRR rail line. Existing conditions are described in order to assess potential environmental impacts arising from the construction and/or operation of the proposed rail line, which are addressed in **Chapter Four, Potential Environmental Impacts**. This Chapter includes information about the project corridor and the surrounding areas that was provided by federal, state, and local agency contacts, as well as data from field work and site visits conducted by scientists and planners from the project team.

3.1 Socioeconomic Setting

3.1.1 Population

According to the U.S. Census Bureau, the City of Eagle Pass had 22,413 persons in year 2000 and the population grew to 26,248 in year 2010, an increase of 17 percent. Maverick County had a population of 47,297 persons in year 2000 and grew by 15 percent to 54,258 persons in year 2010. According to the Texas Water Development Board's (TWDB) 2011 Regional Water Plan, Maverick County's population is projected to grow from 58,252 persons in 2010 to 67,929 residents in 2020 and 85,292 residents by 2040. The City of Eagle Pass' population was estimated at 26,160 in 2010, growing to 28,212 persons in 2020 and 32,116 persons in 2040 (Texas Water Development Board 2011). TWDB's 2010 population figures were estimates made prior to the 2010 census data being available.

3.1.2 Race/Ethnicity

Social and economic data are available from the U.S. Census Bureau. The census count was conducted in 2010 and redistricting data are available (limited data are available at the time of this writing, as certain data types are released on a rolling basis). The project would be constructed in Maverick County Tract 9507 Block Groups 1 and 3 within several Blocks (see **Table 9**). See **Exhibit 4: 2010 Census Tracts & Block Groups** and **Exhibit 5: 2010 Census Blocks**. Because this is generally a rural area, the Block sizes vary widely, and tend to be smaller near roadways where residences are clustered and larger when located further from roadways or other infrastructure. Many of the adjacent blocks do not have a residential population (as noted under **Table 9**). Blocks traversed or encountered by the proposed railroad alignment are included in the tables.

The Blocks with residential population include Tract 9507 Block Group 3 Block 3026 and Block Group 1 Blocks 1144 and 1379. In Tract 9507 Block Group 3 Block 3026, there were 277 persons, of which 224 (80.9 percent) were Hispanic and a total of 240 (86.6 percent) were any minority including Hispanic, Black or African American, American Indian and Alaska Native, Asian, and Two or More Races populations were represented (2.2 percent or less) in the Block. In Tract 9507 Block Group 1 Blocks 1144 and 1379, there were two people in Block 1144 and 27 people in Block 1379. In Block 1144, both persons were Hispanic/minority. In Block 1379, 24 persons were Hispanic out of 27 total and that constitutes the whole minority population in the Block (88.9 percent). The percentage of minority persons in Maverick County was higher at 97.1 percent, with Eagle Pass at 96.4 percent and Elm Creek Census Designated Place (CDP) at 98 percent minority in 2010. At the state level in Texas, the percentage is much lower: 54.7 percent of persons were minority including Hispanic in Texas in 2010.

Table 9: Race & Ethnicity for Total Population (2010 Census Redistricting Data)

Geo- graphy	Not Hispanic															Hispanic**		Total Minority (all non-white populations)	
	Total	White		Black*		Indian*		Asian		Islander*		Other*		Two*		#	%	#	%
	#	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
TRACTS																			
950700	9,412	463	4.9	10	0.1	16	0.2	33	0.4	0	0	3	0	9	0.1	8,878	94.3	8,949	95.1%
BLOCK GROUPS																			
3	3,293	146	4.4	5	0.2	6	0.2	8	0.2	0	0	1	0	3	0.1	3,124	94.9	3,147	95.6%
BLOCKS																			
3026	277	37	13.4	3	1.1	6	2.2	4	1.4	0	0	0	0	3	1.1	224	80.9	240	86.6%
BLOCK GROUPS																			
1	2,117	208	9.8	1	0	2	0.1	12	0.6	0	0	0	0	3	0.1	1,891	89.3	1,909	90.2%
BLOCKS																			
1144	2	0	-	0	-	0	-	0	-	0	-	0	-	0	-	2	100	2	100.0%
1379	27	3	11.1	0	-	0	-	0	-	0	-	0	-	0	-	24	88.9	24	88.9%
COUNTIES																			
Maverick County	54,258	1,552	2.9	75	0.1	506	0.9	140	0.3	2	0	15	0	54	0.1	51,914	95.7	52,706	97.1%
PLACES																			
Eagle Pass	26,248	953	3.6	30	0.1	38	0.1	117	0.4	0	0	13	0	32	0.1	25,065	95.5	25,295	96.4%
Elm Creek CDP	2,469	48	1.9	0	0.0	0	0.0	0	0.0	0	0	1	0	0	0.0	2,420	98.0	2,421	98.0%
STATES																			
Texas	25,145, 561	11,397,3 45	45. 3	2,886,8 25	11. 5	80, 586	0.3	948,4 26	3.8	17,92 0	0. 1	33,98 0	0. 1	319, 558	1.3	9,460,9 21	37.6	13,748,216	54.7%

Source: U.S. Census Bureau, 2010 Census Redistricting Data, Table P2

*Complete Census race descriptions are: White; Black or African American; American Indian & Alaska Native; Asian; Native Hawaiian & Other Pacific Islander; Some other race; Two or more races. **Hispanic persons can be of any race.

NOTE: Block Group 3 Blocks 3020, 3022, 3023, 3027, 3029, 3050, 3064; and Block Group 1 Blocks 1146, 1156, 1374, 1375, 1377, 1381, 1383, 1388 had no residential population in 2010 so they are shown on the Block map but are not included in this table.

3.1.3 Housing

According to the 2010 redistricting data, there were three Blocks adjacent to the project area with residential populations and a total housing unit count of 97 units. Eighty-eight were occupied housing units and nine were vacant housing units. In Tract 9507 Block Group 1, there were 634 housing units, 485 of which were occupied (approximately 76.5 percent) and 149 were vacant (approximately 23.5 percent). In Tract 9507 Block Group 3, there were 966 housing units, of which 855 (88.5 percent) were occupied and 111 (11.5 percent) were vacant. In Maverick County, 84.4 percent of houses were occupied and 15.6 percent were vacant out of 2,855 units (U.S. Census Bureau, 2010 Redistricting Data – Table H1).

3.1.4 Employment, Income, and Poverty

Employment, income, and poverty data are not yet available (October 2011) from the 2010 census. However, the American Community Survey (ACS) provides data for 2005-2009. According to American Community Survey 2005-2009 data (based on 2000 census geographies), the median household income for Tract 950100 was \$29,643 and for Block Group 1 within that tract, the median household income was \$27,596 as shown in **Table 10**. In Tract 950203, the median household income was \$29,712 and for Block Group 1 within that tract, it was \$33,234. By comparison, the median household income for Maverick County was \$30,123 and for Texas was \$48,199. The data are in 2009 dollars and based upon averages over time, accompanied by a substantial margin of error. The project study area Block Groups have similar data to the tract level, and lower median household income levels when compared to data for Maverick County and the State of Texas. According to the Department of Health and Human Services (DHHS), in 2011 the poverty level for a family of four was \$22,350. The median income in Maverick County, Tract 950100 BG 1 and Tract 950203 BG 1 in 2005-2009 exceeded the DHHS level.

Table 10: Median Household Income (American Community Survey 2005-2009)

	Total Households	Median Household Income (\$)
Tract 950100	290	29,643
Block Group 1	50	27,596
Tract 950203	1,608	29,712
Block Group 1	547	33,234
Maverick County	13,659	30,123
Texas	8,269,046	48,199

Source: U.S. Census Bureau, 2005-2009 American Community Survey, Tables B11001 and B19013. Income data is provided in 2009 inflation adjusted dollars.

According to ACS, Maverick County had approximately 20,051 persons in the civilian labor force and 10.4 percent were unemployed. In Maverick County, the median household income in 2009 was \$30,123 and there were 13,659 households. Approximately 30.2 percent of persons were in poverty in Maverick County including 37.4 percent under 18 and 38.8 percent 65 years and older. According to the DHHS, in 2011 the poverty level for a family of four was \$22,350. The poverty level in Maverick County in 2005-2009 exceeded the DHHS level.

Table 11: Income Distribution for Households (American Community Survey 2005-2009)

Geography	Total Households	Income (in Thousands of Dollars)									
		< \$10	\$10 - \$14.9	\$15 - \$24.9	\$25 - \$34.9	\$35 - \$49.9	\$50- \$74.9	\$75- \$99.9	\$100- \$149.9	\$150- \$199.9	\$200+
Maverick County	13,659	14.9 %	9.5%	18.9%	13.6%	15.3%	12.5%	8.6%	4.2%	0.6%	1.9%

Source: U.S. Census Bureau, 2005 – 2009 American Community Survey (2010).

There is a range of income levels across Maverick County. The largest percentage of households was in the \$15,000 – \$24,900 range with 18.9 percent of the households. The next largest was \$35,000 to \$49,900 with 13.6 percent.

Table 12: Occupation (American Community Survey 2005-2009)

Geography	Civilian employed population 16 years and over	Management	Service	Sales	Farming	Construction	Production
Maverick County	17,966	22.6%	23.6%	25.8%	1%	9.6%	17.5%

Source: U.S. Census Bureau, 2005-2009 American Community Survey.

In terms of occupation, according to the 2005-2009 ACS, in Maverick County 25.8 percent of the working age civilian population of 17,966 persons was in sales, followed by 23.6 percent in service, and 22.6 percent in management. Approximately 17.5 percent of persons were in production with 9.6 percent in construction and one percent in farming. According to the U.S. Census, in 2007 there were 3,758 firms in Eagle Pass.

The Kickapoo Lucky Eagle Casino is owned and managed by the Kickapoo Traditional Tribe of Texas. They run the Kickapoo Lucky Eagle Casino on Lucky Eagle Drive south of Eagle Pass. The Casino employs approximately 800 people (Kickapoo Traditional Tribe of Texas, 2011).

3.1.5 Ability to Speak English

There were some persons in the project area who were considered to have Limited English Proficiency. According to the 2005-2009 ACS data, there were approximately 46,014 persons who were age five and over. Of those, 47.7 percent of the Maverick County population was primarily Spanish speakers who spoke English “less than very well”. Zero percent were other Indo-European speakers; zero percent were Asian and Pacific Islander speakers, and 0.6 percent were “Other” speakers.

3.2 Physiography

3.2.1 Geologic History

According to information from the U.S. Department of the Interior - U.S. Geological Survey, the proposed project study area consists of geologic formations from the Phanerozoic Eon (see **Exhibit 6: Geology**). The area is underlain with thick Upper Cretaceous Period deposits and overlain with large deposits from the Pliocene, Pleistocene and Holocene Periods. The Phanerozoic Eon is the current eon in the geologic timescale, and the one during which most current and historical animal life has existed. It covers roughly 542 million years and goes back to the time when diverse hard-shelled animals first appeared. The Phanerozoic is divided into three eras: the Paleozoic Era (old), Mesozoic Era (middle), and Cenozoic Era (late).

Deposit Descriptions for the Proposed Project Study Area

1. *Cenozoic Era/Quaternary Period/Holocene and Pleistocene Epoch Deposits*

Qa--Modern alluvium (Holocene)—Active channel, floodplain, and low-lying terrace deposits consisting of gravel, sand, silt, clay, and organic material. About 2–15 meters thick.

Qal--Alluvium, undivided (Holocene and Pleistocene)—Gravel, sand, silt, and clay in varying proportions; may include channel, floodplain, fan, terrace, and some colluvial deposits. About 3–20 meters thick.

QTu--Uvalde Gravel (Pleistocene) caliche cemented gravel; some boulders up to 1 ft diameter; well-rounded cobbles of chert, some cobbles of quartz, limestone, and igneous rock. About 1-10 meters thick.

2. *Cenozoic Era/Neogene or “upper Tertiary Period/Pliocene Epoch Deposits*

QTu--Uvalde Gravel (Pliocene) See above description for Uvalde Gravel.

3. *Mesozoic Era/Upper Cretaceous Period Deposits*

Kes--Escondido Formation Consists of shale, siltstone, and sandstone; shale gray to bluish gray; silt stone brown-yellow, thin bedded; sandstone is fine grained calcareous, in part asphaltic, argillaceous, gray, flaggy bedded; about 60–250 meter thick.

Kup--Upson Clay Consists of mud and calcareous clay; contains oysters (*Exogyra ponderosa*). About 150 meters thick

Ksm--San Miguel Formation consists of sandstone, limestone, clay; some coal, fossiliferous sand, sandy limestone., and unfossiliferous clay superficially like the underlying Upson, clay increases in amount upward; fossils include *Exogyra ponderosa* and many other marine megafossils. About 120 meters thick.

Kol--Olmos Formation Lower part of Navarro Group consists of clay, sandstone, coal, and fire clay; irreg. stratified, interfingering lenses of sandstone and clay, chief coal seam about 6 ft thick. About 120–150 meters thick.

3.2.2 Topography

Maverick County lies within the northwest section of the Rio Grande Plain, which mainly consists of gently undulating plains. The County center lies fourteen miles southeast of Eagle Pass near 28°38' north latitude and 100°18' west longitude. Elevations range from 540 ft. in the southern part of the county to 960 ft. in the northern part of the County. The topography is level, particularly in the north central part of the County; otherwise the County exhibits slightly undulating terrain. The soils are gray to black, cracking and clayey with high shrink-swell potential. In some areas they are light colored and loamy with limestone bedrock. Native grasses are short to mid height. Less than 1 percent of the land is considered prime farmland. The terrain along the Rio Grande is characterized by rough hills overlooking a mile-wide stretch of irrigated farmland. The Rio Grande drains the western half of the county and the Nueces River the eastern half.

The terrain in general, within the proposed project study area, moves from level bottom land to gently rolling plain with elevations ranging from 750 ft. to 860 ft. The highest elevations are seen in the bluffs located in the northwest (810-850 ft.) and eastern portions (780-860 ft.) of the study area with the lowest elevations observed in plains of extreme southwestern (700-710 ft.) and the south central (710-735 ft.) portions. The only dramatic changes in elevation occur along the western portions of the study area along the Rio Grande. Portions of this western edge contain bluffs that range in height from 820-830 ft. that overlooks the bank of the Rio Grande at 700-710 ft. Along the southwest portion of the study area a flat plain emerges, ranging from 700 ft. to 710 ft., along the bank of the Rio Grande. Within the project study area, this plain is approximately ½ mile wide at its greatest width.

To the east of this plain is the same bluff section that directly borders the Rio Grande to the north. The south central (710-735 ft.) region of the study area is generally flat in appearance. The north central area (780-830 ft.) consists of a very gradual bluff line running through the center to northeast sections of the study area. The drainage patterns are moderately expressed in most of the study area due to the topography being nearly level to rolling plain. The topography of Elm Creek and its tributaries, within the study area, are generally flat and moderately distinct in drainage pattern and appearance with less than 20 ft. elevation difference between the surrounding elevations and the bottom of the creek channel. The tributaries of Elm Creek drain from the north and east and converge into Elm Creek in the south central portion of the proposed project study area. Elm Creek drains in a southwesterly direction towards its confluence with the Rio Grande River, north of the City of Eagle Pass.

3.2.3 Soils

The proposed project study area is dominated by two major soil series types, the Jimenez Series (part of the Jimenez-Olmos-Zapata association) and the Elindio Series (part of the Elindio-Montell association). The typical range of the Jimenez Series is a gravelly range with slight undulating ridges with shallow to very shallow soils undulating to rolling very gravelly loams. Permeability is moderate above the caliche. Available water capacity is very low. Movement of air, water, and roots in these soils is limited by shallow or very shallow depth to caliche. The typical range of the Elindio Series is generally flat terrain consisting of deep to moderately deep, saline silty clay loams and clays on uplands. These soils are moderately to slowly permeable and have medium available water capacity.

Within these three major soil series the following soil types were found to be present within the project study area (see **Exhibit 7: Soils**):

EdA—Elindio silty clay loam, 0 to 1 percent slopes—located large pockets within the central and eastern portions of the study area. These pockets are found interspersed within the elongated band of Elindio silty clay loam, 1 to 3 percent slopes. This soil type is considered prime farmland if irrigated.

EOA—Elindio association, nearly level—located in narrow elongated sections within the north central and northeast portions of the study area. Found on the northern edges of the elongated band containing Elindio silty clay loam, 0 to 1 percent slopes and 1 to 3 percent slopes. This soil type is considered prime farmland if irrigated.

JZD—Jimenez association, rolling—located in great abundance throughout the entire study area, with its greatest accumulations in the west and northwest. This soil type dominates the study area with very large areas of uninterrupted sections located in the west and northwest sections of the study area. It also dominates the north central and northeast portions of the study area with large sections mixed throughout other soil types. It is also located in small pockets along the south central portion of the study area.

Other soil types present, in smaller quantities, within the project study area include:

CAB—Catarina association, gently undulating—located in the south central portion of the study area.

MCB—Mavco association, gently undulating—located in the north central and northeast portions of the study area. This soil type is considered prime farmland if irrigated.

MNA—Mercedes association, depressional—(hydric soil) located in the northeast portion of the study area.

MTA—Montell association, nearly level—located near the northern terminus of the study area.

OMC—Olmos association, undulating—located near the center of the study area.

QMC—Quemado association, undulating—located in the north central and northeast portions of the study area.

Rz—Rio Grande and Zalla soils—(hydric soil) located in the western portion of the study area, along the Rio Grande.

ZPC—Zapata association, undulating—located in the western portion of the study area.

Prime Farmland

According to the USDA/NRCS February 2007 document titled, *Texas Criteria for Prime Farmlands*, prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is suitable for cropland, pastureland, rangeland, or forestland. It is not suited to urban or water use. It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. Prime farmland is defined in the Federal Register, Vol. 6, Parts 400- 699, January 1, 2001, Section 657.5(a).

Texas is divided into three moisture zones; Maverick County is located in Moisture Zone 3. Moisture Zone 3 Soil must have a total available water capacity equal to or greater than 4 inches in the upper 40 inches of the soil profile and must have a developed irrigation water supply that is dependable and meets minimum quality standards for irrigation water. A dependable water supply has water available for irrigating the major commonly grown crops at least 8 out of 10 years.

To be considered prime farmland, the soil must meet the physical and chemical criteria for Prime Farmland or Farmland of Statewide Importance as determined by the NRCS. NRCS compiles lists of which

soils in each survey area meet the quality criteria. Factors considered in qualification of a soil by NRCS include:

- Water moisture regimes, available water capacity, and developed irrigation water supply
- Soil temperature range
- Acid-alkali balance
- Water table
- Soil sodium content
- Flooding (uncontrolled runoff from natural precipitation)
- Erodibility
- Permeability rate
- Rock fragment content
- Soil rooting depth

As indicated above prime, farmland soils, as designated by the USDA Natural Resources Conservation Service (NRCS), are present within the proposed project study area (See **Exhibit 8: Prime Farmland Soils**). However, during onsite field investigations, the soils within the proposed project study area showed no signs of recent, past, or present irrigation methods in use. These soils are only rated as prime farmland soils if they are irrigated, which they are not. As such, no prime farmland is considered to be present within the ROW necessary for construction and/or operation of the proposed EPRR rail line.

3.3 Water Resources

3.3.1 Groundwater

The Carrizo-Wilcox Aquifer is the only significant groundwater source in Maverick County and is located in the extreme eastern portions of Maverick County (see **Exhibit 9: Aquifers**). The only other sources of groundwater come from scatter shallow water wells that lie within alluvium and other near surface strata.

The Wilcox Group and the overlying Carrizo Formation of the Claiborne Group form a hydrologically connected system known as the Carrizo-Wilcox aquifer. This aquifer extends from the Rio Grande in South Texas northeastward into Arkansas and Louisiana, providing water to all or parts of 60 counties. The Carrizo Sand and Wilcox Group crop out along a narrow band that parallels the Gulf Coast and dips beneath the land surface toward the coast. The Carrizo-Wilcox aquifer is predominantly composed of sand locally interbedded with gravel, silt, clay, and lignite deposited during the Tertiary Period. Significant water-level declines have developed in the semiarid Winter Garden portion (Dimmit Zavala, LaSalle, & Frio Counties) of the Carrizo aquifer, as the region is heavily dependent on ground water for irrigation. In fact, since 1920, water levels have declined as much as 100 feet in much of the area and more than 250 feet in the Crystal City area of Zavala County (Texas Water Development Board, November 1995).

3.3.2 Surface Water

3.3.2.1 Surface Water Drainage Characteristics

The Rio Grande, the fifth longest river of North America and the 20th longest in the world, forms the entire border between Texas and Mexico. Rising as a clear, snow-fed mountain stream more than 12,000 ft. above sea level in the Rocky Mountains of Colorado, the Rio Grande descends across steppes and deserts, watering rich agricultural regions as it flows on its way to the Gulf of Mexico; the total length of the river is 1,760 miles. The area within the entire watershed is some 336,000 square miles. However, because a large proportion of the river's basin is arid or semiarid, only about half of the total area, or about 176,000 square miles, actually contributes to the river's flow. For the lower two-thirds of its course, the Rio Grande flows southeastward between Texas and the Mexican states of Chihuahua, Coahuila, Nuevo León, and Tamaulipas to eventually empty into the Gulf of Mexico.

Maverick County is in the northwestern section of the Rio Grande plain region and is located in the southeastern portion of the Rio Grande Basin. The Rio Grande, or Rio Bravo as it is known in Mexico, forms Maverick County's western and international border with Mexico. The Rio Grande drains the western half of the county and the Nueces River the eastern half. Within Maverick County, the terrain along the Rio Grande is characterized by rough hills overlooking a mile-wide stretch of irrigated farmland. The principal source of water, in Maverick County, for domestic and agricultural use is the Rio Grande. Water that is needed for irrigation use is channeled through the Maverick County Irrigation Canal system for agricultural production. Water wells tap into the Carrizo Springs aquifer near the county's eastern border with Zavala and Dimmit Counties; also, there are water wells located in the northwest section of the county near the Rio Grande within gravel bed strata.

The proposed project is located entirely within the Quemado Creek-Rio Grande and Elm Creek watersheds (see **Exhibit 10: Watersheds**). These watersheds are characterized medium to dense tree coverage along streambeds, medium-textured soils, minor areas of surface depression, and slopes averaging a range of 0-10 percent. The rainfall traveling through these watersheds crosses through flat terrain with locally shallow depressions surfaced by medium-textured soils moving in a southwesterly direction until it drains directly into the Rio Grande. Within the proposed project study area the Quemado Creek-Rio Grande watershed is bordered by the Rio Grande River to the west and US 277 to the east. The Quemado Creek-Rio Grande watershed collects and channels rainfall runoff from the northwestern corner of Maverick County and directs this drainage directly to the Rio Grande River north of Eagle Pass. The Elm Creek watershed is primarily located east of US277 with two small portions of the watershed located west of US 277. The Elm Creek watershed, located in north central Maverick County, collects and channels rainfall runoff from Hediondo Creek along with multiple unnamed ephemeral tributaries, into Elm creek which in turn drains directly into the Rio Grande, north of Eagle Pass. Elm Creek traverses approximately 25 miles through Maverick County. Elm Creek flows in a north to south direction for approximately 20 miles from the Kinney/Maverick County border and turns in a southwesterly direction just north of Eagle Pass for approximately five miles until it terminates into the Rio Grande. The surface waters in the project study area consist primarily of arroyos (dry shallow surface features) and dry creek beds, both of which are typical of arid environments that carry surface water only during storm events. Scattered natural and manmade permanent surface water features, such as stock tanks and impoundments, exist within proposed project study area.

3.4 Wildlife

3.4.1 Flora

Regional Vegetation

The proposed project is located within the South Texas Plains Natural Region of Texas (Gould, et al., 1960). The region covers approximately 12 percent of the state, and is generally arid, with 12 to 32 inches of rainfall per year (Telfair, 1999). Topography is nearly level to rolling and soils vary from clays to sands (Telfair, 1999). The South Texas Plains is characterized by a mixture of open prairies and mixed brush shrublands (Correll and Johnston, 1996). Much native vegetation of the region has been altered as a result of brush removal and grass seeding for livestock grazing, and fire suppression has resulted in transformation of native grasslands into thorn-brush vegetation (Telfair, 1999).

Project Area Vegetation

According to *The Vegetation Types of Texas*, there are two vegetation types mapped within the project area. The northern/northeastern portion of the project area is located within the Mesquite-Blackbrush-Bush vegetation type, and the southern/southwestern portion of the project area is located within the Ceniza-Blackbrush-Creosote Brush vegetation type (McMahan, et al., 1984) (see **Exhibit 11: Vegetation Types of Texas**). The descriptions for these vegetation types are similar, and the species composition for the types is almost identical. The main difference between them appears to be the distribution of the vegetation type. Ceniza-Blackbrush-Creosotebrush Brush is found along the slopes of the Rio Grande basin, while Mesquite-Blackbrush Brush is described as occurring on shallow, gravelly or loamy soils of the South Texas Plains.

A field assessment of vegetation was conducted in April 2011. Vegetation of the project area is fairly uniform and consists of mixed brush. Species composition within the project area is consistent with that described by *The Vegetation Types of Texas*.

Common brush species observed within the project area include honey mesquite (*Prosopis glandulosa*), prickly pear (*Opuntia sp.*), yucca (*Yucca sp.*), cenizo (*Leucophyllum frutescens*), little-leaf lead tree (*Leucaena retusa*), blackbrush (*Acacia rigidula*), paloverde (*Parkinsonia texana*), granjeno (*Celtis pallida*), allthorn (*Koeberlinia spinosa*), lotebush (*Ziziphys obtusifolia*), Texas persimmon (*Diospyros texana*), tasajillo (*Opuntia leptocaulis*), lime pricklyash (*Zanthoxylum fagara*), spanish dagger (*Yucca treculeana*), strawberry cactus (*Echinocereus enneacanthus*), fiddlewood (*Citharexylum berlandieri*), and huisache (*Acacia farnesiana*). Common grass species include tall dropseed (*Sporobolus asper*), canatilla (*Ephedra antisyphilitica*), weeping lovegrass (*Eragrostis curvula*), curly mesquite (*Hilaria belangeri*), and King Ranch bluestem (*Bothriochloa ischaemum*). **Photo 1** depicts typical mixed brush vegetation within the project area.



Photo 1: Mixed brush vegetation

Along project area creeks and drainages, vegetation consists of many of the same brush species as found in surrounding areas. Species such as retama (*Parkinsonia aculeata*), cedar elm (*Ulmus crassifolia*), and common buttonbush (*Cephalanthus occidentalis*) are also present along drainages with deeper soils. See **Photo 2**.



Photo 2: Vegetation along a project area creek

Species found growing alongside the Rio Grande include giant reed (*Arundo donax*), retama, saltcedar (*Tamarisk chinensis*), bermudagrass (*Cynodon dactylon*), switchgrass (*Panicum virgatum*), and tree tobacco (*Nicotiana glauca*). See **Photo 3**.



Photo 3: Vegetation along the Rio Grande River, Maverick County

3.4.2 Fauna

Wildlife

The proposed project is located within the Tamaulipan Biotic Province of Texas, as described by Blair (1950) (see **Exhibit 12: Natural Regions and Biotic Provinces of Texas**). The region is roughly analogous to the South Texas Plains Natural Region described by Gould, et al. (1960). The Tamaulipan is known for a large number of vertebrate species, including at least 61 species of mammals, 57 species of reptiles (including 36 species of snakes, 19 species of lizards, and two species of land turtles), and 22 species of amphibians (Blair, 1950). Approximately 529 species have been recorded as occurring within the South Texas region, and avian fauna of the region is noted as the most distinctive in Texas (Arvin, 2007).

Migratory Birds

The Migratory Bird Treaty Act of 1918 provides protection to migratory birds, their young, eggs, or occupied nests, except as authorized by federal permit. The Bald and Golden Eagle Protection Act provides further protection for Bald Eagles (*Haliaeetus leucocephalus*) and Golden Eagles (*Aquila chrysaetos*).

Various species of migratory birds and a few nests which appeared to be active were observed within the project area during the April 2011 field investigations. This is not unusual, as migratory birds would be expected to utilize the project area during the breeding season (generally March-August). No Bald Eagles or Golden Eagles were observed.

Threatened and Endangered Species

Federally-listed species and their habitats are afforded protection by the Endangered Species Act of 1973, as amended. State law prohibits harm to individuals of state-listed species. Lists of rare, threatened and endangered species maintained by the U.S. Fish and Wildlife Service (USFWS) and Texas Parks and Wildlife Department (TPWD) were consulted to determine species of potential occurrence in

the vicinity of the proposed project. A total of five federally-listed endangered species, two federal candidate species, one species proposed for listing as threatened, one species considered federally-listed threatened based on similarity of appearance, and 14 state-listed threatened species were identified as having the potential to occur in Maverick County, Texas. **Table 13** contains a list of these species, their regulatory listing status, habitat description, and a determination of whether appropriate habitat for the species occurs in the project area.

The Texas Natural Diversity Database (TXNDD) was consulted on April 25, 2011, for information regarding occurrence of listed and rare species using data obtained from TPWD’s live version of the TXNDD. TXNDD provides known historical records for rare, threatened, and endangered species. Occurrence data are generally presented as large polygons rather than point location data (for protection of the species). Information files were reviewed for known locations of the species in the *Quemado SE, Deadmans Hill, Indian Tank, Trosado Tank, Paloma, Quemado E, Quemado W, Eagle Pass West, Eagle Pass East, and Eagle Pass NE* USGS 7.5 minute topographical quadrangle maps (which include the project area and surrounding vicinity including a 10-mile search radius around the proposed project). Nineteen (19) Elements of Occurrence (EO) were identified by the TXNDD within an approximate 10-mile radius of the proposed project area. One of these is a rare/tracked plant series, the Cedar Elm-Sugarberry (*Celtis laevigata*) series, for which the occurrence polygon is large and encompasses the project area; the other eighteen (18) occurrences are listed in **Table 13**. Although it provides valuable information regarding recorded occurrences of listed or rare species, it is important to note that TXNDD cannot be used for presence/absence determinations.

Table 13: Threatened, Endangered, and Rare Species of Potential Occurrence in Maverick County, Texas

Species	Federal Status	State Status	Species/Habitat Description	Recorded Occurrences (EO ID* and Distance/ Direction from Project Area)	Habitat Present?
Mollusks					
False spike mussel <i>Quadrula mitchelli</i>	NL	T	Possibly extirpated in Texas; probably medium to large rivers; substrates vary from mud to mixtures of sand, gravel and cobble; water lilies may be present; Rio Grande, Brazos, Colorado, and Guadalupe (historic) River basins	---	No – Although the project crosses the Rio Grande, no water lilies are present and the species may be extirpated.
Mexican fawnsfoot mussel <i>Truncilla cognata</i>	NL	T	Largely unknown; possibly flowing streams and rivers with sand or gravel bottoms and intolerant of impoundment (based on the needs of related species); Rio Grande basin	---	Yes – The species could occur within the Rio Grande.
Salina mucket <i>Potamilus metnecktayi</i>	NL	T	Lotic waters; submerged soft sediment (clay and silt) along river bank; other habitat requirements poorly understood; Rio Grande basin	---	Yes – The species could occur within the Rio Grande.
Texas hornshell <i>Popenaias popeii</i>	C	T	Both ends of shallow runs over bedrock, in areas where small-grained	---	No – No shallow runs over

Species	Federal Status	State Status	Species/Habitat Description	Recorded Occurrences (EO ID* and Distance/ Direction from Project Area)	Habitat Present?
			materials collect in crevices, along river banks, and at the base of boulders; not known from impoundments; Rio Grande basin and several rivers in Mexico		bedrock occur within the project area.
Fish					
Blue sucker <i>Cycleptus elongatus</i>	NL	T	Larger portions of major rivers; channels and flowing pools with a moderate current; substrate of exposed bedrock, in combination with hard clay, sand, and gravel; adults winter in deep pools and move upstream in spring to spawn on riffles	---	Yes – The species could occur within the Rio Grande.
Proserpine shiner <i>Cyprinella proserpina</i>	NL	T	Rio Grande and Pecos River basins; rocky runs and pools of creeks and small rivers	EO ID 4286 – 2.8 miles northwest	No – No rocky runs or pools are found within the project area.
Rio Grande darter <i>Etheostoma grahami</i>	NL	T	Rio Grande and lower Pecos River basins; gravel and rubble riffles of creeks and small rivers; spawns in the winter	---	No – No gravel and rubble riffles are found within the project area.
Rio Grande silvery minnow <i>Hybognathus amarus</i>	E	E	Extirpated; historically Rio Grande and Pecos River systems and canals; reintroduced in Big Bend area; pools and backwaters of medium to large streams with low or moderate gradient in mud, sand or gravel substrate; spawns on silt substrates of quiet coves	---	No – The species is extirpated from the Rio Grande.
Amphibians					
South Texas siren (large form) <i>Siren sp 1</i>	NL	T	Wet or sometimes wet areas, such as arroyos, canals, ditches, or even shallow depressions; aestivates in the ground during dry periods, but does require some moisture to remain; breeds February-June	---	Yes – The species could occur in wet areas along the Rio Grande.
Reptiles					
Reticulate collared lizard <i>Crotaphytus reticulatus</i>	NL	T	Open brush-grasslands; thorn-scrub vegetation; well-drained, rolling terrain of shallow gravel, caliche, or sandy soils; often on scattered flat rocks below escarpments or isolated rock outcrops among scattered clumps of prickly pear and mesquite	EO ID 384 – 1.6 miles south; EO ID 6337 – 5.9 miles south; EO ID 6.1 miles south; EO ID 278 – 7.0 miles south;	Yes – This species could occur within the project area.

Species	Federal Status	State Status	Species/Habitat Description	Recorded Occurrences (EO ID* and Distance/ Direction from Project Area)	Habitat Present?
				EO ID 383 – 10.2 miles southeast	
Texas horned lizard <i>Phrynosoma cornutum</i>	NL	T	Open, arid and semi-arid regions with sparse vegetation; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September; eats red/harvester ants	---	Yes – This species was observed within the project area.
Texas indigo snake <i>Drymarchon melanurus erebennus</i>	NL	T	Thornbush-chaparral woodlands of south Texas, in particular dense riparian corridors; sometimes found in suburban areas or irrigated croplands; requires moist microhabitats, such as rodent burrows, for shelter	EO ID 7746 – 1.6 miles south	Yes – This species could occur within the project area.
Texas tortoise <i>Gopherus berlandieri</i>	NL	T	Open brush with grass understory preferred; avoids open grass and bare ground; when inactive occupies shallow depressions at base of bush or cactus; utilizes burrows; active March-November	EO ID 8206 – 8.0 miles south	Yes – This species could occur within the project area.
Birds					
American Peregrine Falcon <i>Falco peregrinus anatum</i>	DL	T	Resident and breeder in west Texas; migrant across the rest of the state; Winters along Texas Gulf Coast; stopovers at leading landscape edges	---	No – The project area is outside of the breeding range of the species and is not located along the Gulf Coast; however, the species is a potential migrant.
Interior Least Tern <i>Sterna antillarum athalassos</i>	E	E	Listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also nests on man-made structures	---	No – No sand or gravel bars along streams or rivers occur within the project area.
Sprague's Pipit <i>Anthus spragueii</i>	C	SOC	Winters in Texas (mid-September to early April); native upland prairie or coastal grasslands; sensitive to patch size and avoids edges	---	No – No upland prairie or coastal grasslands occur within the project area.
Mammals					
Black bear <i>Ursus americanus</i>	T/SA; NL	T	Bottomland hardwoods and large tracts of inaccessible forested areas; similar in appearance to federally-	EO ID 2918 – 3.6 miles northwest;	No – No bottomland hardwoods or

Species	Federal Status	State Status	Species/Habitat Description	Recorded Occurrences (EO ID* and Distance/ Direction from Project Area)	Habitat Present?
			listed threatened Louisiana black bear (<i>Ursus americanus luteolus</i>)	EO ID 3266 – 5.5 miles south	forested land is found within the project area.
Gray wolf <i>Canis lupus</i>	E	E	Extirpated; formerly known throughout the western two-thirds of the state in forests, brushlands, or grasslands	---	No – Species is extirpated.
Gulf Coast jaguarundi <i>Herpailurus yaguaroundi cacomitli</i>	E	E	Thick brushlands, near water favored; young born in March and August (or beginning of rainy season and end of dry season)	EO ID 2176 – 0.2 mile south; EO ID 1.19 – 1.0 mile south/ southeast; EO ID 7180 – 1.5 miles south; EO ID 5834 – 3.0 miles south	No – Project ROW brushlands are not thick enough to support the species.
Margay <i>Leopardus wiedii</i>	NL	T	Extirpated; neotropical forested areas of South America; often in trees	---	No – Species is extirpated; only known occurrence of species in Texas is based on a single specimen taken near Eagle Pass prior to 1852 (Schmidly, 1994)
Ocelot <i>Leopardus pardalis</i>	E	E	Dense chaparral thickets; mesquite-thorn scrub and live oak motts; avoids open areas; breeds June-November	EO ID 1677 – 0.8 mile south; EO ID 874 – 1.5 miles south; EO ID 7550 – 2.7 miles north/ northwest	No – Project area vegetation is too open and is not thick enough to support the species.
White-nosed coati <i>Nasua narica</i>	NL	T	Woodlands, riparian corridors and canyons; most individuals in Texas probably transients from Mexico; diurnal and crepuscular; sociable; forages on ground or in trees	---	Yes – The species could occur in riparian corridors within the project area.

Status:

E = Endangered

C = Candidate for Listing

SOC = Species of Concern

T = Threatened

D = Delisted

NL = Not Listed

PT = Proposed for listing as threatened

Species	Federal Status	State Status	Species/Habitat Description	Recorded Occurrences (EO ID* and Distance/ Direction from Project Area)	Habitat Present?
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T/SA = Considered threatened due to similarity of appearance to a listed taxon

*EO ID = Element of Occurrence Identification Number, as designated by TXNDD

Sources: TPWD, 2011a. TPWD, 2011b. USFWS, 2011.

3.5 Transportation

Maverick County has an array of transportation facilities including highway, rail, and air transport. Maverick County also contains three international bridge crossings, two for vehicular traffic and one for rail transport.

International Bridges

The City of Eagle Pass owns and operates two international vehicular bridges (up to the international boundary line), Eagle Pass Bridge 1 and Camino Real International Bridge 2. Eagle Pass Bridge 1, designated for passenger vehicles and pedestrians, connects the Eagle Pass business district with Piedras Negras, Coahuila and its downtown business district. The Camino Real International Bridge 2 is designated as the commercial traffic bridge. This bridge connects International Highway 57 in the State of Coahuila to the Eagle Pass Industrial Park, Industrial Boulevard and the future Outer Loop.



Photo 4: Eagle Pass International Bridge

The UP International Railroad Bridge, the only international rail crossing in Maverick County, is the second highest crossing in volume of the six rail crossings along the 2000-mile United States-Mexico border. The rail bridge crosses the U.S./Mexican border immediately south of the Camino Real International Bridge 2. Eagle Pass has 17 percent of the entire Union Pacific border crossings transported through the Port of Eagle Pass. This represents \$245 million worth of products.

Rail



UPRR has an existing rail line that ties into its main line near US 90 and crosses over into Piedras Negras, Coahuila, Mexico at the Port of Eagle Pass International Rail Crossing (see **Exhibit 3**). Near the international crossing there is a U.S. CBP rail cargo inspection facility that services this rail line. The rail line moves approximately 23 miles from the southern side of Eagle Pass in a northeasterly direction through Maverick County.

Aviation

The only public airport in Maverick County is the Maverick County Memorial Airport, located approximately 8 miles north of Eagle Pass with a runway 5500 ft. in length and 100 ft. in width. The airport is owned and operated by Maverick County.

Highways/Roads

Two US Highways US 277 and US 57 are located within Maverick County. US 277 covers approximately 54 miles of the county while US 57 covers approximately 36 miles of Maverick County. US 277 connects Maverick County to Del Rio to the north and Laredo to the south. The Ports-to-Plains Trade Corridor from Laredo via US 83 connects to US 277 in Carrizo Springs, following US 277, the corridor passes through Eagle Pass, Del Rio, and Sonora before connecting to US 87 in San Angelo and from there moves northward into the Midwest region of the United States (Great Plains International Trade Corridor Assessment, September 2008). To the east, US 57 connects Maverick County to San Antonio and to the west it connects directly to the Mexican city of Piedras Negras, Coahuila and continues into Mexico as Mexico 57 which connects Eagle Pass directly to the central Mexican city of San Louis Potosi.

Along with the US 277 and US 57 highway systems, SH 131 which ties into to US 277 at a point 12 miles north of the Eagle Pass, covering approximately 10 miles of Maverick County. SH 131 connects Maverick County with the town of Brackettville located in Kinney County which ultimately ties Maverick County to US 90. US 90 is a direct connector between the cities of El Paso and San Antonio.



Photo 5: Constructed portion of SL 480 in Maverick County



Figure 6: Aerial view of Maverick County Memorial Airport

The city of Eagle Pass and Maverick County have a long term plan for an outer loop to be named State Loop (SL) 480 (**Figure 7**). This two-lane highway would eventually connect the International Bridge 2 to US 277 north of Eagle Pass. SL 480 would intersect US 277 east of Eagle Pass and US 57 northeast of Eagle Pass. These two intersections would allow for expedited freight transportation directed outside of the urbanized areas of Maverick County.



Figure 7: Description of SL 480 Eagle Pass Outer Loop

Source: Maverick County Development Corporation

3.6 Air Quality

Air emission sources in Texas are regulated at the federal level by the Clean Air Act (CAA) with portions revised under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), as amended, and at the state level by the Texas Commission on Environmental Quality (TCEQ) Division of Air Quality. According to Section 176(c) of the CAA (Title 40 Code of Federal Regulations [CFR] Section 51.853), a federal agency must make a conformity determination in the approval of a project having air emissions that exceed specified thresholds in nonattainment and/or maintenance areas.

Conformity is the process wherein federally supported plans, programs, and projects are shown to meet the air quality requirements of the CAA and the applicable State Implementation Plan (SIP). The SIP is the plan that demonstrates how the state will attain and maintain compliance with the National Ambient Air Quality Standards (NAAQS).

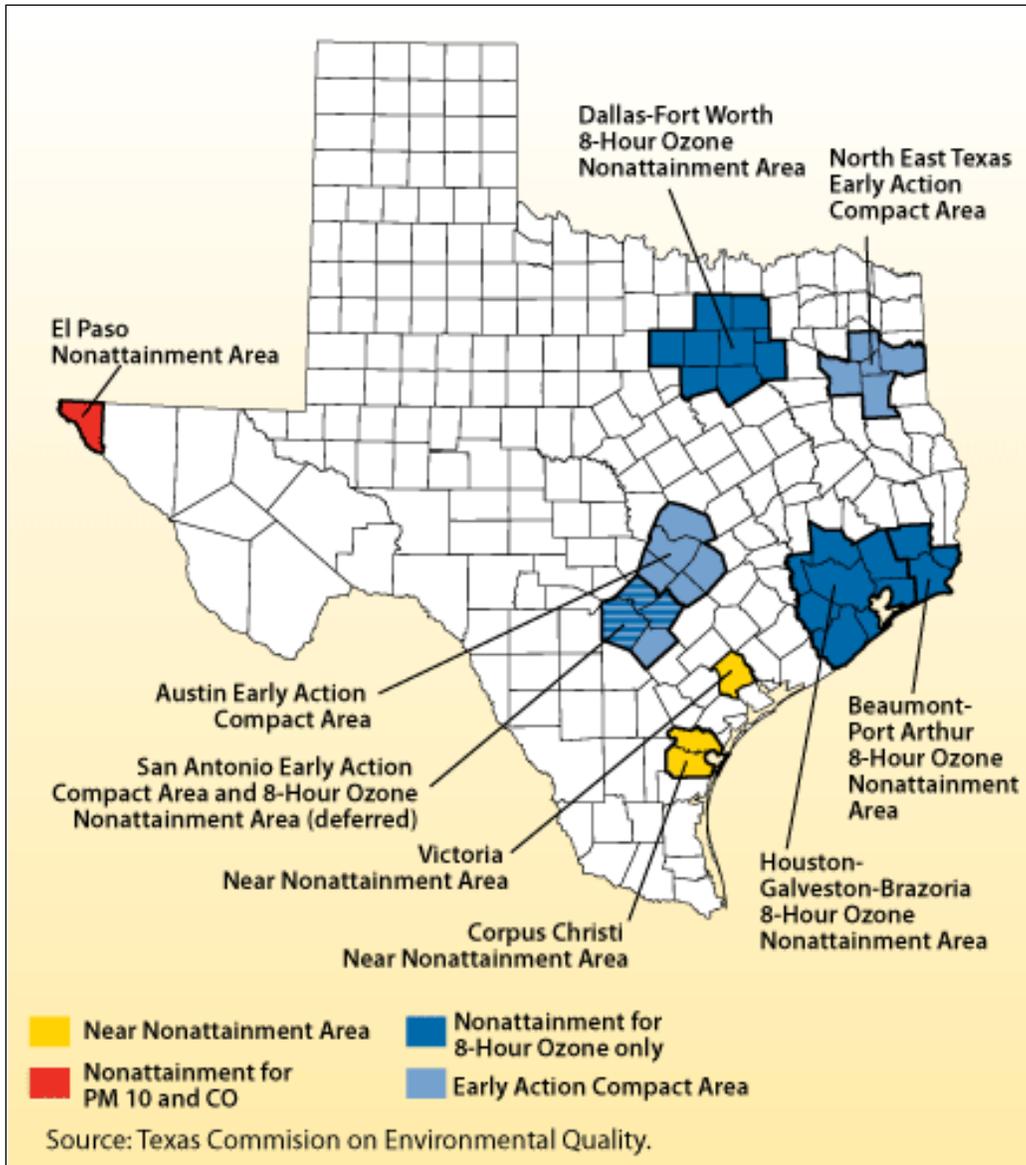
NAAQS are air quality standards set by the U.S. Environmental Protection Agency (EPA) for six “criteria pollutants” which are among the most harmful to public health and the environment: ozone (O3), carbon monoxide (CO), particulate matter (PM), sulfur dioxide (SO2), lead (Pb), and nitrogen dioxide (NO2).

The SIP contains requirements, emission limits, and regulations to control and reduce air emissions in areas failing to meet one or more NAAQS. Such areas are called nonattainment areas.

There are four major metropolitan areas currently subject to conformity in Texas: 1) Houston/Galveston area (Harris, Montgomery, Galveston, Brazoria, Chambers, Fort Bend, Liberty and Waller Counties); 2) Dallas/Fort Worth area (Dallas, Tarrant, Denton, Collin, Ellis, Kaufman, Rockwall, Johnson, and Parker Counties); 3) Beaumont/Port Arthur area (Jefferson, Hardin, and Orange Counties); and 4) El Paso area

(El Paso County). The proposed project is in Maverick County, which is in an area in attainment of all NAAQS. **Figure 8** shows the areas within Texas that are in nonattainment or near nonattainment under the CAA. The proposed project is consistent with the SIP.

Figure 8: Nonattainment and near Nonattainment Areas in Texas



On November 30, 1993, EPA promulgated the General Conformity Regulations, which apply to actions approved or funded by federal agencies other than Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) and thus not covered under transportation conformity. These regulations ensure that other federal actions also conform to the SIPs (58 FR 63214). Airport projects, port projects, rail yards, and construction activities are usually subject to general conformity rules. Freight rail activities would fall under the general conformity regulations (see **Appendix E: Air Quality Technical Memorandum**).

3.7 Noise

To estimate the noise exposure that would result from rail line operation in terms of equivalent sound level (Leq), three background/ambient noise measurements were collected within the study area on May 4, 2011 using an Extech 407780 Integrating Sound Level Meter. Two of the three background noise locations included sound from quarry operations that could be heard in the background. No sensitive receptors (e.g. schools, libraries, hospitals, residences, retirement communities, and nursing homes) were identified within the study area. Each noise measurement was collected at the duration of 15 minutes and results are presented in **Table 14** (see **Appendix F: Noise Analysis Technical Memorandum**).

Table 14: Ambient Noise Measurements

Site No.	Location	Leq (dBA)	Lmin (dBA)	Lmax (dBA)	SEL (dBA)
N1	Southern portion of the new alignment (approximately 0.1 mile east of the Rio Grande River).	45.0	38.7	58.1	74.6
N2	Middle portion of the new alignment (approximately 0.4 mile east of U.S. Highway 277 and approximately 0.2 mile west of the Maverick County Canal).	45.9	34.6	71.7	75.5
N3	Middle portion of the new alignment (approximately 1.1 miles east of the Maverick County Canal and approximately one mile west of the UPRR line).	49.2	33.4	81.6	78.7

Leq – Equivalent Noise Level (The energy-averaged sound pressure level averaged over a specified unit of time).
dBA – A-weighted decibel (Because the human ear does not hear all frequencies, an adjustment is made to the high and low frequency to approximate the average human response to traffic sounds. These adjusted sound levels are referred to as “A-weighted levels”).
Lmin – the lowest sound pressure level within the measuring period.
Lmax – the highest sound pressure level within the measuring period.
SEL – Sound Exposure Level (the total noise energy produced from a single noise event. The SEL is a metric used to describe the amount of noise from an event).
The threshold of human hearing is defined as 0 dBA; very quiet conditions (as in a library, for example) are approximately 40 dBA; levels between 50 dBA and 70 dBA define the range of acceptable daily activity; levels above 70 dBA would be considered noisy, and then loud, intrusive, and deafening as the scale approaches 130 dBA. For most people to perceive an increase in noise, it must be at least 3 dBA. At 5 dBA, the change will be readily noticeable (Bolt, Beranek, and Newman, 1973).

3.8 Cultural Resources

Cultural resources are structures, buildings, archeological sites, districts (a collection of related structures, buildings, and/or archeological sites), cemeteries and objects. Both federal and state laws require consideration of cultural resources during project planning. At the federal level, NEPA and the National Historic Preservation Act (NHPA) of 1966, among others, apply to rail transportation projects such as this one. In addition, state laws such as the Antiquities Code of Texas apply to these projects. Compliance with these laws often requires consultation with the Texas Historical Commission/Texas State Historic Preservation Officer and/or federally-recognized tribes to determine the project’s effects on cultural resources. Review and coordination of this project followed approved procedures for compliance with federal and state laws.

3.8.1 Historic Resources

Historic properties (excluding archeological sites) as referred to in this analysis are defined as non-archeological cultural resources that are included in or are eligible for inclusion in the National Register of Historic Places (NRHP) and may include buildings, structures, objects, and districts. A historic resource is determined eligible for listing in the NRHP based on its association with significant themes and it must retain sufficient integrity to that allow it to communicate its historic significance. Under 36 CFR 800.9(b), an undertaking is considered to have an adverse effect when the effect on a historic property may diminish the integrity of the property's location, design, materials, workmanship, setting, feeling, or association.

Examples of direct adverse effects include relocation, destruction, or alteration. Indirect impacts can occur as a result of a introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting; neglect of the property that results in its deterioration or destruction; or isolation of the property from or alteration of the character of the property's setting when that character is important to the property's significance. Development, either induced or not induced, has the potential to impact historic resources either directly (physical loss or damage) or indirectly (loss of historic character). During the direct impacts analysis of the proposed project, buildings and sites situated within the project Area of Potential Effects (APE) were recorded during the environmental assessment.

It has been determined through consultation with the Texas State Historic Preservation Officer (SHPO) that the APE for the proposed project is 300 ft. beyond the proposed ROW.

Background and Field Investigation

A search of the online Texas Historic Sites Atlas revealed that there are no properties listed in the NRHP, no Official Texas Historical Markers, or local historical markers within the project's APE.

A survey of the project area was performed on April 19, 2011, by an individual who meets the Secretary of the Interior's Professional Qualifications Standards for Historic Architecture. The survey identified five historic-age (pre-1966) properties, including:

- Three properties related to agriculture;
- One property related to transportation; and
- One property of unknown use.

The STB would evaluate these properties to determine NRHP eligibility and effects to historic properties in compliance with Section 106 of the NHPA (see **Appendix G: Historic Resources Reconnaissance Survey**).

3.8.2 Archeology

Regulatory Context

In order to determine the presence of archeological resources, the APE is first delineated. The APE is the area in which direct or indirect impacts to historic properties may occur. Within the APE, resources are evaluated to determine if they are eligible for inclusion in the NRHP, and to determine the presence of any resources that are already listed in the NRHP. To determine if a resource is significant, professionals and regulators evaluate the resource using established criteria set forth by the NRHP:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association and:

- a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- b) that are associated with the lives of persons significant in our past; or
- c) that 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) that have yielded or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Note that significance and NRHP eligibility are determined by two primary components: integrity and one of the four types of association and data potential listed under 36 CFR 60.4(a-d). The criterion most often applied to archeological sites is the last—and arguably the broadest—of the four; its phrasing allows regulators to consider a broad range of research questions and analytical techniques that may be brought to bear (36 CFR 60.4[d]).

Background and Field Investigations

In May 2011, a 100-percent-coverage pedestrian survey was undertaken within the portions of the preferred alignment ROW to which access had been granted. Following standard archeological practice, the APE for the archeological survey was defined as the entirety of the proposed ROW, consisting of a 250-ft-wide corridor from the Rio Grande to the Maverick County Canal, a distance of approximately 1.6 miles, and a 150-ft-wide corridor extending northeast from the Maverick County Canal to the UPRR terminus, a distance of approximately 6.7 miles. In total, the APE is approximately 8.3 miles in length and covers approximately 169.2 acres.

Prior to fieldwork, the online Archeological Sites Atlas maintained by the Texas Historical Commission (THC) and the Texas Archeological Research Laboratory (TARL) was consulted to identify previously recorded archeological sites, historical markers, cemeteries, National Register sites and districts, and other cultural resources within and near the APE. The Atlas search did not reveal any previously recorded resources within the APE (THC 2011). Within 0.6 miles (one kilometer) of the APE, records for 22 sites were found:

- 41MV131, a light scatter of lithics and burned rock recommended for testing,
- 41MV133, a deposit of diagnostic lithics and potential hearth features recommended for testing,
- 41MV134, a surface lithic scatter now destroyed by mining operations and road construction,
- 41MV137, a shallow lithic deposit not recommended for further investigation,
- 41MV138, a scatter of lithics recommended for additional work due to the potential for buried material,
- 41MV139, lithics and subsurface hearths recommended for additional testing,
- 41MV140, a surface lithic scatter not recommended for further investigation,
- 41MV141, prehistoric and historic materials and features recommended for testing,
- 41MV147, a minor surface lithic scatter not recommended for further investigation,
- 41MV150, a lithic deposit recommended for additional testing,
- 41MV151, a minor surface lithic scatter not recommended for further investigation,

- 41MV152, a burned rock deposit recommended for testing due to the potential for deeply buried material,
- 41MV153, a minor scatter of burned rock and lithics recommended for testing due to the potential for deeply buried material,
- 41MV154, a buried lithic scatter recommended for testing,
- 41MV156, a surface scatter not recommended for further work,
- 41MV160, a dense deposit of lithics and burned rock recommended for testing,
- 41MV161, a deposit of lithics and potential hearth features recommended for testing,
- 41MV169, a minor lithic scatter not recommended for further investigation,
- 41MV311, a diffuse lithic scatter not recommended for further investigation,
- 41MV312, a scatter of lithics and burned rock not recommended for further investigation,
- 41MV316, a burned rock deposit not recommended for further investigation, and
- 41MV317, a dense deposit of burned rock and diagnostic lithics likely warranting further investigation (THC 2011).

During the field survey, the ground surface in the bulk of the APE was found to consist of extremely high-visibility, deflated and/or eroded gravelly deposits. Eleven previously unrecorded archeological sites were documented. All are minor surface scatters of materials with low data potential: ten with potentially prehistoric lithic flakes, tested cobbles, non-diagnostic bifaces, and non-diagnostic chopping/scraping tools, and one with both prehistoric lithic flakes and historic-age materials such as nails, glass fragments, and ceramics. Shovel tests were excavated in the rare instances when vegetation obscured the ground surface or soil was present; none yielded archeological materials. Due to the dispersed, surficial nature of the archeological record in the area, some or all of the sites recorded may extend outside the APE. However, none of the materials or deposits observed within the APE would contribute to eligibility for inclusion in the NRHP or for designation as State Archeological Landmarks (SALs), even if other portions of those sites were later determined eligible. Coordination of a separate report describing the results of the survey is ongoing, as is coordination with TARL and the THC regarding the sites found.

3.9 Recreation

Maverick County is in the northwestern part of the Rio Grande Plain in Texas. This part of Texas contains some of the state's premium deer habitat due to excellent amounts of food and cover, making Maverick County a prime hunting area sought out by hunters from all over the U.S. In fact, wildlife is an important resource in the county; thus, many landowners either lease their land for hunting or have converted large livestock ranches into full-time hunting ranches. This practice has become an important source of income to many landowners in Maverick County and South Texas as a whole. These ranches may offer hunting, during recognized TPWD hunting seasons, for white-tailed deer, javelina, squirrel,

turkey, quail, and dove. They may also offer year round hunting for feral/wild hogs which can become a great nuisance to both native wildlife and landowner if their numbers go unchecked. These ranches may also stock exotic wildlife from Africa and Asia to increase their abilities to offer year round hunting experiences. In Maverick County, sportsmen also enjoy fishing for the large Rio Grande catfish along the river's entire reach. Catfish, in the Rio Grande, can be found in deeper water areas where natural pools have formed



Photo 6: Typical white-tailed deer

or near the river banks in natural occurring recesses under the edges of the river bank.

3.10 Hazardous Materials

A review of hazardous materials databases was conducted by Banks Environmental Data on June 7, 2011, to determine if any known sites producing, storing, and/or disposing of toxic or hazardous materials might affect the proposed EPRR rail line. The database search meets the American Society of Testing and Materials (ASTM) standards for a government records review (ASTM 1527-5 for All Appropriate Inquiry). **Table 15** lists the regulatory databases which were reviewed, along with the minimum search distance utilized for each.

Table 15: Hazardous Materials Databases Consulted

Database	Minimum Search Distance (miles)
Federal Databases – ASTM Required	
National Priority List – NPL	1.0
Delisted National Priority List – DNPL	0.5
Comprehensive Environmental Response, Compensation, and Liability Act sites (CERCLIS) – CER	0.5
CERCLIS sites for which No Further Remedial Action Planned (NFRAP) – CER NFRAP	0.5
Resource Conservation and Recovery Act sites (RCRA) subject to corrective action activity (CORRACTS) – RCRA COR	1.0
RCRA non-CORRACTS Treatment, Storage and Disposal (TSD) of hazardous materials sites – RCRA TSD	0.5
RCRA Generators – RCRA GEN	0.25
Federal Brownfields – FED BWN	0.5
Federal Institutional Control – FED IC	0.5
Federal Engineering Control – FED EC	0.5
ERNS List for unauthorized releases of hazardous substances that have been reported to the National Response Center– ERNS	0.25
State Databases – ASTM Required	
State/Tribal Equivalent NPL – ST NPL	1.0
State/Tribal Equivalent CERCLIS – ST CER	0.5
State/Tribal Disposal or Landfill – SWLF	0.5
State/Tribal Leaking Storage Tank – LPST	0.5
State/Tribal Storage Tank – PST	0.25
State/Tribal Institutional Control – ST IC	0.25
State/Tribal Engineering Control – ST EC	0.5
State/Tribal Voluntary Cleanup – VCP	0.5
State/Tribal Brownfield – ST BWN	0.5
Non-ASTM Required Databases	
RCRA – RCRA	0.25
Dry Cleaners – DRYC	0.25
Industrial Hazardous Waste – IHW	0.25

No mapped sites were identified by the database search. Six unmapped sites for which specific addresses were unavailable were identified by the database search, including one Leaking Petroleum Storage Tank (LPST) site, four Petroleum Storage Tank (PST) sites, and one Industrial Hazardous Waste

(IHW) site (see **Table 16**). Six water and/or oil/gas wells were also identified by the database search (see **Table 16**).

Table 16: Potential Hazardous Materials Sites and Wells

Type of Site	Site Name and Address	Owner	Site ID	Status of Site
LPST	TxDOT Eagle Pass Maintenance Facility S Hwy 277 Eagle Pass, TX 78852	Texas Department of Transportation	LPST ID 098733; Facility ID 0043221	Four underground tanks registered at site - two currently in use and two were removed from the ground in June 1991; leak was discovered April 24, 1991; no groundwater impact, no apparent threats or impacts to receptors; final concurrence issued, case closed
PST	Eagle Oil Company – Division of Mapco Gas N Hwy 277 Eagle Pass, TX 78852	Eagle Oil Company – Division of Mapco Gas	Facility # 0010569; TCEQ ID 049920	One underground tank storing used oil was removed from the ground in January 1993; four aboveground tanks storing diesel fuel and one aboveground tank storing used oil have been out of use since February 1996
PST	Conoco E US Hwy 277 Eagle Pass, TX 78852	Westex Investment Corporation	Facility # 0025594; TCEQ ID 059457	One underground tank storing gasoline was removed from the ground in July 1989
PST	Kincaid A-2 Comp Facility State Hwy 277 Eagle Pass, TX 78852	Oxy USA Inc	Facility # 0037980; TCEQ ID 084123	One underground tank storing used oil was permanently filled in place in June 1984
PST	Kelly's Service Station N US Hwy 277 1 BK N Quemado, TX 78877	TD Kelly Service Station	Facility # 0012287; TCEQ ID 077332	One underground tank storing gasoline was permanently filled in place in April 1988, and two underground tanks storing gasoline were removed from the ground in June 1998
IHW	Alta Verde Beef Pack Del Rio Hwy & Eagle Pass, TX 78852	Alta Verde Beef Pack	Register #36093; EPA ID TXD008415697	Currently inactive
Well	Not available	Not available	Well ID 42-323-00-00	Plugged and abandoned
Well	Not available	Not available	Well ID 42-323-31242-00	Permitted
Well	Not available	Not available	Well ID 42-323-00-00	Plugged and abandoned
Well	Not available	XOG Operating, LLC	Well ID 42-323-31271-00	Other
Well	Not available	Not available	Well ID 42-323-31349-00	Plugged and abandoned
Well	Not available	Not available	Well ID 42-323-30366-00	Permitted

Source: Banks Environmental Data. ASTM 1527-05/AAI Compliant The Banks Regulatory Database Report, Target Property Eagle Pass Railroad, Maverick County, Texas. June 7, 2011.

A site assessment was conducted in April 2011. The site assessment included visual observation of properties located along and immediately outside of the project limits to identify the release or threatened release of petroleum products or other hazardous substances. There were no obvious indications (such as spills, stains, or leaks) of environmental impacts along or within the project limits associated with this site or any other adjacent facilities. No oil or gas wells occur within the evaluated ROW. The locations of the unmapped sites listed in **Table 16** were not able to be confirmed during field investigations, nor were the locations of the wells.

4 Potential Environmental Impacts

This Chapter describes the potential environmental impacts associated with the proposed construction and operation of the Preferred Alternative. **Chapter Five** presents recommended mitigation measures. Impacts have been differentiated as impacts that result from project construction impacts, and operation impacts. Construction impacts are usually temporary that result from construction activities. They are normally resolved or mitigated by the end of construction while permanent physical impacts involve permanent changes to the landscape or environment as a result of project implementation. Operational impacts are those that occur as a result of continued railroad operations or maintenance activities, and as such, are considered to be permanent.

4.1 Socioeconomic

This assessment discusses the potential impacts of constructing the proposed EPRR rail line. It does not discuss potential effects of constructing the Eagle Pass Mine, the impacts of which have been assessed in the cumulative impacts discussion below in **Section 4.11**. Notably, the Mine project was assessed under an EIS prepared in 1995 by the EPA for the National Pollutant Discharge Elimination System (NPDES) permit.

4.1.1 Environmental Justice

For this analysis, it was determined that an environmental justice community of concern is present when the total Non-White population constitutes 50 percent or more of the total population. Low-income areas were identified as those where the median household income falls below the DHHS guideline. The 2011 poverty guideline according to the DHHS was \$22,350 for a family of four. Based on the ACS data (2005-2009) for project area Block Groups, the two Block Groups had higher median household incomes when compared to the 2011 poverty guideline. According to American Community Survey 2005-2009 data (based on 2000 census geographies), the median household income for Tract 950100 was \$29,643 and for Block Group 1 within that tract, the median household income was \$27,596 as shown in **Table 9**. In Tract 950203, the median household income was \$29,712 and for Block Group 1 within that tract, it was \$33,234. According to this definition, these Block Groups are not considered low-income. It should be noted that there are low-income populations within Maverick County (see **Table 10**), but they may not be reflected in Block Group Level data.

These demographic indicators show that the project study area is largely comprised of Environmental Justice communities of concern particularly with regard to Race/Ethnicity. However, potential adverse effects to these communities (which could include the following) are not expected to occur for the following reasons:

- Relocations and displacements – There would be no relocations or displacements required by the proposed project.
- Impacts to travel patterns and access – Travel patterns and access would not change for area residents because the rail line traverses undeveloped land.
- Noise impacts – There are no sensitive receptors adjacent to the proposed rail line so adverse impacts to sensitive receptors are not anticipated as a result of this site location.
- Air quality impacts – According to the air quality analysis conducted for the project, the proposed action would not cause or exacerbate a violation of any air quality standards, and has

been found to conform to the State Implementation Plan with respect to emissions and conformity. No mitigation measures are proposed with regard to operational activities or compliance with transportation conformity measures. During construction, short-term, localized air quality impacts could occur.

- Impacts to visual resources – Because there is no residential population near the proposed rail line, impacts to visual resources would be minimal.

In short, no disproportionate, adverse impacts are anticipated to occur to the low-income or minority communities in the project area as a result of the project location or project construction.

4.1.2 Community Cohesion

Maverick County had a population in 2010 of 54, 258 persons. Elm Creek is a census designated location with 2,469 persons and Eagle Pass is a city of 26,248 persons according to the 2010 census. The proposed EPRR rail line does not traverse the city limits of either Eagle Pass or Elm Creek. The proposed EPRR rail line would instead be constructed in a rural area between Maverick County Airport and the communities of Elm Creek and Eagle Pass. No neighborhoods would be traversed or bisected by construction/operation of the proposed EPRR rail line.

Because the Lucky Eagle Casino is located south of Eagle Pass and the proposed railroad is northwest of Eagle Pass, there would be no direct impact to the Casino or travel patterns for its employees or clientele caused by construction of the roadway.

Further, to ensure a fair and equal opportunity to participate in the public process pertaining to the proposed EPRR rail line, all public notices and public involvement materials would be published in English and Spanish to ensure that non-English speakers in the area would have access to project information. Additionally, notices would indicate that Spanish-translation services for all public meetings would be available upon request. The effort to engage in outreach to LEP populations would be compliant with EO 13166.

4.1.3 Land Use and Economic Development

The proposed EPRR rail line runs through land between Maverick County Memorial International Airport to the north/northwest and the community of Elm Creek to the south/southeast. Most of the land is undeveloped, and there are only two large gravel quarries in the project area south of the proposed alignment.

Relocations and Displacements

No residential relocations or business displacements would be required as a result of construction/operation of the proposed EPRR rail line.

Economic Development

Because there would be no residential or commercial relocations and no business displacements, no existing jobs would be lost. Jobs and income anticipated to be generated by construction of the railroad are discussed in the “Construction Effects” section below. Any ROW acquisition would remove the acquired land from the county tax rolls. An estimated total of approximately 168 acres of ROW may be required.

4.1.4 Construction Impacts

The economic impacts resulting from the construction of the Preferred Alternative would likely have direct and indirect effects on regional and state employment and income. Generalizations about the project’s economic impacts can be made using the Regional Input-Output Modeling System (RIMS II) Multipliers generated by the Bureau of Economic Analysis (2008/2008). When multiplied by the total cost of the project (estimated to be \$36.3 million), the factors produce estimates of the positive economic impacts of project construction on a statewide basis.

The Bureau of Economic Analysis (BEA) prepares estimates of economic multipliers for states, counties, and combinations thereof. The multipliers estimate the effects of the changes in the output of one or more industries in an area on the output, employment, and labor earnings in the other industries in that area. The multipliers are produced by BEA’s Regional Input-Output Modeling System (RIMS II) using data on the local area personal income and the national input-output accounts. Total employment, output (sales), and earnings can be described using the RIMS II Modeling System. Estimates for these impacts as they relate to construction of the Preferred Alternative are presented in **Table 17**. The proportion of economic effects retained locally would depend on capturing local materials and labor during the construction process.

Table 17: Economic Impacts of Preferred Alternative Construction

Economic Factors	Preferred Alternative (in 2008 dollars)
Total Project Cost (Output)	\$36.3 million
Employment Impacts <i>(RIMS II Multiplier = 12.39)</i>	450 jobs (direct, indirect and induced employment)
Sales Impacts <i>(RIMS II Multiplier = 1.37)</i>	\$49.5 million
Income (Earnings) Impacts <i>(RIMS II Multiplier = 0.48)</i>	\$17.5 million

Source: Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMS II), Regional Product Division (2008/2008). Total Multipliers for Output, Earnings, Employment, and Value Added by Industry Aggregation – Maverick County Construction Multipliers (Type II).

The initial investment in design and construction dollars of approximately \$36.3 million would have direct, indirect, and induced impacts on the economy through the use of materials and the creation of jobs. Based on application of the BEA multipliers, it is estimated that the project would result in approximately 450 jobs (direct, indirect and induced employment); sales impacts (direct, indirect and induced) would be approximately \$49.5 million; and total income earnings impacts of approximately \$17.5 million. Employment opportunities may arise to the extent that labor and materials for the construction of the proposed action are captured in the local economy.

4.1.5 Operational Impacts

Based upon review of various maps and aerial photos, it appears that students attending schools in Eagle Pass ISD live in Eagle Pass or possibly Elm Creek. Transportation routes serving the schools system would not be impacted by construction of the railroad.

No railroad/roadway at-grade crossings are proposed on any public roadways. Maverick County residents who live to the north/northwest of the proposed project would continue to be accessible and served by MCHD emergency services personnel after the railroad goes into operation.

Once the railroad is operational, potential economic benefits include jobs associated with operation of the railroad line and ancillary businesses. (See also Operational Effects sections under Noise and Air Quality.)

4.1.6 No Build Alternative

The No Build Alternative would not result in relocations or displacements. There would be no new at-grade railroad/roadway crossings. Under the No Build Alternative, it is anticipated that the delivery of coal from the Eagle Pass Mine would still occur via the existing UPRR line, as discussed below in **Section 4.11**.

4.2 Physiography

4.2.1 Construction Impacts

The proposed EPRR rail line would require excavations of native soils and geology features beginning along eastern edge (U.S. side) of the proposed international rail bridge and continuing along the proposed centerline to the proposed project's terminus with the UPRR line. The majority of these excavations would be located between the Rio Grande River and approximately 700 ft. west of the Maverick County Irrigation District (MCID) canal. The excavations would vary in depth, depending on the existing topography, and would reach a maximum depth of approximately 60-ft in specific areas. The proposed project design calls for excavation of natural material in the amount of approximately 1.4 million CY. The proposed design also calls for the reuse of this natural material in the amount of approximately 450,000 CY in the form of embankments, rail and roadway fill.

During construction, the three following soil types would be most affected due to their major presence within the proposed project's ROW: EdA—Elindio silty clay loam, 0 to 1 percent slopes; EOA—Elindio association, nearly level; JZD—Jimenez association, rolling.

During construction, the following soil types would be slightly affected due to their limited presence within the proposed project's ROW: CAB—Catarina association, gently undulating; MCB—Mavco association, gently undulating; MNA—Mercedes association, depressional; MTA—Montell association, nearly level; OMC—Olmos association, undulating; QMC—Quemado association, undulating; Rz—Rio Grande and Zalla soils; ZPC—Zapata association, undulating.

The excavation of the aforementioned soils and geological features would vary due to their location and depth. The soils and rock, if suitable, would be stockpiled and reused as fill material in areas consisting topographical depressions as well as road base for the proposed rail service road that would run adjacent to the proposed rail line.

The excavation of the aforementioned soils and geological features would vary due to their location and depth. The soils and rock, if suitable, would be stockpiled and reused as fill material in areas consisting topographical depressions as well as road base for the proposed rail service road that would run adjacent to the proposed rail line.

Prime Farmlands

No prime farmland is present within the proposed project ROW. If any past irrigation practices were discovered prior to construction, which would change the status of any soil type to prime farmland,

consultation with the NRCS would be undertaken immediately to determine the proper permits and mitigation measure needed to address the impacts the soil.

4.2.2 Operational Impacts

It is not anticipated that the Preferred Alternative would contaminate or otherwise adversely affect any soils or geologic features located within the proposed project ROW.

4.2.3 No Build Alternative

The No Build Alternative would not contaminate or otherwise adversely affect any soils or geologic features located within the proposed project ROW. Any impacts caused as a result of the transportation of coal from the Eagle Pass Mine via the existing UPRR line are addressed in **Section 4.11** below.

4.3 Water Resources

4.3.1 Groundwater

There are a few scattered shallow water wells located within the southern portion of the proposed project study area; however, the study area does not cover any portion of the Carrizo-Wilcox Aquifer.

4.3.2 Surface Water

To characterize surface drainage systems (streams), they have been classified as perennial, intermittent and ephemeral.

- Perennial streams flow year-round during a typical year. The water table is located above the stream bed for most of the year and groundwater is a primary source for stream flow. A perennial stream is typically capable of supporting aquatic life.
- Intermittent streams flow during certain parts of the year, typically seasonally, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Rainfall is a supplemental source of flow. Biological constituents are adapted to wet and dry fluctuations.
- Ephemeral streams only flow for short durations after precipitation. Ephemeral beds are located above the water table year-round. Runoff from rainfall is the primary source of flow. Aquatic life is extremely scarce or typically absent.

Water Quality in Surface Streams

The Texas Surface Water Quality Standards (TSWQS) apply to all surface water features in the state. These standards are enumerated in Title 30, Chapter 307 of the Texas Administrative Code (TAC). The standards were approved by the EPA in accordance with Section 303(d) of the Clean Water Act (CWA) and, as required by the statute, are updated every three years. The standards are typically designed to protect the most sensitive beneficial use within a water body. The TCEQ distributes the information provided by the TSWQS and administers compliance with the standards. Five general categories for water use are defined in the TSWQS: Aquatic life use, contact recreation, general use, public water supply, and fish consumption. A waterway “fully supports” a designated use, such as water supply or contact recreation, when water quality criteria and standards set by the State in conformity to Federal standards are met or exceeded for that use. The TCEQ carries out a regular program of monitoring and assessment to compare conditions in Texas surface waters to established standards and to determine which water bodies are meeting the standards. The results of the assessment are published periodically in the Texas Water Quality Inventory and 303(d) List. The Texas 303(d) List is an overview of the status of surface waters of the state, including concerns for public health, fitness for use by aquatic species and other wildlife, and specific pollutants and their possible sources. As a result of this assessment, the state of Texas must develop action plans to remediate those water bodies that are impaired through the development of a total maximum daily load (TMDL) which determines the maximum amount of pollutants that a water body can receive and still both attain and maintain its water quality standards and which allocates this allowable amount. The TCEQ monitoring program divides the state’s surface water into river basin data and further divides this data into specific segments which are each allocated a segment identification number.



Photo 7: Rio Grande River, Maverick County

As required under Sections 303(d) and 304(a) of the federal Clean Water Act, Texas 303(d) list identifies the water bodies in or bordering Texas for which effluent limitations are not stringent enough to implement water quality standards, and for which the associated pollutants are suitable for measurement by maximum daily load. According to the 2008 Texas 303(d) list, one threatened or impaired segment is located within the project area of encroachment into jurisdictional surface water and/or up to five (5) miles downstream of the proposed encroachment. Since the status of the 2010 list is still “draft”, the 2008 Texas 303(d) list was examined. Both lists were reviewed and are discussed for historical reference and trends which indicate improved conditions from the 2008 303(d) list and apparent in the 2010 303(d) draft list. The threatened or impaired segment (Seg ID: 2304), identified as the Rio Grande Below Amistad Reservoir, from the confluence of the Arroyo Salado (Mexico) in Zapata County to Amistad Dam in Val Verde County is within the study area of the proposed project. Specifically the subsegment identified as (2304 03) Las Moras Creek confluence to Hwy 277 (Eagle Pass). The segment (2304 03) was first listed for bacteria in 1996. The listing is absent from the 2010 Texas 303 (d) draft list and it is assumed that the subsegment’s water quality has improved from 2008. As discussed in the Surface Water Drainage Characteristics, the Rio Grande, the fifth longest river of North America and the 20th longest in the world, forms the entire border between the U.S. state of Texas and Mexico. The water body uses for this segment include aquatic life, recreation, general, fish consumption, and public water supply uses. The aquatic life use, general use, and public water supply use are fully supported. Recreational use was listed as not supporting. The fish consumption use was not assessed. This segment is listed as “category 5c” where additional data and information would be collected before

a TMDL is scheduled. The existing or threatened impairment for this segment is currently listed for bacteria.

Floodplains

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP). Maverick County is a participating member of the NFIP. Federal Insurance Rate Maps (FIRM) were assessed in order to determine the extent of the floodplains and regulatory floodways in the proposed project study area. The 100-year floodplains areas, within the proposed project study area, extend up Hediondo Creek and other tributaries of Elm Creek creating a dendritic pattern (see **Exhibit 13: FEMA 100-yr Floodplain**). The floodplain areas encountered are all Zone A, Zone AE, and Zone X. Zones A and AE signify a special flood hazard area that is inundated by 100-year floods. Zone X satisfies one of two criteria: areas determined to be outside of the 500-year floodplain, or areas of the 500-year floodplain with an average depth of less than one foot or with drainage areas less than one square mile and areas protected by levees from the 100-year flood. Floodplain areas are an important resource from a water quality perspective. They also serve a valuable function by providing floodwater buffering and storage. The design, at a minimum, would assure that the accumulative increases to the 100-year floodplain be less than one foot.

No 100-year floodplain areas are present within the ROW of the proposed project's limits. The proposal is expected to have minimal floodplain impacts. Upon the final design phase, the results of the impact evaluation process would be submitted to the local floodplain management authorities for review and approval.

Wetlands and other waters of the U.S.

Section 404 of the CWA, as administered by the USACE, regulates the discharge of dredged or fill material into waters of the United States, including wetlands. The term "waters of the United States," as defined in 33 CFR § 328.3 typically includes rivers, streams, creeks, lakes and adjacent or adjoining wetlands and specifically denotes:

- a) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- b) All interstate waters including wetlands;
- c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.

All surface waters and streams within the proposed project study area are part of the Quemado Creek-Rio Grande and Elm Creek watersheds, and with the exception of the Rio Grande River, Maverick County canal, and Elm Creek, are ephemeral streams. Ephemeral streams must have an ordinary high water feature to be jurisdictional. An ordinary high water mark (OHWM) is indicated by: clear, natural line impressed on the bank, the presence of litter and debris, changes in the character of soil, destruction of terrestrial vegetation and shelving.

Desktop review of both USGS Quadrangle Maps and the NRCS National Hydrography Dataset for the proposed project study area revealed a total of 13 potentially jurisdictional crossings that may occur within the ROW of the proposed new rail line from its northern terminus near the Eagle Pass Mine to the Rio Grande River (See **Exhibit 14: Water Resources**). The limit of USACE jurisdiction is defined by the OHWM. Within properties accessible during on-site field investigations, six crossings were identified as potentially jurisdictional, while three “bluelines”, indicated by the resources listed above, appeared likely to be non-jurisdictional localized depressions. According to the above mentioned reference sources as well as the *Preliminary Engineering Report* dated November 16, 2011, an additional four “blueline” crossings are located near the eastern terminus of the proposed project. During on-site field investigations, this area was not accessible, thus a jurisdictional evaluation was not conducted for these four crossings. Prior to the commencement of the construction phase of the proposed project, a Jurisdictional Determination Report would be prepared for all potentially jurisdictional sites in accordance with USACE procedures.

The USFWS, for the purpose of their classification and inventory of wetlands, defines wetlands as “lands transitional between the terrestrial and aquatic system where the water table is usually at or near the surface or the land is covered by shallow water” (Cowardin 1979). USFWS National Wetland Inventory (NWI) maps were used to locate potential jurisdiction wetlands and differentiate between vegetated wetlands, likely classified as palustrine emergent, scrub/shrub or forested, and streams, likely classified as palustrine or riverine with unconsolidated or rocky bottoms. Review of NWI mapping for the proposed project revealed the presence of both riverine and palustrine areas (see **Exhibit 15: National Wetlands Inventory**). This information assisted in determining the location and physical characteristics of the systems involved and aided in their classification as jurisdictional waters or USACE vegetated wetlands. Through use of NWI map and field observations, no wetlands were found to be located within the ROW of the proposed project’s limits.

4.3.3 Construction Impacts

Crossing #1 International Crossing of the Rio Grande River

The international railroad bridge would be designed to avoid placing permanent fill within the 100-year floodplain of the Rio Grande, resulting in a bridge length of approximately 3,420 ft. The superstructure over the normal flow of the Rio Grande River would be composed of three, simple span, 90-ft long steel plate girders. The superstructure over the remainder of the floodplain would require 72 45-ft concrete beam spans. The bridge would accommodate a single track and walkway on both sides. Round columns would be used to minimize debris accumulation and hydraulic head losses through the structure. Wing walls and back walls would be provided at the abutments, to retain the soil behind the bridge. Concrete riprap slope protection would be provided under the bridge abutments. Permanent stream impacts would be associated with the construction of bridge foundations within the OHWM, consisting of approximately 84” diameter drilled shafts. Temporary effects would occur for construction equipment access and de-watering for construction of the bridge structural elements



Photo 8: Crossing #2, MCID#1 Main Irrigation Main Canal

Crossing #3 The Maverick County Main Irrigation Canal

The proposed project includes a crossing over the MCID#1 Main Canal. This canal was built in the 1930’s and is a gravity-irrigation canal. Fed by the Rio Grande River, it

consists of a defined, manmade channel with service roads on both banks and large earthen mounds along the outside edge of the service roads. A meeting was held with MCID and requirements from the District included providing adequate access for canal maintenance trucks and equipment to be maintained along the canal. The design of the grade of the proposed bridge over the canal maintains a clearance for equipment to be able to cross under the proposed bridge. Coordination and final approval would be required from the MCID board of directors.

The proposed Irrigation Canal Bridge consists of five concrete beam spans totaling approximately 212 ft in length and supported by concrete columns (60" diameter typical). The canal is approximately 50 ft in width at the proposed project's crossing. Concrete riprap slope protection would be provided under the bridge abutments. Permanent stream impacts would be associated with the construction of bridge foundations within the OHWM, consisting of approximately four 72" diameter drilled shafts. Temporary effects would occur for construction equipment access and de-watering for construction of the bridge structural elements.

Crossings #2 and #4 Unnamed Tributaries

Located on either side of the MCID #1 canal, at Stations 193+18 and 197+70, these proposed concrete box culverts would provide drainage through the canal bridge approaches, flowing parallel to the canal levees. Although these crossings are indicated as blue lines on the USGS topographical maps for the proposed project area, they were not found during on-site investigations and are considered non-jurisdictional.

Crossing #5 Hediondo Creek

Hediondo Creek is a major tributary of Elm Creek. Hediondo Creek is an ephemeral stream, whose headwaters are located approximately 1 mile south of the Maverick County Airport. During field observations the creek bed was dry and consisted of fine clay soil mixed with small rock and small patches of native grasses. At the proposed project's crossing, Hediondo Creek has an average width of 25 ft at the OHWM, thus making it significantly larger than most tributaries within the proposed project study area. Hediondo Creek is the only named tributary to Elm Creek within the proposed project's study area. The proposed bridge consists of concrete beam spans totaling approximately 225 ft in length and supported by concrete columns. Concrete riprap slope protection would be provided under the bridge abutments. Permanent stream impacts would be associated with the construction of bridge foundations within the OHWM, consisting of drilled shafts. Temporary effects would occur for construction equipment access.



Photo 9: Crossing #5 – Hediondo Creek

Crossing #6 Unnamed Tributary to Elm Creek

This unnamed tributary is located approximately one mile east of Hediondo Creek at Station 282+40, within the proposed project study limits. This unnamed tributary is an ephemeral stream with an average width of 6 ft at the OHWM, at the proposed project's crossing. During field observations the creek bed was dry and consisted of mainly fine clay soil, with areas covered by small rock and small patches of native grasses. The proposed structure, within the OHWM would consist of two 4 ft x 4 ft x

65 ft concrete box culverts. Permanent stream impacts would consist of grading for construction of the box culverts and would result in a loss of less than 0.1 acres of non-tidal waters of the U.S.

Crossing #7 Unnamed Tributary Elm Creek

This unnamed tributary is located just over one mile east of Hediondo Creek at Station 297+20, within the proposed project study limits. This unnamed tributary is an ephemeral stream within a defined FEMA floodplain and with an average width of 13 ft. at the OHWM, at the proposed project's crossing. During field observations the creek bed was dry and consisted of mainly fine clay soil covered with large patches of native grasses. The proposed bridge consists of concrete beam spans totaling approximately 160 ft. in length and supported by concrete columns. Concrete riprap slope protection would be provided under the bridge abutments. Permanent stream impacts would be associated with the construction of bridge foundations within the OHWM, consisting of drilled shafts. Temporary effects would occur for construction equipment access.

Crossing #8 Unnamed Tributary

This unnamed tributary is located at Station 361+80 within a defined FEMA floodplain. The proposed bridge consists of 25 - 5 ft. x 3 ft. x 80 ft. concrete box culverts. Although this location was not found during on-site investigations, the crossing was indicated as a blue line on the USGS topographical maps and is expected to be considered jurisdictional due to its hydrologic connectivity with the 100-yr floodplain. Permanent stream impacts would consist of grading for construction of the box culverts and is expected to result in a loss of less than 0.1 acres of non-tidal waters of the U.S.

Crossing #9 Unnamed Tributary to Elm Creek

This unnamed tributary is located approximately three miles east of Hediondo Creek and approximately 2 miles west of the proposed project's eastern terminus at Station 406+35, within the proposed project study limits. This unnamed tributary is an ephemeral stream within a defined FEMA floodplain and with an average width of 15 ft. at the OHWM, at the proposed project's crossing. During field observations the creek bed was dry and consisted of mainly fine clay soil and scattered small rock covered with large patches of native grasses. The proposed bridge consists of concrete beam spans totaling approximately 145 ft in length and supported by concrete columns. Concrete riprap slope protection would be provided under the bridge abutments. Permanent stream impacts would be associated with the construction of drilled shaft bridge foundations within the OHWM. Temporary effects would occur for construction equipment access.

Four Potential Crossings

Four possible jurisdictional crossings are located east of Crossing #9. At the time when field investigations were conducted, access to the property containing crossings #10-#13 was not available. Prior to the commencement of construction in the area, these four crossings would be field verified as to their jurisdictional status. If any of the crossings are found to be jurisdictional, the project applicant would coordinate with the USACE and the proper permits would be sought prior to the commencement of construction. Locations are as follows:

Crossing #10 - This unnamed tributary at Station 457+05 is within a defined FEMA floodplain. The proposed bridge consists of concrete beam spans totaling 190 ft. in length.

Crossing #11 and #12 are proposed at Station 483+15 and Station 492+56, respectively. These appear to be localized drains requiring small concrete box culverts.

Crossing #13 – This unnamed tributary at Station 507+67 is within a defined FEMA floodplain and is adjacent to an existing UPRR bridge. Five 10-ft x 6-ft x 38-ft concrete box culverts are proposed.

Table 18 summarizes the total impacts of the construction of the proposed Preferred Alternative discussed in this document. For the purpose of determining impact acreage for USACE NWP, each crossing is considered a separate and complete project. The CWA recognizes the need to streamline the permitting process when practicable. Certain types or categories of activities related to work in jurisdictional surface waters have been recognized to be of minimal impact, from both an individual and cumulative perspective and are referred to as General permits. General permits are issued on a national, regional or state basis for certain categories of activities that are similar in nature and have only minimal impacts. One such General permit is the USACE NWP 14, allows impacts for linear transportation crossings of waters of the U.S. This permit conditionally allows up to 0.1 acre of impacts to jurisdictional waters per crossing without notification procedures. Impacts from 0.1 to 0.5 acres qualify for a nationwide permit, but preconstruction notification must be submitted to the USACE before construction. The USACE has 45 days from receipt of the notification to review the project and determine if they require an individual permit (IP) or condition the NWP. Since impacts are largely limited to ephemeral drainages, crossings impacting less than 0.5 acres are likely to be approved via the NWP 14 process.

All of the proposed crossings appear to meet NWP 14 acreage thresholds; all jurisdictional crossings are anticipated to have impacts well under the 0.1 acre per crossing threshold, and thus, none of the identified jurisdictional crossings should require a preconstruction notification be submitted to USACE.

Table 18: Impacts to Waters of the U.S.

Name of Body of Water or Other Location Indicator	Existing Structure	Proposed Structure	Permanent Fill		Temporary Fill		NWP (Indicate Number)	PCN (Y/N)	IP (Y/N)
			Open Waters (Acres and Linear Feet)	Wetlands or Other Special Aquatic Sites (acres)	Open Waters (Acres and Linear Feet)	Wetlands or other Special Aquatic Sites (acres)			
Crossing #1 Rio Grande/ Rio Bravo STA 82+30	N/A	3420' Bridge	<0.10	0.0	TBD	0.0	NMP 14	N	N
Crossing #2 STA 193+18	N/A	3-4'x3'x50' MBC	<0.10	0.0	TBD	0.0	NMP 14	N	N
Crossing #3 MCID#1 Main Canal STA 194+55.5	N/A	212' (45' TYP.) – 23' Bridge	<0.10	0.0	TBD	0.0	NMP 14	N	N
Crossing #4 STA 197+70	N/A	1-3'x4'x55' SBC	<0.10	0.0	TBD	0.0	NMP 14	N	N
Crossing #5 STA 232+80	N/A	225' (45' TYP.) – 23' Bridge	<0.10	0.0	TBD	0.0	NMP 14	N	N
Crossing #6 STA 282+40	N/A	2-4'x4'x65' MBC	<0.10	0.0	TBD	0.0	NMP 14	N	N

Name of Body of	Existing	Proposed	Permanent Fill		Temporary Fill		NWP	PCN (Y/N)	IP (Y/N)
Crossing #7 STA 297+20	N/A	160' (45' TYP.) – 23' Bridge	<0.10	0.0	TBD	0.0	NMP 14	N	N
Crossing #8 STA 361+80	N/A	25-5'x3'x80' MBC	<0.10	0.0	TBD	0.0	NMP 14	N	N
Crossing #9 STA 406+35	N/A	145' (45' TYP.) – 23' Bridge	<0.10	0.0	TBD	0.0	NMP 14	N	N
*Crossing #10 STA 457+05	N/A	190' (45' TYP.) – 23'	<0.10	0.0	TBD	0.0	NMP 14	N	N
*Crossing #11 STA 483+15	N/A	3-4'x4'x100' MBC	<0.10	0.0	TBD	0.0	NMP 14	N	N
*Crossing #12 STA 492+56	N/A	2-4'x4'x50' MBC	<0.10	0.0	TBD	0.0	NMP 14	N	N
*Crossing #13 STA 507+67	N/A	5-10'x6'x38' MBC	<0.10	0.0	TBD	0.0	NMP 14	N	N

*Requires field verified for jurisdictional determination prior to the commencement of construction phase.

MBC=Multi Box Culvert
SBC=Single Box Culvert
STA=Station Location

CWA Section 401

Administration of the CWA Section 401 is delegated to the State of Texas and administered by TCEQ through 30 TAC Ch. 279, Water Quality Certification. EPA, through its role as the ultimate overseer of the CWA, established the Section 401 program to parallel regulation of wetlands and State waters and EPA encourages each State to administer the program to assure that state waters, including jurisdictional wetlands, are managed consistently with the goals of the CWA. One of the requirements for obtaining a USACE 404 permit is certification from TCEQ that the proposed discharges meet Texas water quality standards. TCEQ is the State agency with primary responsibility for adopting and enforcing water quality standards. TCEQ has developed a tiered system of review for all individual Section 404 permit applications based upon project size and the amount of state water affected. The extent of 401 certification review would vary between the different tiers, as well as the type of water body affected. It is anticipated that all the proposed project's crossings would qualify for nationwide permits; specifically NWP 14.

Generally, for small projects that affect less than three acres of waters in the state, or less than 1,500 linear feet of streams, TCEQ has determined that incorporating certain BMPs and other requirements into the project would sufficiently address the likelihood that water quality would remain at the desired level. For linear projects, each crossing is considered a single and complete project for purposes of complying with the 1,500 foot threshold. For those projects, no further 401 review would be necessary if the permittee agrees to include those BMPs and requirements in their project, which makes them part of their Section 404 permit. These BMPs are designed to minimize impacts to water quality.

Acceptable BMPs for Section 401 compliance are the following:

Erosion Control

Disturbed areas must be stabilized to prevent the introduction of sediment to adjacent wetlands or water bodies during wet weather conditions. At least one of the following BMPs must be maintained and remain in place until the area has been stabilized. If the applicant does not choose one of the BMPs listed, an individual Section 401 certification is required.

- Temporary Vegetation Blankets/Matting

- Mulch Sod
- Interceptor Swale Diversion Dike
- Erosion Control
- Compost
- Mulch Filter Berms and Socks
- Compost Filter Berms and Socks

Sedimentation Control

Prior to project initiation, the project area must be isolated from adjacent wetlands and water bodies by the use of BMPs to confine sediment to the extent practicable. Dredged or fill material must be placed in a manner that prevents sediment runoff into waters of the state (and waters of the United States), including wetlands. Water bodies can be protected by the use of one or more of the required BMPs identified for sedimentation control. These BMPs must be maintained and remain in place until the dredged or fill material is stabilized.

- Sand Bag Berm
- Rock Berm
- Silt Fence
- Hay Bale Dike
- Triangular Filter Dike
- Brush Berms
- Stone Outlet Sediment Traps
- Sediment Basins
- Erosion Control Compost
- Mulch Filter Berms and Socks
- Compost Filter Berms and Socks

Post-Construction Total Suspended Solids (TSS) Control

After construction is completed and the site is stabilized, TSS loadings must be controlled by at least one of the following BMPs. Runoff from bridge decks has been exempted from the requirements for post-construction TSS controls.

- Retention/Irrigation
- Constructed Wetlands

- Extended Detention Basins
- Wet Basins
- Vegetative Filter Strips
- Vegetation-lined drainage ditches
- Grassy Swales
- Sand Filter Systems
- Erosion Control Compost
- Mulch Filter Berms and Socks
- Compost Filter Berms and Socks

Return Water from Upland Contained Disposal Area

Effluent from an upland contained disposal area must not exceed a TSS concentration of 300 mg/L unless an individual certification has been issued with site-specific TSS limits.

Stormwater Permits

Under the existing TCEQ Construction General Permit (CGP) TXR150000, originally issued August 14, 2006, and renewed effective August 14, 2011, construction activities from which runoff goes into or adjacent to any surface water in the state are regulated according to the area of land disturbed:

1. Large construction activities which disturb 5 or more acres, or are part of a larger common plan of development that would disturb 5 or more acres, are regulated under this general permit.
2. Small construction activities which disturb at least 1 but less than 5 acres, or are part of a larger common plan of development that would disturb at least 1 but less than 5 acres, are also regulated under this general permit.
3. Construction activities that disturb less than 1 acre, and are not part of a larger common plan of development that would disturb 1 or more acres, are not required to obtain coverage under this general permit.

The proposed rail line would disturb more than 5 acres in total and would be required to comply with the requirements of the TCEQ CGP TXR150000. These requirements include the preparation and implementation of a Storm Water Pollution Prevention Plan (SWP3), submission of Notice of Intent (NOI) to TCEQ, posting of NOI and site notice and submission of copy of NOI to Maverick County (the MS4 operator).

The proposed rail line would also need to comply with any applicable local requirements in regards to storm water.

4.3.4 Operational Impacts

It is not anticipated that the Preferred Alternative would contaminate or otherwise adversely affect any groundwater or surface water, including public water supply, water treatment facilities or water distribution systems. Known crossings appear to qualify for NWP 14 authorization. Additionally, most of the streams which are crossed are intermittent or ephemeral and only have water flowing in them for brief periods. Rainfall runoff rates would increase slightly due to an increase in impervious cover, but those increased runoff rates would not make a measurable impact on surface waters.

Further, TCEQ 401 certification regulations, which incorporate both temporary and permanent BMPs, are designed to assure that unacceptable impacts to water quality are avoided. These measures include, but are not limited to, silt fences, check dams (porous, nonerodible, rock structures placed along the drainage path to absorb energy, reduce erosion, and trap sediment), vegetative swales and filter strips, and detention basins.

4.3.5 No Build Alternative

The No Build Alternative would have no impact on groundwater or jurisdictional waters of the U.S., except to the extent waters would be impacted as a result of transportation of coal from the Eagle Pass mine via the existing UPRR line, as discussed in **Section 4.11** below.

4.4 Wildlife

4.4.1 Flora

Approximately 168 acres of mixed brush vegetation is located within the proposed ROW and would be removed for construction of the proposed project. Vegetation to be removed provides habitat for various wildlife species.

4.4.2 Fauna

Migratory Birds

All appropriate actions would be taken to prevent the take of migratory birds, their active nests, eggs, or young.

Threatened and Endangered Species

No federally-listed threatened or endangered species or their habitats occur within the proposed project corridor. Two endangered felids—the ocelot and jaguarundi—are known from the project vicinity. While no optimal or sub-optimal habitat exists for these species within the project ROW, the EPRR would involve perpendicular crossings of at least five drainage features (multiple creeks, Maverick County Canal, Rio Grande) which could be utilized as travel corridors by these species. All of the corridors would be bridged by rail construction, allowing the cats to continue to utilize the corridors (see **Exhibit 16: Bridged Sections of EPRR Corridor**). Bridging of these linear features, the lack of habitat within the study corridor, the limited width of the proposed ROW (generally 100 to 150 ft) and the low volume of train traffic anticipated on the track indicate a negligible likelihood of impacting listed species. Vegetative clearing in the vicinity of these corridors would be limited to the minimum required for bridge construction. None of the bridges would have lights or other security features which could deter

cat utilization. Therefore, the proposed EPRR would have no effect on federally-listed species as a result of construction or operation of the proposed project.

Nine state-listed threatened species could occur within the project area and therefore could be impacted by the project. These species include the Mexican fawnsfoot (*Truncilla cognata*), Salina mucket (*Potamilus metneckayi*), blue sucker (*Cycleptus elongatus*), south Texas siren (*Siren sp 1*), reticulate collared lizard (*Crotaphytus reticulatus*), Texas horned lizard (*Phrynosoma cornutum*), Texas indigo snake (*Drymarchon melanurus erebennus*), Texas tortoise (*Gopherus berlandieri*), and white-nosed coati (*Nasua narica*). An individual Texas horned lizard was observed within the project area during field investigations in May 2011. See **Photo 10**. In accordance with state law, direct impacts to individuals of state-listed species would be avoided during construction where feasible.



Photo 10: Texas Horned Lizard found within project study area

4.4.3 Construction Impacts

Any required clearing or other construction-related activities may directly affect animals that reside on and adjacent to the project ROW. Operations normally associated with construction could destroy existing habitat and displace wildlife populating the project area. Some take from construction equipment would be expected for species that are in the area and are not mobile, such as those in hibernation or with young that are unable to leave the nest.

During construction, efforts would be taken to avoid and minimize disturbance of vegetation and soils. All disturbed areas would be revegetated as soon as it becomes practicable. In accordance with EO 13112 on Invasive Species and the EO on Beneficial Landscaping, all revegetation would, to the extent practicable, use only native species. Further, best management practices would be used to control and prevent the spread of invasive species.

To avoid impacts to migratory birds, clearing of the project area should be done outside of the breeding season (generally March-August) or a qualified biologist should examine the project area to ensure that no nests are located within the project area prior to clearing.

No federally-listed species would be affected by construction because no habitat for federally-listed species occurs within the project ROW. In accordance with state law, direct impacts to individuals of state-listed species would be avoided during construction when possible. Impacts to state species of concern should be avoided to the extent practicable during construction.

4.4.4 Operational Impacts

Vegetation within the project ROW would be maintained by mowing/shredding or use of herbicides as needed.

No operational impacts to wildlife, migratory birds, or listed species would be anticipated as a result of the proposed project, other than potential collision effects. Animals, particularly mammals, using the railway as travel corridors between various parts of their home range would be at risk of collision (English Nature, 2002). Scavengers could be attracted to the carcasses of animals killed by collision, and could thereby be at risk of collision themselves while feeding (Wells, et al., 2000). It is recommended that, in order to reduce collision effects, carcasses be removed as quickly as possible following collisions. In addition, vegetation within the ROW should be maintained such that attractiveness to wildlife is reduced (i.e., avoid seeding with forage plants and maintain the growth/height of vegetation to reduce habitat).

4.4.5 No Build Alternative

The No Build Alternative would not result in any removal of, or impacts to, vegetation or wildlife habitat. For example, no impacts to migratory birds are anticipated as a result of the No Build Alternative. Likewise, the No Build Alternative would not result in any effects to federally-listed threatened or endangered species or impacts to state-listed threatened or endangered species. Any impacts caused by the transportation of coal via the existing UPRR line are addressed in **Section 4.11**.

4.5 Transportation

4.5.1 Construction Impacts

International Bridges

During the construction phase of the proposed rail line and international rail bridge no foreseen direct impacts either positive or negative are anticipated on any of the three existing international bridges.

Rail

With the exception of the future tie-in with the existing UPRR rail line at the northeast limits of the proposed rail line, no foreseen direct impacts either positive or negative are anticipated on the daily operations of existing UPRR rail line. The actual tie-in would call for coordination with UPRR to enable the tie-in to be constructed while not effecting the daily operations of the existing UPRR line.

Aviation

During the construction phase of the proposed rail line and international rail bridge no foreseen direct impacts either positive or negative are anticipated in connection with the Maverick County Memorial Airport.

Highways/Roads

During the construction phase of the proposed rail line and international rail bridge no foreseen direct impacts either positive or negative are anticipated on any of the existing highways and or roads within Maverick County. The proposed rail line would cross “at grade” several ranch roads along the rail’s centerline. Although these ranch access roads would have to be closed at certain times for construction purposes, all proposed traffic control plans would take into account the direct accessibility of these properties by the owners and operators of said properties. It should be noted that at the intersection of US 277 and the proposed rail line, the design calls for the rail line to underpass US 277 thus grade separating the rail from the existing highway system. By under passing US 277 the construction of the proposed rail line would have no adverse effects on traffic traveling along US 277.

4.5.2 Operational Effects

International Bridges

Once operational the proposed international rail bridge and rail line would have a positive effect on the existing rail bridge currently in operation near downtown Eagle Pass. The addition of a second international rail bridge in Maverick County would bring added rail capacity and would help to reduce rail traffic congestion in the downtown Eagle Pass area. The additional rail bridge would allow for carriers such as UPRR the ability to bypass the city of Eagle Pass when the freight carried is designated for destinations beyond Maverick County and thus does not need to be held stationary in downtown Eagle Pass during inspections and or loading and unloading of freight. It would also provide a safe route, through sparsely populated areas, for potentially hazardous chemical freight moving through Maverick County in route to industrial facilities in Mexico. It has long been a long term goal for both municipal entities and rail freight carriers to relocate rail routes to less urbanized “rural” areas, by-passing densely populated areas, thus decreasing the risk of derailment and minimizing the potential effect to bystanders. The addition of a new international bridge well north of the urbanized area of Eagle Pass would help achieve this goal.

There are no foreseen negative effects to the existing international rail bridge and or the two international vehicular bridges in connection with the proposed international rail bridge and rail line.

Rail

Much like the effects to the existing international bridges, the effects of the proposed international rail bridge and rail line would be positive. The added capacity and the location, outside of the urbanized areas of Eagle Pass, would provide added capacity and a safer route for hazardous materials to pass through Maverick County in route to Mexican industrial manufacturing complexes. This also allows the County and UPRR the ability to coordinate rail shipments along either rail line in order to increase the efficiency of cross border freight transport.

There are no foreseen negative effects to the existing UPRR rail line in connection with the proposed international rail bridge and rail line.

Aviation

The airport's close proximity to the proposed rail line and US 277 provides potential opportunities for adjacent land owners to develop their properties into multimodal business facilities that can access all three transportation service types by way of US 277, Maverick County Memorial Airport, and the proposed international rail bridge and rail line.

There are no perceived direct adverse effects on the Maverick County Memorial Airport in connection with the proposed international rail bridge and rail line.

Highways/Roads

The proposed rail line design calls for an underpass US 277 and would have multiple at-grade crossings with rural dirt roads used for ranch/property access. Therefore, operationally speaking, there are no perceived direct adverse effects on the existing Maverick County roadway infrastructure in connection with the proposed international rail bridge and rail line.

4.5.3 No Build Alternative

If the No Build Alternative were pursued, there would not be any adverse impacts to the existing international bridges, the existing rail line, the Maverick County Memorial Airport or the existing Maverick County roadway infrastructure. Transportation of coal from the Eagle Pass Mine would continue on the existing EPRR line, as addressed in Section 4.11 below.

4.6 Air Quality

4.6.1 Construction Impacts

Fugitive Emissions

Construction of the proposed project and associated facilities could result in intermittent and short-term fugitive emissions. These emissions would include dust from soil disruption and combustion emissions from the construction equipment. The fugitive dust emissions would depend on the moisture content and texture of the soils that would be disturbed. However, emissions from construction are not expected to cause or considerably contribute to a violation of an applicable ambient air quality standard because the construction equipment would be operated on an as-needed basis, primarily during daylight hours. In order to minimize dust generated from construction activities, the Contractor would take all reasonable steps to control dust near residential areas (if any). Control practices might include wetting soils on the right-of-way, limiting working hours in residential areas, and/or additional measures as appropriate based on site specific conditions. The use of dust suppression techniques would minimize fugitive dust emissions during construction of the project, thereby minimizing potential air quality impacts on nearby residential and commercial areas.

4.6.2 Operational Impacts

The Surface Transportation Board's (STB) 49 CFR 1105, Section 1105.7(5)(e) on environmental report requirements on air emissions are as follows:

STB Regulation 49 CFR 1105.7(5)(e)(i):

If the proposed action will result in (A), (B), or (C), the anticipated effects on air emissions would be quantified.

- A. An increase in rail traffic of at least 100% (measured in gross ton miles annually) or an increase of at least eight trains a day on any segment of rail line affected by the proposal, or
- B. An increase in rail yard activity of at least 100% (measured by carload activity), or
- C. An average increase in truck traffic of more than 10% of the average daily traffic or 50 vehicles a day on any affected road segment.

For a proposal under 49 United States Code (USC) 10901, *Authorizing construction and operation of railroad lines*, (or 10505, *Authority to exempt rail carrier and motor carrier transportation*) to construct a new line or reinstitute service over a previously abandoned line, only the eight train a day provision in subsection (i)(A) will apply.

Proposed Project:

- It is projected that at least two diesel engine trains per day would utilize the proposed project.
- UPRR does not plan to run any of its existing traffic over the proposed project's route.
- The purpose of the proposed EPRR is to increase rail line capacity between Eagle Pass, TX and the State of Coahuila, Mexico. Specifically, the railroad will meet the need to transport coal from a mine to be developed near Eagle Pass, at a point at or near the planned northern terminus of the EPRR line, to points in Mexico where the coal would be used to generate power. In addition, EPRR has identified a need for rail transport of raw materials necessary for Mexico's metallurgical industry from the United States to Mexico.
- Track configurations would be in cuts, at fills, and bridged (refer to Typical Sections).
- One railroad track (with a potential of a staging track to cross the U.S.-Mexico border) is proposed.

Result:

Because the construction of the new line would be less than the eight train a day provision in subsection (i)(A), the proposed project will not require the quantification of the anticipated effects on air emissions.

STB Regulation 49 CFR 1105.7(5)(e)(ii):

If the proposed action affects a Class I or nonattainment area under the CAA and will result in (A), (B), or (C), state whether any expected increased emissions are within the parameters established by the SIP.

- A. An increase in rail traffic of at least 50% (measured in gross ton miles annually) or an increase of at least three trains a day on any segment of rail line.
- B. An increase in rail yard activity of at least 20% (measured by carload activity), or
- C. An average increase in truck traffic of more than 10% of the average daily traffic or 50 vehicles a day on a given road segment.

However, for a rail construction under 49 USC 10901 (or 49 USC 10505), or a case involving the reinstatement of service over a previously abandoned line, only the three train a day threshold in (ii)(A) will apply.

Proposed Project:

- The proposed project is in Maverick County, which is in an area in attainment of all the NAAQS and is therefore consistent with the SIP. The SIP and associated revisions can be found at <http://www.tceq.texas.gov/airquality/sip/siplans.html>.
- The proposed project would not affect a Class I area, where emissions of PM and sulfur SO₂ are to be restricted. Mandatory Class I federal lands include all national wilderness areas exceeding 500 acres. Such lands may not be redesignated (42 USC 7472). Additionally, national wildlife refuges which exceed 10,000 acres may only be redesignated by States as Class I or Class II areas (42 USC 7474).

Result:

Because the construction of the new line would be less than the three train a day threshold as discussed in subsection (5)(ii) and the proposed project would not affect a Class I or nonattainment area under the CAA, disclosure of the proposed project's increased emission with parameters established by the SIP is not required.

STB Regulation 49 CFR 1105.7(5)(e)(iii):

If transportation of ozone depleting materials (such as nitrogen oxide [NO_x] and Freon) are contemplated, identify:

- the materials and quantity;
- the frequency of service;
- safety practices (including any speed restrictions);
- the applicant's safety record (to the extent available) on derailments, accidents and spills;
- contingency plans to deal with accidental spills; and
- the likelihood of an accidental release of ozone depleting materials in the event of a collision or derailment.

Proposed Project:

Coal will be the predominant commodity that would be transported on the proposed project. There are no known O₃ depleting chemicals that are currently transported.

Result:

Because the predominant commodity that would be transported on the proposed new line is coal and no O₃ depleting materials would be transported, the materials and quantity; the frequency of service; safety practices (including any speed restrictions); the applicant's safety record (to the extent available) on derailments, accidents and spills; contingency plans to deal with accidental spills; and the likelihood of an accidental release of O₃ depleting materials in the event of a collision or derailment is not required for identification.

Ozone-depleting substances (ODS) are generally very stable in the troposphere and only degrade under intense ultraviolet light in the stratosphere. When they break down, they release chlorine or bromine atoms, which then deplete O₃. The following are the ODS, compounds that contribute to stratospheric O₃ depletion (<http://www.epa.gov/ozone/basicinfo.html>):

- Chlorofluorocarbons (CFCs) - commonly used as refrigerants, solvents, and foam blowing agents. The most common CFCs are CFC-11, CFC-12, CFC-113, CFC 114, and CFC-115.

- Hydrochlorofluorocarbons (HCFCs) - are one class of chemicals being used to replace the CFCs. They contain chlorine and thus deplete stratospheric O3, but to a much lesser extent than CFCs.
- Halons - used as fire extinguishing agents, both in built-in systems and in handheld portable fire extinguishers. Halon production in the U.S. ended on December 31, 1993, because they contribute to O3 depletion. They cause O3 depletion because they contain bromine.
- Methyl bromide - is an effective pesticide used to fumigate soil and many agricultural products. Because it contains bromine, it depletes stratospheric O3. Production of methyl bromide was phased out on December 31, 2004, except for allowable exemptions.
- Carbon tetrachloride - was widely used as a raw material in many industrial uses, including the production of CFCs, and as a solvent. Solvent use ended when it was discovered to be carcinogenic. It is also used as a catalyst to deliver chlorine ions to certain processes.
- Hydrobromofluorocarbons (HBFCs) - were not originally regulated under the CAA, subsequent regulation added HBFCs to the list of Class I substances. Class I substances listed in the CAA include CFCs, halons, carbon tetrachloride, and methyl chloroform. EPA later added HBFCs and methyl bromide to the list by regulation. HCFCs are Class II substances.
- Chlorobromomethane - the shortest hydrocarbon having bromine as well as chlorine is used as a reaction solvent and flotation agent. It is used as an intermediate for organic synthesis, agrochemicals (biocides) and pharmaceuticals. It is also used in fire extinguishers.
- Methyl chloroform - used as a solvent and industrial degreasing agent. It is an ingredient in consumer products such as household cleaners, glues, and aerosol sprays. It was formerly used as a food and grain fumigant.

The STB's 49 CFR 1105.7(5) environmental documentation requirements on air quality for the proposed project have been met. The proposed action would not require the quantification of air emissions, will not affect a Class I or nonattainment area under the CAA, and will not transport O3 depleting materials.

4.6.3 No Build Alternative

Any air impacts resulting from operation of the No Build Alternative would be similar, since coal from the Eagle Pass Mine would continue to be transported by rail via the existing UPRR line, as discussed more fully in **Section 4.11**.

4.7 Noise

4.7.1 Construction Impacts

Noise associated with the construction of the proposed project is difficult to predict. Heavy machinery, the major source of noise in construction, is constantly moving in unpredictable patterns. **Table 19** shows examples of noise levels for construction equipment associated with railroad construction.

Table 19: Construction Equipment Noise Levels (dBA)

Equipment	Noise Level at 50 feet ¹
Bulldozer	85
Heavy truck	88
Rail saw	90
Rock drill	98
Impact pile driver	101

Equipment	Noise Level at 50 feet ¹
¹ Source: Transit Noise and Vibration Impact Assessment, FTAVA-90-1003-06, May 2006	

For the proposed project, sensitive receptors were not identified within the study area. However, provisions will still be included in the plans and specifications that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and proper maintenance of muffler systems.

4.7.2 Operational Impacts

The STB’s 49 CFR 1105.7(e)(6) on environmental report requirements on noise are as follows:

If any of the thresholds identified in item (5)(e)(i)[Air] are surpassed, state whether the proposed action will cause:

- i. An incremental increase in noise levels of three decibels day-night average sound level (Ldn) or more; or
- ii. An increase to a noise level of 65 decibels Ldn or greater.

If so, identify sensitive receptors in the project area, and quantify the noise increase for these receptors if the thresholds are surpassed.

Result:

The construction of the new line would be less than the eight train a day provision; therefore, the proposed project does not meet the threshold and quantification required by STB Regulation 49 CFR 1105.7(5)(e)(i) [Air], a preliminary requirement to quantify STB’s 49 CFR 1105.7(e)(6) on quantification of noise levels. The STB’s 49 CFR 1105.6(6) environmental documentation requirements on noise analysis for the proposed project have been met. Refer to **Appendix F** for the Noise Measurement Data Sheets and Project Area Photographs.

4.7.3 Railroad Horn Noise

Railroad horn noise is the noise from locomotive horns when trains approach grade crossing locations to warn motorists and pedestrians of the oncoming train. EPRR’s rail line would be located in Maverick County, Texas. The State of Texas and Maverick County have no ordinances, guidelines, or restrictions regarding railroad horn noise. However, pursuant to state law (Texas Administrative Code, Title 43, Part 1, Chapter 7, Subchapter D, Rule §7.31 (c)(9)), all railroads operating within the state must comply with Federal regulations regarding the sounding of locomotive horns near at-grade crossings of railroads and public highways. These Federal regulations are codified at 49 CFR, Parts 222 and 229. The final revision to these regulations, adopted in 2005, requires that locomotive horns be sounded to provide for safety at public highway-rail grade crossings except in quiet zones.

CFR Part 229.129 specifies that each lead locomotive shall be equipped with a locomotive horn that produces a minimum sound level of 96 dB(A) and a maximum sound level of 110 dB(A) at 100 feet forward of the locomotive in its direction of travel. Federal regulations define public railroad at-grade crossings as locations where a public highway, road, or street, including associated sidewalks or pathways, cross one or more railroad tracks at grade. If a public authority maintains the roadway on both sides of the crossing, the crossing is considered a public crossing.

The proposed US 277 public railroad at-grade crossing would be the only crossing that trains would be required to sound their horns. There are no sensitive receivers within one-half mile of the proposed crossing. The closest sensitive receiver to the proposed project is approximately 3,170 feet (0.6 mile) from the proposed railroad line. Sound levels naturally attenuate due to distance such that there is a 3 dB(A) drop in noise for the doubling of the distance between a receiver and a source. Generally, railroad horn noise levels fall below FTA impact levels at a distance of 500 feet. Because the closest sensitive receiver to the proposed project is approximately 0.6 mile from the proposed railroad line; substantial railroad horn noise impacts are not anticipated by the proposed project.

4.7.4 No Build Alternative

Noise impacts resulting from operation of the No Build Alternative would be similar, since coal from the Eagle Pass Mine would continue to be transported by rail via the existing UPRR line, as discussed more fully in Section 4.11 below. No noise impacts caused by construction of the No Build Alternative are anticipated, beyond any insignificant impacts caused by the construction of loading facilities to tie into the existing UPRR line.

4.8 Cultural Resources

4.8.1 Historic Resources

The proposed EPRR rail line would result in construction of a bridge that would span the Maverick County Water Control & Improvement District No. 1 main canal. The NRHP eligibility of the irrigation district as a whole has not been determined. Nonetheless, the project would have no adverse effect to the irrigation system since, as shown in **Figure 9**, the proposed rail bridge would entail the construction of two concrete bents within the canal. These bents would not alter the canal or impede its function, resulting in no change to the canal's integrity of design, materials, workmanship, or association.

Further, as agreed in a July 26, 2004 letter of consensus between the Texas Department of Transportation (TxDOT) and the THC regarding South Texas irrigation systems, highway transportation projects that would not alter the overall function of the system, nor pose effects to the character defining features of the system or to its overall historic integrity are considered as having no adverse effect to the irrigation system as a whole. Although STB was not a party to this agreement, a precedent has been set for bridges over irrigation features.

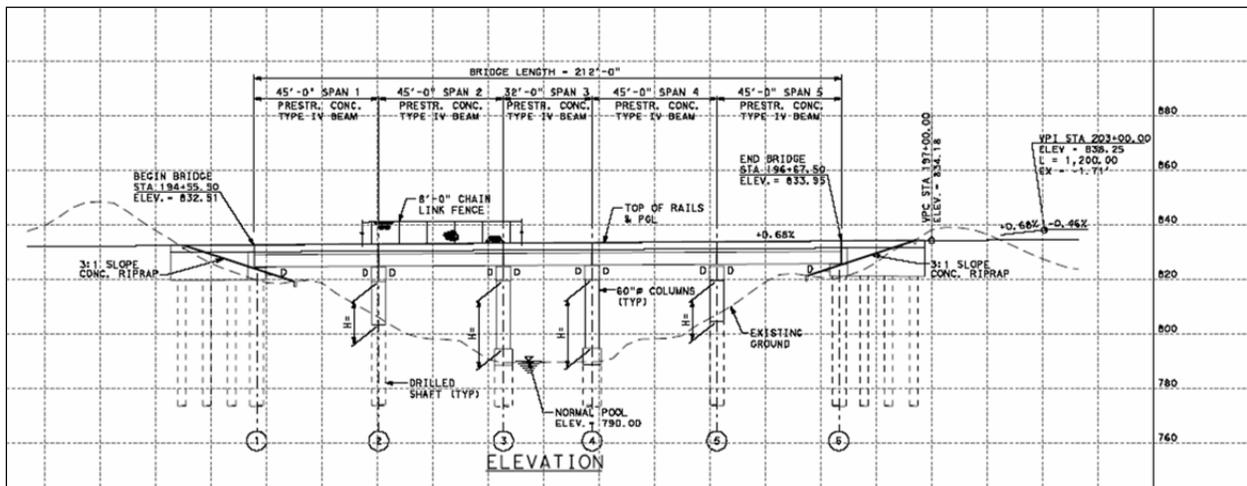


Figure 9: Elevation of Bridge at Canal

For purposes of the proposed EPRR rail line, this canal should be considered as a contributing feature of an NRHP-eligible irrigation system. Because the proposed bridge would not directly impact the canal nor impede its function as part of the larger irrigation system, it would have no adverse effect on the irrigation system as a whole.

Because identified historic resources can be impacted by either induced or non-induced developments within the indirect impact study area, and because the development within the indirect study area would be mainly private and therefore, not subject to Section 106 of the NHPA of 1966, potential indirect impacts to the historic resources are not expected within the indirect impacts study area.

4.8.2 Archeological Resources

The Preferred Alternative would result in the destruction of part or all of each of the 11 sites recorded in the field survey. The portions of the sites within the APE are not considered contributing resources to NRHP or SAL eligibility; thus, the data loss represented by such destruction would be minor, and the project would have no effect on NRHP-eligible properties. No cemeteries are known from the study corridor, and no impacts are anticipated.

4.8.3 Construction Impacts

Permanent impacts to archeological resources would be anticipated as a result of construction of the proposed EPRR rail line. If any additional cultural resources were encountered during construction activities, the contractor would stop and consult with appropriate authorities regarding the need for any additional documentation or coordination activities prior to continuing work.

4.8.4 Operational Effects

Operation of the railroad facility would not be anticipated to result in any impacts to cultural resources, beyond those archeological resources that would be permanently impacted during construction of the proposed EPRR rail line.

4.8.5 No Build

It is not anticipated that the No Build Alternative would result in any impacts to cultural resources.

4.9 Recreation

There are no state-listed wildlife management areas within in Maverick County or the vicinity of the proposed project study area; however; game-managed ranches in the local vicinity routinely interact with TPWD thus allowing ranch owners the knowledge needed to provide enhancement or restoration of habitats and management of key species including species indigenous to the South Texas Brush Country and “exotic” animals from Asia and Africa.

No state or national parks, watchable wildlife sites, community parks, or legacy ranches were found to be located within the vicinity of the proposed project study area.

4.9.1 Construction Impacts

The construction of the Preferred Alternative may have some short-term effects on recreational hunting and fishing due to presence of construction workers and equipment needed during installation. These effects are short-term and would cease when construction is completed.

The construction of the Preferred Alternative would temporarily affect the normal routines of local recreational hunted wildlife. Deer, turkey, raccoon, squirrel, javelina, quail, dove as well as wild/feral hog would most likely avoid the area along the proposed route during construction due the presence of construction workers and their equipment. Once the construction of the rail has ceased and normal rail operations have commenced, the normal routines of these highly adaptive animals would likely return.

In regards to the new international bridge, there would also be temporary impacts due to the disturbance of the waters by the installation of piers into the bed of the Rio Grande River. These disturbances should be considered temporary and once constructed, the fish would return to a normal habitat.

4.9.2 Operational Impacts

The rail line itself poses little threat to white-tailed deer hunting and or any other hunting that currently takes place within the vicinity of the proposed project. Other than dove, all other listed hunting species in Maverick County are considered non migratory and would soon grow accustomed to the permanent presence of a rail line in the study area.

The installation of the rail underpass at US 277 may have a positive, unforeseen effect on local wildlife. The underpass would provide a wildlife crossing for species to easily a safely cross US277. Not only would this provide a safe route for endangered species such as the ocelot and jaguarondi, but would also provide the same access for sporting game such as: white tailed deer, wild/feral hog, turkey, javelina, and raccoon.

The short-term negative effects caused by the installation of the bridge piers may actually have a permanent long-term positive effect on fishing. The installation of peers, causing small breaks in the current would create areas for new life to take hold. Catfish, looking for areas of slow current, dark water, and possible recesses provided by back fill can thrive in these areas, thus creating new areas for recreational fishing to take place. The portion of the Rio Grande that would be crossed by the new international bridge is not considered a “wild and scenic” portion of the rivers system. It should also be noted that the design of the bridge crossing would follow all necessary parameters involved in U.S. Coast Guard permits necessary for a project of this magnitude.

The new rail bridge may also provide new habitat for federal and state listed “species of concern” including: the Yuma myotis bat (*Myotis yumanensis*), Cave myotis bat (*Myotis velifer*) and the Ghost-faced bat (*Mormoops megalophylla*) all of which can utilize the underside of bridges for roosting sites. The addition of these bat species within the vicinity of the new rail bridge would help control insect species such as mosquitoes which in turn would be a positive and environmentally friendly approach to insect control in relation to recreational activities.



Photo 11: Typical feral hog

4.9.3 No Build

It is not anticipated that the No Build Alternative would have any adverse or positive effects on recreational activities in Maverick County.

4.10 Hazardous Materials

No potential hazardous materials sites were identified within or immediately adjacent to the proposed project study area based on a database search and field investigations. No potential hazardous materials impacts are anticipated as a result construction of the proposed project. Any unanticipated hazardous materials and/or petroleum contamination encountered during construction would be handled according to applicable federal and state regulations.

4.10.1 Construction Impacts

Since no hazardous material sites were identified in the project study area, any impacts caused by hazardous materials would be the result of spills from machinery/etc. used during construction of the proposed EPRR rail line. As explained in Chapter 5, the contractor would take appropriate measures to prevent, minimize, and control the spill of hazardous materials in the construction staging area. The use of construction equipment within sensitive areas would be minimized or eliminated entirely. All construction materials used for this project would be removed as soon as work schedules permit.

4.10.2 Operational Impacts

Operation of the railroad facility would not be anticipated to result in any hazardous materials impacts, except for any minor spills from machinery/etc. resulting from rail line maintenance and/or operation of the proposed EPRR rail line.

4.10.3 No Build

The No Build Alternative would not result in any impacts to potential hazardous materials sites.

4.11 Cumulative Impacts

The CEQ regulations implementing NEPA define a cumulative impact as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future action regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 C.F.R. § 1508.7).

In compliance with CEQ guidelines for assessing cumulative impacts, consultation took place with local, state, and Federal agencies. Public outreach and scoping activities were also conducted to identify other past, present, and reasonably foreseeable future actions within the proposed EPRR project area.

The Eagle Pass Mine and the State Loop (SL) 480 (U.S. 277 Eagle Pass Outer Loop project)¹ were determined to be the only projects underway or that are reasonably foreseeable to take place in the

¹ The U.S. 277 Eagle Pass Outer Loop was initiated in 1998; the ribbon cutting ceremony commemorating the completion of the first phase of SL 480 took place in Eagle Pass on December 22, 2010. This 5.6 mile segment

same geographic area and time frame as the proposed EPRR line construction. Because the Eagle Pass Mine and proposed EPRR line are related to the extent that the rail line would serve the Mine, and because development and operation of the Mine has the potential to impact some of the same resources as the proposed EPRR line at about the same time as rail line construction and operation, it was determined that, as opposed to the State Loop, the Eagle Pass Mine's environmental impacts must be considered as part of the cumulative impacts analysis.

Eagle Pass Mine

The Eagle Pass Mine is a sub-bituminous coal mine located northeast of Eagle Pass on the north side of the Elm Creek watershed, traversing the existing UPRR line north of U.S. Highway 57 and east of U.S. Highway 277. The coal from the mine is intended to be transported to two Rio Escondido electric power plants in the State of Coahuila, Mexico: Carbon I and Carbon II. The mine has not begun mining activities, though it was initially issued a mining permit by the Texas Railroad (TRC) Commission on October 3, 1994. An application to renew that permit is currently pending before TRC. Approval is expected to be provided in the Fall of 2012.

DRRC was also issued a NPDES permit in 1995 by EPA, and was subsequently reissued a TPDES permit by TCEQ in 2000, 2006, and 2011 for the treatment and discharge of wastes from the Eagle Pass Mine. EPA initially recorded its analysis of the proposed mining activities on the surrounding environmental resources in its 1995 Final Environmental Impact Statement (FEIS) when it issued in the initial NPDES permit (see **Appendix H: Eagle Pass Mine Environmental Impact Statement Documents**).

The FEIS reports a total mining area of 5900 acres with maximum depth of approximately 120 feet. On-site facilities include haul roads, power lines, surface water diversions and channels, sedimentation ponds, coal transfer, crushing and loading facilities, a rail siding, and other support facilities. Four different pits will be utilized in the mine comprising the 5,900 acres. 3,611 acres will be strip-mined and reclaimed through replacement of topsoil and re-vegetation. Three seams of coal will be mined at depths of up to 120 feet. Substantial amounts of overburden requiring frequent blasting must be removed by heavy equipment. The removed overburden will be used to fill previous pits. After an area is mined, land reclamation will begin.

Prior to purchase, the mine site was rangeland/pastureland primarily utilized for grazing. Any agricultural, recreational, aesthetic, or ecological uses will be temporarily replaced with industrial/mining use for the life of the mine. Reclamation of the mining site will convert much of the existing grazing land to pastureland, which has a productivity rate two to three times that of grazing land, but which requires ongoing, long-term maintenance. The area along Elm Creek will be replanted as brush land in order to restore riparian wildlife habitat. The mine will use approximately 300 acre – feet per year (AFY) of water for dust control and other industrial purposes, plus an estimated 800 AFY for reclamation and 100 AFY for possible alternate supplies for area landowners.

The FEIS reports that the mine will generate a peak employment of 275 people. The total impact considering earnings will be 795 jobs and \$23.29 million in earnings, of which about 60% will occur in Maverick County (400 jobs and \$14.27 million in earnings).

construction of SL 480, with project limits from FM 1021 to US 57, is the first of three segments to comprise SL 480. The second phase of SL 480 is currently under construction. This new segment of road, totaling 4.579 miles in length, is tentatively scheduled for completion in July 2012. The final phase of SL 480, with limits from US 57 to US 277N, remains unfunded.

During full operations, coal production is estimated to average approximately 2.2 million tons/year. For the life of the mine, nearly 40 million tons of sub-bituminous coal will be removed from the site. This amount of coal will be distributed to Mexico regardless of by what means (e.g., existing UPRR line or by use of the proposed EPRR line). The FEIS reports that two trains per day (one empty, and one loaded with coal) consisting of four engines and 35 railcars will be necessary to facilitate transportation of coal produced at the Mine. Coal will be transported about 25-35 miles to the Carbon I & II facilities in Mexico. The length of transportation is dependent upon whether coal will be transported via the existing UPRR line, or by way of the proposed EPRR line.

The EPA 1995 FEIS contains a summary of all environmental factors considered for the mine (Table I-1). These factors include physical environment, surface water, ground water, water quality and use, air quality, noise, vegetation and wildlife, endangered species, cultural resources, land use/productivity, socioeconomics, public health, and cumulative impacts involving any of these resources. Mine activities and possible impacts are subject to the Surface Mining Control and Reclamation Act (SMCRA), requiring both mitigation of the impacts to within regulatory limits, and monitoring to ensure that the mitigation is accomplished. The regulatory limits are set at levels that are protective of public health and safety, and are intended to prevent significant damage to private property (Appendix H: FEIS, page 36/100).

Local roads will be impacted partially due to employees travelling to and from the mine. The FEIS additionally indicated that transportation of coal via slow moving trains may result in some increase in: delays to auto traffic at crossings (including emergency vehicles); energy use and air emissions from idling or increased travel distances (from idling vehicles waiting at crossings, and idling trains awaiting border crossing); noise and air emissions from the trains; and an increase accident risk at crossings that are at-grade with roadways.

4.11.1 Cumulative Impacts on Elements of the Human Environment

It was determined that the following resources may be cumulatively impacted due to the construction/operation of the Eagle Pass Mine, together with construction/operation of the proposed EPRR rail line. Any additional resources not addressed, are not anticipated to be impacted.

Surface Water Resources

Potential cumulative impacts on water resources in the foreseeable future were evaluated. Though the indirect impacts on water resources for the proposed EPRR rail line are minimal, water resources impacts are included in the cumulative analysis due to public concern over the effects of the mining operations on water quality.

For analysis of the potential cumulative impacts of water resources, a water resources study area (RSA) was developed and is depicted in **Exhibit 17**. The RSA utilized Elm Creek and the Rio Grande River as natural boundaries to surface and base water flow. The RSA includes the area adjacent to the proposed project and the Eagle Pass Mine and follows the natural drainage flow to these water bodies. The broadest area of impact in the watersheds was considered for analysis of potential cumulative impacts.

The Mine has the potential to affect surface water resources in the area, as further described in Section 2, Page II-11, and Table I-1 of the 1995 FEIS (see Appendix H). During mining, impacts are anticipated to include the following: the replacement of existing stock ponds with sedimentation ponds; elimination of much of Lateral No. 21 and associated seepage within the permit area; increased control of surface runoff from a reduced drainage area; elimination of the natural channel of Elm Creek and reduced

flooding and recharge along the floodplain; development of artificial stream flows related to pumping of water from pits through ponds; and, elimination of most base flow within the permit area.

During reclamation of the mine, impacts are anticipated to include the following: some restoration of pre-mining hydrology, such as permanent stock ponds and a natural runoff regime at the site; Elm Creek's channel will be rebuilt to channel length and number of meanders; base flow will occur, if only as a result of the direct discharge of excess water return flows from Lateral 21; it is possible Elm Creek will not return completely to natural conditions for many decades or centuries; and, there could be a slight long-term increase in flooding potential downstream of the mine and decrease in flooding and recharge within the mine compared to pre-mining conditions.

Agencies with regulatory oversight have not predicted any significant toxic drainage resulting from the Mine. Though physical changes to site hydrology will be significant at a local level, effects on water quality should be small (Appendix H: FEIS, Table I-1, Water Quality and Use). Physical channel changes to Elm Creek will occur, and sedimentation and salinity levels may increase during mining activities, but this is not expected to impact uses of Elm Creek, including its suitability for fisheries or livestock. The EPA further reported that significant direct and indirect water quality impacts are not expected from the coal mine (Appendix H: FEIS, Page II-11).

Since the Eagle Pass Mine must comply with conditions included in its TPDES permit, it is anticipated that any cumulative impacts to surface water will not be significant. The permit imposes specific monitoring and reporting requirements, conditions, operational requirements, and mitigation conditions for the mine. Additionally, the TCEQ requires that the mine maintain operations and procedures as reported in the application process. In fact, the purpose of the TPDES is to ensure protection of the Elm Creek and Rio Grande watersheds and nearby streams from any industrial construction and mining operations that take place over the watersheds during the life of the mine. Moreover, TCEQ states that it will continually and proactively monitor the Eagle Pass Mine operation for adherence to the standards and regulations set forth in the TPDES Permit. As such, the release of harmful levels of chemicals, sediment, and runoff into local surface waters from the Mine, even during large-scale flood events, will be adequately mitigated/not significant.

Floodplain/Flooding

Maverick County's floodplain permitting process follows the requirements of the Federal Emergency Management Agency's (FEMA's) National Flood Insurance Program (NFIP), set forth at 44 CFR § 60.3, which was developed to implement the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973, 42 U.S.C. 4001 *et. seq.*

Table I-1 of the Mine FEIS discusses potential impacts to existing flood conditions caused by Mine construction and/or operation. The Elm Creek channel will be rebuilt with USACE oversight during reclamation of the mining area, though it may not return to pre-mining conditions for decades or centuries following mining activities (Appendix H: FEIS, Table I-1 & I-2). This may result in a slight long-term increase in flooding potential downstream of the Mine. Though the cumulative impacts contributed by the Mine for future downstream flooding impacts were of concern during the FEIS process, TCEQ determined that the Mine operations and reclamation activities will not increase downstream flooding impacts (Appendix H: FEIS, Appendix H, Page 9).

The EPA further addressed concerns over a more efficient rebuilt Elm Creek channel in the ROD. The EPA's decision in the ROD (in keeping with the FWS Term and Condition #4, Appendix H: FEIS) was based on the expectation of DRRC to plan with multiple agencies and to "consider the existing geomorphology,

soil conditions and hydrologic regime of the natural dense riparian brush corridor” of the original channel in its restoration planning (Appendix H: ROD, Page 2-19). The natural channel is restricted from over-efficient stream flows, and increased probability of downstream flooding, by the current riparian vegetation. In favor of a more natural channel rather than more efficient one, the EPA aimed to sustain optimal and sub-optimal ocelot habitat in the restored corridor(s), while inadvertently steering the restoration planning toward reducing the downstream flooding potential.

Provided that any required mitigation is undertaken, no significant cumulative impacts on floodplains are anticipated from Mine construction/operation.

Water Quality

It has been determined that the construction of the proposed project will have minimal impacts on water quality (see Section 4.3.2 of this ER). However, the construction and operation of the Mine has the potential to impact groundwater quality within the project area.

Specifically, the TPDES “Fact Sheet and Executive Director’s Preliminary Decision” of the Draft Permit for the Mine includes the following summary of Water Quality:

The effluent will be discharged to unnamed ditches; thence to Elm Creek; thence to the Rio Grande below Amistad Reservoir in Segment No. 2304 of the Rio Grande Basin. The unclassified receiving waters have no significant aquatic life use for the unnamed ditches and high aquatic life use for Elm Creek. The designated uses for Segment No. 2304 are high aquatic life use, contact recreation, and public water supply. Effluent limitations and/or conditions established in the draft permit are in compliance with state water quality standards and the applicable water quality management plan. The effluent limits in the draft permit will maintain and protect the existing instream uses.

Additionally, the Executive Director’s response to public comments (ED Response) includes a detailed response to concerns over water quality.² Response 3 and Response 4 (ED Response, Pages 4-9) detail the determination of the TCEQ that no adverse water quality issues are expected from the mining operations. Moreover, the TCEQ states that it will need to test the water discharge of the mine when mining actually commences on the site. In Response 4, TCEQ determined:

When discharge commences at this mining operation, flow data can then be collected so that additional aquatic life and human health water quality-based effluent limitations can be calculated and compared to the sampling data required per the draft permit in Other Requirement No. 12. Based on a technical review of the submitted analytical results, an amendment may be initiated by TCEQ staff to include additional effluent limitations and monitoring requirements in the permit if it is determined they are necessary for the protection of aquatic life, human health, and the public water supply. The draft permit contains effluent limitations and provisions designed to protect the designated uses of the Rio Grande. The designated uses and dissolved oxygen criterion as stated in Appendix A of the Texas Surface Water Quality Standards (30 TAC § 307.10) for Segment 2304 are contact recreation, public water supply, high aquatic life use, and 5.0 mg/L dissolved oxygen. As discussed in the previous response, the draft permit is designed to be protective of the applicable water quality uses and criteria.

² <http://www7.tceq.state.tx.us/uploads/eagendas/hr-rfr/2011-1565-IWD-rtc.pdf>

In addition, in order to ensure protection of water quality, the TCEQ state TPDES guidelines for the water discharge permit require weekly self-monitoring and monthly reporting. Likewise, the TRC state surface mine permit guidelines require monthly self-monitoring and quarterly reporting for four sites on surrounding streams, along with quarterly self-monitoring and annual reporting for eight water wells within the mine and several neighbor's wells.

Water for dust control will come from retiring water rights in the Rio Grande Valley. Potable water will come from extending the City system; residents that hookup to the new water line should benefit from an improved water supply. No wells would be impacted. Irrigation rights at the mine site will be used to provide water needed for reclamation.

Provided the Mine complies with any required mitigation and/or conditions included within any issued permits, the cumulative impacts on groundwater resources is not anticipated to be significant.

Air Quality

Both Mine development and operation, and the proposed EPRR line have the potential to impact the air quality in the area. The proposed EPRR line has the potential to improve air quality within Eagle Pass and Piedras Negras by diverting rail traffic that would otherwise utilize the existing rail border crossing and contribute to increased wait times of vehicles at railroad crossings. Moreover, the potential for fugitive coal dust emissions along the existing railroad would be eliminated by transporting the coal via the proposed EPRR line, and any mobile source emissions from locomotives would be reduced on the existing rail as a result of the diversion of those locomotives to the proposed EPRR line.

However, as identified in the 1995 FEIS for the Mine, various mining operations are anticipated to generate air emissions impacting air quality within the project area. For instance, according to the 1995 FEIS (Appendix H: FEIS, Table I-2, Page 2):

Mine emissions must meet the fugitive dust standards of a [TCEQ] permit (under Federal law). State regulations require the mine and the train-loading facility not to contribute to an exceedence of any ambient air quality standard, and not to produce a nuisance or create a traffic hazard due to visibility impairment. Dos Republicas modeled health effects for its [TCEQ] permit. Mitigation of dust will include use of sprays, coverings and enclosures, and control of vehicle weight and speed.

Possible nuisance dust at neighboring properties would primarily consist of soil materials from wind erosion and/or equipment traffic. Dust emissions have been addressed in the TCEQ permitting process for air quality. For example, the mine will utilize a chemical agent for dust control, Nalco Dust Ban 8801, which is not classified as a hazardous waste.

The EPA further investigated coal mines for representative dust emissions in climates similar to the Eagle Pass region. At those mines, with residences and businesses within one-half mile, there were no official citizen complaints about dust against the mines to the regulatory agencies at the time of the inquiry by the EPA. There were, however, concerns about visibility impacts in certain areas due to the dust created when a dragline dumps its load. To mitigate any dust emissions, the Eagle Pass Mine may employ the use of a dragline for excavation after a few years as well, although the EPA notes that this type of dust emission is difficult to control. The EPA further indicated that dust from wind erosion of soil, overburden, and coal piles will be an ongoing possibility, though it should be controlled in large part by mitigation measures. Soil dust during reclamation activities, are also expected.

The EPA further evaluated the mine's impact on the region in relation to the power plants the mine will supply in Mexico, Carbon I & II (See Appendix H: EPA Record Of Decision, Page 2-28; FEIS, Page II-6). The EPA recognized that coal from the mine "will be burned at the Carbon I & II plants in Mexico, where it will contribute to severe degradation of air quality and visibility at Big Bend National Park in Texas" (See Appendix H: ROD, Page 2-28). The EPA also recognized that these power plants could expand in the future, could cause other adverse impacts, and have raised significant public concern in the U.S. However, the EPA acknowledged that denial of the mine permit due to the concern over the Mexican power plants would be symbolic only, and the plants would continue to operate and perhaps derive coal from other U.S. mines.

Vehicle exhausts are anticipated to be minor sources of carbon monoxide and other emissions. Such emissions would result from mine construction/operation. For example, approximately 275 people are expected to be employed by the mine during peak employment. An additional 795 jobs are expected to be created indirectly from mining operations over the life of the mine. Sixty percent of these, or 400 jobs, will be created in Maverick County alone. These employees will be commuting to and from the Mine, and/or other work daily. Significant emissions, however, caused by trucks transporting the coal are not anticipated since trucking of the coal would likely require modification of the Mine's TPDES permit.

Rail transport of coal from the mine across the border into Mexico would additionally affect air quality by contributing emissions from rail car loading and mobile source emissions from locomotives. The EPA reports concerning train transport by existing rail in the FEIS:

Coal dust blowing off the trains transporting the coal to Carbon I/II is not expected to be a significant problem because the coal will be sprayed with water containing the dust-control agent at every transfer point in the coal handling circuit, including the loadout gate that dumps the coal into the train cars. The stockpiles awaiting loading also will be sprayed with the mixture. The low speed imposed by the short distance to the border will tend to reduce the amount of coal dust blown off on that leg of the trip. The concentrations of dust in the air would be expected to be very low and the small amount of coal deposited near the tracks would contain extremely small quantities of any trace contaminants in the coal (See Appendix H: FEIS, Page II-11).

The mobile source emissions of the existing rail use under the 1995 FEIS plan would likely be greater than the proposed EPRR rail line, given that the route of the proposed EPRR rail line is shorter and does not cause any level of traffic congestion with Eagle Pass or Piedras Negras en route to the power plants. Provided the Mine complies with any required mitigation and/or conditions within its permits, no significant cumulative impacts to air quality are anticipated from combining the mining operations with the proposed EPRR rail line.

Land Use

Development and operation of the Eagle Pass Mine would result in permanent alternative of the land use to the areas that would be mined. As discussed, in Section 4 above, the proposed EPRR rail line will directly convert the rail corridor from agricultural and recreational use to transportation use. Thus,

construction and operation of the EPRR line, together with the impacts caused by construction and/or operation of the Eagle Pass Mine would have cumulative impacts on land use.

5 Proposed Mitigation Measures

This chapter describes preliminary recommended mitigation associated with the construction and/or operation of the proposed EPRR rail line and international bridge at the U.S. –Mexico border. Based on the information available to date, preliminary discussions with agencies, and the environmental analysis which has been conducted to date, the preliminary recommended mitigation is intended to address the potential environmental impacts of the proposed construction, operation, and maintenance of the EPRR rail line, and international bridge.

During construction, all possible efforts to minimize impacts to the natural surroundings will be implemented. However, due to the nature of construction projects some impacts (permanent or temporary) will occur. EPRR is committed to the cleanup and restoration of these impacts made during the construction of the proposed project. The goal of these post construction efforts is to restore the project site back to (as close as possible) a natural “pre-construction” state and ensure that post construction activities do not alter that natural state.

Cleanup

Upon completion of construction for the proposed project, the entire site will be inspected and cleared of all construction related materials and debris. If areas of hazardous waste including contaminated soil (due to construction) are found during the inspection, the area of contamination will be delineated and removal of all contaminants including contaminated soils will be completed. The area will be replaced with native soils and native vegetation upon final clearance of the remediation process. These remediation procedures will comply with all local, state and federal regulations related to hazardous waste contamination cleanup and remediation.

Restoration

1. Natural Setting

To the greatest extent possible, all efforts will be made to restore the natural setting (pre-construction) of the proposed project. The post construction restoration will include the re-seeding and replanting of native grasses, bushes, and trees. Knowing that linear projects such as railroads can disrupt the normal travel patterns of natural wildlife, every effort will be made to ensure that the natural setting will be restored and maintained after construction. In an effort to augment the restoration process the EPRR will work to limit impacts outside of the railroad line and rail maintenance operations.

2. Erosion Control (water quality)

RE-SEEDING

In order to minimize erosion problems that may occur due the disturbance of native vegetation the contractor must provide and install seeding for erosion control. This “seeding must be applied in accordance with the requirements for cellulose fiber mulch seeding as shown on the proposed project’s construction plans. The seeding must be applied to all areas that have been disturbed by the construction activities of the proposed project.

VEGETATIVE WATERING

In order to establish the newly seeded areas, all areas to be reseeded shall be watered at a rate substantial enough to allow the newly formed grasses to establish permanent “deep” roots capable of withstanding the arid atmosphere common within the region of the proposed project.

POLLUTION PREVENTION POST CONSTRUCTION (OPERATIONS)

The Pollution Prevention/Good Housekeeping minimum measure consists of Best Management Practices (BMPs) that focus on training and on the prevention or reduction of pollutant run off from daily railroad operations. EPRR is responsible for maintenance activities, schedules and long term inspection procedures for controls to reduce floatable and other pollutants; controls for reducing or eliminating the discharge of pollutants from service roads, railway, parking lots, maintenance and storage yards, waste areas; as well as procedures for the proper disposal of waste removed from the proposed project's area of operations.

For this proposed action, the applicant, EPRR, has proposed the voluntary mitigation, which is set forth below.

Air Quality

1. The EPRR shall implement best management practices and appropriate fugitive dust suppression controls, such as spraying water on haul roads adjacent to construction sites and exposed soils, covering loaded trucks, and washing haul trucks before they leave the construction site.
2. The EPRR shall comply with the requirements of all applicable federal, state, and local regulations regarding open burning and the control of fugitive dust related to rail line construction activities.
3. The EPRR shall revegetate areas disturbed during construction with native grasses or other appropriate native habitat as soon as possible after construction activities are completed to minimize windblown dust.
4. The EPRR shall shut off construction equipment when it is not in direct use to reduce idling emissions.
5. The EPRR shall verify that construction equipment is properly maintained and regularly inspected and that required pollution control devices are in good working condition.

Cultural, Historic, and Archaeological Resources

1. The EPRR shall ensure that any sites that are eligible for the NRHP are not disturbed prior to completion of the Section 106 review process of the NHPA, 16 U.S.C. 470 f.
2. In the event that any unanticipated historic or cultural properties, archaeological sites, human remains, funerary items, or assorted artifacts are discovered during the proposed construction, the EPRR shall immediately cease all work and notify Texas SHPO, the STB OEA, and other appropriate parties, if any, to determine if additional consultation and mitigation is necessary. In the event that human remains are discovered, the EPRR shall also notify appropriate law enforcement agencies.

Fish, Wildlife, and Vegetation

1. The EPRR shall consult with the TPWD and comply with its applicable laws and regulations so that project-related construction activities are conducted in a manner that avoids or minimizes impacts to Federal and State recognized threatened and endangered species as well as listed species of concern.
2. To minimize disturbance to wildlife and vegetation to the maximum extent possible, EPRR shall limit construction activities, including staging areas, and vehicle turnaround areas, to the ROW or within previously disturbed areas. Existing vegetation shall be preserved to the maximum extent possible.

Hazardous Materials

1. EPRR shall develop a Spill Prevention Control and Countermeasures (SPCC) plan and an emergency response plan. In a manner consistent with applicable legal requirements, the SPCC plan and emergency response plan shall address the following:

- a. Definition of what constitutes a reportable spill.
 - b. Requirements and procedures for reporting spills to appropriate government agencies.
 - c. Equipment available to respond to spills and where the equipment would be located.
 - d. Training of personnel and training records.
 - e. List of government agencies and response personnel to be contacted in the event of a spill.
 - f. Measures to address the transport of hazardous materials by rail.
2. EPRR shall observe the requirements of the Federal Railroad Administration (FRA), EPA, RRC, TCEQ and other federal, state and local applicable requirements concerning the handling and disposal of any hazardous waste or hazardous materials and clean-up in the event of a spill during construction.
 3. EPRR shall observe the requirements of the FRA, EPA, RRC, TCEQ and other federal, state and local applicable requirements concerning the handling and disposal of any hazardous waste or hazardous materials and clean-up in the event of a spill during rail operation.
 4. EPRR shall ensure that locomotives associated with project operations shall be checked regularly for leaks and that repairs to leaks would be addressed immediately upon discovery.

Land Use

1. To the maximum extent practicable, EPRR shall advise businesses and the public of construction schedules in advance to minimize disruptions.
2. To the extent practicable, the EPRR shall negotiate with affected property owners to minimize any project-related severance impacts.
3. The EPRR shall submit form 7460 (Notice of Proposed Construction or Alteration) to the Federal Aviation Administration (FAA) prior to construction if necessary due to bridge construction.

Noise and Vibration

1. During construction, the EPRR shall ensure that manufacturer recommended mufflers have been installed on all diesel-powered equipment used on the project and that all equipment is kept in good operating condition.

Social Elements and Environmental Justice

1. During project construction, EPRR shall comply with applicable state, county and city regulations or requirements regarding detour signs and the routing of construction truck traffic. EPRR shall also provide proper notification of the construction schedule to the effected land owners, the general public and the nearest fire department and emergency response units.
2. EPRR shall comply with federal, state and local regulations involving at grade rail crossing signs to help provide better advance warnings of approaching trains for pedestrians and drivers.

Soils and Geology

1. EPRR shall construct the proposed project in accordance with the American Railway Engineering and Maintenance of Way Association guidelines.
2. EPRR shall minimize sedimentation and erosion in the project area by employing best management practices during construction.
3. EPRR shall revegetate disturbed areas with native grasses as soon as practicable after project construction ends.

Traffic and Transportation

1. EPRR shall ensure, to the extent possible, that all truck activity associated with the construction of the proposed project occurs during daytime hours.
2. EPRR shall consider school bus schedules in planning and executing the necessary road and rail work.

3. EPRR shall consult with appropriate federal, state, and local transportation agencies to determine the final design of the US2 77 highway overpass at the new rail line.
4. EPRR or the operator of the rail line shall comply with applicable FRA track maintenance and inspections procedures.

Visual Quality

1. To the extent practicable, EPRR shall be responsible for the following:
 - a. Ensuring that only the vegetation that needs to be cleared for construction purposes is removed.
 - b. Using native flora and vegetation when replanting disturbed areas.
 - c. Adding compost to the soil before seeding or planting in order to increase plant establishment.
 - d. Ensuring that cut-and-fill slopes are blended with the form and line of the existing landscape through grading practices to enhance visual quality.
 - e. Ensuring that vegetative buffers, such as trees or bushy shrubs, are located near residential areas to help screen the railroad corridor from viewers. These buffers should be located where additional vegetation would not impair visibility at road crossings.

Water Resources/Water Quality

1. EPRR shall consult with TCEQ and shall comply with the TSWQS that apply to all surface water features in the state. These standards are enumerated in Title 30, Chapter 307 of the TAC.
2. EPRR shall consult with the local Maverick County floodplain administrator as to the potential design effects on FEMA recognized flood plain areas and upon the final design phase, the results of the impact evaluation process would be submitted to the local floodplain management authorities for review and approval.
3. EPRR shall comply with any applicable conditions imposed in any permit issued to it by USACE under Section 404 of the Clean Water Act.
4. For project-related construction, EPRR shall comply with all applicable storm water management requirements. Consistent with applicable legal requirements, EPRR shall prepare a SPCC to minimize any impacts associated with accidental spills of hazardous materials. The SPCC would require the development of a spill contingency plan and would provide for the implementation of containment and other countermeasures that could prevent spills from reaching navigable waters or wetlands.
5. EPRR shall implement the following erosion and sedimentation controls:
 - a. Installing silt fencing with geotextile material along the proposed project area perimeter to filter sediment from un-concentrated surface water runoff.
 - b. Placing catch basin inserts in all new and existing catch basins receiving runoff from the disturbed areas of the project.
 - c. Placing straw bales in paths of concentrated runoff to filter sediment.
 - d. Preserving existing vegetation to the maximum extent possible.
 - e. Revegetating areas disturbed during construction with native grasses, where practicable. These areas shall be reseeded as soon as practicable to prevent erosion.
 - f. Covering exposed soils with plastic or straw in the event of a major storm.
 - g. Constructing temporary ditches, berms, and sedimentation ponds to collect runoff and prevent discharge of sediment into drainages, streams, or wetlands.
 - h. Installing stabilized construction entrances and exits for truck access to the construction site to protect existing roadways and railroad tracks. This involves placing blacktop or gravel along the edge of the roadway to avoid erosion or displacement of soil where trucks access and leave the roadway.

- i. Cleaning any storm sewer facilities affected by project construction to prevent sediment from leaving the site after construction is completed and erosion control measures are removed.
6. To avoid or minimize impacts to water resources during construction, EPRR shall implement the following measures:
 - a. Consulting with the USACE and complying with the requirements of the Section 404 permitting process.
 - b. Consulting with the TCEQ and complying with the requirements of the Section 401 Water Quality Certification process.
 - c. Locating equipment staging areas further than 200 ft. from water bodies (Rio Grande, Maverick County Canal, Hediondo Creek, unnamed tributaries to Elm Creek).
 - d. Leaving in place erosion control measures at culvert construction sites until the permanent culvert construction process is completed.
 - e. Coordinating with farmers, ranchers and/or agricultural businesses regarding drainage issues that might arise.
 - f. Applying noxious weed control measures by an appropriately-licensed contractor, using herbicides approved by the USEPA Region 6 and TCEQ Region 16 offices. Herbicides shall not be applied during periods of high wind.
7. To prevent non-sedimentation pollutants (such as hazardous materials) from entering the following water bodies: Rio Grande River, Maverick County Canal, Hediondo Creek and unnamed tributaries to Elm Creek within the ROW of the proposed rail, EPRR shall implement the following measures:
 - a. Handling and disposing of all pollutants used on-site during construction in a manner that does not contaminate storm water,
 - b. Establishing staging areas for equipment repair and maintenance at least 200 ft. from all wetlands or water bodies.
 - c. Inspecting all construction equipment regularly for any fuel, lube oil, hydraulic fluids, or antifreeze leaks. If leaks are found, EPRR shall immediately remove the equipment from service and repair or replace it and remediate the spill.
 - d. Disposing any washout from concrete trucks in a manner that avoids dumping it into storm drains or onto soil or pavement.
 - e. Ensuring that thinners and solvents are used at least 200 ft. from wetlands or water bodies. Capturing, containing and properly disposing of thinners and solvents.
 - f. Requiring that fuel trucks maintain a minimum distance of 200 ft. from water bodies and fueling construction vehicles away from sensitive areas, such as areas of permeable soils where a spill could more easily migrate to surface water.
 - g. Designing staging areas to capture all runoff and/or spills.
 - h. Testing all fill before it is placed into surface water to ensure it is free of polluting materials.
8. In relation to the Rio Grande international boundary crossing, EPRR shall consult with USACE and International Boundary and Water Commission (USIBWC) and comply with the USACE regulations as well as USIBWC's Criteria for Construction Activities within the Limits of USIBWC Floodways.
9. In relation to the Maverick County Canal crossing, EPRR shall consult with the Maverick County Water Control and Improvement District No. 1 (MCWCID#1) and shall employ rail construction and operations control measures to minimize point source pollution into the canal system in relation to the rail.
10. In relation to the crossings of Hediondo Creek and jurisdictional unnamed tributaries to Elm Creek EPRR shall consult with USACE and comply with all USACE regulations in regards to jurisdictional waters of the US.
11. To minimize the operational effects of the proposed project on water resources, EPRR shall implement the following railroad practices:

- a. Developing a bridge maintenance plan in compliance with Federal Railroad Administration regulations.
 - b. Regularly checking locomotives associated with the proposed operations to identify and repair fluid leaks or discharges.
12. EPRR shall avoid or minimize disturbance to wetland areas whenever possible during construction.
 13. EPRR shall not allow construction staging areas in jurisdiction waterways and or wetlands, even within the project right of way.
 14. EPRR shall ensure that irrigation ditches and canals are either avoided by spanning both banks with the crossing structure, or that a culvert is installed to allow water to flow beneath the rail fill.

