

**PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT**

**IMPROVEMENTS TO THE USIBWC RIO GRANDE FLOOD CONTROL  
PROJECTS ALONG THE TEXAS-MEXICO BORDER**

**APPENDIX B**

**RESPONSES TO DRAFT PEIS COMMENTS**



## **APPENDIX B**

### **RESPONSES TO DRAFT PEIS COMMENTS**

Responses to comments on the Draft PEIS for sub-sections used in Appendix A, comments, applicable to all flood control projects, and comments related individually to the Rectification FCP, Presidio FCP and Lower Rio Grande FCP. The list of reviewers is as follows:

#### **PART 1. COMMENTS APPLICABLE TO THE THREE FLOOD CONTROL PROJECTS**

AG-1: U.S. Fish and Wildlife Service  
AG-2: Bureau of Reclamation  
AG-3: U.S. Environmental Protection Agency  
AG-4: U.S. Department of the Interior  
AG-5: National Oceanic and Atmospheric Administration  
AG-6: Natural Resources Conservation Service  
AG-7: Texas Historical Commission  
AG-8: Texas Commission of Environmental Quality  
ORG-1: Lone Star Chapter of the Sierra Club  
IND-1: Mr. Conrad Keyes

#### **PART 2. COMMENTS SPECIFIC TO THE RECTIFICATION FCP**

AG-9: Ysleta del Sur Pueblo  
ORG-2: Friends of the Rio Grande  
ORG-3: Southwest Environmental Center  
ORG-4: University of Texas at El Paso  
EP-H: EL PASO PUBLIC HEARING, AUGUST 21, 2007

- EP-H1: Ms. Heather McMurray
- EP-H2: Mr. John Sproul
- EP-H3: Mr. Kevin Bixby
- EP-H4: Mr. Ari Michelsen

### **PART 3. COMMENTS SPECIFIC TO THE PRESIDIO FCP**

PR-H: PRESIDIO PUBLIC HEARING, AUGUST 22, 2007

- PR-H1: Mr. Carlos E. Nieto
- PR-H2: Mr. Lorenzo Hernandez
- PR-H3: Ms. Patt Simms
- PR-H4: Mr. Dennis McEntire

### **PART 4. COMMENTS SPECIFIC TO THE LOWER RIO GRANDE FCP**

AG-10: U.S. Army Corps of Engineers

ORG-5: The Arroyo Colorado Watershed Partnership

ORG-6: Lower Rio Grande Committee

IND-2: Mr. Carl A. Boyd

IND-3: Mr. Bill Forbes

McA-H: McALLEN PUBLIC HEARING, AUGUST 28, 2007

- McA-H1: Ms. Laura de la Garza
- McA-H2: Mr. Eric Ellmer
- McA-H3: Mr. Godfrey Garza
- McA-H4: Mr. Ernesto Reyes

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## **I- COMMENTS APPLICABLE TO THE THREE FLOOD CONTROL PROJECTS**

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### **AG-1: U.S. FISH AND WILDLIFE SERVICE**

#### **AG-1a**

The USIBWC appreciates your review and input on the Draft PEIS, as well as the USFWS assistance as cooperating agency in the PEIS preparation, including comments submittal on the preliminary version of Draft PEIS.

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### **AG-2: BUREAU OF RECLAMATION**

#### **AG-2a**

The USIBWC appreciates your review and input on the Draft PEIS, and overall support in the preparation of the document as a cooperating agency.

The Tigua Nation does not have a claim ownership to the Rectification FCP floodway as incorrectly stated in Section 1.1.2 of Chapter II of the Draft PEIS. An informal agreement is in place to facilitate access to the river for ceremonial use purposes, and partially re-schedule mowing activities to avoid their disruption. The USIBWC apologizes for the misleading wording of the statement which has been corrected in the Final PEIS.

#### **AG-2b**

Figure ES-1 was revised as suggested to show only the Rio Grande flood control projects. Also, as suggested, the Tijuana River FCP was retained in Figure I-1 with a note indicating that the San Diego project is concurrently being evaluated under a separate PEIS.

#### **AG-2c**

Tables initially presented in the February 2007 technical support document *Alternatives Report, Programmatic Environmental Impact Statement, Rio Grande and Tijuana River Flood Control Projects* included lines without checkmarks. Those lines indicated those measures that were evaluated but considered not applicable or relevant for a given project. Without this context, retaining those lines in the PEIS proved to be confusing and were removed from Tables 1.1 of Chapters II, II and IV. This change, however, was not made in summary Tables ES-1 and I-2.1 of the Draft PEIS. This omission has been corrected in the Final PEIS.

#### **AG-2d**

The clarification has been made in Chapter I, Section 3.2.1. The request for potential cooperating agencies was sent in November 2004, and was accepted by the USFWS New Mexico Ecological Services Office. Coordination was delegated to the Corpus Christi

## Appendix B: Responses to Draft PEIS Rio Grande Flood Control Projects

Ecological Services Office following removal from the PEIS evaluation of the USIBWC Rio Grande Canalization Project, located almost entirely in New Mexico.

AG-2e

The change has been made as suggested.

AG-2f

A summary description of USBP activities was added to Section I-2.2.4, as recommended:

*Both flood control needs and U.S. Border Patrol (USBP) operations are primary restrictions to significant vegetation development and implementation of other environmental initiatives along the flood control projects. Activities of the USBP require low vegetation to improve the prevention, deterrence and detection of illegal activities. Other USBP operations fall within the operational category (e.g., conduct of ground patrols Listening Post/Observation Post), and engineering category (e.g., design and construction of training facilities, buildings, border, roads, fences, and lighting).*

AG-2g

Issues associated with Cultural Resources, including the National Historic Preservation Act, are discussed for the Rectification FCP in Sections 2.3 and 3.3 of Chapter II. Similar evaluations are provided for the Presidio FCP in Chapter III and Lower Rio Grande FCP in Chapter IV. As part of the preparation of the PEIS, the USIBWC commissioned preparation of the document *A Cultural Resources Overview for the Rio Grande and Tijuana River Flood Control Projects* completed in July 2005. This document, provided in Appendix C (PEIS Documentation), served as the basis for the cultural resources evaluation in the PEIS.

AG-2h

Section 1.3.1 text has been modified to provide a comparison of project features, including flood design, as indicated in a new Table I-1, below.

**Table I-1 Summary of Features of the Flood Control Projects  
(Sturdivant, et al. 2004)**

Features	Rio Grande Rectification Project	Presidio-Ojinaga Flood Control Project	Lower Rio Grande Flood Control Project	
			River Segment	Interior Floodways
<b>Flood Information</b>				
Flood design	100-year	25-year	500 -year	500 -year
Freeboard *	2 feet	4 feet	3 feet	3 feet
Design Flow (cubic feet per second)	11,000 cfs at El Paso, TX	3,600 cfs above Rio Conchos 42,000 below Rio Conchos	250,000 cfs at Rio Grande City, Tx	105,000 cfs at Anzalduas Dam 20,000 cfs at Brownsville, Tx

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<b>Floodway (U.S. side, only)</b>				
Miles of levee	84.5	15.2	102	172
Miles at risk of overtopping	12	1.25	38	2
Miles of insufficient freeboard	38	1.25	64	24
<b>Floodplain Acreage (2004 FEMA Estimates)</b>				
Agriculture	2,356	764	75,645	
Residential	2,643	320	3,237	
Commercial	2,759	0	605	
Industrial	32	0	0	
<i>Total Acreage</i>	<i>7,790</i>	<i>1,084</i>	<i>79,487</i>	

\* Freeboard is the levee height above the anticipated water surface levee at design flood conditions

AG-2i

Cell height in the table has been expanded to show entire text.

AG-2j

The 2003 findings were used as a general guideline for the PEIS evaluation; more detailed evaluations will be conducted as specific levee improvement projects are developed. Reevaluation of the 2003 results is currently underway for levee certification by the Federal Emergency Management Administration. This additional information has been added to Section II-1.2.

AG-2k

Text has been modified as indicated below; for clarity, the scientific names were included to differentiate the group of species that are commonly considered “minnows.”

*In this region, the fish fauna are likely to include small fish, commonly called “minnows,” that live in the tributaries for all or part of their life cycles. The fish species may include such species as two or more species of minnows (Pimephales spp.), red shiner (Cyprinella lutrensis), species of sunfish (Lepomis spp.), and western mosquitofish (Gambusia affinis).*

AG-2l

Text correction has been made as recommended.

## **Appendix B: Responses to Draft PEIS Rio Grande Flood Control Projects**

AG-2m

Text has been modified as recommended.

AG-2n

Consultation and coordination was conducted jointly for the Rectification FCP, Presidio FCP, and Lower Rio Grande FCP; for that reason this information has been compiled in Chapter I, Section 3. During the public review period, in fact, several agencies and organizations provided comments and input relevant to all flood control projects. Comments on the Draft PEIS are analyzed in a new Subsection 3.2 of Chapter I, Public Review of Draft PEIS.

An Environmental Commitments section would not be applicable at a PEIS level, but will be included in environmental evaluations of future, specific projects.

AG-2o

A new Subsection 3.8 has been added to each of the Chapters II, II and IV, indicating the alternative selected for implementation, and rationale for selection. This information will be subsequently provided in the Record of Decision for the PEIS.

AG-2p

Consistent with the recommendation, new Appendix C, D and E have been added to the Final PEIS. These appendices contain USIBWC environmental documentation, such as two previous EIS and Environmental Assessment for specific projects, as well as other key documents supporting the impacts evaluation in the PEIS, including Biological Opinions.

AG-2q

Clarification text on previous evaluations has been added. The biological sections primarily referred to the August 2005 document “*Biological Resources Survey, Rio Grande and Tijuana River Flood Control Projects, New Mexico, Texas and California*,” commissioned by the USIBWC in support of the PEIS. This document has also been included in Appendix C (PEIS Documentation).

AG-2r

The September 10, 2007 letter refers to a current levee construction project along the USIBWC Rio Grande Canalization Project in New Mexico. The construction area is located upstream of the geographic area that is not under consideration in the PEIS.

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**AG-3: U.S. ENVIRONMENTAL PROTECTION AGENCY**

**AG-3a**

The USIBWC appreciates your review and input on the Draft PEIS. Five copies of the Final PEIS will be sent to the Region 6 Office of Federal Activities, as indicated.

**AG-3b**

All references to the Clean Air Act have been corrected in the text.

**AG-3c**

Calculations in the revised text are now presented individually for each county. The data indicate that most of the levee improvements (approximately 88%) would take place in the lower reach of the Rectification FCP in Hudspeth County. Based on potential emissions, the potential annual emissions for El Paso County would be well below annual threshold values for both carbon monoxide and PM<sub>10</sub>. The emission calculations are based on the conservative assumption that all construction would take place in a single year, rather than over a 2-3 year typical construction period. The text of Sections 2.6.1 and 3.6.2 has been revised with the updated calculations, as follows:

***Section 2.6.1 Air Quality***

*... The emissions data for El Paso and Hudspeth Counties are used for analysis purposes because the activity associated with the alternatives would be localized in the narrow area along the river within these two counties; emissions from the projected activities would not likely affect the more distant counties within the AQCR. The majority, about 88 percent, of the levee improvement activities would occur within 29 miles of the lower reach between river miles 48-91, located in Hudspeth County. Areas requiring structural improvements in the upper reach of the Rectification FCP in El Paso County, as identified in the 2004 study conducted by the USACE, would be limited to river miles 0-2 in the City of El Paso, and river miles 15-17 near the City of Socorro. Levee improvement activities within the upper reaches of the levee system in El Paso County would be limited to approximately 12 percent of the total construction area.*

***Section 3.6.2 Air Quality***

*Air emissions were calculated for the EOM Alternative based on per mile unit annual emissions estimates, listed in Table II-11. Unit air emissions estimates were based on common construction practices and methods (Means 2005) and emission factors reported by USEPA (USEPA 1996). Unit emissions were calculated based on an estimated disturbed area per mile, assuming a conservative construction timeframe of 6 months. Construction projects of this nature would typically require more than 1 to 3 years to complete. Unit emissions were then multiplied by the length of the EOM Alternative affected areas, to estimate air emissions for the alternative.*

*Improvements to the levee through the EOM Alternative would not impact air quality through excavation and fill activities. A slight increase in localized criteria air pollutants*

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would occur due to emissions associated with increasing the existing levee height. Table II-12 summarizes the estimated criteria pollutant emissions associated with the EOM Alternative, as well as the percent increase above the existing county emissions inventory. Because El Paso and Hudspeth Counties have a different attainment status, emissions were calculated in Table II-12 for each county based on the percentage of construction activity in each county (12% and 88%, respectively). Criteria pollutant increases in Hudspeth County by levee construction under the EOM Alternative would range from 0.9 to 3.7 percent above the No Action Alternative for the five criteria pollutants and would not be regionally significant. For El Paso County, potential air emissions as a result of levee construction activities would range from 0.01 percent to 0.09 percent for the five criteria pollutants. Additionally, CO and PM<sub>10</sub> levels for El Paso County would be below the designated de minimis levels presented in Table II-11; therefore, a general conformity determination would not be required.

**Table II-12 Potential Air Emissions of EOM Alternative**

	Emissions (tons per year)				
	Sulfur Oxides	Nitrogen Dioxides	Carbon Monoxide	Volatile Organic Compounds	Particulate Matter (PM <sub>10</sub> )
Increase levee height, unit emissions (per mile)	0.16	1.27	8.68	0.44	3.27
EOM Alternative in El Paso and Hudspeth Counties (33 miles)	5.28	41.91	286.44	14.52	107.91
<b>El Paso County</b>					
Potential emissions in El Paso County (12 % of 33 miles)	0.63	5.03	34.4	1.74	12.95
* Area source emissions inventory (USEPA 2006)	1,089	20,272	143,118	19,706	13,472
* Point source emissions inventory (USEPA 2006)	902	4,119	3,753	1,117	519
<b>Total annual source emissions for El Paso County</b>	<b>1,991</b>	<b>24,391</b>	<b>146,871</b>	<b>20,823</b>	<b>13,991</b>
Potential emissions as a Percent of El Paso County Emissions Inventory	0.03%	0.02%	0.02%	0.01%	0.09%
<b>Hudspeth County</b>					
Potential emissions in Hudspeth County (88 %)	4.65	36.9	252.1	12.8	95.0
* Area source emissions inventory (USEPA 2006)	163	3,409	18,792	1,394	2,548
* Point source emissions inventory (USEPA 2006)	0.24	315.0	55	3	0
<b>Total annual source emissions for Hudspeth County</b>	<b>163</b>	<b>3,724</b>	<b>18,847</b>	<b>1,397</b>	<b>2,548</b>
Potential emissions as a Percent of Hudspeth County Emissions Inventory	2.8%	1.0%	1.3%	0.9%	3.7%

**AG-4: U.S. DEPARTMENT OF THE INTERIOR**

AG-4a

The USIBWC appreciates your review and input on the Draft PEIS. Listed values represent percent exceedances. The text has been modified in the Final PEIS as follows:

***Chapter II:***

*3) natural/man-made levels of nitrate and fluoride that continually exceed federal drinking water standards. Up to 20 percent exceedances of the nitrate standard (0.002 mg N/L) have been reported for El Paso County, and 41-60 percent exceedances for Hudspeth County. For fluoride, up to 3 percent exceedances of the 4 mg/L standard have been reported for both El Paso and Hudspeth Counties (USACE 2001).*

***Chapter III***

*3) natural/man-made levels of nitrate and fluoride that continually exceed federal drinking water standards. For Presidio County, 41-60 percent exceedances of the nitrate standard (0.002 mg N/L) have been reported, and up to 3 percent exceedances of the 4 mg/L fluoride standard (USACE 2001).*

AG-4b

The previously cited reference “USGS 1996” has been modified as recommended.

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**AG-5: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**

AG-5a

The USIBWC appreciates your review and input on the Draft PEIS. Based on a search of the NGS database, no geodetic control monuments would be modified along the levee systems or in the vicinity of potential project areas; consequently, planned activities are not anticipated to affect geodetic control monuments. If the need for monument relocation is subsequently identified for a future individual project, notification to the National Geodetic Survey will be submitted prior to the required 90-day notification period.

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## **AG-6: NATURAL RESOURCES CONSERVATION SERVICE**

### **AG-6a**

The USIBWC appreciates your review and input on the Draft PEIS, and determination that anticipated improvements of the USIBWC Rio Grande Rectification, Presidio and Lower Rio Grande Flood Control Projects have little potential for impacts on Prime Farmlands.

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## **AG-7: TEXAS HISTORICAL COMMISSION**

### **AG-7a**

The USIBWC appreciates your review and input on the Draft PEIS. Issues associated with Cultural Resources, including the National Historic Preservation Act, are discussed for the Rectification FCP in Sections 2.3 and 3.3 of Chapter II. Similar evaluations are provided for the Presidio FCP in Chapter III, and Lower Rio Grande FCP in Chapter IV. The Programmatic level of evaluation provides a broad definition of potential modifications to the existing FCP. Future improvements projects will be evaluated individually, once design specifications are developed. Those evaluations will be typically conducted in the form of Environmental Assessments based on detailed description of the proposed action and potentially affected resources.

Examples of recently conducted evaluations are five EAs for levee improvement projects along the Lower Rio Grande FCP, submitted in draft form to the THC and other agencies for review. Those documents are included in electronic form in Appendix D (USIBWC Environmental Evaluation Documents) of the Final PEIS. A detailed identification of cultural resources along the Rectification FCP, Presidio FCP, and Lower Rio Grande FCP is provided in the document *A Cultural Resources Overview for the Rio Grande and Tijuana River Flood Control Projects* prepared in support of the PEIS evaluation. A copy of this document is provided in Appendix C of the Final PEIS.

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## **AG-8: TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

### **AG-8a**

The USIBWC appreciates your review and input on the Draft PEIS. As pointed out by the TCEQ, the Programmatic level of evaluation only defines in broad terms potential modifications to the existing flood control projects. Individual environmental evaluations for future improvement projects will be prepared once design specifications are developed. Those evaluations will be typically conducted in the form Environmental Assessments based on detailed description of the proposed action and potentially affected resources. Examples of

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recently conducted evaluations are five EAs for levee improvement projects along the Lower Rio Grande FCP, submitted in draft form to the TCEQ and other agencies for review. Those documents are included in electronic form in Appendix D (USIBWC Environmental Evaluation Documents) of the Final PEIS.

As allowed by NEPA, the USIBWC deferred selection of the preferred alternative until comments on the Draft PEIS were evaluated and addressed. Selection of the preferred alternative for each FCP has been added to the Final PEIS as new Sections 3.8 in Chapters II, II and IV. One of the main objectives of the selected alternative, Multipurpose Project Management Alternative, is in fact improvement of water quality and protection of aquatic ecosystems.

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### **ORG-1: LONE STAR CHAPTER OF THE SIERRA CLUB**

#### **ORG-1a**

The USIBWC appreciates your review and input on the Draft PEIS. The Multipurpose Project Management Alternative has been selected as the preferred option for improvements to the flood control projects. This selection supports regional initiatives for habitat improvement and management of natural resources within the floodway. Text has been added to Section 3.8 of Chapters II, III, and IV indicating that the preferred alternative.

#### **ORG-1b**

Water quality improvements is one of the two main components of the Integrated Water Resources Management Alternative selected as the preferred option for implementation of improvements to the flood control projects.

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### **IND-1: Mr. Conrad Keyes**

#### **IND-1a**

The USIBWC appreciates your review and input on the Draft PEIS. Inconsistencies in Table ES-1 and Tables 1.1 of Chapters III and IV have been addressed in the final version of the PEIS.

#### **IND-1b**

Use of dual units in the maps is intended to illustrate distances in kilometers and facilitate review by international organizations. To provide additional information on units, a table of conversions from English to Metric units has been included in the Final PEIS.

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## **II - COMMENTS APPLICABLE ONLY TO THE RECTIFICATION PROJECT**

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### **AG-9: YSLETA DEL SUR PUEBLO**

#### **AG-9a**

The USIBWC appreciates your review and input on the Draft PEIS, as well as taking the time to attend the public hearing in El Paso. The Multipurpose Project Management Alternative has been selected as the preferred option for implementation of improvements to the flood control projects. This selection supports regional initiatives for habitat improvement and management of natural resources. Text has been added to the document in Section 3.8 of Chapter II (Rectification FCP) indicating the preferred alternative.

#### **AG-9b**

A request to support the PEIS as a cooperating agency/organization was made by the USIBWC as an initial step in the PEIS preparation. A total of 87 letters were sent on November 16, 2004, including Ysleta del Sur Pueblo Council and 41 other Native-Americans Pueblos, Tribes and Nations. Responses were received only from the U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, and the New Mexico Office of Cultural Affairs. Formal consultation with Indian Nations will be conducted, as applicable, as specific projects are developed for implementation. Please refer to Chapter I, Section 3.2.1 for information on initial consultation and cooperating agency request.

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### **ORG-2: FRIENDS OF THE RIO BOSQUE**

#### **ORG-2a**

The USIBWC appreciates your review and input on the Draft PEIS. The USIBWC will support to the extent possible, initiatives for improvement of the Rio Bosque wetlands.

#### **ORG-2b**

The Multipurpose Project Management Alternative has been, in fact, selected as the preferred option for implementation of improvements to the flood control projects. This alternative supports regional initiatives for management of natural resources within the floodway. Text has been added to the document in Section 3.8 of Chapter II (Rectification FCP) indicating the preferred alternative.

**ORG-3: SOUTHWEST ENVIRONMENTAL CENTER**

**ORG-3a**

The USIBWC appreciates your review and input on the Draft PEIS, as well as taking the time to attend the public hearing in El Paso. The PEIS was prepared according to NEPA requirements for a PEIS, and fulfills both content and procedural aspects specified in the 1978 regulations by the President's Council on Environmental Quality, as well as NEPA guidelines adopted by the USIBWC in 1981.

**ORG-3b**

In the MOU, the USIBWC agreed to prepare an EIS and a Biological Assessment for the Rectification Flood Control Project. Both documents have been developed, the PEIS, nearing completion, and the Biological Assessment submitted in 2004 to the USFWS for evaluation. The USFWS issued a letter of concurrence with findings of the BA prepared by the USIBWC. A copy of the 2004 BA is provided in Appendix D (USIBWC Environmental Evaluation Documents). Anticipated cumulative actions, and potential impacts, are discussed individually by project in Sections 3.7 of Chapters II, III and IV (Rectification FCP, Presidio FCP and Lower Rio Grande FCP, respectively).

**ORG-3c**

Listed items were addressed in the Draft PEIS as follows:

1. Detailed information on ecological conditions of each FCP are provided in Section 2.2 of Chapters II, III, and IV (Rectification FCP, Presidio FCP, and Lower Rio Grande FCP, respectively). Given the programmatic nature of the document, information is referred to multiple support technical documents prepared by the USIBWC and other agencies for evaluation of potential impacts. Several of those documents are included in the Final PEIS in electronic form in Appendices C, D and E.
2. Alternatives to current management were evaluated in detail in the document *Alternatives Report for the PEIS of the Rio Grande and Tijuana River*, provided in Appendix C (PEIS Documentation), and summarized in Chapter I, Section 2 (Formulation of Alternatives), and individually by project in Sections 1 of Chapters II, III and IV.
3. Improvements to flood control is routinely re-evaluated by the Engineering Division of the USIBWC as the core goal of the flood control projects. A re-evaluation of the levee system is underway for certification of levee improvements by FEMA.
4. Collaborative measures with agencies, organizations, and landowners are the primary components of the MPM Alternative; their applicability and extent of included measures are described individually for each project. The USIBWC will support, through cooperative agreements, regional initiatives that are endorsed by a natural resources management agency; consistent with water use requirements by water rights holders; and not in conflict with applicable regulations. Such proposals have not yet

## **Appendix B: Responses to Draft PEIS Rio Grande Flood Control Projects**

been submitted to the USIBWC for consideration. The Multipurpose Project Management Alternative has been selected as the preferred option for implementation of improvements to the flood control projects. This alternative supports regional initiatives for management of natural resources within the floodway. Text has been added to the document in Sections 3.8 of Chapters II, III and IV (Rectification FCP, Presidio FCP, and Lower Rio Grande FCP, respectively) indicating selection of the preferred alternative.

5. Restoration potential is a key component of the MPM alternative.
6. Opportunities and limitations for restoration of Rio Grande FCP projects were extensively evaluated in a prior USIBWC evaluation of an upstream project, the RGCP. Please refer to the Section 4 of the August 2003 USIBWC document *Reformulation of River Management Alternatives for the Rio Grande Canalization Project*, previously provided to the SWEC and also included in Appendix D, for detailed discussions of four major issues taken into account in evaluating management alternatives, namely flood control evaluation; river restoration analysis; river configuration and sediment transport; and water rights and availability for river restoration. A key consideration is the fact that the Rectification FCP is a bi-national flood control project, also intended to maintain the international boundary.
7. The statutory basis for management of the flood control projects is discussed in Chapter I, Section 2.1 of the PEIS.
8. Current management practices, and their applicability, are discussed individually by flood control project in Sections 1.1 of Chapters II, III and IV.

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### **ORG-4: UNIVERSITY OF TEXAS AT EL PASO**

#### **ORG-4a**

The USIBWC appreciates your review and input on the Draft PEIS. The USIBWC will support, to the extent possible, initiatives for improvement of the Rio Bosque wetlands.

#### **ORG-4b**

The Yellow-billed Cuckoo, has been listed in Appendix E.

#### **ORG-4c**

The correction has been done as requested.

#### **ORG-4d**

The proposed text has been added to the wetlands discussion.

#### **ORG-4e**

The text has been modified to remove the statement about trail management.



## ***Appendix B: Responses to Draft PEIS Rio Grande Flood Control Projects***

ORG-4f

The Rio Bosque Wetlands Park description text has been modified as proposed.

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### **EL PASO PUBLIC HEARING, AUGUST 22, 2007**

#### **EP-H1: Ms. Heather McMurray**

EP-H1a

The USIBWC appreciate your input on the Draft PEIS, as well as taking the time to attend the public hearing in El Paso. The USIBWC understands your concern about contamination associated with the abandoned industrial plant, and potential adverse effects on El Paso residents. The issue, however, is not within the scope of the PEIS evaluation of the Rio Grande flood control projects along the Texas-Mexico border.

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#### **EP-H2: Mr. John Sproul**

EP-H2a

The USIBWC appreciates your review and input on the Draft PEIS, as well as taking the time to attend the public hearing in El Paso. As previously indicated in the response to your comment ORG-4a, the USIBWC will support to the extent possible, initiatives for improvement of the Rio Bosque Wetlands.

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#### **EP-H3: Mr. Kevin Bixby**

EP-H3a

The USIBWC appreciates your input on the Draft PEIS, as well as taking the time to attend the public hearing in El Paso. The MOU issue was previously addressed in responses to written review comments submitted by the SWEC. Please refer to comment ORG-3b for responses.

EP-H3b

The Multipurpose Project Management Alternative has been selected as the preferred option for implementation of improvements to the flood control projects. This selection was made after receiving input during the public review period, as allowed by NEPA guidelines. Further, text has been added to the document in Sections 1.6 and Sections 3.8 of Chapters II, III and IV indicating selection of the preferred alternative.

EP-H3c

## **Appendix B: Responses to Draft PEIS Rio Grande Flood Control Projects**

The statutory basis for management of the Rio Grande flood control projects is discussed in Chapter I, Section 2.1 of the Draft PEIS.

### **EP-H3d**

As indicated during the public hearing, dredging along the Rio Grande streambed has not been conducted as routine maintenance of the Rectification FCP. Upstream of the flood control project, very limited dredging has been conducted near the American Dam gates and the Chamizal segment, which is the cement-lined channel of the Rio Grande. Those maintenance activities have been conducted under an USACE nationwide permit.

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### **EP-H4: Mr. Ari Michelsen**

#### **EP-H4a**

The USIBWC appreciates your input on the Draft PEIS, as well as taking the time to attend the public hearing in El Paso. As indicated by the reviewer, an economic cost-benefit analysis is a main component in prioritizing specific projects to be developed in the future, and to evaluate alternatives. At the programmatic level of evaluation, however, such level of analysis is not warranted given the conceptual nature of projects potentially covered by the PEIS.

#### **EP-H4b**

Text and data have been added to the socioeconomic analysis to illustrate the economic benefit of flood control project operation, as provided in the 2004 document *Estimated Benefits of IBWC Rio Grande Flood-Control Projects in the United States* (Sturdivant, et al. 2004; included in Appendix E). Please refer to Sections 3.5.1 in Chapters II, II and IV for updated text that emphasizes the high economic benefit derived from maintaining and improving the USIBWC flood control projects. Below is an example of the text added for the Rectification FCP. Similar entries were included for the Presidio FCP in Chapter III and Lower Rio Grande FCP in Chapter IV.

#### *3.5.1 Flood Protection*

*Flood protection, the core mission of the Rectification FCP, represents a sizable federal investment for protection and enhancement of economic conditions along the Rio Grande. An USIBWC-sponsored study (Sturdivant, et al. 2004) evaluated economic benefits derived from the flood control mission of the project. The study concluded that the Rectification FCP economic benefit is approximately 139 million dollars for protection of residential, industrial and commercial structures, and an additional 1.25 million was estimated for protection of agricultural use. In addition to the baseline benefits for protection of structures, nearly 69 million in damage protection was calculated for loss of road and utilities, and emergency response and recovery. Table II-8 shows the calculated baseline economic benefits of the Rectification FCP.*

**Appendix B: Responses to Draft PEIS Rio Grande Flood Control Projects**

**Table II-8      Estimated Economic Benefits of the Rectification FCP Operation  
(Sturdivant, et al. 2004)**

Category	Estimated Area (acres)	% of Total Area	Estimated Damages (\$ per acre)	Number. of Structures	Total Estimated Damages	% of Total Damages
Agriculture	2,356	30	\$ 530	--	\$ 1,249,533	1
Urban						
Residential	2,643	34	\$41,091	4,251	\$ 108,603,502	78
Commercial	2,759	35	\$ 9,732	331	\$ 26,850,544	19
Industrial	32	0	\$ 74,783	1	\$ 2,393,060	2
Subtotal Urban	5,434	70	\$25,368	4,591	\$ 137,847,106	99
<b>TOTAL</b>	<b>7,790</b>	<b>100</b>	<b>\$17,857</b>	<b>4,591</b>	<b>\$139,096,639</b>	<b>100</b>

EP-H4c

The 2003 findings were used as a general guideline for the PEIS evaluation; more detailed evaluations will be conducted as specific levee improvement projects are developed. A reevaluation of the 2003 results is currently underway for levee certification by the Federal Emergency Management Administration.

EP-H4d

As indicated by the reviewer, environmental evaluations of future, specific projects warrant a more focused analysis based on site-specific socioeconomic conditions. Given the extensive geographic coverage of the USIBWC flood control projects, however, a county-level evaluation is the adequate scale for assessment of potential improvements to flood control projects.

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### **III - COMMENTS APPLICABLE ONLY TO THE PRESIDIO PROJECT**

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No written comments were received

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#### **PRESIDIO PUBLIC HEARING, AUGUST 23, 2007**

##### **PR-H1: Mr. Carlos E. Nieto**

###### **PR-H1a**

The USIBWC appreciates your input on the Draft PEIS, as well as taking the time to attend the public hearing at Presidio. Since 1998 the USIBWC has partnered with the Texas Commission on Environmental Quality (TCEQ) to oversee and manage the Texas Clean Rivers Program for the Rio Grande. As part of the program USIBWC staff and other partners collect water quality data throughout the Rio Grande basin. A yearly assessment of the data is conducted and published as the annual Basin Highlights Report. Information on the 2007 Basin Highlights Report can be obtained at: <http://www.ibwc.state.gov/CRP/BHR2007final.pdf>.

###### **PR-H1b**

A reevaluation of the 2003 hydraulic model results, used as a guideline in the PEIS preparation, is currently underway for levee certification by the Federal Emergency Management Administration. The current evaluation indicates levee segments along Presidio FCP, as well as the Rectification and Lower Rio Grande FCP, where potential levee height increases are needed to improve flood protection. Those levee increases were calculated taken into consideration known and anticipated water flows originating from Mexico.

###### **PR-H1c**

The USIBWC shares your concern over health issues but, unfortunately, has no jurisdiction over abandoned river channels that are now part of the flood control project. The issue can best be addressed to the Texas Department of Health Services, Service Region 9/10. For the applicable points of contact please refer to the following website:  
<http://www.dshs.state.tx.us/regions/default.shtm>.

###### **PR-H1d**

Salt cedar control is a component of the Integrated Water Resources Management Alternative and well as the Multipurpose Project Management Alternative selected as the preferred option in the Final PEIS.

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**PR-H2: Mr. Lorenzo Hernandez**

**PR-H2a**

The USIBWC appreciates your input on the Draft PEIS, as well as taking the time to attend the public hearing at Presidio. Cibolo Creek flood discharges into the Rio Grande have been taken into consideration for potential improvements to the levee system owned and managed by the USIBWC. Upstream flood protection, however, is addressed through other applicable local, state, and federal agencies, such as Presidio County, the Federal Emergency Management Agency (FEMA), and the U.S. Army Corps of Engineers. Please refer to the state offices of FEMA for assistance on local flood classification and emergency prevention plans.

**PR-H2b**

Salt cedar control is a component of the Integrated Water Resources Management Alternative that is currently under consideration at a regional level. Biological control, such as release of the salt cedar beetle, are potential measures available to the United States Department of Agriculture for implementation.

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**PR-H3: Ms. Patt Simms**

**PR-H3a**

The USIBWC appreciates your input on the Draft PEIS, as well as taking the time to attend the public hearing at Presidio. Increasing levee height is a key component of improving flood control along the Presidio FCP, as well as improved structural conditions. Initiatives for multipurpose use of the floodway, such as construction of river trails, have not been identified for the Presidio FCP.

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**PR-H4: Mr. Dennis McEntire**

**PR-H4a**

The USIBWC appreciates your input on the Draft PEIS, as well as taking the time to attend the public hearing at Presidio. Improved efficiency of water resources use would apply to regional initiatives to increase water availability, such as salt cedar control, or to assist the farming community in use of more efficient irrigation systems. Such initiatives most likely would be proposed, among other agencies, by the U.S. Department of Agriculture, Natural Resources Conservation Service, and the Bureau of Reclamation, and would be supported as applicable by the USIBWC under a cooperative agreement.

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## **IV - COMMENTS APPLICABLE ONLY TO THE LRGFCP**

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### **AG-10: U.S. ARMY CORPS OF ENGINEERS**

#### **AG-10a**

The USIBWC appreciates your review and input on the Draft PEIS, and overall USACE support as a cooperating agency in the PEIS preparation. As indicated, the USIBWC will submit a permit application, under Section 10 of the Rivers and Harbors Act or Section 404 of the Clean Water Act, as applicable, for any work to be conducted in the Rio Grande, or fill of any waters of the U.S., including wetlands.

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### **ORG-5: THE ARROYO COLORADO WATERSHED PARTNERSHIP**

#### **ORG-5a**

The USIBWC appreciates your review and input on the Draft PEIS. The Multipurpose Project Management Alternative has been selected as the preferred option for improvements to the flood control projects. Water quality improvement is, in fact, a main component of the selected alternative. This selection supports regional initiatives for habitat improvement and management of natural resources, such as wetlands development within the floodway.

The USIBWC intends to continue working closely with the Arroyo Colorado Watershed Partnership on improved management of natural resources within the interior floodways. Section 1.3 of Chapter IV has been modified to make explicit that, at the programmatic level, the Arroyo Colorado Watershed Protection Plan will be considered during any future interior floodways management improvements as part of the Integrated Water Resources Management Alternative. Section 3.2.2 has also been revised to indicate likely benefits on wildlife and wetlands of implementing measures under consideration for the Integrated Water Resources Management Alternative. The watershed plan has also been included in Appendix E.

#### **ORG-5b**

The PEIS, as a framework for environmental evaluation of future projects, does not provide the level of definition needed for evaluation of specific initiatives. Please submit to the USIBWC a summary description of the proposed wetlands project, indicating extent, locations and likely benefits, for review by the USIBWC. The description should also indicate funding sources, and expected role of the USIBWC. For more information on the USIBWC real property license and lease program, please visit the Boundary and Realty website at: [www.ibwc.state.gov/Permits\\_Licenses/boundary\\_realty.html](http://www.ibwc.state.gov/Permits_Licenses/boundary_realty.html).

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## **ORG-6: LOWER RIO GRANDE WATER COMMITTEE**

### **ORG-6a**

The USIBWC appreciates your review and input on the Draft PEIS. The Multipurpose Project Management Alternative has been selected as the preferred option for implementation of improvements to the flood control projects. Water quality improvement is, in fact, a main component of the selected alternative.

Section 2.1.5 of Chapter IV has been expanded to include the January 2007 study on economic benefits of the El Morillo Drain as a potential improvement measure in agricultural water use. Section 3.1.3 has also been modified to include the El Morillo Drain as an example of benefits associated with improved management of irrigation flows. The text addition to Section 2.1.5 is as follows:

*Impacts of high-salinity return flows into the Rio Grande have been of great concern for downstream agricultural production. To address this problem a number of initiatives have been implemented to lower salinity of return flows. A 2007 study sponsored by the Texas Water Resources Institute (Lacewell, et al. 2007) illustrates the potential economic benefit of salinity reduction in the lower Rio Grande. The 2007 study evaluated the expected benefits of El Morillo Drain, a drain channel constructed in 1969 to divert from the Rio Grande high-salinity return flows originating in agricultural areas in Mexico adjacent to the river. The 2007 study concluded that the annual direct economic benefit to residents in South Texas ranges between \$16.3 and \$30.3 million. In addition, prevention of crop losses would represent an additional economic benefit of \$26.7 million.*

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## **IND-2: Mr. Carl A. Boyd**

### **IND-2a**

The USIBWC appreciates your review and input on the Draft PEIS. Maintenance of Anzalduas Dam is of utmost importance to the USIBWC, and its operation is routinely monitored for compliance with design specifications. Every five years, a bi-national team of technical advisors from the United States and Mexico conduct a dam safety inspection. Anzalduas Dam was inspected in April 2007, and the report can be obtained at: [www.ibwc.state.gov/Files/SOD\\_Report\\_Anzalduas.pdf](http://www.ibwc.state.gov/Files/SOD_Report_Anzalduas.pdf).

### **IND-2b**

Vegetation control of the floodway is routinely conducted by the USIBWC. The potential for vegetation development within the floodway, considered in the Programmatic PEIS as part of the Multipurpose Project Management Alternative, would not be a USIBWC initiative, and it would only be considered to the extent the flood control mission of the project is not impeded.

**IND-3: Mr. Bill Forbes**

IND-3a

The USIBWC appreciates your review and input on the Draft PEIS. The Multipurpose Project Management Alternative has been selected as the preferred option for improvements to the flood control projects. This selection is consistent with the core project mission of flood control, and supports regional initiatives for habitat improvement and management of natural resources within the floodway.

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**McALLEN PUBLIC HEARING, AUGUST 28, 2007**

**McA-H1: Ms. Laura de la Garza**

McA-H1a

The USIBWC appreciates your input on the Draft PEIS, as well as taking the time to attend the public hearing in McAllen. As we indicated in the response to Comment ORG-5a of the Partnership, the USIBWC will continue working closely with the Arroyo Colorado Watershed Partnership on improved management of natural resources within the interior floodways. Section 1.3 of Chapter IV has been modified to make explicit that, at the programmatic level, the Arroyo Colorado Watershed Protection Plan will be considered for interior floodways management improvements as part of the Multipurpose Project Management Alternative. Section 3.2.2 has also been revised to indicate likely benefits on wildlife and wetlands of implementing measures under consideration.

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**McA-H2: Mr. Eric Ellmer**

McA-H2a

The USIBWC appreciates your taking the time to attend the public hearing in McAllen and giving us an update on the City of McAllen's initiative for trail development. It is our understanding that the proposed 50-mile trail would include sections of the levee system right-of-ways. As specific plans are submitted for review, potential support to such initiative by the USIBWC will be considered under a license or lease agreement. The text of Chapter IV, Section 3.4.4, has been modified to indicate the recreation trail initiative is under consideration by the City of McAllen.

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**McA-H3: Mr. Godfrey Garza**

McA-H3a

The USBWC appreciates your input on the Draft PEIS, as well as taking the time to attend the public hearing in McAllen. As you have pointed out, protection of life and property from flooding is the core mission of the Lower Rio Grande FCP, and is included as a critical component of all improvement alternatives evaluated in the PEIS. The USBWC will continue to improve flood control capabilities, and to ensure that proposed initiatives for modified natural resources management are not in conflict with the Lower Rio Grande FCP's core mission of flood control.

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**McA-H4: Mr. Ernesto Reyes**

McA-H4a

The USBWC appreciates your input on the Draft PEIS, as well as taking the time to attend the public hearing in McAllen. The USBWC shares your concerns on the location of the proposed border fence, and its compatibility with planned levee improvements to the Lower Rio Grande FCP. To the extent possible, the USBWC will coordinate with the USBP to ensure the fence project does not conflict with the flood control capabilities and, hopefully, minimize impacts on valuable natural resources along the levee system.

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**PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT**

**IMPROVEMENTS TO THE USIBWC RIO GRANDE FLOOD CONTROL  
PROJECTS ALONG THE TEXAS-MEXICO BORDER**

**APPENDIX C**

**PROGRAMMATIC EIS DOCUMENTATION**  
*(PROVIDED IN CD-ROM)*

- C.1 PEIS ALTERNATIVES REPORT – FEBRUARY 2007**
- C.2 DRAFT PEIS- JULY 2007**
- C.3 PEIS SCOPING MEETINGS SUMMARY – MARCH 2005**
- C.4 CULTURAL RESOURCES REPORT – JULY 2005**
- C.5 BIOLOGICAL RESOURCES SURVEY – AUGUST 2005**
- C.6 NOTICE OF DRAFT PEIS AVAILABILITY – AUGUST 10, 2007**
- C.7 DRAFT PEIS DISTRIBUTION LIST**
- C.8 TRANSCRIPT – AUGUST 21, 2007 EL PASO PUBLIC HEARING**
- C.9 TRANSCRIPT – AUGUST 22, 2007 PRESIDIO PUBLIC HEARING**
- C.10 TRANSCRIPT – AUGUST 28, 2007 McALLEN PUBLIC HEARING**



**PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT**

**IMPROVEMENTS TO THE USIBWC RIO GRANDE FLOOD CONTROL  
PROJECTS ALONG THE TEXAS-MEXICO BORDER**

**APPENDIX D**

**USIBWC ENVIRONMENTAL EVALUATION DOCUMENTS**  
*(PROVIDED IN CD-ROM)*

- D.1 RECTIFICATION FCP – BIOLOGICAL ASSESSMENT – AUGUST 2001**
- D.2 RECTIFICATION FCP - ENVIRONMENTAL ASSESSMENT- LEVEE RAISING –  
AUGUST 2007**
- D.3 RECTIFICATION FCP – CULTURAL RESOURCES REPORT – MAY 2003**
- D.4 LOWER RIO GRANDE FCP - ENVIRONMENTAL IMPACT STATEMENT FOR  
FLOODWAY VEGETATION MANAGEMENT – DECEMBER 2003**
- D.5 LOWER RIO GRANDE FCP – USFWS BIOLOGICAL OPINION – MAY 2003**
- D.6 LOWER RIO GRANDE FCP - ENVIRONMENTAL ASSESSMENT OF MISSION  
LEVEE IMPROVEMENTS – FEBRUARY 2007**
- D.7 LOWER RIO GRANDE FCP - ENVIRONMENTAL ASSESSMENT OF LATERAL A  
LEVEE IMPROVEMENTS – APRIL 2007**
- D.8 LOWER RIO GRANDE FCP - ENVIRONMENTAL ASSESSMENT OF DONNA-  
BROWNSVILLE LEVEE IMPROVEMENTS – SEPTEMBER 2007**
- D.9 LOWER RIO GRANDE FCP - ENVIRONMENTAL ASSESSMENT OF MAIN & NORTH  
FLOODWAYS IMPROVEMENTS – DECEMBER 2007**
- D.10 LOWER RIO GRANDE FCP - ENVIRONMENTAL ASSESSMENT OF HIDALGO  
LEVEE IMPROVEMENTS – AUGUST 2005**
- D.11 LOWER RIO GRANDE FCP - ENVIRONMENTAL ASSESSMENT OF RETAMAL DAM  
SEDIMENT REMOVAL – JANUARY 2004**
- D.12 CANALIZATION FCP – REFORMULATION OF ALTERNATIVES – AUGUST 2003**



**PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT**

**IMPROVEMENTS TO THE USIBWC RIO GRANDE FLOOD CONTROL  
PROJECTS ALONG THE TEXAS-MEXICO BORDER**

**APPENDIX E**

**TECHNICAL SUPPORT DOCUMENTS**

*(PROVIDED IN CD-ROM)*

- E.1 T&E SPECIES LIST – EL PASO, HUDSPETH, PRESIDIO, HIDALGO, CAMERON  
AND WILLACY COUNTIES**
- E.2 ARROYO COLORADO POLLUTION REDUCTION PLAN – JULY 2006**
- E.3 ECONOMIC BENEFITS OF USIBWC RIO GRANDE FLOOD CONTROL  
PROJECTS – SEPTEMBER 2004**
- E.4 ECONOMIC BENEFITS OF EL MORILLO DRAIN – JANUARY 2007**