Description of document:	International Boundary and Water Commission (USIBWC): Various Documents, 1978-2017
Requested date:	09-April-2018
Release date:	02-May-2018
Posted date:	12-October-2020
Source of document:	Freedom of Information Act Request USIBWC Attn: FOIA - Legal Office 4191 N. Mesa Street El Paso, Texas 79902 Fax: (915) 317-5032 Email: rebecca.rizzuti@ibwc.gov

From: Rebecca Rizzuti <Rebecca.Rizzuti@ibwc.gov>
Cc: Brenda Porras <Brenda.Porras@ibwc.gov>
Sent: Wed, May 2, 2018 4:55 pm
Subject: FOIA 2018-29, CLOSING, email 1

I refer to your Freedom of Information Act (FOIA) 5 U.S.C. § 552 request No. 2018-29 sent via email dated 4/9/2018. A review of United States International Boundary and Water Commission (Agency) records has been completed and responsive documents are attached hereto. Redactions include one, but not all, possible exemptions.

FOIA Request No. 2018-29 is considered completed by the Agency. If you have any questions, you may contact Rebecca Rizzuti, Legal Counsel, International Boundary and Water Commission, at (915) 832-4729. Please be sure to refer to the case number shown above in all correspondence about this case.

Due to the voluminous nature of the responsive documents, material may be sent in multiple emails.

Sincerely,
Rebecca A. Rizzuti
Assistant Legal Advisor
International Boundary and Water Commission, Office of the Legal Advisor

Appeal Rights

A FOIA requester may appeal an adverse determination of a FOIA request to the USIBWC Commissioner.

22 C.F.R. § 1102.7. The appeal should be addressed to:

> United States Section, International Boundary and Water Commission
> Edward Drusina, Commissioner
> 4171 North Mesa, Suite C-310
> El Paso, TX 79902-1422

The appeal should be clearly identified as such on the envelope and in the letter by labeling it “Freedom of Information Act Appeal” or “Appeal or Records” or the equivalent. An appeal must be filed within 90 days of the receipt of an initial determination (in cases of denials of entire request), or of receipt of any records being made available pursuant to the initial determination (in case of partial denials).

The 2007 FOIA amendments created the Office of Government Information Services (OGIS) to offer mediation services to resolve disputes between FOIA requesters and Federal agencies as a non-exclusive alternative to litigation. Using OGIS services does not affect a requester's right to pursue litigation. A requester may contact OGIS in any of the following ways:

Office of Government Information Services
National Archives and Records Administration
8601 Adelphi Road - OGIS
College Park, MD 20740-6001
E-mail: ogis@nara.gov
Web: https://ogis.archives.gov
Telephone: 202-741-5770
Fax: 202-741-5769
Toll-free: 1-877-684-6448

Respectfully,

Rebecca A. Rizzuti
Assistant Legal Advisor
International Boundary and Water Commission, Office of Legal Advisor
4171 N. Mesa St., Suite C-100
El Paso, TX 79902
(915) 832-4729

United States Section
International Boundary and Water Commission

Directives Management System

Volume I : Mission Support
Part 0400 : Foreign Affairs
Chapter 0401 : Foreign Affairs Administration
Directive 01011 : Passport Application and Issuance Directive
Citation : SD.I.04011
Proponent : Foreign Affairs Office
Effective Date : 24 October 2017

1. **Purpose**: The Department of State has established procedures for the issuance and renewal of official and diplomatic passports for USIBWC personnel. All government employees required to travel out of the country on official business have a right to a U.S. government-issued **Official Passport**. However, for official business in the immediate vicinity of the U.S.-Mexico border, the **Commission identification card issued by the Foreign Affairs Office** is adequate. Additionally, because the 1944 U.S.-Mexican Treaty Regarding the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande (the "1944 Treaty") grants certain officers of the International Boundary and Water Commission diplomatic status, the Special Issuance Agency issues a **Diplomatic Passport** to the Commissioner, Secretary, Legal Advisor, and Principal Engineers.

   The application procedure varies slightly depending on which category of passport is sought. For most applicants, the issuance/renewal process can be accomplished directly and quickly through a simple form completion, cover memo and mailing process. However, all first-time passport applicants, or those who have not been issued a U.S. passport within the last 15 years, will need to appear in person at a U.S Passport Agency or at an official acceptance agency when submitting a passport application. The various procedures are described below.

   Upon separation from the agency, USIBWC personnel are required to turn in any official or diplomatic passport obtained in connection with employment.

2. **Authority**: 22 U.S.Code Chapter 4 - Passports

3. **Responsibilities:**

   A. USIBWC Commissioner: Signing authority on memo requesting official passports.

   B. USIBWC Employees: Complete required actions to request a passport consistent with this Directive.

C. Foreign Affairs Office and Liaison at Department of State: Coordinate and communicate with USIBWC employees and the Department of State on matters related to issuance of official and diplomatic passports to USIBWC personnel.

4. **How to request approval for an official passport:** The supervisor and department head of the employee for whom an official passport is requested shall jointly submit a memorandum to the Secretary requesting approval for an official passport. The memorandum shall contain the following information:

(b) (2), (b) (7)(A)

[redacted]

[redacted]

[redacted]

The Secretary will review the request and will determine if an official passport is necessary or whether the Commission identification issued by the Foreign Affairs Office is sufficient for the employee to perform their official duties in Mexico. If the request is approved, the Secretary will respond via memorandum, with copy to the Commissioner. If the request is denied, the Secretary will respond via memorandum stating the reason for the denial.

The Commissioner shall verify receipt of an approval memorandum from the Secretary before signing the cover memorandum referenced as Appendix B of this Directive.

For Commission personnel eligible for a diplomatic passport (described in paragraphs 7 and 8 below), as determined by the 1944 Treaty, the passport application does not require prior approval of the Secretary.

5. **First Time Passport Applicants (other than for a Diplomatic Passport):** If a USIBWC employee has never held a U.S. passport of any kind, has not been issued a passport within the previous 15 years, or whose previous passport is unavailable or damaged, the applicant will have to execute the application in person at a U.S. Passport Agency (which is a Department of State facility) or passport acceptance facility (a non-Department of State office such as a post office or county clerk's office). The pertinent DS-11 application form can be filled in electronically at:

https://pptform.state.gov for the application wizard or you can also go to: http://travel.state.gov/content/passports/english/passports.html to select "Passport Applications & Forms" at this link and then select the DS-11.

Once completed, the form should be printed out and brought with supporting documentation described on the form (proof of U.S. citizenship, proof of identity, passport photo ***without eye glasses***) to a U.S. Passport Agency or designated acceptance facility to execute the application. Applicants should submit their forms and supporting documentation through the Passport Agency or acceptance facility under cover of (1) a memorandum (b) (2), (b) (7)(A) [redacted] that states the information in the sample memo attached as Appendix B of this Directive. Instructions for preparation and submission of the memo are included in Appendix A of this Directive.

If the applicant is appearing at an acceptance facility (not a Department of State U.S. Passport Agency) then the applicant must also bring (2) a no-fee letter signed by the Director of the Department of State's Special Issuance Agency (attached as Appendix D), authorizing issuance to the applicant of an official passport by the Department of State; however, you will have to pay any execution fee charged by the acceptance facility. The USIBWC will pay the fee or reimburse the applicant. Please check with the acceptance facility regarding their fees and payment procedures and coordinate with your USIBWC cost center for the payment or reimbursement.

New passport applicants who work at USIBWC Headquarters can most readily execute their applications at the Department of State's El Paso Passport Agency located in the Anson Mills Building at 303 N. Oregon St.; appointments can be arranged at 1-877-487-2778. Elsewhere, applicants can find the location of the nearest acceptance facilities by means of a zip-code activated search engine at http://iafdb.travel.state.gov/ .

You can also search for the nearest Department of State Passport Agency (usually in large cities and probably not convenient for our employees unless they're in El Paso or San Diego) at:

http://travel.state.gov/content/passports/english/passports/information/where-to-apply/agencies.html

6. **Official Passport for those who already have a valid or expired passport:** USIBWC passport applicants for Official Passports who have any type of currently-valid U.S. passport or expired passport in undamaged condition issued within the previous 15 years and otherwise meet the requirements should use form DS-82, which can be filled in electronically at:

   https://pptform.state.gov for the application wizard or you can also go to: http://travel.state.gov/content/passports/english/passports.html to select "Passport Applications & Forms" at this link and then select the DS-82.

   If you do not meet the requirements for the DS-82 as indicated on the form, even if you were previously issued a passport, the wizard will guide you to the correct form.

Once completed, the form should be printed and submitted to the (b) (2), (b) (7)(A) with supporting documentation (your most recent passport, passport photo ***without eye glasses***, original or certified copies of documentation associated with any name change) under cover of a memorandum (b) (2), (b) (7)(A). Instructions for preparation and submission of the memo are included in Appendix A of this Directive. Applicants should submit their current or expired passport with the application package as proof of previous passport issuance; if the passport is a regular ("tourist") passport and is not yet expired, the Special Issuance Agency will return it to the applicant. Official Passport application packages should be sent to:

U.S. Department of State
(b) (2), (b) (7)(A)
CA/PPT/SIA
44132 Mercure Circle
P.O. Box 1185
Sterling, VA 20116-1185

7. **Diplomatic Passport for those eligible who have never had any kind of passport:** If a USIBWC employee has never held a U.S. passport of any kind, has not been issued a passport within the previous 15 years, or whose previous passport is unavailable or damaged, the applicant should execute the application in person at the U.S. Passport Agency in El Paso, Texas. The pertinent DS-11 application form can be filled in electronically at:

   https://pptform.state.gov for the application wizard or you can go to http://travel.state.gov/content/passports/english/passports.html and select "Passport Applications & Forms" at this link and select the DS-11.

   Once completed, the form should be printed out and brought with supporting documentation described on the form (proof of U.S. citizenship, proof of identity, passport photo ***without eye glasses***) to the Department of State's El Paso Passport Agency located in the Anson Mills Building at 303 N. Oregon St.; appointments can be arranged at 1-877-487-2778. The applicant should submit the completed form under cover of (b) (2), (b) (7)(A) that states the information in the sample memo attached as Appendix C of this Directive, including the statement that the applicant is one of the category of five USIBWC officials (Commissioner, Secretary, 2 Principal Engineers, Legal Adviser) accorded diplomatic status by the 1944 Treaty Between the United States of America and Mexico Regarding Utilization of the Colorado and Tijuana Rivers and of the Rio Grande. Instructions are attached as Appendix A of this Directive.

8. **Diplomatic Passport for those with a valid or expired passport**: USIBWC passport applicants for Diplomatic Passports who have any kind of currently-valid U.S. passport or an expired passport in undamaged condition issued within the previous 15 years

and who otherwise meet the requirements should use form DS-82, which can be filled in electronically at:

https://pptform.state.gov for the application wizard or you can go to http://travel.state.gov/content/passports/english/passports.html and select "Passport Applications & Forms" at this link and select the DS-82.

Once completed, the form should be printed and submitted to the Special Issuance Agency with the supporting documentation indicated on the form (your most recent passport, passport photo ***without eye glasses***, original or certified copies of documentation associated with any name change) under cover of (b) (2), (b) (7)(A) [redacted] that states the information in the sample memo attached as Appendix C of this Directive, including a statement that the applicant is one of the category of five USIBWC officials (Commissioner, Secretary, 2 Principal Engineers, Legal Adviser) accorded diplomatic status by the 1944 Treaty Between the United States of America and Mexico Regarding Utilization of the Colorado and Tijuana Rivers and of the Rio Grande. Instructions are attached as Appendix A of this Directive.

Applicants should submit their current or expired passport with the application package as proof of previous passport issuance; if the passport is a regular ("tourist") passport and is not yet expired, the Special Issuance Agency will return it to the applicant. Passport application packages should be sent to:

U.S. Department of State
(b) (2), (b) (7)(A) [redacted]
CA/PPT/SIA
44132 Mercure Circle
P.O. Box 1185
Sterling, VA 20116-1185

9. **Supersession**: This directive supersedes Directive SD.I.04011 dated May 3, 2015.

(b) (6) [redacted]
Ed Drusina
[redacted]
Commissioner

10/24/2017
Date

Appendix A
SD.I.04011

Instructions for Submitting a Memorandum

Requesting a Special Issuance Passport

The term "special issuance" passport refers to either an official or diplomatic passport. An "official" passport is the type issued to most USIBWC employees who require a passport for official U.S. Government business.

1. Submit one signed one-sided original and one copy of the memo with each application for a special issuance passport.

2. Information in [red] must be replaced with corresponding information or deleted where used for informational purposes. Be sure to remove the red brackets "[ ]" when submitting memos.

3. Identify the enclosures being submitted with the Memorandum (i.e., DS-11, DS-82, Passport, etc).

4. Requests for expedited services should be limited to the following:

- when the passport is needed in less than 10 working days;
- when traveling to a country requiring lengthy visa processing; or
- when traveling to multiple countries, several of which require a visa.

For such requests, use "Request EXPEDITED Issuance" in the subject line and provide justification detailing why the passport needs to be expedited.

Appendix B
SD.I.04011

Sample Memorandum for Official Passport to be prepared [redacted]

[DATE]

MEMORANDUM **Agency Code:** [redacted]

TO: [redacted]

SUBJECT: Request Issuance of an Official Passport for [LASTNAME, Firstname Middlename]

[redacted]

Appendix B
SD.I.04011

Enclosures:

1. Color photograph without glasses
2. Application form
3. Current or expired passport (if applicable)
4. (applicable supporting documentation)

cc:
USIBWC Liaison at the Department of State
DMS
[name of Foreign Affairs Officer at Headquarters]
[name of Foreign Affairs Coordinator]
(Insert drive address where document is saved)

Appendix C
SD.I.04011

Sample Memorandum for Diplomatic Passport to be prepared on (b) (2) [redacted]

[DATE]

MEMORANDUM **Agency Code:** (b) (2), (b) [redacted]

TO: (b) (2), (b) (7)(A) [redacted]

SUBJECT: Request Issuance of a Diplomatic Passport for [LASTNAME, Firstname Middlename]

(b) (2), (b) (7)(A) [redacted]

Appendix C
SD.I.04011

Enclosures:

5. Color photograph without glasses
6. Application form
7. Current or expired passport (if applicable)
8. (applicable supporting documentation)

cc:
USIBWC Liaison at the Department of State
DMS
[name of Foreign Affairs Officer at Headquarters]
[name of Foreign Affairs Coordinator]
(Insert drive address where document is saved)

Appendix D
SD.I.04011

Letter Submitted with Passport Application

United States Department of State

(b) (2) [redacted]

Dear Passport Application Acceptance Agent:

(b) (2) b(7) (A) [redacted]

(b) (6) [redacted]

Jennifer DeWitt Walsh
Director, Special Issuance Agency

New: SD.I.04021
Old: Volume 1, Chapter 301

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION

HEADQUARTERS
DIRECTIVE NUMBER: ~~04-93~~

VOLUME : ~~V~~ I
SECTION: ~~200~~ 301
CHAPTER: 250
DATE : January 26, 1993

TO : Commissioner and Executive Staff Officers; Division and Branch Offices, EEO Officer, Field Offices, Presidents of AFGE Locals 3060 and 3309

SUBJECT: Minutes of the Commission

CONTROL: Secretary (Foreign Affairs) (915) 534-6698

200.1 PURPOSE:

Update U.S. Section Manual Volume V, Section 200, Chapter 250, Minutes of the Commission.

200.2 AUTHORITY:

Headquarters Directive 24-92, Volume I, Section 100, Chapter 120, dated December 31, 1992.

200.3 SUPERSESSION:

This directive supersedes Headquarters Directive 9-87 of April 6, 1987.

200.4 PROCEDURE:

A January 1993 revision of the U.S. Section Manual, Volume IV, Section 200, Chapter 250, Minutes of the Commission, is enclosed.

200.5 EFFECTIVE DATE:

Immediately.

FOR THE COMMISSIONER

[redacted]

Reinaldo Martinez
Director, Administration

Enclosure:
As stated

UNITED STATES SECTION MANUAL
VOLUME V, SECTION 200, CHAPTER 250
MINUTES OF THE COMMISSION
(Revised January 1993)

250	List of Minutes of the International Boundary Commission (IBC) and of the International Boundary and Water Commission, U.S. and Mexico (IBWC)
250.1 - 250.4	(Reserved)
250.5	International Boundary and Water Commission Minutes Nos. 180 - 289
250.5(a)	General Subject Index Minutes Nos. 180 - 289
250.5(b)	Detailed Subject Index Minutes Nos. 180 - 289
250.5(c)	Chronological Minute Index Minutes Nos. 180 - 289

250 List of Minutes of the International Boundary Commission (IBC) and of the International Boundary and Water Commission, U.S. and Mexico (IBWC)

IBC MINUTES: No. 1 (October 3, 1922) through No. 179 (June, 1945)

IBWC MINUTES: No. 180 (January 11, 1946) through No. 289 (Nov 13, 1992)

BREAKDOWN BY U.S. COMMISSIONERS

Commissioner Curry	:	No. 1 (October 3, 1922) through No. 96 (April 22, 1927)
Commissioner Lawson	:	No. 97 (June 4, 1927) through No. 199 (December 15, 1953)
Commissioner Hewitt	:	No. 200 (August 13, 1954) through No. 212 (December 22, 1961)
Commissioner Friedkin:		No. 213 (April 26, 1963) through No. 270 (April 30, 1985)
Acting Commissioner McNealy	:	No. 71 (September 9, 1986) through No. 274 (April 15, 1987)
Commissioner Gunaji	:	No. 275 (November 4, 1987) through No. 289 (November 14, 1992)

BREAKDOWN BY COMMISSIONS
(Starting After 1944 Water Treaty)

Lawson - Fernandez McGregor	No. 180 (January 11, 1946) through No. 185 (January 25, 1947)
Lawson - Herrera Jordan	No. 186 (May 26, 1947) through No. 199 (December 15, 1953)
Hewitt - Herrera Jordan	No. 200 (August 13, 1954) through No. 212 (December 22, 1961)

Friedkin - Herrera Jordan	No. 213 (August 26, 1963) through No. 258 (May 27, 1977)
Friedkin - Bustamante	No. 259 (July 27, 1978) through No. 270 (April 30, 1985)
Friedkin - Santibanez	No Minutes concluded
McNealy - Santibanez	No. 271 (September 9, 1986) through No. 274 (March 19, 1987)
Gunaji - Santibanez	No. 275 (November 4, 1987) through No. 276 (July 26, 1988)
Gunaji - Herrera	No. 277 (Aug 28, 1988) through No. 289 (November 13, 1992)

250.5(a) **GENERAL SUBJECT INDEX - MINUTES NOS. 180 - 289**
INTERNATIONAL BOUNDARY AND WATER COMMISSION

NO	DATE	TITLE
ALL AMERICAN CANAL		
185	Jan 25,1947	Proposing agreement relative to the emergency use of the All-American Canal for the delivery of water for use in Mexico during the 1947 irrigation season.
188	Mar 12, 1949	Agreement relative to the emergency use of the All-American Canal for the delivery of water for use in Mexico during the 1948 irrigation season.
191	Mar 8, 1949	Agreement relative to the emergency use of the All-American for the delivery of water for use in Mexico during the 1949 irrigation season.
194	Mar 3, 1950	Agreement relative to the emergency use of the All-American Canal for the delivery of water for use in Mexico during the portion of the calendar year 1950 until Articles 10, 11, and 15 of the Water Treaty of 1944 become effective.
AMISTAD DAM		
207	Jun 19, 1958	Consideration of joint report of the Principal Engineers on site, capacities and type of dam for the second major international storage dam on the Rio Grande.
210	Jan 12, 1961	Recommendations regarding construction of Amistad Dam.
213	Apr 26, 1963	Foundation drilling and grouting program for Amistad Dam.
215	Sep 28, 1963	Design and procedures for construction of Amistad Dam.
232	May 9, 1968	Demarcation of a jurisdictional line in Amistad Dam.
235	Dec 3, 1969	Division of operation and maintenance costs of Amistad Dam.

NO	DATE	TITLE
BORDER SANITATION		
206	Jan 13, 1958	Joint operation and maintenance of the Nogales international sanitation problem.
216	Mar 18, 1964	Operation and maintenance of the international plant for treatment of Agua Prieta, Sonora and Douglas, Arizona sewage.
220	Jul 16, 1965	Improvement and expansion of the International plant for the treatment of Douglas, Arizona and Agua Prieta, Sonora sewage.
227	Sep 5, 1967	Enlargement of the international facilities for the treatment of Nogales, Arizona and Nogales, Sonora sewage.
240	Jun 13, 1972	Emergency Deliveries of Colorado River waters for use in Tijuana
261	Sep 24, 1979	Recommendations for the solution to the border sanitation problems.
264	Aug 26, 1980	Recommendations for the solution of the New River border sanitation problem at Calexico, California/Mexicali, Baja California Norte.
270	Apr 30, 1985	Recommendations for the first stage treatment and disposal facilities for the solution of the border sanitation problem at San Diego, California/Tijuana, Baja California.
273	Mar 19, 1987	Recommendations for the solution of the border sanitation problem at Naco, Arizona/Naco, Sonora.
274	Apr 15, 1987	Joint project for improvement of the quality of the waters of the New River at Calexico, California/Mexicali Baja California.
276	Jul 26, 1988	Conveyance, treatment and disposal of sewage from Nogales, Arizona and Nogales, Sonora exceeding the capacities allotted to the United States and Mexico at the Nogales International sewage treatment plant, under Minute No. 227.

NO	DATE	TITLE
279	Aug 28, 1989	Joint measures to improve the quality of the waters of the Rio Grande at Laredo, Texas/Nuevo Laredo, Tamaulipas.
283	Jul 2, 1990	Conceptual plan for the international solution to the border sanitation problem in San Diego, California/Tijuana, Baja California
288	Oct 30, 1992	Conceptual plan for the long term solution to the border sanitation problem of the New River at Calexico, California - Mexicali, Baja California.
289	Nov 13, 1992	Observation of the quality of the waters along the United States and Mexico border.
BOUNDARY TREATY OF 1970		
246	Jan 28, 1975	Recommendations for execution of change in the location of the Rio Grande stipulated in Article I of the 1970 Boundary Treaty.
247	Feb 7, 1975	International plan for the protection of the Presidio-Ojinaga Valley against floods of the Rio Grande.
251	Apr 28, 1976	Occupants of Horcon Tract (that residents of Horcon Tract not be evacuated) for the transfer of the tract from the U.S. to Mexico under the 1970 Boundary Treaty.
253	Sep 23, 1976	Maps of the international boundary in the Rio Grande and in the Colorado River.
255	Jan 28, 1977	Consideration of possible property rights of the residents and occupants of the Horcon Tract and of Beaver Island.
257	May 18, 1977	Completion of the relocations of the Rio Grande stipulated in Article I of the Treaty of November 23, 1970.
262	Dec 26, 1979	Recommendations for works to preserve for the Rio Grande its character as the international boundary in the reach from Cajoncitos, Chihuahua to Haciendita, Texas.

NO	DATE	TITLE
189	May 12, 1948	Determination as to site and design features of the main diversion structure to be constructed by Mexico on the Colorado River and works necessitated thereby for protection of United States lands, pursuant to the provisions of Article 12(a) of the Water Treaty of February 3, 1944.
191	Mar 8, 1949	Agreement relative to the emergency use of the All-American for the delivery of water for use in Mexico during the 1949 irrigation season.
194	Mar 3, 1950	Agreement relative to the emergency use of the All-American Canal for the delivery of water for use in Mexico during the portion of the calendar year 1950 until Articles 10, 11, and 15 of the Water Treaty of 1944 become effective.
195	May 6, 1950	Works required above the Morelos Diversion Dam to protect lands within the United States against damages from such floods as might result from the construction, operation and maintenance of that structure.
197	Jun 30, 1951	Adoption of rules for the operation and maintenance of the Morelos Diversion Dam on the Colorado River.
208	Nov 14, 1958	Final liquidation of costs corresponding to Mexico for Group I levee works required upstream from the Morelos Diversion Dam to protect lands within the U.S. against damages from such rise in flood stages of the Colorado River as might result from construction, operation and maintenance of that structure.
209	Nov 21, 1958	Portion allocatable to Mexico of costs of operation and maintenance of the Group I levees on the Colorado River upstream from the Morelos Diversion Dam.
211	May 12, 1961	Manner of payment of Mexico's share of cost of construction of Group II Colorado River levees, upstream from Morelos Diversion Dam.

NO	DATE	TITLE
221	Nov 29, 1965	Final liquidation of costs allocatable to Mexico of construction of the South Gila Levee and determination of the part of its operation and maintenance costs allocatable to that country.
240	June 13, 1972	Emergency deliveries of Colorado River waters for use in Tijuana.
243	Sep 25, 1973	An amendment to Minute No. 240, relating to emergency deliveries of Colorado River water for use in Tijuana.
245	May 15, 1974	Additions and modifications to Minute No. 240, entitled "Emergency deliveries of Colorado River waters for use in Tijuana," of June 13, 1972.
252	Aug 31, 1976	An amendment to Minutes Nos. 240 and 245, relating to emergency deliveries of Colorado River waters for use in Tijuana: (Mexico agrees to pay beginning October 1976 for additional costs of treatment in the U.S. of the portion of Mexico's Colorado River Treaty waters delivered through facilities in the United States).
256	Feb 22, 1977	Extension of Minutes Nos. 240, 243, 245, and 252, regarding emergency deliveries of Colorado River waters for use in Tijuana.
259	Jul 27, 1978	Extension of the effect of Minute No. 256, relating to the emergency deliveries of Colorado River water for use in Tijuana.
260	Aug 11, 1979	Extension of the effect of Minute No. 259, relating to the emergency deliveries of Colorado River water for use in Tijuana.
263	Aug 6, 1980	Extension of the effect of Minute No. 260, relating to the emergency deliveries of Colorado River water for use in Tijuana.
266	Aug 3, 1981	Extension of the effect of Minute No. 263, relating to the emergency deliveries of Colorado River water for use in Tijuana.
267	Aug 13, 1982	Extension of the effect of Minute No. 266, relating to the emergency deliveries of Colorado River water for use in Tijuana.

NO	DATE	TITLE
275	Nov 4, 1987	Demarcation of the international boundary and monumentation of the new international bridges over the Rio Grande between Del Rio, Texas and Ciudad Acuna, Coahuila and between Hidalgo, Texas and Reynosa, Tamaulipas.
286	Nov 29, 1991	Demarcation of the International Boundary on the new international Ysleta/Zaragoza bridge and demolition of the old bridge.
MONUMENTATION (LAND BOUNDARY)		
180	Jan 11, 1946	Reestablishment of western land boundary at Monument 118.
226	Jun 23, 1967	Additional monuments on the land boundary between international Monuments Nos. 2 and 3.
230	May 8, 1968	Additional Monuments 244A and 244B on the land boundary, between international Monuments Nos. 244 and 245.
244	Dec 4, 1975	Maintenance of the international land boundary monuments.
249	Jul 14, 1975	Placement of markers on the land boundary.
271	Sep 9, 1986	Markers installed on the land boundary.
272	Oct 24, 1986	Installation of Monument 13-R.
277	Aug 29, 1988	Location, permanency and visibility of international Monument No. 123-A.
MORELOS DAM AND LEVEES		
189	May 12, 1948	Determination as to site and design features of the main diversion structure to be constructed by Mexico on the Colorado River and works necessitated thereby for protection of United States lands, pursuant to the provisions of Article 12(a) of the Water Treaty of February 3, 1944.
195	May 6, 1950	Works required above the Morelos Diversion Dam to protect lands within the United States against damages from such floods as might result from the construction, operation and maintenance of that structure.

NO	DATE	TITLE

NO	DATE	TITLE
RIO GRANDE WATERS		
201	Oct 18, 1954	Regulations for storage, conveyance and delivery of waters of the Rio Grande from Fort Quitman, Texas to the Gulf of Mexico.
234	Dec 2, 1969	Waters of the Rio Grande allotted to the United States from the Conchos, San Diego, San Rodrigo, Escondido, and Salado Rivers and the Las Vacas Arroyo.
SANITATION		
206	Jan 13, 1958	Joint operation and maintenance of the Nogales international sanitation problem.
216	Mar 18, 1964	Operation and maintenance of the internaational plant for treatment of Agua Prieta, Sonora and Douglas, Arizona sewage.
220	Jul 16, 1965	Improvement and expansion of the International plant for the treatment of Douglas, Arizona and Agua Prieta, Sonora sewage.
227	Sep 5, 1967	Enlargement of the international facilities for the treatment of Nogales, Arizona and Nogales, Sonora sewage.
240	Jun 13, 1972	Emergency Deliveries of Colorado River Waters for use in Tijuana.
261	Sep 24, 1979	Recommendations for the solution to the border sanitation problems.
264	Aug 26, 1980	Recommendations for the solution of the New River border sanitation problem at Calexico, California/Mexicali, Baja California Norte.
270	Apr 30, 1985	Recommendations for the first stage treatment and disposal facilities for the solution of the border sanitation problem at San Diego, California/Tijuana, Baja California.
273	Mar 19, 1987	Recommendations for the solution of the border sanitation problem at Naco, Arizona/Naco, Sonora.

NO	DATE	TITLE
274	Apr 15, 1987	Joint project for improvement of the quality of the waters of the New River at Calexico, California/Mexicali Baja California.
276	Jul 26, 1988	Conveyance, treatment and disposal of sewage from Nogales, Arizona and Nogales, Sonora exceeding the capacities allotted to the United States and Mexico at the Nogales international sewage treatment plant, under Minute No. 227.
279	Aug 28, 1989	Joint measures to improve the quality of the waters of the Rio Grande at Laredo, Texas/Nuevo Laredo, Tamaulipas.
283	Jul 2, 1990	Conceptual plan for the international solution to the border sanitation problem in San Diego, California/Tijuana, Baja California.
288	Oct 30, 1992	Conceptual plan for the long-term solution to the border sanitation problem of the New River at Calexico, California - Mexicali, Baja California.
289	Nov 13, 1992	Observation of the quality of the waters along the United States and Mexico border.
TIJUANA EMERGENCY DELIVERIES		
240	June 13, 1972	Emergency deliveries of Colorado River waters for use in Tijuana.
243	Sep 25, 1973	An amendment to Minute No. 240, relating to emergency deliveries of Colorado River water for use in Tijuana.
245	May 15, 1974	Additions and modifications to Minute No. 240, entitled "Emergency deliveries of Colorado River waters for use in Tijuana," of June 13, 1972.
252	Aug 31, 1976	An amendment to Minutes Nos. 240 and 245, relating to emergency deliveries of Colorado River waters for use in Tijuana: (Mexico agrees to pay beginning October 1976 for additional costs of treatment in the U.S. of the portion of Mexico's Colorado River Treaty waters delivered through facilities in the United States).

250.5c CHRONOLOGICAL MINUTE INDEX - MINUTES NOS. 180-289
INTERNATIONAL BOUNDARY AND WATER COMMISSION

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
180	Jan 11, 1946	Reestablishment of Western Land Boundary at Monument No. 118. Juarez United States - February 04, 1946 Mexico - February 06, 1946
181	Apr 4, 1946	Request of Maverick County Water Control and Improvement District No. 1 to construct, operate and maintain a diversion dam across the Rio Grande about 42 miles (67 kms) upstream from Eagle Pass, Texas and Piedras Negras, Coahuila. El Paso United States - April 11, 1946 Mexico - April 27, 1946
181A	Jul 15, 1946	Supplementing Minute No. 181 dated April 4, 1946, relative July 15, 1946 to the request of the Maverick County Water Control District No. 1 to construct, operate and maintain a diversion dam across the Rio Grande about 42 miles (67 kms) upstream from Eagle Pass, Texas and Piedras Negras, Coahuila. El Paso United States - July 27, 1946 Mexico - July 27, 1946
182	Sep 23, 1946	Approval of Joint Report on Engineering Conference on Studies, Investigations and Procedures for the Planning of Works to be Built in Accordance with the Treaty of 1944. Ciudad Juarez United States - October 19, 1946 Mexico - October 14, 1946

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
183	Sep 24, 1946	Banco Number 153 "Culebron." El Paso United States - October 10, 1946 Mexico - October 14, 1946
184	Jan 21, 1947	Adoption of official means of identification of personnel, vehicles, and other equipment crossing the International Boundary on official business of the Commission or of either Section thereof. Juarez United States - February 13, 1947 Mexico - February 08, 1947
185	Jan 25,1947	Proposing agreement relative to the emergency use of the All-American Canal for the delivery of water for use in Mexico during the 1947 irrigation season. El Paso United States - February 20, 1947 Mexico - February 09, 1947
186	May 26, 1947	Approval of the construction by Mexico of a temporary diversion dam across the Rio Grande below Retamal Heading. Juarez United States - May 29, 1947 Mexico - June 04, 1947
187	Dec 20, 1947	Determination as to site and required capacities of the lowest major international storage dam to be built on the Rio Grande, in accordance with the provisions of Article V of the Treaty of 1944. El Paso United States - January 06, 1948 Mexico - January 06, 1948

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
188	Mar 12, 1948	Agreement relative to the emergency use of the All-American Canal for the delivery of water for use in Mexico during the 1948 irrigation season. Juarez United States - March 18, 1948 Mexico - March 19, 1948
189	May 12, 1948	Determination as to site and design features of the main diversion structure to be constructed by Mexico on the Colorado River and work necessitated thereby for protection of United States lands, pursuant to the provisions of Article 12(e) of the 1944 Water Treaty. El Paso United States - June 09, 1948 Mexico - May 18, 1948
190	Aug 13, 1948	Allocation to the two Sections of the Commission of remaining items of work preparatory to construction of Falcon Dam. Juarez United States - September 9, 1948 (Except paragraph three, which had to do with the proration, in principle, of the cost of construction.) United States - September 09, 1948 Mexico - August 21, 1948
191	Mar 8, 1949	Agreement relative to the emergency use of the All-American Canal for the delivery of water for use in Mexico during the 1949 irrigation season. El Paso United States - March 18, 1949 Mexico - March 16, 1949

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
192	Sep 7, 1949	Plans and procedures for construction of Falcon Dam and recommendations for construction of Falcon Hydroelectric Plants. Juarez United States - October 05, 1949 Mexico - September 20, 1949
193	Sep 12, 1949	Bancos Nos. 154 "Ringgold" and 155 "Don Juan Cross." El Paso United States - September 26, 1949 Mexico - September 26, 1949
194	Mar 3, 1950	Agreement relative to the emergency use of the All-American Canal for the delivery of water for use in Mexico during the portion of the calendar year 1950 until Articles 10, 11, and 15 of the Water of Treaty of 1944 become effective. Juarez United States - March 13, 1950 Mexico - March 10, 1950
195	May 6, 1950	Works required above the Morelos Diversion Dam to protect lands within the U.S. against damages from such floods as might result from the construction, operation and maintenance of that structure. El Paso United States - June 02, 1950 Mexico - May 13, 1950
196	Dec 18, 1950	Modification of the original plan for the Lower Rio Grande International Flood Control Project. Juarez United States - January 12, 1951 Mexico - July 18, 1951

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
197	Jun 30, 1951	Adoption of Rules for the Operation and Maintenance of the Diversion Dam on the Colorado River. El Paso United States - July 30, 1951 Mexico - July 18, 1951
198	Jun 2, 1953	Temporary weir across the Rio Grande at the Anzalduas Dam site. Juarez United States - June 18, 1953 Mexico - June 17, 1953
199	Dec 15, 1953	Establishment of jurisdictional line at the Falcon Reservoir. El Paso United States - December 30, 1953 Mexico - January 15, 1954
200	Aug 13, 1954	Temporary dike across the Rio Grande near its mouth. Juarez United States - August 18, 1954 Mexico - August 18, 1954
201	Oct 18, 1954	Regulations for storage, conveyance, and delivery of waters of the Rio Grande from Ft. Quitman, Texas to the Gulf of Mexico. El Paso United States - October 23, 1954 Mexico - October 28, 1954
202	Jan 11, 1955	Bases for joint operation and maintenance of Falcon Dam and Hydroelectric Plant and for division of costs thereof. Juarez United States - February 04, 1955 Mexico - January 25, 1955

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
203	Dec 23, 1955	Plans and procedures for construction of the Anzalduas Diversion Dam. El Paso United States - January 16, 1956 Mexico - January 14, 1956
204	Dec 24, 1955	Banco Number 602, "San Felipe." Juarez United States - January 12, 1956 Mexico - January 14, 1956
205	May 21, 1956	Improvement of generation of hydroelectric energy at Falcon Plant. El Paso United States - June 08, 1956 Mexico - June 06, 1956
206	Jan 13, 1958	Joint operation and maintenance of the Nogales International Sanitation Project. Juarez United States - February 08, 1958 Mexico - January 28, 1958
207	Jun 19, 1958	Consideration of joint report of the principal engineers on site, capacities and type of dam for the second major international storage dam on the Rio Grande. El Paso United States - November 28, 1958 Mexico - November 14, 1958
208	Nov 14, 1958	Final liquidation of costs corresponding to Mexico for Group I levee works required upstream from the Morelos Diversion Dam to protect lands within the United States against damages from such rise in flood stages of the Colorado River as might result from construction, operation and maintenance of that structure. Juarez United States - November 20, 1958 Mexico - December 04, 1958

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
209	Nov 21, 1958	Portion allocatable to Mexico of costs of operation and maintenance of the Group I levees on the Colorado River upstream from Morelos Diversion Dam. El Paso United States - November 28, 1958 Mexico - December 04, 1958
210	Jan 12, 1961	Recommendations regarding construction of Amistad Dam. Juarez United States - January 23, 1961 Mexico - January 24, 1961
211	May 12, 1961	Manner of payment of Mexico's share of cost of construction of Group II Colorado River levees upstream from Morelos Diversion Dam. El Paso United States - May 25, 1961 Mexico - May 23, 1961
212	Dec 22, 1961	Improvement of the channel of the Lower Rio Grande. Juarez United States - January 12, 1962 Mexico - January 05, 1962
213	Apr 26, 1963	Foundation drilling and grouting program from Amistad Dam. El Paso, Texas United States - May 08, 1963 Mexico - May 16, 1963

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
214	Aug 28, 1963	Engineering considerations relating to relocation of the Rio Grande at El Paso, Texas, and Cd. Juarez, Chihuahua. Juarez United States - September 27, 1963 Mexico - September 26, 1963 Both approvals subject to the understanding that, as indicated by its terms, it shall be effective as of date of exchange of ratifications of Chamizal Convention signed August 29, 1963.
215	Sep 28, 1963	Design and procedures for construction of the Amistad Dam. El Paso United States - October 22, 1963 Mexico - October 22, 1963
216	Mar 18, 1964	Operation and maintenance of the international plant for treatment of Agua Prieta, Sonora, and Douglas, Arizona sewage. Juarez United States - April 02, 1964 Mexico - April 01, 1964
217	Nov 30, 1964	Clearing of the Colorado River channel downstream from Morelos Dam. El Paso United States - December 07, 1964 Mexico - December 14, 1964
218	Mar 22, 1965	Recommendations on the Colorado River Salinity problem. Juarez United States - March 22, 1964 Mexico - March 22, 1964

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
219	Jul 16, 1965	Bridges to be constructed over the new channel of the Rio Grande between El Paso and Ciudad Juarez, and their corresponding international inspection facilities. El Paso United States - July 26, 1965 Mexico - August 12, 1965
220	Jul 16, 1965	Improvement and expansion of the international plant for the treatment of Douglas, Arizona, and Agua Prieta, Sonora sewage. Juarez United States - July 28, 1965 Mexico - August 12, 1965
221	Nov 29, 1965	Final liquidation of costs allocatable to Mexico of construction of the south Gila levee and determination of the part of its operation and maintenance costs allocatable to that country. El Paso United States - December 13, 1965 Mexico - December 07, 1965
222	Nov 30, 1965	Emergency connection of the sewage system of the city of Tijuana, Baja California, to the Metropolitan sewage system of the city of San Diego, California. Juarez United States - December 20, 1965 Mexico - December 07, 1965
223	Nov 30, 1965	Measures for solution of the Lower Rio Grande salinity problem. El Paso United States - December 27, 1965 Mexico - December 07, 1965

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
224	Jan 16, 1967	Recommendations concerning the Lower Rio Grande salinity problem. Juarez United States - January 23, 1967 Mexico - January 20, 1967
225	Jun 19, 1967	Channelization of the Tijuana River. El Paso United States - June 27, 1967 Mexico - June 26, 1967
226	Jun 23, 1967	Additional Monuments on the land boundary between International Monuments Nos. 2 and 3. Juarez United States - June 30, 1967 Mexico - June 30, 1967
227	Sep 5, 1967	Enlargement of the international facilities for the treatment of Nogales, Arizona, and Nogales, Sonora sewage. El Paso United States - September 08, 1967 Mexico - September 20, 1967
228	Oct 19, 1967	Demarcation of the new international boundary in the El Paso, Texas/Cd. Juarez, Chihuahua sector pursuant to the Convention for solution of the Chamizal. Juarez United States - October 27, 1967 Mexico - October 27, 1967 To take effect at 12:01 a.m., M.D.T., on October 28, 1967

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
229	Jan 4, 1968	Delineation of Provisional Maritime Boundaries between the exclusive fishery zones of the U.S. and Mexico in the Gulf of Mexico and the Pacific Ocean. El Paso United States - January 17, 1968 Mexico - January 19, 1968
230	May 8, 1968	Additional Monuments 244A and 244B on the land boundary, between International Monuments Nos. 244 and 245. Juarez United States - May 17, 1968 Mexico - May 18, 1968
231	May 9, 1968	Banco Number 156 "Los Indios." El Paso United States - May 17, 1968 Mexico - May 18, 1968
232	May 9, 1968	Demarcation of a jurisdictional line in the Amistad Reservoir. Juarez United States - May 17, 1968 Mexico - May 18, 1968
233	May 21, 1969	Monumentation of new bridges over the Rio Grande. El Paso United States - May 29, 1969 Mexico - June 04, 1969
234	Dec 2, 1969	Waters of the Rio Grande allotted to the U.S. from the Conchos, San Diego, San Rodrigo, Escondido, and Salado Rivers and the Las Vacas Arroyo. Juarez United States - December 19, 1969 Mexico - December 10, 1969

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
235	Dec 3, 1969	Division of operation and maintenance costs of Amistad Dam. El Paso United States - December 15, 1969 Mexico - December 10, 1969
236	Jul 2, 1970	Construction of works for channelization of the Tijuana River. Juarez United States - July 10, 1970 Mexico - July 23, 1970
237	Jul 10, 1970	Elimination of 19 Bancos cut by the Rio Grande before 1910 in the Presidio-Ojinaga Valley. El Paso United States - July 27, 1970 Mexico - July 23, 1970
238	Sep 10, 1970	Improvement of the International Flood Control works of the Lower Rio Grande. Juarez United States - October 07, 1970 Mexico - October 02, 1970
239	Oct 16, 1970	Elimination of "Panales" and "Loma del Pinto 2." El Paso United States - October 29, 1970 Mexico - October 21, 1970
240	Jun 13, 1972	Emergency deliveries of Colorado River waters for use in Tijuana. Juarez United States - June 19, 1972 Mexico - June 19, 1972

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
241	Jul 14, 1972	Recommendations to improve immediately the quality of Colorado River waters going to Mexico. El Paso United States - July 14, 1972 Mexico - July 14, 1972
242	Aug 30, 1973	Permanent and definitive solution to the international problem of the salinity of the Colorado River. Mexico, D.F. United States - August 30, 1973 Mexico - August 30, 1973
243	Sep 25, 1973	An amendment to Minute No. 240 relating to emergency deliveries of Colorado River water for use in Tijuana. El Paso United States - October 24, 1973 Mexico - October 10, 1973
244	Dec 4, 1973	Maintenance of the international land boundary monuments. Juarez United States - December 18, 1973 Mexico - December 11, 1973
245	May 15, 1974	Additions and Modifications to Minute No. 240 entitled "Emergency Deliveries of Colorado River waters for use in Tijuana," of June 13, 1972. El Paso United States - June 03, 1974 Mexico - June 28, 1974

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
246	Jan 28, 1975	Recommendations for execution of the changes in location of the Rio Grande stipulated in Article I of the Boundary Treaty of 1970. Juarez United States - February 04, 1975 Mexico - February 18, 1975
247	Feb 7, 1975	International plan for the protection of the Presidio-Ojinaga Valley against floods of the Rio Grande. El Paso United States - February 18, 1975 Mexico - February 18, 1975
248	Jun 10, 1975	Recommendation for extension of the Wellton-Mohawk Bypass Drain in Mexican territory. Juarez United States - June 23, 1975 Mexico - June 20, 1975
249	Jul 14, 1975	Placement of Markers on the land boundary. El Paso United States - July 22, 1975 Mexico - July 24, 1975
250	Jan 8, 1976	Elimination of Bancos No. 334 "Carranza," No. 335 "Macum," No. 451 "La Oficina," 452 "Vaco de Piedra," No. 453 "Las Viboras," and No. 454 "Rancho Texas," cut by the Rio Grande between Ft. Quitman, Texas and the mouth of the Rio Conchos. Juarez United States - January 21, 1976 Mexico - January 16, 1976

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
251	Apr 28, 1976	Occupants of Horcon Tract (That residents of Horcon Tract not be evacuated for the transfer of the tract from the U.S. to Mexico under the 1970 Boundary Treaty.) El Paso United States - May 14, 1976 Mexico - May 07, 1976
252	Aug 31, 1976	An amendment to Minutes Nos. 240 and 245, Relating to emergency deliveries of Colorado River waters for use in Tijuana (Mexico agrees to pay beginning October 1976 for additional costs of treatment in the U.S. of the portion of Mexico's Colorado River Treaty waters delivered through facilities in the U.S.) Juarez United States - September 29, 1976 Mexico - September 30, 1976
253	Sep 23, 1976	Maps of the International Boundary in the Rio Grande and in the Colorado River. El Paso United States - October 15, 1976 Mexico - October 17, 1976
254	Sep 24, 1976	Operation and maintenance of Retamal Diversion Dam. Juarez United States - October 15, 1975 Mexico - October 17, 1975
255	Jan 28, 1977	Consideration of possible property rights of the residents occupants of the Horcon Tract and of Beaver Island. El Paso United States - March 07, 1977 Mexico - March 31, 1977

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
256	Feb 22, 1977	Extension of Minutes Nos. 240, 243, 245 and 252, regarding emergency deliveries of Colorado River waters for use in Tijuana. Juarez United States - July 15, 1977 Mexico - March 14, 1977
257	May 18, 1977	Completion of the relocations of the Rio Grande stipulated in Article I of the 1970 Treaty. El Paso United States - May 26, 1977 Mexico - May 26, 1977
258	May 27, 1977	Modification of the U.S. portion of the plan for the channelization of the Tijuana River. Juarez United States - June 08, 1977 Mexico - June 20, 1977
259	Jul 27, 1978	Extension of the effect of Minute No. 256, relating to the emergency deliveries of Colorado River water for use in Tijuana. El Paso United States - August 11, 1978 Mexico - August 09, 1978
260	Aug 11, 1979	Extension of the effect of Minute No. 259, relating to the emergency deliveries of Colorado River water for use in Tijuana. Juarez United States - December 07, 1979 Mexico - August 14, 1979
261	Sep 24, 1979	Recommendations for the solution to the border sanitation problems. El Paso United States - September 27, 1979 Mexico - October 02, 1979

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
262	Dec 26, 1979	Recommendations for works to preserve for the Rio Grande its character as the International Boundary in the reach from Cajoncitos, Chih. Juarez United States - January 14, 1980 Mexico - February 11, 1980
263	Aug 6, 1980	Extension of the effect of Minute No. 260, relating to the emergency deliveries of Colorado River water for use in Tijuana. El Paso United States - September 22, 1980 Mexico - August 07, 1980
264	Aug 26, 1980	Recommendations for solution of the New River border sanitation problem at Calexico, California/Mexicali, Baja California Norte. Juarez United States - September 26, 1980 Mexico - December 04, 1980
265	Dec 13, 1980	Installation of stoplogs at Anzalduas Diversion Dam. Juarez United States - January 14, 1981 Mexico - January 07, 1981
266	Aug 3, 1981	Extension of the effect of Minute No. 263, relating to the emergency deliveries of Colorado River water for use in Tijuana. Juarez United States - November 13, 1981 Mexico - August 25, 1981
267	Aug 13, 1984	Extension of Minute No. 266, relating to the emergency deliveries of Colorado River water for use in Tijuana. El Paso No approvals needed

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
268	Jul 26, 1984	Modification to Minute No. 253 Maps of the International Boundary in the Rio Grande and in the Colorado River. Juarez United States - August 20, 1984 Mexico - August 03, 1984
269	Nov 29, 1984	Replacement of pumps at the Morillo Drain Pumping Plant. El Paso United States - December 07, 1984 Mexico - November 22, 1984
270	Apr 30, 1985	Recommendations for the First Stage Treatment and Disposal Facilities for the Solution of the Border Sanitation Problem at San Diego, California/Tijuana, Baja California. Juarez United States - July 17, 1985 Mexico - June 26, 1985
271	Sep 9, 1986	Markers Installed on the International Boundary. El Paso United States - October 08, 1986 Mexico - September 24, 1986
272	Oct 24, 1986	Installation of Monument 13-R. Juarez United States - October 30, 1986 Mexico - November 21, 1986
273	Mar 19, 1987	Recommendations for the Solution of the Border Sanitation Problem at Naco, Arizona/Naco, Sonora. El Paso United States - April 09, 1987 Mexico - April 15, 1987

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
274	Apr 15, 1987	Joint Project for Improvement of the Quality of the Waters of the New River at Calexico, California/Mexicali, Baja California. Juarez United States - May 13, 1987 Mexico - April 24, 1987
275	Nov 4, 1987	Demarcation of the International Boundary and Monumentation of the new International Bridges over the Rio Grande between Del Rio, Texas/Cd. Acuna, Coahuila and between Hidalgo, Texas and Reynosa, Tamaulipas. El Paso United States - December 01, 1987 Mexico - November 11, 1987
276	Jul 26, 1988	Conveyance, treatment and disposal of sewage from Nogales, Arizona and Nogales, Sonora exceeding the capacities allotted to the United States and Mexico at the Nogales International Sewage Treatment Plant, under Minute No. 227. Juarez United States - August 19, 1988 Mexico - August 10, 1988
277	Aug 29, 1988	Location, Permanency and Visibility of International Monument No. 123-A El Paso United States - September 27, 1988 Mexico - September 13, 1988
278	Mar 31, 1989	Delineation of the International Boundary on Aerial Photographic Mosaics of the Rio Grande Juarez United States - April 28, 1989 Mexico - April 18, 1989

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
279	Aug 28, 1989	Joint Measures to Improve the Quality of the Waters of the Rio Grande at Laredo, TX/Nuevo Laredo, Tamaulipas Laredo, Texas Nuevo Laredo, Tamaulipas United States - August 28, 1989 Mexico - August 28, 1989
280	Mar 6, 1990	Disposal of Equipment Installed at the Expense of Mexico in United States Territory to Enable Emergency Deliveries of Colorado River Waters for Use in Tijuana, Baja California Ciudad Juarez United States - April 05, 1990 Mexico - April 05, 1990
281	Mar 17, 1990	Modification of the Official Decal Adopted to Identify Personnel, Vehicles and Other Equipment of the Commission El Paso United States - April 19, 1990 Mexico - April 19, 1990
282	Mar 27, 1990	Rehabilitation of the Saline Waters Disposal System for Solution of the Salinity Problem in the Waters of the Lower Rio Grande Juarez United States - April 25, 1990 Mexico - July 03, 1990
283	Jul 2, 1990	Conceptual Plan for the International Solution to the Border Sanitation Problem in San Diego, California/Tijuana, Baja California El Paso United States - August 08, 1990 Mexico - August 08, 1990

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
284	Jan 18, 1991	Rehabilitation of the Wellton-Mohawk Bypass Drain in Mexican Territory Juarez United States - February 15, 1991 Mexico - February 15, 1991
285	Nov 8, 1991	Recommendations for Establishing a Restricted Use Zone on Lands Adjacent to the Main Channel of the Rio Grande in the Vicinity of Brownsville, Texas/Matamoros, Tamaulipas El Paso United States - December 06, 1991 Mexico - December 05, 1991
286	Nov 29, 1991	Demarcation and Monumentation of the International Boundary on the New International Ysleta/Zaragoza Bridge and Demolition of the Old Bridge Juarez United States - December 17, 1991 Mexico - December 17, 1991
287	Oct 6, 1992	Emergency Deliveries of Colorado River Waters for Use in Tijuana, Baja California El Paso United States - Mexico - November 19, 1992
288	Oct 30, 1992	Conceptual Plan for the Long Term Solution to the Border Sanitation Problem of the New River at Calexico, California - Mexicali, Baja California Juarez United States - November 13, 1992 Mexico - November 24, 1992

NO.	DATE SIGNED	TITLE, PLACE SIGNED & DATES APPROVED
289	Nov 13, 1992	Observation of the Quality of the Waters Along the United States and Mexico Border El Paso United States - Mexico - November 24, 1992

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION
DIRECTIVE SYSTEM

VOLUME: I
CHAPTER: 101
DATE: May 7, 2003

TO: Each Division and Office In Headquarters; each Field Office; Office of the Secretary; Internal Auditor; Communications and Records Office; Presidents - AFGE Locals 3060 and 3309

SUBJECT: Freedom of Information Act

Control: Freedom of Information Act Officer

101.1. PURPOSE: To distribute the United States Section, International Boundary and Water Commission, Freedom of Information Act final rules to Section personnel. Supervisors should inform employees under their supervision of the contents of the rules and procedures.

101.2. AUTHORITY: The Freedom of Information Act (FOIA), 5 U.S. C. 552, as amended on November 21, 1974, by Pub. L. 93-502, and on October 27, 1986, by Pub. L. 99-570.

101.3. POLICY: The United States Section is required by law to issue rules implementing the FOIA.

101.4. PROCEDURES:

a. All FOIA requests will be answered by the FOIA Officer at the Headquarters level. Field offices receiving such requests will forward them immediately to Headquarters for reply.

b. FOIA requests will be routed to the FOIA Officer in a special 10-day suspense folder. Copies will be made for the Foreign Affairs Secretary, and the General Counsel.

c. The form at Appendix A (Record of Freedom of Information (FOI) Processing Cost - IBWC - 122 (9/90) will be used to document charges incurred by the requester.

d. The FOIA Officer will route the original request to the responsible USIBWC employee for reply.

(1) The responsible functional area employees will coordinate the reply through their division/office. Final coordination will be routed through the General Counsel, the Foreign Affairs Secretary and the FOIA Officer.

(2) The FOIA folder will contain the incoming request, draft response prepared for the FOIA Officer's signature, IBWC - form, determination and reasons therefore, with pertinent information documenting reasons for exemptions, if applicable.

101.5. RESPONSIBILITIES:

a. The Compliance Officer/Internal Auditor will serve as the Agency's FOIA Officer. His responsibility includes implementation of and compliance with the Act, as well as coordination of requests.

b. Assigned functional areas are responsible for drafting responses, coordinating with their Division/Office, the General Counsel, the Foreign Affairs Secretary, and FOIA Officer. All responses must contain appropriate documentation as required by paragraph 210.4d (2) above.

c. The Foreign Affairs Secretary, acting as Security Officer, will review and rule on questions concerning classified material. Further The Secretary will review and rule on questions concerning IBWC controlled documents.

d. The General Counsel and Foreign Affairs Secretary will receive a copy of the final response.

101.6. SUPERSESSION: This directive supersedes Headquarters Volume 1, Chapter 101, dated April 17, 1991

101.7. EFFECTIVE DATE. These rules became effective September 6, 1999. The provisions of this Directive are effective upon the date of issuance.

FOR THE COMMISSIONER:

Tony R. Chavez
Freedom of Information Act Officer

RECORD OF FREEDOM OF INFORMATION (FOI) PROCESSING COST			Date Received
Type of Request (X One) ☐ Initial ☐ Appeal	Name and Category of Requester		Date Completed
Direct Costs (Those expenditures which the Section actually incurs in searching for and duplicating (and in the cost of commercial requesters, reviewing)			
REVIEW AND SEARCH FEES	Total Hours	Hourly Rate	Total Cost
Manual searches by clerical staff		x $ 9.00/hour	
Manual searches and reviews by professional staff Technical staff		 x$18.00/hour x$13.50/hour	
Computer searches		Direct cost	
REPRODUCTION FEES	Total Pages	Rate	Total Cost
Pages no larger than 8 1/2 x 14		$.10/page	
Pages requiring reduction, enlargement, or other special service.		Direct cost	
Reproduction by other than routine electrostatic copying		Direct cost	
OTHER FEES	Total Unit	Rate	Total Cost
Certification of each record as a true copy		$1.00/copy	
Certification of each record as a true copy under official seal		$1.50/copy	
Duplication of architectural photographs and drawings: 1) Available tracing or reproducible, per square foot		$.10/sq. ft.	
2)If intermediate negative and reproducible required; plus tracing per square foot		$2.00/negative	
		$1.00/sq. ft.	
POSTAGE AND HANDLING		Direct cost	
OTHER FEES (PLEASE DESCRIBE)			
Comments:	TOTAL COLLECTABLE COSTS		$0.00
	FEES WAIVED/ REDUCED		
	TOTAL CHARGED		$0.00

No fees under $10.00 will be billed by the U.S. Section because the cost of collection would be greater than the fee.

CATEGORIES:

1. Commercial - Use Request -- Refers to a request from or on behalf of one who seeks information for cause or purpose that furthers the commercial, trade, or profit interests of the requester or person on whose behalf
   the request is made.

2. Educational Institution -- Refers to a preschool, a public or private elementary or secondary school, an institution of graduate higher education, an institution of undergraduate higher education, an institution of professional education, and an institution of vocational education, which operates a program or programs of scholarly research.

3. Noncommercial Scientific Institution - Refers to an institution that is not operated on a "commercial" basis as that term is referenced in 1 above, and which is operated solely for the purpose of conduction scientific research the results of which are not intended to promote any particular product or industry.

4. Representative of the News Media - Refers to any person actively gathering news for an entity that is organized and operated to publish or broadcast news to the public. The term "news" means information that is about current events or that would be current interest to the public.

Educational and noncommercial scientific institutions, and the news media will be charged for the cost of reproduction along. These requesters are entitled to the first 100 pages (paper copies) of duplication at no cost. Other noncommercial requesters not included above, are entitled to the first 100 pages (paper copies of duplication at no cost and 2 hours of search without charge). Commercial - use requesters will be charged the full direct costs of search for, reviewing for release, and duplicating the records sought. Commercial - use requesters are NOT entitled to 2 hours of free search time.

The U.S. Section may assess charges for time spent searching for the records even if the Section fails to locate the records or if the records located are exempt from disclosure.

Volume: II
Chapter: 350
Date: August 2, 2000

CHANGE ORDER NO.: 1

SUBJECT: Revision of IAG/MOA/MOU Agreement Format

TO: USIBWC Executive Staff and Division and Project Managers

CONTROL: Office of the Chief Administrative Officer (CAO)

350.1 REQUIREMENT/AUTHORITY

This Change Order is issued under the authority of United States Section Directive Volume I, Chapter 001, Dated March 12, 1999, SUBJECT: UNITED STATES SECTION ISSUANCE SYSTEM.

350.2 PURPOSE

The purpose of this Change Order is to transmit a revised page H 350-D-6, the final page of the agreements format. The revision is to clarify whom the USIBWC signatories should be for most agreements.

350.3 FILING INSTRUCTIONS

Remove and dispose of the original page H 350-D-6 from Appendix D of the Directive. Insert the attached page H 350-D-6, CO 1, dated August 2, 2000.

350.4 RESPONSIBILITIES

Supervisors and managers responsible for the negotiation and approval of interagency, intergovernmental, and/or international agreements are responsible for assuring that such agreements are properly formatted, and that the signature page is accurate. These individuals are also responsible for the proper filing of this Change Order.

350.5 EFFECTIVE DATE

This Change Order is effective upon the issue date.

FOR THE COMMISSIONER

_____

Rodney L. Adelman
Chief Administrative Officer

CO 1: 8/2/2000

IAG/MOA/MOU/INTERAGENCY & INTERGOVERNMENTAL AGREEMENTS HANDBOOK

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FOR THE USIBWC

Date:_____ _____

(Signature)

_____

(Typed Name of Contracting Officer)

USIBWC CONTRACTING OFFICER

—

Date:_____ _____

(Signature)

_____

(Typed Name of Chief Financial Officer [CFO])

USIBWC CHIEF FINANCIAL OFFICER

—

United States Section
International Boundary and Water Commission
United States and Mexico

FOR THE [Other Agency Acronym]

Date:_____ _____

(Signature)

_____

(Typed Name of Signatory)

_____

(Signatory's Position or Organizational Title)

(Enter Other Agency's Full Name)

United States Section Directive

Volume: II
Chapter: 350
Date: May 15, 2000

SUBJECT: **Mandatory Procedures - Development, Implementation, Monitoring, and Maintenance of Interagency Agreements (IAG's), Memorandums of Understanding (MOU's), Memorandums of Agreement (MOA's), and Similar Intergovernmental/Interagency/International Agreements and Grants**

TO: **USIBWC Executive Staff and Division and Project Managers**

CONTROL: **Office of the Chief Administrative Officer (CAO)**

350.1 REQUIREMENT/AUTHORITY

A. Under the provisions of a variety of laws and regulations such as, but not limited to, the Intergovernmental Cooperation Act, the Admiral James W. Nance Foreign Relations Authorization Act, the Intergovernmental Personnel Act, the Economy in Government Act, and the Federal Acquisition Regulations, the United States Commissioner is authorized to enter into agreements with other governmental entities such as other Federal agencies, State and Local Governments, educational institutions, and special governmental entities such as water districts. These authorities are in addition to the USIBWC's basic enabling legislation, its authorizing legislation, and its general and project-specific appropriations legislation. The purpose of these agreements is to accomplish necessary work for the benefit of United States citizens.

B. Because these agreements are essentially procurement actions involving the expenditure of resources, usually taxes paid by United States citizens and entrusted to the United States Commissioner by various entities, it is mandatory that:

- Agreements be prepared which clearly meet not only the letter, but also the spirit and intent of existing laws and regulations concerning competition, efficiency, and economy;

- All resources (fiscal, human, material, etc.) are expended in complete accordance of

existing law and regulation, and that the expenditure of any resources are carefully monitored to assure compliance with existing laws and regulations; and

- All necessary records and other documentation are prepared and maintained to prevent inappropriate, improper, or illegal actions in any aspect of the agreements.

350.2 PURPOSE

The purpose of this Directive is to establish the framework for the mandatory policies, practices, and procedures for the development, implementation, monitoring, and maintenance of contractual agreements such as IAG's, MOU's, MOA's, and similar agreements. Specific requirements, practices, and procedures are stated in the Handbook (VOLUME II, Chapter 350, Handbook **H 350**) developed based upon the requirements stated in this Directive.

350.3 SUPERSESSION

There has been no previous Directive, Handbook, or Manual on this subject. No previous documents are canceled or superseded.

350.4 RESPONSIBILITIES

A. The laws, rules, and regulations authorizing interagency and intergovernmental contractual agreements vest the authority and responsibility for such actions in the **United States Commissioner (Commissioner)**. Therefore, **except as specifically delegated or assigned**, the final authority, responsibility, and liability for the propriety of such agreements rests with the United States Commissioner. Specific delegations and assignments are stated in section 350.5, DELEGATION, below.

B. **Departmental level managers and heads of Headquarters offices** are responsible for the actions of their subordinates, and are responsible for observing the policies, practices and procedures as stated in this Directive and Handbook **H 350**. They are also responsible for assuring that their subordinate managers and supervisors act in compliance with the policies, practices, and procedures as stated in this Directive and Handbook **H 350**. Departmental level managers and heads of Headquarters offices are assigned the personal liability for any agreement consummated personally or by his/her subordinates which is not in accordance with this Directive and Handbook **H 350**.

C. The **Chief, Compliance Office** is responsible for periodically conducting audits of IAG's, MOU's, MOA's, and similar agreements to assure that all legal and/or regulatory requirements have been met and that appropriate action is being taken to assure an adequate level of internal control. In the event the Chief, Compliance Office, finds that legal and/or regulatory requirements are not being met, or that the levels of internal controls are not in compliance, he/she will, **within 30 calendar days** of determining the nature and extent of the deficiencies,

prepare a report detailing his/her findings for the attention of the Commissioner and the attention of the **Chief Administrative Officer (CAO)**, to whom the Commissioner has delegated the primary responsibility and authority for reviewing and monitoring such agreements prior to their finalization, during their implementation, and upon completion.

D. The **Legal Advisor** is responsible for reviewing such agreements prior to their finalization to assure that (1) legal requirements have been met, and (2) that the interests of the USIBWC and the United States Government as a whole are protected. The Legal Advisor is also responsible for assisting the **CAO** in resolving any legal issues concerning such agreements.

E. The **Chief Administrative Officer (CAO)** is responsible for reviewing such agreements to ensure that all such agreements are self-supporting (do not require a subsidy from, or put "at risk" the annual State Department appropriation), and that sufficient administrative support can be provided to ensure efficient use of agreement resources. The CAO is also responsible for the accounting and reporting of agreement resources, and securing necessary financial management (apportionment/allotment) authority for the use of those resources.

350.5 DELEGATION

A. The Commissioner hereby delegates to the Chief Administrative Officer (CAO) the responsibility for evaluating and approving such agreements prior to their finalization; the responsibility for monitoring the implementation of such agreements to assure that legal and/or regulatory requirements are being met; and for assuring that full documentation is properly prepared to assure that all actions taken were legal, regulatorily correct, and proper upon the close-out or completion of such agreements. This authority includes the authority to initiate corrective action when needed, and to recommend disciplinary action where appropriate. This delegation may be further delegated to not more than one office or individual.

B. The Commissioner hereby delegates to Departmental Level Managers and the heads of Headquarters Offices the authority to, subject to the policies, practices, procedures, and conditions stated in Handbook **H 350**, enter into **discussions** with other governmental entities which may lead to a contractual agreement. Upon approval of the **CAO**, these individuals may enter into formal **discussions and/or negotiations** which may lead to a contractual agreement. However, prior to finalizing such an agreement, the review procedures specified in Handbook **H 350** must be completed, and the agreement must have the formal approval of the **Contracting Officer**. The authority to discuss and negotiate may be delegated to subordinate managers at no lower than Division Engineer, Division Manager, or Project Manager level. Failure of subordinates to whom such authority has been delegated to act properly **does not** absolve the Department Level Manager or head of a Headquarters Office from personal liability should his or her subordinates fail to observe established requirements.

350.6 EFFECTIVE DATE

This Directive is effective 15 calendar days following its issue date.

John M. Bernal
United States Commissioner

UNITED STATES SECTION
INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

ADMINISTRATION DEPARTMENT

IAG/MOA/MOU/INTERAGENCY

AND

INTERGOVERNMENTAL AGREEMENTS

HANDBOOK

VOLUME : II
CHAPTER : 350
HANDBOOK: H 350
DATE : MAY 15, 2000

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United States Section Handbook

Volume: II
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Mandatory Procedures
Development, Implementation, Monitoring, and Maintenance Of
Interagency Agreements (IAG's), Memorandums of Agreement (MOA's)
Memorandums of Understanding (MOU's), and Similar Intergovernmental Agreements,
International Agreements/Minutes and Grants

H 350.1 Requirement and Reference

This Handbook has been prepared to provide the mandatory procedures for the development, implementation, monitoring, and maintenance of Interagency Agreements (IAG's), Memorandums of Agreement (MOA's), Memorandums of Understanding (MOU's), similar interagency/intergovernmental agreements, and grants. United States Section Directive Volume II, Chapter 350, dated May 15, 2000, with the same subject as shown above, provides that a Handbook such as this will be prepared and distributed to help assure the proper preparation and use of such interagency agreements.

H 350.2 Control

As stated in Directive Volume II, Chapter 350, dated May 15, 2000, the United States Commissioner has delegated the responsibility for monitoring such agreements at all stages to the **Chief Administrative Officer (CAO)**. Questions regarding these requirements should be addressed to that office which will either obtain the information and provide it to the requestor, or will refer the requester to the Office/individual which can provide the information directly and expeditiously. In some instances, it may be more appropriate to contact the **Contracting Officer** directly.

H 350.3 Supersession

There has been no previous Handbook or Manual on this subject. Therefore, no previous instructions are superseded.

H 350.4 Effective Date

The provisions of this Handbook are effective fifteen (15) calendar days following the date of issuance.

H 350.5 General

A. Known by a variety of different names, and usually with somewhat less stringent requirements than a competitive contract with private industry contractors, interagency and/or intergovernmental agreements **are contracts**, and there are requirements which must be met to assure that the agreements, and the activities resulting from the agreements, are legal and in accordance with existing laws and regulations.

B. One must be careful to maintain the required documentation, in assuring that any changes are made within the legal and regulatory framework, and in assuring that a thorough and complete "audit trail" is maintained at all times during the implementation of the agreement. Because of their contractual nature, failure to maintain control over such agreements and assure that all actions are in accordance with existing laws and regulations can result in what is essentially an unauthorized commitment, sometimes called an "unratified purchase," and as in other instances when procurement and fiscal requirements are not met, the official taking or permitting an illegal, improper, or irregular action may be held personally liable for the improper expenditures. As stated in the Directive which is the basis for this Handbook, the United States Commissioner has imposed the requirement for accountability/liability with the delegation of authority to act.

C. As with all governmental financial matters, agencies must avoid unauthorized use of Congressional appropriations, and must assure that funds appropriated for one purpose are not used for any other purpose without first securing required approvals. Subsidizing an activity with funds appropriated for a different activity is not permitted. A major purpose of this Handbook is to attempt to eliminate such situations because the USIBWC is frequently financially liable for unreimbursed expenditures. Another purpose is to improve the control and utilization of interagency and intergovernmental agreements.

D. The format of the information which follows is, to the extent possible, in "building block" order, with the first actions or activities listed first and then the follow-on activities are shown. Where reviews, concurrences, and/or approvals are required prior to moving to the next set of activities, the information of "who, what, and when" is shown.

E. Interdepartmental/office communication, coordination, and cooperation within the USIBWC is crucial. Each contact person must be fully informed of the capabilities of the USIBWC so that internal capabilities such as design, construction management, environmental contract

management, etc. can be fully utilized while at the same time agreements are not reached which exceed the USIBWC's capabilities.

H 350.6 Initial Contacts

A. When the initial contact is made by the USIBWC, the full scope of the activity which will most likely result if an agreement is reached should be known, and the steps shown in H 350.7, Defining the Scope and Cost of the Project, Initial, and H 350.8, Initial Review and Approval, should have been completed. Understandably, as a result of discussions/negotiations, the scope of the activity may change, and some additional work may be required to more accurately determine anticipated costs, as well as re-submittal for review and approval.

B. When the initial contact is made with the USIBWC by another governmental entity, the person contacted, or the person to whom the responsibility for initial, informal discussions is assigned, must obtain as much information as possible regarding the scope of the desired activity. As an absolute minimum, a full description of the work to be performed, where and when the work is to be performed, what resources the contacting party will provide, and the expected duration of the activity is to be obtained. The USIBWC representative must assure that **no** commitment, implied or actual, is made to the other governmental entity regarding the proposed activity. The USIBWC representative must be very clear that these are considered informal discussions only, and that the main purpose is to obtain sufficient information for the USIBWC to make an initial decision as to whether or not to continue the discussions.

H 350.7 Defining the Scope and Cost of the Project, Initial

A. Working with the information obtained in the initial contact, a fairly detailed outline of the work to be performed should be prepared. Where necessary, the representative of the other organization(s) should be contacted to resolve questions and clarify expectations. If the contact was initiated by the USIBWC, the outline prepared before the contact was made is to be modified if considered appropriate as a result of the initial contact.

B. The detailed outline will serve as the basis for developing the initial estimate of costs, and should include sufficient information to assure that the USIBWC is not subsidizing work which is requested by an outside party. In some instances, it may be that the work is considered mutually beneficial, and it would be appropriate to use some USIBWC resources in the work. **However**, the final decision(s) regarding such subsidies must be made in the review and approval process described below. Where USIBWC subsidies will be involved, the definition of the scope of the work must clearly identify the subsidies, the amount, and the justification. It must be clearly established and documented that budget authority exists for such expenditures.

C. The initial costing activity will use the Budget and Costs Definitions in Appendix A, and the Cost Calculation Worksheet in Appendix B. Upon completion of this work, the preparer is responsible for a detailed review to assure that projections are accurate, and for identifying any costs

which are not addressed using the two appendices.

H 350.8 Initial Review and Approval*

A. The proposed scope of work, with worksheets and justifications attached, will first be reviewed by the head of the departmental level office responsible for supervision of the office where the proposed scope and anticipated costs was prepared. This must be a careful review, and a cursory review will not be sufficient. Any questions will be resolved before the package is forwarded.

B. The next reviewer will be the Office of the Legal Advisor where a determination will be made as to whether or not the proposed agreement meets existing legal and regulatory requirements for the type of proposed agreement. If it does not, the Office of the Legal Advisor will return the package to the departmental level manager of the originating office with a brief statement of the deficiencies which must be corrected. The corrected package will be resubmitted to the Office of the Legal Advisor. When the package is acceptable, the Office of the Legal Advisor will forward the package to the next reviewing office.

C. The next reviewing office will be the Budget/Financial Services office which will review the proposed funding to: determine whether or not current legal and regulatory financial requirements are met; whether or not the USIBWC has the required reimbursable and Full Time Equivalent Personnel (FTE) authority; whether or not and/or what impact the agreement will have on other FTE and financial accounts; and to initiate action to set up required financial accounts. If required authorities are not present, or the agreement will have an adverse impact on existing accounts, the package will be returned to the departmental level manager of the originating office with a memorandum stating the deficiencies which must be corrected before the package is resubmitted to the Budget/Financial Services Office. When the package is acceptable, the Budget/Financial Services office will forward the package to the next reviewing office.

D. The next reviewing office will be the Acquisition Division where the package will be reviewed to assure that the proposed work and approach will meet current contracting requirements. If it is deficient, it will be returned to the departmental level manager of the originating office with a memorandum stating the deficiencies and corrections which will have to be made prior to the resubmission of the package to the Acquisition Division. When the package is acceptable, a tentative contract number will be assigned, a Contracting Officer will be assigned, and the package will be forwarded to that office designated by the United States Commissioner as the controlling office for such agreements.

E. Following review of the package and briefing of the United States Commissioner, the package, assuming it is approved, will be returned to the departmental level manager of the originating office. Assuming such work is not assigned to another office, the originating office will be authorized to enter into Formal Discussions. Because these discussions will most likely result in a contract, the designated Contracting Officer must be involved.

***NOTE:** In those instances where the USIBWC is initiating the contacts, the steps outlined above will have been completed **before** the initial contact is made.

H 350.9 Formal Discussions

A. The primary purposes of the formal discussions are to assure (1) that the full extent of the work is known, and (2) that all parties have a good understanding of who will do what, when, where, and at what cost. Every effort is to be made to assure that there are no "loose ends," and that there is agreement among the parties regarding any expectations.

B. The formal discussions will normally produce information regarding the amount, type, timing, and location of the work which is different from that of the initial, informal discussions. This information must be clearly highlighted, and must be used both to develop the final project scope of work, and to refine the cost estimates.

C. At this point, it is quite important that USIBWC offices engaged in these discussions understand that they must make **no** commitment regarding the agreement to the other party or parties. Formal commitment must be made by the signatory authority, and the agreement must go through the formal, final review and approval process before signature.

H 350.10 Defining the Scope and Cost of the Project, Final

A. The information obtained in the formal discussions should be used to prepare a final project scope. This work should be performed with great attention to detail and substance, because this will form the basis of the agreement (contract), and any changes in the future will require substantial justification as well as the same level of review and approval as indicated above.

B. Once the scope is finalized, it must be "costed," **and it must be submitted through the same review process as described above** (i.e., H 350.8) before it can be finalized. Only the United States Commissioner or the individual or office designated by the United States Commissioner can sign as the approving officer. The final review package must contain all documents required in any contract, to include the completed Requisition form.

H 350.11 Office of Record

A. The "Office of Record" is that office where the original agreement, and the original copy of any changes to the agreement, are maintained. The original of all such agreements, and changes to the agreements, will be maintained in the Acquisition Division except international agreements and Minutes. The original of international agreements/minutes will be retained by the Foreign Affairs Office. The Foreign Affairs office will provide the Acquisition Division with a Duplicate Original of

agreements and changes to agreements.

B. The operating office which is implementing the agreement will retain a Duplicate Original of the agreement and any changes to the agreement for their day-to-day use in implementing the agreement. While there is only one Record copy required, the operating office must assure that they have a full understanding of all requirements, and the duplicate copy is to assist them by being readily available for review.

C. It is the responsibility of the Contracting Officer and the office negotiating and finalizing the agreement or changes to the agreement to assure that the Acquisition Division receives the required original documents.

H 350.12 Periodic Reports

The USIBWC will rely upon a system of internal reports to maintain oversight of on-going agreements. As a minimum, the following reports will be used in the monitoring process.

S A quarterly activity report covering the major activities of the office will be prepared by the on-site operating office for each agreement. One copy of the report will be routed through the operating office's management chain to the departmental level manager. One copy will be routed directly to the Contracting Officer. One copy will be routed to the Budget Office, and one copy will be routed to the USIBWC agreements monitor, the **CAO**.

S A monthly budget report will be prepared by the USIBWC Budget Office. One copy of the report will be sent directly to the operating office which is responsible for resolving any differences with the Budget Office. One copy will be sent directly to the Contracting Officer, and one copy will be routed to the agreements monitor.

S A monthly report of pay requests will be prepared by the operating office. This report will reflect:

- The number and amount of any "draw downs;"
- The number of pay requests received to include the dollar amounts of each;
- The number of pay requests approved, to include the dollar amounts of each;
- The number of pay requests rejected, to include the dollar amounts of each and the reason(s) for rejection; and
- The number of pay requests remaining, to include the dollar amounts of each and the anticipated date by which the review of the requests will be completed.

One copy of this report will be routed through the operating office's management chain to the departmental level manager. One copy will be routed to the Contracting Officer. One copy will be routed to the Budget Office, and one copy will be routed to the

agreements monitor.

- **S** The agreements monitor will prepare a monthly briefing paper for the information of the United States Commissioner with a copy being provided to the Acquisition Division and the Budget Office. This report will provide a brief status report on each agreement to include progress, problems, and budgetary conditions.

H 350.13 Changes in the Planned Work

A. It would be highly unusual if an agreement to perform work began and ended with no changes in the work to be performed, or by whom the work is to be performed, or when the work is to be performed, or, in some instances, where the work is to be performed. Such changes should be expected and planning to deal with the changes should be completed before the agreement begins. While you cannot predict the future, you can be prepared to deal with the changes the future will bring.

B. Since these agreements are contractual in nature, the changes must be dealt with in much the same fashion as any other modification to a contract. As a minimum:

- **S** The changes must be defined sufficiently to permit a cost determination;
- **S** The changes must fall within the scope of the original agreement, or a determination must be made that, while the change is outside the scope of the original agreement, it is still within the legal and regulatory framework which controls such agreements;
- **S** The proposed changes must go through an abbreviated review process developed by the agreements monitor to assure that budget and contracting requirements are met; and
- **S** The proposed changes must have the approval of the United States Commissioner or his/her designee.

H 350.14 Changes in Budget

A. There are several possible changes in budget with which you may be required to deal. Some, but not all, of these are:

- Changes in work may require budgetary changes with increases or decreases in funding;
- Changes in appropriations which may cause increases or decreases in funding;
- Corrections of errors in initial budgetary planning may require the shifting of funding from one budget classification to another;
- Changes in the number and type of personnel may require changes in budget requirements; and

- Changes in the priority of the work may require increases or decreases in the budget.

B. Maintaining an absolutely accurate control of the budget at all times is essential. It is not an area which can be left for correction at a later date. It is critical that you understand that any change in an element of the budget has a "domino effect" on other areas of the budget.

C. When there is a change, no matter how small, the individual or office responsible for implementing the agreement must take the actions outlined below. Where the changes result in no increase in the use funds or changes in budget classification, the change must be made before the end of the pay period following the pay period in which the change takes place. If possible, the actions should be taken before the change(s) take place. If the change will result in an increase in the use of funds or change in budget classification, the actions **must be taken before** the change is effected to avoid an unauthorized commitment or possible Anti-Deficiency Act violation.

(1) The budgetary change must be defined in terms of its impact upon (a) the work to be performed, (b) the personnel required to perform the work, (c) any changes in the number or type of agreements/contracts which will be required to perform the work, (d) where changes are required, the impact on the timing and cost of the performance of the agreement/contract, and (e) the identification of any changes in budgetary allocations which will be required.

(2) Once the changes are defined, the office must then work through the Cost Calculation Worksheet contained in Appendix B, clearly identifying the changes by showing, as a minimum, the previous estimate and the new estimate.

(3) Once completed, the re-defined work and proposed changes in budget must be submitted through the abbreviated review and approval process developed by the agreements monitor so as to assure legal and regulatory compliance, and should include a completed Requisition form and Change Order form for any cost changes.

NOTE: Pending review and approval, the office or individual responsible for implementing the agreement has no legal or regulatory authority to expend funds in the new categories which may be required. Therefore, it is imperative that the highest priority be given to processing the information so that it can be submitted in a timely fashion. The reviewing offices have work of equal or higher priority to perform and cannot be expected to push everything aside to deal with a late submittal.

H 350.15 Documentation Requirements

Until such time as the need for documentation greater than that already called for in this Handbook is shown, no additional documentation will be required other than that which may be required in contracting actions such as the requirement for the preparation of a Determination and Findings to support an Economy Act agreement/action. However, all offices must exercise caution to

assure that documentation requirements reflected in this Handbook are met.

H 350.16 Inventory Requirements

A. Most interagency/intergovernmental agreements/contracts will provide funding for the purchase of the supplies, materials, and equipment required to perform the work. In some instances, the USIBWC will retain the equipment when the work is completed. In other instances, the equipment will revert to the funding agency, or a determination will be made by the funding agency as to the disposition of the equipment. The terms of the agreement must state the disposition of equipment once the project is completed.

B. **In all instances**, the USIBWC must maintain a precise, detailed inventory of all equipment purchased, including instances where the equipment will revert to the USIBWC. As a minimum, this inventory must show:

1) Who requisitioned the equipment and its cost;

2) A full description of the equipment including the "brand" name;

3) Where and when the equipment was received and assigned;

4) Any reassignments of the equipment; and

5) Current physical location and condition.

C. While it is permissible to have regular USIBWC equipment at the same location as equipment purchased through the special funding, managers/supervisors must assure that each category of equipment is **properly marked and identified** to distinguish between the two categories of equipment. Managers/supervisors must assure that equipment purchased for use in completing a specific project is used for that project alone until such time as the equipment is properly released for other uses.

H 350-17 Audit Requirements

A. The USIBWC is responsible for obtaining/performing audits in accordance with the Single Audit Act Amendments of 1996 (31 U.S.C. 7501 - 7507) and revised OMB Circular A-133. These audits will be made in accordance with generally accepted government auditing standards covering financial audits.

B. Such audits are required for **all** agreements, and any contracts resulting from the agreements. In some instances, and particularly those instances where the USIBWC is receiving grant funds from another Federal agency, it may be required that these audits be performed by an

independent auditor. Each agreement will be reviewed at the informal and formal levels of discussion to determine the nature and extent of the audit requirements. The cost of these audits will be included in the overall cost of the agreement as a separate line item.

H 350-18 Restrictions on Lobbying - Grant Funds

[Pub. L. 101-121 (31 U.S.C. 1352); 33 U.S.C. 1251 *et seq.;* 42 U.S.C. 7401 *et seq.;* 42 U.S.C. 6901 *et seq.*; 42 U.S.C. 300f *et seq.*;7 U.S.C. 136 *et. seq.;* 15 U.S.C. 2601 *et seq.*; 42 U.S.C. 9601 *et seq.*; 20 U.S.C. 4011 *et seq.*; 33 U.S.C. 1401 *et seq.]*

A. Conditions on use of funds.

No appropriated funds may be expended by the recipient of a Federal contract, grant, loan, or cooperative agreement to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions:

- the awarding of any Federal contract;
- the making of any Federal grant;
- the making of any Federal loan;
- the entering into of any cooperative agreement; and/or
- the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement

B. Certification requirements

Each person who requests or receives from an agency a Federal contract, grant, loan, or cooperative agreement shall file with that agency a certification that -

- the person has not made, and will not make, any payment prohibited by paragraph A. of this section;
- where indicated as appropriate by completion of a disclosure form, a statement if such person has made, or has agreed to make, any payment using nonappropriated funds (to include profits made from any covered Federal action) which would be prohibited under the terms of paragraph A. of this section if paid with appropriated funds; and

- **S** states whether or not that person has made or has agreed to make any payment to influence or attempt to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the Federal action.

C. Definitions

Agency, as defined in 5 U.S.C. 552(f), includes Federal executive departments and agencies as well as independent regulatory commissions and Government corporations, as defined in 31 U.S.C. 9101(1).

Covered Federal action means any of the following Federal actions:

(1) The awarding of any Federal contract;

(2) The making of any Federal grant;

(3) The making of any Federal loan;

(4) The entering into of any cooperative agreement; and

(5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

Federal contract means an acquisition contract awarded by an agency, including those subject to the Federal Acquisition Regulation (FAR), and any other acquisition contract for real or personal property or services not subject to the FAR.

Federal cooperative agreement means a cooperative agreement entered into by an agency.

Federal grant means an award of financial assistance in the form of money, or property in lieu of money, by the Federal Government or a direct appropriation made by law to any person. The term does not include technical assistance which provides services instead of money, or other assistance in the form of revenue sharing, loans, loan guarantees, loan insurance, interest subsidies, insurance, or direct United States cash assistance to an individual.

Federal loan means a loan made by an agency. The term does not include loan guarantee or loan insurance.

Influencing or attempting to influence means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

Local government means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

Officer or employee of an agency includes the following individuals who are employed by an agency:

- An individual who is appointed to a position in the Government under title 5, U.S. Code, including a position under a temporary appointment;
- A member of the uniformed services as defined in section 101(3), title 37, U.S. Code;
- A special Government employee as defined in section 202, title 18, U.S. Code; and
- An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, U.S. Code appendix 2.

Person means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit or not for profit.

NOTE: Providing any information **specifically** requested by an official agent of, or Member of Congress is allowable at any time.

D. Penalties

(1) Any person who makes an expenditure prohibited by this section shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such expenditure.

(2) Any person who fails to file or amend the disclosure form to be filed or amended if required herein, shall be subject to a civil penalty of not less than $10,000 and not more that $100,000 for each such failure.

(3) A filing or amended filing on or after the date on which an administrative action for the imposition of a civil penalty is commenced does not prevent the imposition of such civil penalty for a failure occurring before that date.

(4) An imposition of a civil penalty under this section does not prevent the United States from seeking any other remedy that may apply to the same conduct that is the basis for the imposition of such penalty.

E. Certification Form

As stated in H 350-18, paragraph B. above, certifications regarding lobbying are required in some instances. Shown in Exhibit A on the next page is the text of the certification which is required. This may be prepared in letter form, or it can be converted to a standard agency form.

Exhibit A

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid, or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form- LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each failure.

_____ _____

(Signature) ***(Date of Signature)***

_____

(Typed Name)

FOR:

_____

(Organization)

_____

(City & State Where Organization Located)

APPENDIX A

Budget and Cost Definitions

The objective of this list of definitions is to attempt to identify all costs which may be associated with a proposed project or agreement. Most of the possible costs are identified, but costs unique to a specific project or agreement may need to be identified and taken into account in developing an estimated budget.

PERSONNEL COSTS

All personnel costs need to be identified. These will include not only the cost of the personnel of the unit performing the work, but also the costs of the USIBWC **support units** such as the Human Resources Office, Administration Department Divisions (AD, F&A D, GSD, IMD, Budget), Auditor, and Legal Advisor. While some general guidance will be available, **activity-specific discussions must be held with the support units to refine accurate budget projections**.

The major personnel cost categories are:

Personnel Compensation - Regular These are regular salary costs paid to individuals, including paid leave. If the exact grade and step of the employees to be involved in the work is known, the exact information should be used. However, if employees will be involved for whom the exact grade and step is not known, you should use:

Step 4 of the grade for GG employees; and
Step 2 of the grade for WG employees.

These are the "representative rates" which are accepted throughout the Federal government. A GG work year is 2,087 hours, and a WG work year is 2,080 hours.

Personnel Compensation - Premium This is the anticipated pay for overtime, holiday work, Sunday work, Shift, Night, or Hazard Differentials, and cash awards.

Personnel Benefits These are such things as the Government contributions to FICA, Medicare, life and health insurance, Thrift Savings Plan, Retirement, Severance Pay, and Unemployment Compensation* if it is anticipated that entitled employees will be laid off at the end of the work. You should also include Workman's Compensation if the nature of the work is such that on-the-job injuries may occur. In most cases, a "thumb-nail" percentage of the salary costs can be used for all but severance pay, unemployment compensation*, and workman's compensation which must be computed separately. The CAO or Budget Office can provide you with the percentage which is being used. The percentage was 29% at the time this Handbook was prepared.
***(NOTE:** *If TERM employees are to be used, or other employees appointed for more than one year,*

it is critical to include ***Unemployment Compensation*** *in the budget projections. These individuals are not normally entitled to Severance Pay, but they will be entitled to Unemployment Compensation which is paid by the employer after the project is completed. The amount of these payments will vary from State to State.***)**

TRAVEL

Include all travel costs, including mission travel, conference travel, training travel, Permanent Change of Station (PCS) travel, rental of GSA sedans and vans, and rental of commercial sedans and vans (GSA and Commercial trucks and pickups are covered under Transportation of Things, below. Careful - some SUV's are categorized as "trucks.")

Any special travel requirements such as project site orientation visits, pre-bid conferences away from the usual office location, etc., by USIBWC employees, contractor employees, or employees of other Federal agencies should be identified and included. (Usually, only USIBWC travel would be covered, and other travel would be at the expense of the contractors or other Federal agencies. However, in some instances, the USIBWC may cover all or part of the other travel expenses, or may provide transportation, "guide" personnel, etc.)

TRANSPORTATION OF THINGS

These are all transportation costs, including freight, common carrier or contract carrier such as United Parcel Service and Federal Express, GSA and commercial truck (including pickups and some SUV's) rental or lease, mail transportation, transportation of household goods etc. Note that while GSA sedans and vans are covered under Travel, pickups and some SUV's are covered under Transportation of Things.

RENT, COMMUNICATIONS, AND UTILITIES

This covers all charges for possession and use of property and equipment or systems owned by others and used by the USIBWC through rental or lease (not including vehicles listed earlier, or items which are purchased). Some of the more common categories are:

(1) Telephone service, including cell telephones, FAX, and modem lines;
(2) Electric service;
(3) Rental of office space and temporary storage space;
(4) Rental or lease of office equipment such as copiers, FAX machines, computers, printers, furniture, etc.;
(5) Rental or lease of machinery such as generators, pumps, transformers, cranes, and other production and/or construction equipment;
(6) Rental/lease costs associated with communications services including radios, radio repeaters, and tower space;
(7) Postage (not including parcel post which is under Transportation of Things) and rental

of Post Office boxes; and

(8) Utility services such as gas, water, heat, air conditioning, etc.

PRINTING AND REPRODUCTION SERVICES

These are charges for contractual printing and reproduction, including photo composition, photography, photographic film processing, blueprints, photostating and microfilming, and related composition and binding operations performed by the Government Printing Office, other Government agencies, or commercial printers or photographers. When there are costs in this category, care must be exercised to place the costs into the correct category or either "printing" or "reproduction." Note that charges for the rental/lease of photocopying equipment in USIBWC space and used by USIBWC employees is not in this category.

OTHER SERVICES

This covers charges for contractual services not otherwise classified, to include supplies and materials which may be provided by the contractor in providing the services. Some of the categories included are:

- S Experts, consultants, and Technical Advisors, including A-E's and similar firms, but not including such individuals employed through the Human Resources Office by a personnel action;
- S Repairs and alterations to buildings, bridges, viaducts, equipment, etc., which are performed by contract;
- S Storage and maintenance, when obtained by contract, for vehicles, storage of household goods, etc.
- S Contracts for ADP Software with a useful life of under two years;
- S Janitorial services, trash collection, soil analysis, weight vehicles, and other maintenance contracts such as for copiers, FAX machines, computers, etc.;
- S Publication of notices in the Federal Register or news media, advertising, radio and television time;
- S College/conference/training course fees, tuition, and other charges such as for money orders;
- S Short-term rental of space for public meetings, "start-up" meetings, etc.
- S Employment of interpreters, "court reporters," and translators for the purpose of recording public meetings, providing interpreter services at public meetings, providing English and Spanish transcripts of meetings, etc.; and
- S Auditor services if obtained by contract.

SUPPLIES AND MATERIALS

This covers such things as "off-the-shelf" software costing less than $25,000 and with a useful life of less than two years, pencils, paper, calendar pads, stenographic notebooks, regular standard forms, unprinted envelopes, other office supplies, desk trays, pen sets, calendar stands, photocopier supplies, computer tapes and discs, manuals, publications such as those obtained by subscription to magazines and periodicals, pamphlets, documents, books, newspapers, records, cassettes, chemicals such as insect repellents, herbicides, pesticides, and waxes, fuel and lubricants, cleaning and toilet supplies, and materials and parts such as for the repair of equipment, machinery, buildings. Also included are items such as batteries, keys, paint, ice, plaques, maps, undeveloped photographic film, slides, drinking water, etc.

EQUIPMENT

This covers the cost of purchased items such as motor vehicles/trucks, boats, desks, tables, chairs, typewriters, computers, monitors, keyboards, printers, calculators, compressors, engines, generators, electric motors, transformers, pumps, books, telephone equipment, electronic equipment, appliances, vacuum cleaners, telecopiers, cameras, transducers, calibration equipment, hoists, flow meters, scientific equipment, measuring and weighing instruments, photographic equipment, duplicating equipment, movie, slide, and overhead projectors, lab equipment, radios, software costing more than $25,000, tools and implements, etc.

LAND AND STRUCTURES

This covers the costs of purchased land, buildings, office trailer and facilities, and improvements to land and structures. It also covers the cost of fixtures and equipment to be added to the land or structures such as elevators, plumbing, power plant boilers, fire alarm and security systems, lighting, and heating/air conditioning systems, etc.

GRANTS, SUBSIDIES, AND CONTRIBUTIONS

This covers the costs of any grants, subsidies, gratuities, and other aid for which cash payments are made to States, other political subdivisions, corporations, associations, and individuals; contributions to international societies, commissions, proceedings, or projects whether in lump sum or as quotas of expenses; contributions fixed by treaty; grants to foreign countries, etc. Note that non-cash contributions such as services, supplies, materials, and the like are covered by the section representing the nature of the services, articles, etc. which are contributed. For example, a contribution of a pickup truck would be covered by "Equipment."

ADMINISTRATIVE OVERHEAD COSTS

This is a determination of the administrative costs incurred by the USIBWC for the project or agreement. In some instances, it may be possible to determine a "thumb nail" cost for like or similar projects/agreements, but the categories must be reviewed in each instance to avoid subsidizing the activity. Elements include, but are not limited to, such items as:

- Human Resources Office costs for recruiting new personnel, obtaining referrals of eligibles from the U.S. Office of Personnel Management, processing the new hires into the USIBWC workforce, and processing any required current or future Notification of Personnel Action (SF-50's);

- Finance and Accounting Division and Budget Office costs (including NFC charges) for processing payroll actions, processing payments and invoices (if such costs are not covered by the personnel costs of added TERM or temporary employees), maintenance of the budget and funds control, and accounting for and reporting funding transactions;

- Information Management Division costs for determining equipment and software compatibility, setting up and maintaining computer equipment, maintaining the computer based electronic communication/LAN system, technical support, and troubleshooting computer related problems;

- Acquisition Division costs for preparing and issuing solicitations and contracts (to include the costs for photocopying), for small purchases, and for contract administration;

- General Services Division costs for arranging and setting up office space, furniture, telephone systems, etc., for receiving and delivering supplies, materials, equipment, etc., and for processing mail, to include the costs of postage;

- Costs of the Office of the Legal Advisor for reviewing agreements, contracts, protests, appeals, and claims;

- A pro-rate share of the office building lease, telephone service FAX service, etc. if these costs are not budgeted separately;

- Costs incurred by audit staff who are USIBWC employees engaged either directly in audits of contracts/agreements, or in overseeing contract audit staff; and

- An overhead cost to represent a proportional share of the cost of USIBWC management, i.e., time required by the CAO, ACAO, FAO, PE's, Commissioner, etc.

These costs may range from 25% to over 100% of the work costs.

APPENDIX B

Cost Calculation Worksheet

H 350-B.1 Purpose

The Cost Calculation Worksheet (Worksheet) is to be used in conjunction with the Budget and

Cost Definitions (Appendix A). Its purpose is to guide the development of a budget for a project or agreement by providing reasonably accurate data. If, in the development of the agreement or project, unanticipated costs are identified, they should be added to the budget so as to avoid either budget deficits or the need to secure approval to shift funds among the budget categories. Where standard costs are shown, **these are as of February 2000**, and most will change at the beginning of each fiscal year. Check to determine the accuracy of the costs and percentiles for each new fiscal year.

PERSONNEL COSTS

Regular personnel compensation - - - - - $_____
Premium pay personnel compensation - - - - $_____
Regular personnel benefits (29% of regular personnel compensation) $_____
Workman's Compensation Benefits - - - $_____
Unemployment Compensation Benefits - - - $_____
Severance Pay Benefits (See HRO for calculation procedure) $_____
Total Personnel Costs - - - $_____

TRAVEL COSTS

Mission Travel, including travel for "start-up" meetings, pre-bid conferences, etc. - - - - - - $_____
Conference Travel - - - - - - - $_____
Training Travel - - - - - - - $_____
PCS Travel - - - - - - - - $_____
Commercial & GSA Vehicle (Sedans/Vans) Rentals - - $_____
Parking Fees - - - - - - - - $_____
Bridge Tolls - - - - - - - - $_____
POA/POV Mileage Fees - - - - - - $_____
Total Travel Costs - - - - $_____

TRANSPORTATION OF THINGS COSTS

Freight - - - - - - - - $_____
Common/Contract Carrier (UPS, Fed Ex, etc.) - - - $_____
GSA & Commercial Truck/Pickup Rentals/Leases - - - $_____
Mail Transportation (Not including 1st Class) - - - $_____
Transportation of Household Goods - - - - $_____
Other Transportation Costs - - - - - - $_____
Total Freight Costs - - - - $_____

RENT, COMMUNICATIONS, AND UTILITIES

Telephone Service, including cell phones, FAX, and modem lines- $_____

Electrical Service - - - - - - - $_____
Rental/Lease of Office Space - - - - - $_____
Rental/Lease of Office Equipment (Copiers, FAX, Computers, etc.) $_____
Rental/Lease of Machinery - - - - - - $_____
Communications Services - - - - - - $_____
Postage & Rental of Post Office Boxes - - - - $_____
Utility Services (Gas, Water, Heat, Air Conditioning, etc.) - $_____
Total Rent/Communications/Utilities Costs $_____

PRINTING AND REPRODUCTION

Printing Costs - - - - - - - $_____
Reproduction Costs (Photocopying by Other Than USIBWC) - $_____
Total Printing & Reproduction Costs - $_____

OTHER SERVICES

Experts, Consultants, Technical Advisers, - - - - $_____
Contract Auditors - - - - - - - $_____
Contract Repairs and Alterations - - - - - $_____
Storage and Maintenance - - - - - - $_____
Contracts for ADP Software - - - - - - $_____
Contract Laboratory Testing & Analysis - - - - $_____
Janitorial, Trash Collection, Other Maintenance - - - $_____
Publication of Notices - - - - - - $_____
Fees, Tuition, Other Charges - - - - - $_____
Rental of Meeting Halls for Public Hearings - - - $_____
Court Reporters, Interpreters, Translators - - - - $_____
Other "Other Services" such as some of the PCS costs.- - - $_____
Total Other Services - - - - $_____

SUPPLIES AND MATERIALS

General Office Supplies - - - - - - $_____
Computer Supplies, Software Under $25,000 - - - $_____
Copier Supplies - - - - - - - $_____
Cleaning Supplies - - - - - - - $_____
Books, Subscriptions - - - - - - $_____
Chemicals, Repellants, Herbicides, etc. - - - - $_____
Fuel & Lubricants - - - - - - - $_____
Ice, Water, Photographic film, Maps, etc. - - - - $_____
Other Supplies and Materials - - - - - $_____
Total Supplies and Materials - - $_____

EQUIPMENT

Motor Vehicles (Any Kind), Purchased - - - - $_____
Construction Equipment, Purchased - - - - $_____
Office Furniture, Purchased - - - - - - $_____
Computer Equipment, Purchased - - - - - $_____
Telephone Equipment, Purchased- - - - - - $_____
Duplicating Equipment, Purchased - - - - - $_____
Audio Visual Equipment, Purchased - - - - $_____
Laboratory Equipment, Purchased- - - - - - $_____
Photographic Equipment, Purchased- - - - - $_____
Radio Equipment, Purchased- - - - - - $_____
Computer Software Over $25,000 - - - - - $_____
Other Equipment, Purchased- - - - - - $_____
Total Equipment - - - - $_____

LANDS AND STRUCTURES

Land, Buildings, Office Trailers, Other Structural Facilities - $_____
Improvements to Land, Buildings, Office Trailers - - - $_____
Fire/Security Alarm Systems - - - - - $_____
Lighting, Heating/Cooling Improvements - - - - $_____
Other Lands and Structures - - - - - - $_____
Total Lands and Structures - - - $_____

GRANTS, SUBSIDIES, AND CONTRIBUTIONS

_____ $_____
_____ $_____
_____ $_____
_____ $_____
Total Grants, Subsidies, & Contributions - $_____

ESTIMATED CONTRACT COSTS

Architect-Engineer Contract
Concept Plans - - - - - - $_____
Facility Plans - - - - - - $_____
Design - - - - - - - $_____
Construction Management - - - - - $_____
Total A-E Contracts - - - $_____

Construction Contracts

_____ - - - - $_____
_____ - - - - $_____
_____ - - - - $_____
_____ - - - - $_____
Total Construction Contracts - $_____

Environmental Contracts

_____ - - - - $_____
_____ - - - - $_____
_____ - - - - $_____
Total Environmental Contracts - $_____

Supply Contracts

_____ - - - - $_____
_____ - - - - $_____
_____ - - - - $_____
Total Supply Contracts - - $_____

Utility Contracts

_____ - - - - $_____
_____ - - - - $_____
_____ - - - - $_____
Total Utility Contracts - - $_____

Other Contracts

Audit Services (If not to be performed by Compliance Office) $_____
_____ - - - - $_____
_____ - - - - $_____
Total Other Contracts - - $_____

COMMENTS/DISCUSSION: _____
_____
_____
_____ ADMINISTRATIVE OVERHEAD COSTS _____

For any situation where work is to be performed, there are "Administrative Overhead Costs." These are the costs associated with the administrative support functions such as maintaining the organization's financial records, processing payrolls and employee benefits, human resources support, legal support, acquisition support, management and executive direction, etc. For regular, already established mission functions, usually referred to as S&E, these costs are "built in" and are included in the budgets. However, anytime there is <u>new</u> work to be performed, including in the S&E functions, there will be additional administrative overhead costs, and these must be computed to assure that

requested budgets will be sufficient to cover all costs.

When addressing the financial needs of new work which is to be performed either under grant funding or reimbursable funding, it is critical that these costs be fully and completely identified. Failure to do so can result in either the work having to be abandoned for lack of funding, or having to support the work with funding appropriated for other work, a situation where additional resources will have to be expended to assure that legal and regulatory requirements are fully and completely met. In addition, the shift of funding from other work means that the other, planned work will not be funded and cannot be performed.

Shown below are some of the more common and costly administrative costs which are inherent in new work. In working with these costs, **keep in mind that the costs shown are current as of February 2000**. The costs will have to be adjusted for work to be performed at a later date. Where the costs are valid for a set period, such as the OPM costs for Fiscal Year 2000, the information will be shown. If no set period is shown, check back with the support office to obtain the current costs.

GENERAL SERVICES DIVISION

Cost for arranging office space, including move in of furniture and equipment, **not** including cost of furniture and equipment.

One-time charge - $200/employee

#Employees _____ X $200 = - - - - - - $_____

Cost for arranging telephone service and installation, including cabling and installation but not including cost of telephones & switchgear.

One-time charge - $150/telephone

#Telephones _____ X $150 = - - - - - - $_____

Cost for reviewing telephone bills, resolving questions, and forwarding for payment.

Monthly charge, per telephone number $6.90/month

#Telephone Number _____ X $6.90 X #Months _____= - - $_____

Cost for arranging assignment of GSA vehicle, reviewing monthly mileage reports, preparing and forwarding information to GSA.

Monthly charge, per GSA vehicle $4.98/month

#GSA Vehicles _____ X $4.98 X #Months _____ = - - $_____

Cost for acquisition/lease of real property, rights of way, etc., including title search, comparability studies, negotiations, etc.

Varies by location and work involved. Contact Chief, General Services Division for cost information.

#Real Property Acquisitions _____ X Cost $_____ - - $_____

Total General Services Division - - - - **$_____**

HUMAN RESOURCES OFFICE

Cost of OPM Referrals (Valid Through End of FY 2000)

S Positions such as Engineer, Environmental Protection Specialist, Accountant, Higher grade Hydrologic Technician/Accounting Technician, etc.

$860 for each grade level

#Referrals _____ X $860 = - - - - - - $_____

S Higher grade Interdisciplinary positions

$1,290 for each grade level

#Referrals _____ X $1,290 = - - - - - - $_____

S Clerical support positions at grade level GG-5 and below

$575 for each grade level

#Referrals _____ X $575 = - - - - - - $_____

Internal USIBWC Recruiting Actions

S Development and issuance of a JOA, acceptance of applications, rating/evaluation of applications, responding to inquiries, FAX transmission of JOA's, issuance of referral to selecting official.

$479.75 for each JOA

#JOA's _____ X $479.75 = - - - - - - $_____

S Development and classification of position description

$409.14 for each grade level

#Position Descriptions _____ X $409.14 = - - - - $_____

S Processing SF-52, Request for Personnel Action: **$19.91 each**

#SF-52's _____ X $19.91 = - - - - - - $_____

S Processing SF-50, Notification of Personnel Action **$14.93 each**

#SF-50's _____ X $14.93 = - - - - - - $_____

S Processing Training Request & Maintaining Training Records **$31.14 each**

#Training Requests _____ X $31.14 = - - - - - $_____

S Maintaining TSP account information **$29.87/each/year**

#Employees _____ X $29.87 = - - - - - - $_____

S Maintenance of OPF & Personnel Records **$100.06/each/year**

#Employees _____ X $100.06 = - - - - - $_____

S Technical support: Retirement, life insurance, health insurance, military service, NFC/PACT/PRES troubleshooting **$237.05/employee/year**

#Employees _____ X $237.05 = - - - - - $_____

Total Human Resources Office - - - $_____

ACQUISITION DIVISION

Average cost of small purchase where RFQ not required - - $76.99
#No RFQ small purchases _____ X $76.99 = - - - $_____

Average cost of small purchase where RFQ **is** required - - $96.24
#RFQ required small purchases _____ X $96.24 =- - - $_____

Average cost of service contract, All Aspects, including administration- $3,622
#Service Contracts, _____ X $3,622 = - - - $_____

Average cost of construction contracts, All Aspects including administration, $2,717
Construction Contracts, _____ X $2,717 - - - - $_____

Total Acquisition Costs - - - $_____

FINANCE & ACCOUNTING DIVISION

Average cost for processing a travel voucher - - $ 19.73
Estimated # Travel Vouchers _____ X $19.73 = - - - $_____

Average cost for processing a payment - - - $ 19.73
Estimated # payments _____ X $ 19.73 = - - - - $_____

Average cost for processing a collection - - - $ 14.96
Estimated # collections _____ X $14.96 = - - - - $_____

Average cost for processing an employee's payroll/Pay Period $12.03
#Employees _____ X $12.03 X _____ Pay Periods = - - - $_____

Average cost for reviewing a Requisition to assure: proper coding, funds available, funds authorized when -

A. Requester does not have to be contacted - $7.11
B. Requester must be contacted - - - $28.44

#A type Requisitions _____ X $7.11 = - - - - $_____
#B type Requisitions _____ X $28.44 = - - - - $_____

Average cost for developing and issuing **Monthly** budget reports $ 598.26

Budget reports _____ X $598.26 = - - - - $_____

Total, Finance and Accounting Division - $_____

LEGAL ADVISOR

Hours to review non-complex contract 6

#Non-complex contracts _____ X $287.43 = - $_____

Hours to review complex contract 10

#Complex contracts _____ X $ 479.00 = - - $_____

(*Multiply hours X hourly rate X 1.29)

Total, Office of Legal Advisor - - $_____

COMPLIANCE OFFICE

Estimated cost* to audit non-complex contract = $3,752.21

Non-complex contracts _____ X $3,752.21 = - - $_____

Estimated cost* to audit complex contract = $7,154.40

Complex contracts _____ X $7,154.40 = - - $_____

(*Cost shown include hours at hourly rate X 1.29 plus travel & per diem)

Total, Compliance Office - - - $_____

INFORMATION MANAGEMENT DIVISION (IMD)

Annual cost for supporting one (1) PC, including selecting hardware, selecting compatible software, installation, maintenance, and Internet service - - $2,669.09

#PC's_____ X $2,669.09 = $_____ **Total for IMD- - - $_____**

DESIGN DIVISION

These costs will have to be determined through discussions with the Division Engineer, Design Division. Costs should include hourly rates X 1.29 plus any travel and per diem.

ENVIRONMENTAL MANAGEMENT DIVISION

These costs will have to be determined through discussions with the Division Engineer, Environmental Management Division. Work to be included would include review of environmental documents and should be computed by multiplying hourly rates X 1.29 plus any travel and per diem.

MANAGEMENT AND EXECUTIVE DIRECTION

The cost of management and executive direction for each IAG, MOA, MOU, or other agreement is:

$500.00 plus 0.2% of the total value of the initial agreement. For an agreement valued at $100,000.00, this cost would be $500 + $200 = $700.

APPENDIX C

International Agreements/Minutes

- Reserved -

The practices and procedures governing international agreements and minutes are covered in a Directive issued by the Foreign Affairs Office. Individuals working with such agreements should contact the Foreign Affairs Office for guidance.

APPENDIX D

MOU/MOA/IAG Agreement Format

H 350-D.1 Basic Requirements

A. Title 31 U.S.C. Section 6303, Using Procurement Contracts, requires that Federal executive agencies use *procurement* contracts to reflect the relationship between the United States government and a State, a local government, or other non-Federal governmental entity. The following is a quote of the law.

> "31 USC Sec. 6303
> Title 31 - Money and Finance
> Subtitle V - General Assistance Administration
> Chapter 63 - Using Procurement Contracts and Grant and Cooperative Agreements
>
> Sec. 6303. Using procurement contracts
>
> An executive agency shall use a procurement contract as the legal instrument reflecting a relationship between the United States Government and a State, a local government, or other recipient when -
>
> (1) the principal purpose of the instrument is to acquire (by purchase, lease, or barter) property or services for the direct benefit or use of the United States Government; or
>
> (2) the agency decides in a specific instance that the use of a procurement contract is appropriate." [Pub. L. 97-258, Sept. 13, 1982, 96 Stat. 1004.]"

B. It is the determination of the United States Commissioner that all intergovernmental (agreements between the USIBWC and State, local, and/or other non-Federal governmental entities) and interagency (agreements between the USIBWC and other Federal government agencies) agreements shall be framed in the form of a procurement contract. Exempt from this requirement are those agreements which do not entail the expenditure of resources of any kind and those agreements with Mexico which will be framed in the format of treaty and treaty-type agreements. Also exempt are those agreements whereby the USIBWC is receiving funding from another governmental entity, and that organization requires the use of its own format.

C. Under the provisions of 31 USC Sec. 6307, the Director of the Office of Management and Budget is authorized to issue interpretive guidelines and exemptions to promote consistent and efficient use of procurement contracts, grant agreements, and cooperative agreements. These guidelines have been issued in various OMB Circulars including, but not limited to, A-87 and A-97..

D. Any MOA/MOU/IAG must be supported by a Requisition Form which provides the

information cited in the Procurement Handbook, Volume II, Chapter 310, Handbook H 310.

H 350-D.2 Agreement Format

A. To provide for the consistent processing, implementation, and audit of agreements such as MOA's, MOU's, MOA's, and IAG's*, the USIBWC has adopted a standardized format for such agreements. This format is shown below.

***NOTE:** Agreements with some agencies and/or organizations will be in the format specified by the agency providing the funding for the work to be performed.

B. The format shown below is a *pattern* which will have to be modified to fit individual situations. For example, the sample is for a situation where the USIBWC is paying another organization for services, and a number of individual work orders or task orders will be required. The sample would have to be modified to cover a situation where the USIBWC would be paid for providing services to another organization. Information on how to modify the sample can be obtained from the Acquisition Division. Any modifications must be approved in the review process.

Contract No. IBM-_____

MEMORANDUM OF [*Enter Agreement or Understanding*] ***OR***
INTERAGENCY AGREEMENT

UNITED STATES SECTION
INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

AND

[*Enter Full Name of Other Organization*]

This (Memorandum of _____ [MOA/MOU/**or** IAG] - *spell out in full, followed by correct acronym in quotes*) is made by and between the United States Section, International Boundary and Water Commission, United States and Mexico, hereafter referred to as "USIBWC" of El Paso, Texas, and the ___[*Other organization full name*]____, hereafter referred to as "_[*other organization acronym in quotes*]___," of ___[*City*]_, ___[*State*]_.

WITNESSETH:

WHEREAS, _____[*description of problem or situation*]_____; and

WHEREAS, The USIBWC and the [other *agency acronym*] are cooperating to [*description of end result desired by cooperative effort*]; and

WHEREAS, The Federal agencies are authorized under the Economy Act, 31 U.S.C. 1535 and 22 U.S.C. 277 et seq.; (***WARNING!*** *The authority shown is valid* ***only*** *for agreements between Federal government agencies. Agreements involving other, non-Federal governmental entities require a different authority. Enter the correct authority.*) and

WHEREAS, The [other *agency acronym*] Possesses the capabilities to [*description of capabilities of other organization to supplement USIBWC*]; and

NOW THEREFORE, the parties hereto agree as follows:

ARTICLE I: USIBWC SERVICES

The following services will be provided by the USIBWC:

A. Provide a draft Individual Work Order (**IWO**) to [other *agency acronym*] For desired services, requesting a detailed cost proposal.

B. Negotiate equitably with [other *agency acronym*] For fair and reasonable costs for the required services.

C. Issue Notice to Proceed (**NTP**) for negotiated IWO's.

D. [*description of USIBWC activities*] _____

_____

_____

E. [*description of USIBWC activities*] _____

_____

_____

F. Pay [other *agency acronym*] in accordance with ARTICLE V. below.

ARTICLE II: [other *agency acronym*] SERVICES

The following services will be provided by the [other *agency acronym*], as requested by the USIBWC. The USIBWC retains the right to procure these same services from other suppliers at any time.

A. Provide a detailed cost proposal for each IWO within ten (10) working days of receipt of IWO draft scope of work. The proposal shall include an estimate of all direct costs and verified overhead factor for each activity. The direct costs to be itemized include types of

personnel, wage rates, estimated hours, travel expenses, etc.

B. Provide services and deliverables in accordance with terms and conditions of written IWO's upon receipt of NTP.

C. Services to be provided (and due dates) are:

1.
2.
3.
4.

D. Deliverables to be provided (and due dates) are:

1.
2.
3.
4.

E. Submit billing for services rendered in accordance with Article V. below.

ARTICLE III: INDIVIDUAL WORK ORDERS AND NOTICE TO PROCEED

Requests for services to be performed by the ___[*other agency acronym*]___ will be documented as follows:

A. Each request will be initiated by a written IWO describing in detail the scope of work, required deliverables, delivery schedule, and any such particulars as are necessary to describe clearly the obligations of the parties with respect to the requested services. The IWO scope of work and costs shall be negotiated by both parties prior to issuance by the USIBWC.

B. Work for each IWO will commence only upon issuance of a written NTP by the USIBWC.

C. No work is to commence nor costs to be incurred under this (MOA/MOU) until the above conditions are satisfied.

ARTICLE IV: COST AND FUNDING

The USIBWC agrees to provide funding resources for all agreed upon costs associated with the services to be provided.

ARTICLE V: PAYMENTS

Payments for services performed by the ___[*other agency acronym*]___ will be made as follows:

A. No costs in excess of the estimate included in the IWO shall be incurred pursuant to this (MOA/MOU/IAG) without prior written approval from the Contracting Officer;

B. Upon completion of each IWO, the ___[*other agency acronym*]___ shall submit a detailed invoice for actual expenses incurred in the performance of the IWO. The invoice will include a listing of the direct costs (labor, material, etc.), the quantities and unit rates for each, and the negotiated overhead factor; and

C. Reimbursement will be made for all verified expenses after acceptance of the required deliverables by the USIBWC technical representative as shown on the IWO cost estimate.

ARTICLE VI: DURATION

This (MOA/MOU/IAG) is effective from the date of execution until ___[*month*]___ ___[*day*]___ , _[*year*]___, and is renewable from year to year as may be agreed by both parties in the form of a written amendment to the (MOA/MOU/IAG). **[NOTE: For administrative convenience and to avoid confusion regarding the availability of funding, agreements should be set to end at the conclusion of the Federal fiscal year.]**

ARTICLE VII: AMENDMENTS

This (MOA/MOU/IAG) may be modified at any time by written agreement of both parties. Either party may request a review of the contents of this agreement, at any time, to provide recommendations for amendments.

ARTICLE VIII: INTERAGENCY COMMUNICATIONS

To provide for consistent and effective communication between both parties, each agency shall immediately designate representatives to serve as the points of contact on all matters relating to this (MOA/MOU/IAG).

Each agency will advise the other agency in writing of the names and telephone numbers of the representatives designated.

IN WITNESS WHEREOF, the parties hereto execute this instrument to be effective when signed by both parties.

(Continued on Next Page)

FOR THE USIBWC

Date:_____ _____

[*Typed Name of USIBWC Signatory*]
[Typed Position Title of USIBWC Signatory]

United States Section
International Boundary and Water Commission
United States and Mexico

FOR THE [*other agency acronym*]_____

Date: _____ _____

[*Typed Name of Other Agency Signatory*]
[*Signatory's job or organizational title*]
[*Other Organization's full name*]

APPENDIX E

Laws and Regulations

H 350-E.1 General

A. As indicated in the Directive, the USIBWC, through the United States Commissioner, is authorized to enter into interagency and intergovernmental agreements by a variety of laws and regulations. Most of these laws and regulations have **limitations** and **conditions** attached to their use.

B. Listed below are a number of the laws and regulations which the USIBWC may use at one time or another. **Some**, but not all, of the limitations and conditions for their use are shown. The listing is not exhaustive, and the limitations and conditions reflected should not be considered as all inclusive. **Before using, or discarding, any of the authorities shown, the user should research and review the authority in its entirety**. Where there are any uncertainties, the assistance of the Legal Advisor should be sought.

"ECONOMY ACT"

The Economy Act is the popular name for a law which applies to a number of the United States Codes (USC). Some of these are listed below.

10 USC § 377 - Authorizes the Department of Defense to provide military support for civilian law enforcement agencies. Reimbursement by the civilian agency may or may not be required, depending on the nature of the support.

22 USC 277 - Authorizes the President of the United States to designate the American Commissioner of the International Boundary Commission, United States and Mexico, or other Federal agency, to cooperate with a representative or representatives of the Government of Mexico in a study regarding the equitable use of the waters of the lower Rio Grande and the lower Colorado and Tia Juana Rivers, for the purpose of obtaining information which may be used as a basis for the negotiation of a treaty with the Government of Mexico related to the use of the waters of these rivers **and to matters closely rated thereto**. On completion of such study the results shall be reported to the Secretary of State.

[Amended August 19, 1935, to create the International Boundary Commission.
Amended March 3, 1927, to provide for a study of the Tia Juana River in addition to the lower Rio Grande and Colorado Rivers.
June 30, 1932: powers, duties, and functions of the International Water Commission, United States and Mexico, American Section, were transferred to the International Boundary Commission, United States and Mexico, American Section.
Reconstituted as the International Boundary and Water Commission by the Water Treaty of

1944.]

NOTE: This permits agreements with the Government of Mexico only, and provides **no** authority for agreements with other U.S. Federal agencies, or with domestic State and Local governments. However, subsequent Public Laws (Pub. L.) provided broader range of authority. Those noted are:

Pub. L. 100-465, October 3, 1988, Rio Grande Pollution Correction Act of 1987;
Pub. L. 92-549, October 25, 1972, American-Mexican Boundary Treaty Act of 1972;
Pub. L. 88-300, April 29, 1964, American-Mexican Chamizal Convention Act of 1964;
Act of September 13, 1950, American-Mexican Treaty Act of 1950 (64 Stat. 846)

29 USC § 563a - Authorizes the Department of Labor (DOL) to establish and maintain a working capital fund for a comprehensive program of centralized services including worker's compensation. The DOL is empowered to draw reimbursement in advance from funds available to Federal agencies in amounts which will pay the full cost of operations, including depreciation of capitalized equipment and amortization of ADP software and systems.

31 USC 1535 - Authorizes agreements among and between **Federal** agencies through which an agency may place an order with a major organizational unit within the same agency or another agency for goods or services if:

(1) amounts are available;
(2) the head of the ordering agency decides the order is in the best interest of the United States Government;
(3) the agency or unit to fill the order is able to provide or get by contract the ordered goods or services; and
(4) **the head of the agency decides ordered goods or services cannot be provided by contract as conveniently or cheaply by a commercial enterprise**. (Emphasis provided)

Payment shall be made promptly by check on the written request of the agency or unit filling the order. Payment may be made in advance or on providing the goods or services and shall be for any part of the estimated or actual cost as determined by the agency or unit filling the order. However, no agreement providing for advance payment may be entered into unless it contains a provision requiring the refund of any unobligated balance of the advance.

A bill submitted or a request for payment is not subject to audit or certification in advance of payment. Proper adjustment of amounts paid in advance shall be made as agreed to by the heads of the agencies or units on the basis of the actual cost of the goods or services provided. **An order placed or agreement made under this section obligates an appropriation of the ordering agency or unit.**

The amount obligated is deobligated to the extent that the agency or unit filling the order has not incurred obligations, before the end of the period of availability of the appropriation, in -

(1) providing goods or services; or
(2) making an authorized contract with another person to provide the requested goods or services.

NOTE: Pub. L. 103-355, Title I, Sec. 1074, October 13, 1994, 108 Stat. 3271, provided that the Federal Acquisition Regulation (FAR) was to be revised to include regulations governing the exercise of authority under this section for Federal agencies to purchase goods and services under contracts entered into or administered by other agencies, and further provided for content of regulations and **the establishment of systems to monitor procurements under such regulations**. Final FAR regulations were published in the Federal Register of September 26, 1995, and were effective October 1, 1995. See 60 F.R. 49720.

40 USC § 298b - Authorizes the Administrator of General Services (GSA) to furnish services in the continental United States, on the basis of full reimbursement and at the request of the State Department, to any international body with which the United States Government is affiliated.

43 USC § 1471f - Authorizes the Department of the Interior (DOI), through appropriations made to DOI or provided from other Federal agencies through reimbursable or other agreements pursuant to **sections 1535 and 1536 of title 31** may be used to fund, incrementally, research work orders for cooperative agreements with colleges and universities, State agencies, and nonprofit organizations that overlap fiscal years: **Provided**, that such cooperative agreement shall contain a statement that "the obligation of funds for future incremental payments shall be subject to the availability of funds."

"ADMIRAL JAMES W. NANCE FOREIGN RELATIONS AUTHORIZATION ACT, FISCAL YEARS 2000 and 2001"

§ 824 ASSISTANCE TO STATES AND LOCAL GOVERNMENTS BY THE INTERNATIONAL BOUNDARY AND WATER COMMISSION

(a) AUTHORITY - Upon the request of a State or local government, the Commissioner of the United States Section of the International Boundary and Water Commission may provide, on a reimbursable basis, technical tests, evaluations, information, surveys, or other similar services to that government.

(b) REIMBURSEMENTS -

(1) AMOUNT OF REIMBURSEMENT - Reimbursement for services under subsection (a) shall be made before the services are provided and shall be in an amount equal to the estimated or actual cost of providing the goods or services, as determined by the United States Section of the International Boundary and Water Commission on the basis of the actual cost of goods or services provided.

(2) CREDITING APPLICABLE APPROPRIATION ACCOUNT - Reimbursements received by the United States Section of the International Boundary and Water Commission for providing services under this section shall be deposited as an offsetting collection to the appropriation account from which the cost of providing the services has been paid or will be charged.

FEDERAL EMPLOYEES INTERNATIONAL ORGANIZATION SERVICE ACT

5 CFR 352, Subpart C - Detail and Transfer of Federal Employees to International Organizations

Under this authority, a Federal agency can detail or transfer an employee to an international organization for up to five (5) years with or without the consent of the employee. With the approval of the Secretary of State, the detail can be extended for an additional three (3) years. The employee continues to be carried as an employee of the Federal agency, and can, under specific conditions, continue his/her health insurance, life insurance, and all other rights and benefits. Time spent working for the international organization counts as service time for retirement purposes.

The employee is entitled to return to the position from which he/she was detailed, or to a position of like seniority, status, and pay. Where appropriate, equalization allowances may be paid to the employee while on detail.

Such details may be made without the prior approval of OPM if the organization to which the employee is to be detailed is on the listing of international organizations maintained by OPM. If the organization is not on the listing, approval of the organization must be sought from OPM who will consult with the Secretary of State in determining if the organization meets the "international organization" criteria.

The following types of positions **are not** eligible for such details:

- Presidential appointee;
- Schedule C appointees to confidential or policy-determining positions;
- Employees serving under noncareer, limited emergency, or limited term appointment in the SES;
- Employees serving under a temporary appointment pending establishment of a register (TAPER employees);
- Employees serving under an appointment specifically limited to one (1) year or less; and
- Employees serving on a seasonal, intermittent, or part-time basis.

INTERGOVERNMENTAL PERSONNEL ACT MOBILITY PROGRAM (IPA)

5 CFR 334 - The IPA provides for the temporary assignment of personnel between the Federal

Government and state and local governments, colleges and universities, Indian tribal governments, federally funded research and development centers, and other eligible organizations.

Under this authority, Federal employees can be temporarily assigned to state and local organizations, and state and local employees can be assigned to Federal agencies. Assignments are limited to two (2) years, and may be extended for two (2) additional years. Assignments are initiated by management. Assignments are **voluntary** and must be agreed to by the employee.

Federal employees retain all employee rights and benefits. Federal employees are required to agree to a service agreement which requires the employee to remain in Federal civil service for a period of time equal to the amount of time spent on the IPA assignment once the assignment is completed.

Excluded from such assignments are:

- Federal, State or local government employees serving under noncareer, excepted service, noncompetitive, time-limited, temporary or TERM appointments;
- Elected Federal, State, or local government officials;
- Members of the uniformed military services and the Commissioned Corps of the Public Health Service and the National Oceanic and Atmospheric Administration; and
- Students employed in research, graduate, or teaching assistant and similar temporary positions.

There are limitations on paying administrative costs when individuals are being detailed **to** a Federal agency. Cost sharing is encouraged, but not required. Under some circumstances, travel, relocation, and per diem expenses can be paid.

INTERGOVERNMENTAL COOPERATION ACT

31 USC 6501 - 6508 - Authorizes Federal agencies to enter into agreements to provide *assistance* (anything of value for a public purpose of support or stimulation that is authorized by a law of the United States and provided by the United States Government through grant or contractual arrangements including technical assistance programs providing assistance by loan, loan guarantee, or insurance) to State and local governments as well as special purpose units of local government. There are significant limitations and controls on Federal agency activities under this authority **because the primary use of the authority is for Federal agencies to provide GRANTS to State and local governmental entities**. Some of these are outlined below.

Consistent with the regulations of the Secretary of the Treasury, the head of an executive agency carrying out a grant program shall schedule the transfer of grant money to minimize the time elapsing between transfer of the money from the Treasury and the disbursement by a State, whether disbursement occurs before or after the transfer. A State is not accountable for interest earned on grant money pending its disbursement.

A State may not be required by a law or regulation of the United States to deposit grant money received by it in a separate bank account. However, a State shall account for grant money made available to the State as United States grant money in the accounts of the State. The head of the State agency concerned shall make periodic authenticated reports to the head of the appropriate executive agency on the status and the application of the money, the liabilities and obligations on hand, and other information required by the head of the executive agency. Records related to the grant received by the State shall be made available to the head of the executive agency and the Comptroller General for auditing.

The head of an executive agency may provide services prescribed by the President under this section to a State or local government when -

(1) written request is made by the State or local government; and
(2) payment of pay and all other identifiable costs of providing the services is made to the executive agency by the State or local government making the request.

Payment received by an executive agency for providing services under this section shall be deposited to the credit of the principal appropriation from which the cost of providing the services has been paid or will be charged.

Federal agency activities under the provisions of this code are subject to Congressional review, particularly for grant programs. In addition, committees of Congress may request the Comptroller General to study the Federal agency activities.

Federal agency activities identified in the Code which are most commonly performed for State and local governments are:

- statistical and other studies and compilations;
- development projects;
- technical tests and evaluations;
- technical information;
- training activities;
- surveys;
- reports;
- documents; and
- development assistance such as -
  - **S** appropriate land uses for housing, commercial, industrial, governmental, institutional and other purposes;
  - **S** wise development and conservation of all natural resources;
  - **S** balanced transportation systems, including highway, air, water, pedestrian, mass transit, and other means to move people and goods;
  - **S** adequate outdoor recreation and open space;
  - **S** protection of areas of unique natural beauty and historic and scientific interest;

- properly planned community facilities (including utilities for supplying power, water, and communications), for safely disposing of wastes, and for other purposes; while
- establishing and maintaining concern for high standards of design.

APPENDIX F

Workflow and Time Line Schematics

Attached are two schematics which reflect the flow the work or process in developing and implementing an agreement. One shows the flow in those instances where the USIBWC is receiving funding from another source, and one reflects the flow when the USIBWC is providing the funding.

This information is provided for planning purposes. The times shown are considered a close approximation. Depending upon the nature and complexity of the agreement involved, the required for each step may be longer or shorter. However, the bottom line is not expected to vary significantly.

UNITED STATES SECTION
INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

United States Section Directive

Volume: II
Chapter: 0509
Date: December 1, 2005

SUBJECT : United States IBWC Section Library Operations

TO : Principal Engineers, Commissioner's Staff, Division Chiefs, Heads of Offices, Project Managers, Presidents, AFGE Locals 3060 and 3309

CONTROL : IMD, Communications and Records (915) 832-4744

509.1 PURPOSE: To establish procedures for the administration and maintenance of the United States Section Library Services Program.

509.2 AUTHORITY: The U.S. Section library classification system was adopted from the Department of State library classification system.

509.3 Objectives: To maintain a central library facility containing a collection of United States International Boundary and Water Commission (USIBWC) historical and technical documents and other related publications; and, to provide required cataloging, circulation, reference and bibliographic services to make the resources and information readily available.

509.4 Policy and Procedures: The Communications and Records office, under the supervision of the Chief, Information Management Division, is responsible for the administration and maintenance of the Section's library services program.

a. General: The United States Section's loan and reference service basic principle is to provide the personnel of the U.S. Section with publications required and to assist them in searching and locating information needed in the discharge of their responsibilities. Loan and reference services are provided first to personnel of the U.S. Section. These services are also made available to other Federal agencies on a

reciprocal basis, and as appropriate, to academicians and other public officials to the extent that it is feasible to do so after the demands of the U.S. Section are met.

b. Reading Room: A general reading room or a vacant desk will be maintained as a focal point for all direct services to library users. This space will be located in the vicinity of the library, and made available to personnel during normal working hours. Also in the vicinity, a computer will be made available to users for the purpose of doing research of the library database.

c. Circulation Service: All publications in the library collection are available on loan. Requests will be made in person, email or by telephone. Requesters are expected to supply, whenever possible, all pertinent data required in identifying the document(s) needed. If the request requires searching and locating a large number of documents, the department, division or office requesting them may be asked to provide assistance.

d. Conditions of loan: Library documents will normally be signed out for a period of two weeks, except for those publications, which are permanently charged out to an office.

e. Users of the U.S. Section Library:

(1) The U.S. Section Library's facility will be available to personnel of the U.S. Section on a priority basis.

(2) Application for access to the Library's facilities will be made through the Communications and Records office. Clearances for access to classified documents will be obtained from the U.S. Section Security Documents Officer either by the requester or by personnel in the Communications and Records office.

(3) Members of faculties of colleges and universities, graduate students, and other scholars doing research on subjects of interest to the U.S. Section will be given access to the facilities of the Library provided that clearance for access was obtained from appropriate agency staff having authority over the release of a particular document. For example, the Foreign Affairs Officer provides the access for international documents; for technical environmental documents the Principal Engineer in charge of the Environmental Division provides the access. Clearance for access to view or copy non-technical and historical documents is the responsibility of the employee in charge of the Communications and Records office. Members of the general public will also be considered.

f. Cataloging of Library Documents: All publications selected for addition to the central library collection will be catalogued and analyzed for subject contents and entered on a computer database.

g. Maintenance and Administration: While centralized control of the library facilities is desired, the actual needs and available space for the central library

determines whether the library collection is maintained as a unit or whether it is decentralized to several locations. General reference documents and books of general interest will be kept in the central library facilities and available to the entire staff. Some specialized reference document or books may be more appropriately maintained at the point of primary use.

h. *Bibliographic Control:* Publications acquired by the U.S. Section for official use, regardless of their physical format, will be recorded and accessed to the library in order to be brought under bibliographical control. This control consists in the establishment of a system of records, which describes each publication available to the U.S. Section, indicating its location, and specifying the principal subjects contents.

i. *Central Cataloging:* A central control for publications will be maintained, regardless of whether the library collection is maintained in one or more locations. A control entry will contain the following information: Library Accession Number, Subject or Title, Author, Source, Publication Date, and Accession Date. Additionally, if the publication is to be permanently charged out to an office, the name of the office will be added at the end of the subject. A monthly report will be posted on the library GroupWise folder listing publications accessed to the library during the current month.

j. *Loan Record:* A charge-out-card will be made for each publication removed from its assigned location. A database will be maintained listing all publications signed out from the library, posted on the library GroupWise folder and updated monthly.

k. *Disposal of Obsolete Publications:* Publications no longer useful to the U.S. Section will be withdrawn from the collection and the central catalog database cleared of these documents. The obsolete publications could be offered to local libraries and institutions or destroyed.

509.5 Responsibilities:

a. The person in charge of the Communications and Records office, under the supervision of the Chief, Information Management Division, is responsible for the overall operation and management of the U.S. Section library services program.

b. Personnel assigned to the Communications and Records office are responsible for aiding individuals in searching for and locating the requested publications.

c. Users of the U.S. Section Library are required to:

(1) Keep Communications and Records personnel informed of the location

of the books or publications borrowed, and of their intentions to house them in their own offices permanently.

(2) Keep Communications and Records personnel informed of any new purchases made, regardless of whom may have initiated the request, and publications received, so that they can be accessed into the library for accountability purposes. **Note:** Publications purchased by another agency for a reimbursable USIBWC office will not be stamped "Property of USIBWC" nor control maintained by Communications and Records.

(3) Sign out for all books, documents or publications, which are removed from the Library.

d. Prior to an employee departing this agency and/or changing jobs, the following procedures must be completed:

(1) All publications signed out to them or their office must be returned to the library, or;

(2) Transfer, in writing, all documents, publications and books to his/her successor.

509.6 Supersession: This DIRECTIVE supersedes Volume II, Chapter 0509 dated November 28, 2000.

509.7 Effective Date: This directive is effective immediately and continues in effect until otherwise superseded.

FOR THE COMMISSIONER

Diana Forti
Chief Administrative Officer

MANUAL

DETERMINATION OF THE NORMAL FLOW AND THE INTERNATIONAL BOUNDARY FOR INTERNATIONAL BRIDGES ON THE RIO GRANDE

UNITED STATES SECTION
INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

AUGUST 2000

VOLUME III
CHAPTER 105
MANUAL 105

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INTRODUCTION

Historically, the identification of the international boundary on proposed bridges was based on the agreement reached through a Joint Report of the Principal Engineers of the International Boundary and Water Commission, United States and Mexico (Commission) and joint agreement of the two Commissioners. The engineering process included examining and analyzing local historical flow data to determine the normal flow and performing a hydraulic study to determine the associated computed water surface elevation at the proposed bridge site. Each Section of the Commission used its own procedure to determine normal flow.

1970 BOUNDARY TREATY

The treaty between the United States and Mexico to resolve pending boundary differences and maintain the Rio Grande and Colorado Rivers as the international boundary was signed into effect on November 23, 1970 (Boundary Treaty). Article II-A of the Boundary Treaty states " ...the international boundary between the United States and Mexico in the limitrophe sections of the Rio Grande and the Colorado River shall run along the middle of the channel occupied by normal flow and, where either of the rivers has two or more channels, along the middle of the channel which in normal flows has the greater or greatest average width over its length, and from that time forward, the international boundary shall determine the sovereignty over the lands on one side or the other of it, regardless of the previous sovereignty over these lands. " Article II-B states "For the purpose of this Treaty, the Commission shall in each case determine the normal flow, which shall exclude flood flow, and the average widths, referred to in the preceding paragraph of this Article." To date, there has been no agreement on the definition of a flood flow between the two Sections of the Commission.

PURPOSE

The purpose of this Manual is to describe the procedure for determining the normal flow and subsequently determining the associated computed water surface elevation. This information is used to identify the location of the international boundary on proposed international bridges.

METHODOLOGY

The method of determining the normal flow and the international boundary from the U.S. Section are described below:

A) Normal Flow

1. A flow duration curve at the nearest gaging station is plotted using "DQMENU," the in-house developed Fortran Program, based on mean daily flows for the period of record. In addition, a table of flows, based on the mean daily flows, is prepared using "DQMENU" which shows the percent of time that flow is greater than or equal to various rates during the period of record. Due to the lack of a binational agreement on the definition of a flood flow, flood flows are not excluded from the analysis.

2. Normal flow at the gaging station, from the plotted duration curve (or table), is determined by selecting the median flow (based on present levels of development). The median is that value for which 50% of the flows are greater than or equal to it.

3. If necessary, the normal flow at the gaging station is adjusted by deducting diversions and/or adding inflows not covered at the gaging station but required for adjustment to the proposed bridge site.

Engineers from both Sections meet, compare their calculated normal flows, and conclude with one (Commission) normal flow value.

B) International Boundary

1. a) When a gaging station is located downstream from the proposed bridge site:

The water surface elevation at the gaging station corresponding to the normal flow is determined according to the latest rating curve for the gaging station. The normal flow and the associated water surface elevation at the gaging station shall be used as the starting river flow and starting water surface elevation for the HEC-2 Water Surface Profiles model.

b) When a gaging station is located upstream from the proposed bridge site:

The water surface elevation at the gaging station corresponding to the normal flow is determined according to the latest rating curve for the gaging station. The HEC-2 model will start at the proposed bridge site with an assumed water surface elevation, then routed upstream to the gaging station. The hydraulic model should be run until the water surface elevation matches the elevation associated with the normal flow at the gaging station.

2. The water surface cross-section (width) corresponding to the normal flow at the proposed international bridge site, based on the latest cross-section, is used to identify the central point as the international boundary.

Engineers from both Sections meet, compare their values, and conclude with one (Commission) point for the international boundary.

A letter is exchanged between Principal Engineers from the two Sections to accept the finding of the normal flow and the associated international boundary. Upon acceptance of the findings, recommendations are made to the Commissioners who exchange letters formally approving the results.

C) Demarcation of the International Boundary

Following the binational determination and verification of the international boundary at the proposed international bridge, the demarcation of the international boundary on the proposed international bridge shall be constructed by the bridge proponents in accordance with the Joint Report of the Principal Engineers Concerning the Demarcation of the International Boundary at the Border Ports and the International Bridges Along the United States/Mexico Border which was signed into effect on December 10, 1999.

D) Joint Report of the Principal Engineers/Commission Minute

A Joint Report of the Principal Engineers of the Commission and a Commission Minute are developed and signed, formalizing the agreement reached by the two Sections concerning the international boundary on the international bridge site.

FILE:ISS-NOR.WPD 8/2000

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION

UNITED STATES SECTION DIRECTIVE

Volume: III
Chapter: 201
Date: 2/9/01

SUBJECT: Project Planning Manual

TO: Executive Management Staff, Division Engineers, Heads/Chiefs of Offices, Project Managers

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CONTROL: Chief, Technical Planning Office

201.1 Requirement and Purpose

The Government Performance and Results Act (GPRA) of 1993 requires that agencies develop and implement an accountability system based on performance measurement, including setting goals and objectives and measuring progress toward achieving them. These requirements can only be met through early systematic planning of agency projects. The purpose of this manual is to provide general guidance, instruction and procedures for project planning, including budget and staffing estimates, project tracking, and the development of internal performance measures.

201.2 Responsibilities

All employees of the U.S. Section involved in any aspect of project planning are responsible for assuring that planning is conducted in a systematic and logical manner that is consistent with the requirements of the Government Performance and Results Act (GPRA) of 1993.

201.3 Control

The responsibility for the development and maintenance of this manual is assigned to the Technical Planning Office. Questions regarding information in this manual should be addressed

to that office.

201.4 Supersession

There have been no previous handbooks issued by the USIBWC on this subject. Therefore, this Manual does not cancel or supersede any previous document.

201.5 Effective Date

This manual takes effect on March 1, 2001.

FOR THE COMMISSIONER

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Debra J. Little
Principal Engineer
Engineering Department

PROJECT PLANNING MANUAL

201.6 BACKGROUND

Comprehensive project planning is the single most important activity for ensuring the success of a project, especially in the preliminary phases when basic decisions are being made that will affect the entire course of the project. Project teams are essential to the entire project planning process and are the key to effective planning. This guidance focuses on the project planning process from initial project requirement and definition to project tracking and internal performance measurement after a project is underway. Also provided are general guidelines for preparing project budget and staffing estimates. This guidance is not intended to be prescriptive. It provides a template for successful planning and should be tailored to best serve the needs of the planning team.

201.7 DEFINITIONS

(a) *PROJECT*– A project is work undertaken by the Commission to produce a solution to a stakeholder problem or need. It has a specific objective to be completed within certain quality specifications. It has start and end dates, funding limits (budget), and consumes resources (money, people, equipment, etc.).

(b) *FUNCTIONAL CHIEF*– The supervisor or manager of a specific functional area such as Design Division, Acquisitions Division, Foreign Affairs Office, etc..

(c) *PROJECT TRACKING*– Project tracking is the monitoring of schedules and budgets for reporting purposes and does not involve management of the project.

201.8 PROJECT PLANNING

The Technical Planning Office (TPO) is responsible for the coordination and management of project development from initial problem or requirement identification, to alternative selection, scheduling and tracking. Project planning is a team effort that requires support and participation from many functional areas. Project planning involves a series of analysis and study as described in section 2.2.

201.9 ROLES AND RESPONSIBILITIES

Project Planning Team Leader

The project planning team leader will usually be from the TPO, however, as workload and technical requirements dictate, planning team leaders may be drawn from other organizational elements. Regardless of how many organizational elements are represented on the planning team, there will be a single planning team leader. Responsibilities of the Planning Team Leader include the following:

primary point of contact with outside organizations during the planning process
keeps the functional chiefs and cost center managers informed of the status of the planning process
assists in early identification and resolution of problems
identifies where additional talent and effort may be required to complete the planning process
responsible and accountable for insuring that the planning team takes effective, coordinated actions to complete the planning process

Project Planning Team

Planning team members are assigned by their respective Functional Chief to represent their organization during the planning process. Team members will be empowered to act on behalf of their functional organizations, and are responsible for production and delivery of technical products from their organizational element to the Planning Team Leader.

Functional Chiefs

The chiefs of technical and administrative functions (Division/Office Chiefs) are responsible for developing and maintaining a professional, technically competent workforce; establishing and maintaining the necessary systems, technical/administrative processes and environment to produce quality products; providing the technical/administrative oversight to assure production of quality products. The functional chiefs are also responsible and accountable for the quality of the organization's technical/administrative products, assigning qualified members to the planning team, keeping commitments made to the planning team, and for ensuring that their technical/ administrative processes produce the desired results.

201.10 PLANNING STEPS

Step One--Identifying Problems and Opportunities

Problems, opportunities or requirements will usually be brought to the attention of the TPO by USIBWC Principal Engineers, other government agencies, elected representatives, or non-government organizations. This first step in project conceptualization will involve development of the following:

A clear and concise **statement** of the issue. This statement should be no more than a few sentences.

A clear statement of planning **objectives and constraints**.

A **definition** of the problem, opportunity or requirement. This definition identifies the nature, cause, location, dimensions, origin, time frame, and importance of the problem or opportunity.

The Department Heads (Principal Engineers, Chief Administrative Officer, and/or Foreign Affairs Officer) will decide if the problem or opportunity, as articulated in the statement and definition, is authorized, justifies the commitment of additional resources, and is consistent with strategic planning goals and the USIBWC Annual Performance Plan. If further work is justified, the project development process will proceed to the next step, "Inventorying Information."

Step Two--Inventorying Information

Existing and forecast information will be inventoried. Existing information defines historic conditions and existing conditions. Forecast information defines projected base year (year the project becomes operational) conditions, most likely future conditions without a project (no action alternative), and likely future conditions with a project. Three important generic types of information will be inventoried, they are:

- # Technical information such as structural, hydraulic, geotechnical and environmental data needed to analyze alternatives.

- # Basic information needed to estimate life cycle project costs. This includes project design, construction, operation and maintenance, major rehabilitation, disposal and other relevant costs.

- # Information needed to describe important project effects, such as compliance with laws, impacts to other agencies, and other impacts such as environmental.

Step Three--Formulation of Alternative Plans

Plan formulation is the process of building plans that meet planning objectives within identified constraints. Plan formulation requires the knowledge, experience, and judgements of many professional disciplines (i.e. a planning team). Alternatives should be developed to a level of detail that allows realistic evaluation and comparison of planning objective(s) accomplishment, project effects, and costs. This process will eliminate the least suitable alternatives while refining the remaining alternatives fairly and comprehensively. Development of alternatives should proceed through the following steps:

- # Ask the experts. Start by conducting brainstorming sessions with knowledgeable USIBWC staff. Further develop alternatives through brainstorming sessions with experts from outside USIBWC, such as other federal agencies and academic experts.

- # Review plans of others. Conduct thorough literature research on the subject by using the Internet, professional journals, textbooks, and reports by other agencies.

- # Use information collected in the two steps above to develop the individual pieces, the building blocks, that can be put together to form various alternatives.

Step Four--Evaluation of Alternatives

The evaluation of alternatives is a two part process; assessment (quantification) and appraisal (judgement). The three principal things to measure in this step are resources, outputs, and effects. Units of measure will be dollars, functionability, water quality changes, habitat units, erosion units, or a host of other units, tangible and intangible. Evaluations must include careful consideration by the Foreign Affairs Office and the PE's of the potential international issues associated with each alternative. Evaluations will involve five principal tasks.

- # Forecast a most likely with-project condition for each alternative.
- # Compare the without-project and with-project conditions.
- # Describe all important differences between alternatives.
- # Appraise the differences between alternatives.
- # Qualify alternatives for further consideration or "drop" them.

Step Five--Comparison of Alternatives

The first task in this step is for the planning team to determine what should be compared, i.e., the criteria. Typically criteria are: achievement of project objective(s), effects (impacts), costs, feasibility, and acceptability by stakeholders. The relative importance of the criteria being compared is often determined by policy, partners, the public, and politics.

Comparing the selected criteria involves identifying the differences among the alternatives. The difficult task is weighing those differences, as when one plan contributes more to one objective and less to another. Whenever possible, differences should be quantified for comparison purposes. An effects matrix is often useful for making comparisons. For each alternative being compared numeric values are assigned for each criteria. The resulting scores are used to numerically rank the alternatives. Table 1 shows how an effects matrix may look for a flood control project. The columns of the matrix are alternative plans. The first number in the box under a plan is the measure of impact. A 1-5 scale has been used in this example to indicate the relative magnitude of the effect (or attainment of the objective). The second number (1-5 scale) in the box is the relative importance, or weighting, of the plan effect to be compared. Agency decision makers determine relative importance of effects based on their knowledge of the big picture. A score of 5 is the most desirable, a score of one is least desirable. Under each plan multiply the magnitude of effect by the relative importance to come up with a score. Then sum the scores under each plan to calculate a total score.

TABLE 1:

OBJECTIVE / EFFECTS	PLAN 1	PLAN 2	PLAN 3	PLAN 4	PLAN 5
Reduce Flood Damages	5 / 5	5 / 5	4 / 5	3 / 5	4 / 5
Cost	4 / 4	5 / 4	3 / 4	2 / 4	1 / 4
Environmental Impacts	3 / 4	5 / 4	4 / 4	3 / 4	5 / 4
Stakeholder Acceptance	4 / 3	3 / 3	4 / 3	3 / 3	4 / 3
Technical Feasibility	4 / 4	5 / 4	3 / 4	4 / 4	2 / 4
TOTAL SCORES	81	94	72	60	64

In this example the ranking indices for plans 1 through 5 would be 81, 94, 72, 60, and 64. These numbers are just information. The scores are not decisions, they are simply recommendations based on a set of judgements and will be used by decision makers along with other information to arrive at a favored plan.

Step Six--Alternative Selection

In the final iteration of the planning process, the TPO will present to decision-makers (Commissioner and Department Heads) a final array of plans that have been compared. These are the plans that survived iterations of the planning process. All alternatives presented will have been assessed and appraised and found to be complete, effective, and efficient. Upon completion of this step, the project development role of the TPO is complete.

201.11 BUDGET AND STAFFING ESTIMATES

The budget request and justification for a project is the USIBWC's proposal to continue work on an existing project, or to start work on a new project, and quantifies the financial and human resources required for successful project completion. Specific requirements will be delineated in the appropriate budget call. The following elements should be taken into consideration when preparing budget and staffing estimates:

Strategic Linkage

The primary consideration in initiating a project is its linkage with the Strategic Plan, and specifically to the Annual Performance Plan. Your project must have a link to the accomplishment of a goals or goals identified in these plans. This linkage should be clearly articulated in the first few sentences of your project narrative.

Inventory Resources and Needs

Determine what information is available and what is really needed to solve the problem. What resources (including staff) are available to complete the tasks? Many government agencies,

private organizations, and universities may already have some of the data that you may need. Internet data bases are also a powerful source of data. Other participants such as state agencies and irrigation districts can sometimes get needed information more easily or may have already completed some or all of the work. Consider all of the connected tasks that must be accomplished (e.g., specific studies that may be needed prior to design such as land surveys, cultural resources assessments, biologic surveys, etc.)

Base Budget Estimates on Needed Work

Start with your definition of the problem and brainstorm with the people who will do the work. Consider all of the tasks involved and develop a project cost estimate. Look at the actual costs and proposed budgets for some similar projects. While your project may be unique, you can use this information to create a rule of thumb. Check your estimates with experts who have developed similar estimates. Consider how much staff time (technical, coordination, and support), money, and equipment will be required. What specific actions will you have to take? What will they cost? Once you have all of this information together, layout the project and determine the work and cost required in each fiscal year. Be accurate in your estimates and take in to consideration that your project must compete with other agency projects for available funds.

Use Budget Tools

Forecasting tools, budget computer software programs, and research are useful for estimating a budget. People already involved in the problem are your most important tools. Their ideas on the extent of the problem, the necessary research, and potential solutions will help clarify what needs to be done and how many resources will be needed to do it. Also, they will be able to identify others who may be involved and who may contribute to the effort a vital piece of the estimating puzzle.

Consider Performance Measurement

Performance measures must include a desired outcome, who the customers are, a measure with a definition of the measure and what the measure demonstrates, the unit of output, and data source. Following are some example performance measures for typical agency projects.

Flood Control Performance Measure

Goal: 100 Percent Availability

Stakeholders: People directly affected by the USIBWC flood damage reduction projects, U.S. taxpayers and Mexican citizens.

Measure: Project Availability

Definition: The number of days a project is one hundred percent (100 %) operational to perform its flood damage reduction function. "Operational" means the project's features are fully

functioning as designed and constructed or can be made functional (i.e., using backup systems) if needed in response to a spillway design type flood event. If a project feature is down for whatever reason and cannot be made functional in time to respond to a flood event then the project is unavailable for that day. "Features" include, but are not limited to, dams, levees, embankments, dikes, gates, spillways, channels and outlet structures.

Demonstrates: The effectiveness of the Flood Damage Reduction system to provide national benefits, and a level of maintenance over time. Government managers may interpret the data from this measure in order to allocate resources in support of the Flood Damage Reduction mission.

Unit of Output: The number of calender days in a fiscal year a project is in compliance with the definition. The days are expressed as a percentage of the total days within the year.

Data Source: Quarterly data calls from Field Offices. Each field office must keep a log that records days that a project is not functioning at 100%.

Sanitation Project Performance Measure

Goal: 100 Percent Availability

Stakeholders: People directly affected by the USIBWC sanitation (water quality) projects, U.S. taxpayers and Mexican citizens.

Measure: Project Availability

Definition: The number of days a project is one hundred percent (100 %) operational to perform its wastewater treatment functions. "Operational" means the project's features are fully functioning as designed and constructed or can be made functional (i.e., using backup systems) if needed to treat sewerage to permit standards. If a project feature is down for whatever reason and cannot treat sewerage to permit standards, it is unavailable for that day.

Demonstrates: The effectiveness of the treatment system to provide national benefits, and a level of maintenance over time. Government managers may interpret the data from this measure in order to allocate resources in support of the water quality mission.

Unit of Output: The number of calender days in a fiscal year a project is in compliance with the definition. The days are expressed as a percentage of the total days within the year.

Data Source: Quarterly data calls from Field Offices. Each field office must keep a log that records days that a project is not functioning at 100%.

Boundary Demarcation Performance Measure

Goal: 100 Percent compliance with boundary treaty requirements.

Stakeholders: People and agencies directly affected by the USIBWC boundary demarcation projects, U.S. taxpayers and Mexican citizens.

Measure: Miles of border properly demarcated.

Definition: The number of miles of border properly demarcated. Properly demarcated means all land boundary markers are in place, structurally sound, and legible. Properly demarcated river boundary means that the centerline of the channel designates the international boundary as specified in applicable treaties.

Demonstrates: The effectiveness of the boundary demarcation program to provide national benefits, and a level of maintenance over time. Government managers may interpret the data from this measure in order to allocate resources in support of the boundary demarcation mission.

Unit of Output: The number of miles in compliance with the definition. The miles properly demarcated are expressed as a percentage of the total border miles.

Data Source: Quarterly data calls from Field Offices. Each field office must keep a log that records days that a project is not functioning at 100%.

201.12 ADDITIONAL BUDGET AND STAFFING ESTIMATE GUIDANCE

Careful and complete preparation of the project justification, including budget and staffing estimates, is the first step of the budgeting phase of capitol acquisitions. Detailed guidance on budget and staffing estimates can be found in the Office of Management and Budget Circular A-11, Part 3: Planning, Budgeting, and Acquisition of Capitol Assets (annually); Capitol Programming Guide version 1.0 (July, 1997); and the appropriate USIBWC budget call. In developing your project budget and staffing estimates, consider the following information:

- Citation of the authority or authorities for your project.
- Clear definition of the problem to be addressed.
- Brief history of the problem.
- Brief history of project accomplishments to date if ongoing.
- Project objectives: what, when, where (quantify the number of people affected or acres of land protected).
- Description of the methodology used to arrive (basis) at your cost estimate.
- How progress on the project will be measured.
- Possible constraints on the project.
- How the project relates to the USIBWC mission and Strategic Plan.

The budget timetable can be variable and is subject to change. In general, the internal IBWC schedule for annual budget preparation is as follows:

FEBRUARY	Initial Budget Call
MARCH	Draft Budget Requests to Department Heads

APRIL	Budget Requests to Budget Team
MAY	Consolidated Budget Request to CAO and Commissioner
JUNE	Submission to State Department

201.13 PROJECT TRACKING

Once work begins on a selected alternative, the TPO will be responsible for monitoring and reporting on the progress of ongoing projects. Projects will be tracked using an established project management software. Project monitoring and internal reporting will include documentation of all significant changes, tracking of schedule and budget, and forecasting the impacts of deviations from the original schedule and budget. Quarterly updates of the annual Agency Work Plan will be the mechanism for internal reporting of project tracking information. The Agency Work Plan will detail plans and schedules for each project and will be the baseline to which comparisons will be made. The frequency of monitoring and reporting updates may vary from project to project, but in most cases a quarterly update should be sufficient. This tracking system will provide a means to compare project accomplishments to the project performance measures. Additional reporting may be required through the budget process, annual independent audit, and annual Performance Report.

United States Section
International Boundary and Water Commission

Directives Management System

Volume II	: Engineering
Part 0100	: Engineering Management
Chapter 0102	: Project Planning/Coordination
Directive 01022	: Guidance for the Development of Project Specifications for USIBWC Construction Projects
Manual	: Policy Guidance for inclusion of FISMA Requirements for USIBWC Information Technology (IT) assets as part of the Design Requirements in the Technical Specifications and/or Scopes of Work for Construction or Rehabilitation of USIBWC Facilities
Citation	: SD.II.01022-M-1
Proponents	: Master Planning Section and Information Management
Effective Date	: 9 April 2014

1. **Purpose**: The Federal Information Security Act of 2002 (FISMA) requires federal agencies to implement a mandatory set of processes and system controls designed to ensure the confidentiality, integrity, and availability of system-related information. The processes and systems controls in each federal agency must follow established Federal Information Processing Standards, National Institute of Standards and Technology standards, and other legislative requirements pertaining to federal information systems, such as the Privacy Act of 1974.The Federal government regulations require that the International Boundary and Water Commission, U.S. Section (USIBWC) develop, document, and implement an agency-wide program to ensure the protection and security of information systems that support the operations and assets of the agency.

   This manual establishes design requirements that specify the minimum level of physical and environmental protection controls required under the law, for USIBWC information systems at existing and future USBWC facilities. The facilities include all the field offices, wastewater treatment plants, dams, power plants, and headquarters.

2. **Authority**:

   A. United States Section Directive SD.I.01011, dated April 1, 2013, subject: Directives Management System

   B. United States Section Directive SD.I.06063, dated March 23, 2012, subject: Plan of Action and Milestones (PoA& Ms) Directive.

C. The Federal Information Security Management Act of 2002 ("FISMA", 44 U.S.C. § 3541, *et seq.*)

FISMA assigned specific responsibilities to federal agencies, the National Institute of Standards and Technology (NIST) and the Office of Management and Budget (OMB) in order to strengthen information system security. In particular, FISMA requires the head of each agency to implement policies and procedures to cost-effectively reduce information technology security risks to an acceptable level.

In accordance with FISMA, NIST is responsible for developing standards, guidelines, and associated methods and techniques for providing adequate information security for all agency operations and assets.

The USIBWC is to follow NIST, Special Publication (SP) 800-53, Revision 3, which lists the required physical and environmental controls required.

3. **Responsibilities**:

A. Office of the Commissioner: The Commissioner, as head of the agency, is required to implement policies and procedures to cost-effectively reduce information technology security risks to an acceptable level at all agency infrastructure.

B. Information Management Division: This division ensures and requests that the requirements under this Standard Operating Procedure are updated/revised each time new and/or revisions are mandated by FISMA and/or other federal requirements. This division will also review, comment, and sign off on documents such as scopes of work, drawings, specifications, contractor submittals, etc. in order to ensure that the requirements under this Manual are being cited and implemented for all existing and/or new facilities.

C. Operation Principal Engineer: Ensures that staff under his/her direction is aware of this Manual and ensures that the field office Area Operations Managers are implementing the requirements under this Manual at each of the facilities.

D. Engineering Principal Engineer: Ensures that staff under his/her direction is aware of this Manual and ensures that requirements under this Manual are incorporated into all scopes of work, drawings, specifications, contract submittals, etc. dealing with USIBWC present and future facilities.

E. Engineering Services Division: The Division Engineer ensures that the security requirements under this Manual are incorporated into all scopes of work, drawings, specifications, contract submittals, etc. for the rehabilitation of existing USIBWC specific facilities or construction of new facilities at the field offices,

wastewater treatment plants, and headquarters. The security contract language identified in this Manual should be sufficiently detailed to enable contractors to fully understand the information security regulations, mandates, and requirements that they will be subject to under the contract or task order that may be awarded to them. This will also give potential contractors a better opportunity to ask questions about these Information Technology (IT) security requirements. The idea is to better prepare contractors and Commercial Service Providers to be compliant with USIBWC and Federal IT security requirements up front, avoiding unnecessary future contract modifications.

F. Master Planning Section: The planners update this Manual when the Information Management Division requests updates/revisions.

4. **Policy Guidance**:

A. The security requirements that form part of Technical Specifications and/or Scopes of Work awarded to contractors for construction or rehabilitation of USIBWC facilities such as field office administration buildings, wastewater treatment plants, and headquarters offices shall include IT security compliance with the following federal, state, and local laws, codes, rules, regulations, ordinance, and standards. In instances where regulations and codes are in conflict, the stricter standard will apply. Where conflicts arise between various federal requirements, the strictest interpretation shall apply.

(1) National Institute of Standards and Technology (NIST), Special Publication (SP) 800-53, Revision 3, which lists the required physical and environmental controls required.

(2) Institute of Electrical and Electronics Engineers, Inc (IEEE) Standards.

(3) National Fire Protection Association (NFPA).

(4) National Electrical Code (NEC).

(5) Telecommunications Industry Association (TIA) Standards.

(6) Electronic Industries Alliance (EIA)/Telecommunications Industry Association (TIA) -568-B Commercial Building Telecommunications Wiring.

(7) EIA/TIA-569 Commercial Building Standard for Telecommunications Pathways and Spaces.

(8) EIA/TIA-606-A Administration Standard for the Telecommunications Infrastructure of Commercial Buildings.

(9) EIA/TIA-607-A Commercial Building Grounding and Bonding Requirements

for telecommunications.

(10) Underwriter's Laboratory (UL) 1479 and American Society for Testing and Materials (ASTM) E814 compliant fire stopping thru-wall fittings that accommodate adding or removing cables without disturbing the fire-stopping material.

B. The USIBWC is required to adhere with NIST, Special Publication (SP) 800-53 Revision 3, which lists the physical and environmental controls required for effective physical and environmental protection of USIBWC IT assets. The design requirements in the Technical Specifications and/or Scopes of Work for Construction or Rehabilitation of USIBWC Facilities shall include the following controls:

(1) Physical Access Control - controls entry to the facility containing the information system using physical access devices and/or guards. Physical access devices include, for example, keys, locks, combinations, and card readers. Workstations and associated peripherals connected to (and part of) an organizational information system may be located in areas designated as publicly accessible with access to such devices being safeguarded. The intent is to provide additional physical security for those areas where the organization may be more vulnerable due to the concentration of information system components.

(2) Access Control for Transmission Medium - controls physical access to information system distribution and transmission lines within organizational facilities. Protective measures to control physical access to information system distribution and transmission lines include: (a) locked wiring closets; (b) disconnected or locked spare jacks; and/or (c) protection of cabling by conduit or cable trays.

(3) Access Control for Output Devices – Physical access to information system output devices (printers, fax machines, networked scanners, and copiers) that may produce sensitive or confidential information prevents unauthorized individuals from obtaining the output.

(4) Monitoring Physical Access - monitors real-time physical intrusion alarms and surveillance equipment.

(5) Visitor Control - controls physical access to the information system by authenticating visitors before authorizing access to the facility where the information system resides other than areas designated as publicly accessible. The organization escorts visitors and monitors visitor activity, when required.

(6) Access Records – Records showing access to the facility where the

information system resides. These records should be created automatically with automated access control devices (card readers and physical control systems) when possible.

(7) Power Equipment and Power Cabling - protects power equipment and power cabling for the information system from damage and destruction.

(8) Emergency Shutoff - provides the capability of shutting off power to the information system or individual system components in emergency situations. Place emergency shutoff switches or devices where the information system resides to facilitate safe and easy access for personnel and protects emergency power shutoff capability from unauthorized activation.

(9) Emergency Power - provides a short-term uninterruptible power supply to facilitate an orderly shutdown of the information system in the event of a primary power source loss. The organization provides a long-term alternate power supply for the information system that is capable of maintaining minimally required operational capability in the event of an extended loss of the primary power source. Long-term alternate power supplies for the information system are either manually or automatically activated.

(10) Emergency Lighting - employs and maintains automatic emergency lighting for the information system that activates in the event of a power outage or disruption and that covers emergency exits and evacuation routes within the facility.

(11) Fire Protection Control - employs and maintains fire suppression and detection devices/systems for the information system that are supported by an independent energy source. Fire suppression and detection devices/systems include, for example, sprinkler systems, handheld fire extinguishers, fixed fire hoses, smoke detectors and *Total Flood, Clean Agent Fire Suppression Systems*.

(12) Temperature and Humidity Control - maintains temperature and humidity levels within the facility where the information system resides at ***18-27 deg C (64.4- 80.6 Degrees F)*** *and 40-59 % relative Humidity;* and monitors temperature and humidity levels ***constantly.*** The organization employs automatic temperature and humidity controls in the facility to prevent fluctuations potentially harmful to the information system. The organization employs temperature and humidity monitoring that provides an alarm or notification of changes potentially harmful to personnel or equipment.

(13) Water Damage Protection - protects the information system from damage resulting from water leakage by providing master shutoff valves that are accessible, working properly, and known to key personnel.

(14) Location of Information System Components - positions information system components within the facility to minimize potential damage from physical and environmental hazards and to minimize the opportunity for unauthorized access.

C. The following criteria and applicable 2013 NFPA 75 standards for the Information Technology (IT) equipment area shall be included as part of the design requirements in the Technical Specifications and/or Scopes of Work for Construction or Rehabilitation of USIBWC Facilities:

(1) The IT area shall be separated from other occupancies within the building, including atria or other open-space construction, by fire-resistant rated construction.

(2) The fire resistance rating shall be commensurate with the exposure but not less than 1 hour for both.

(3) The fire-resistant-rated enclosures shall extend from the structural floor to the structural floor above or to the roof.

(4) Cable penetrations or other penetrations through required fire –rated assemblies shall be fire stopped with a listed fire stopping material that has a fire resistance rating equal to the fire resistance rating of the penetrated barrier where tested with a minimum positive furnace pressure differential of 2.5 Pa (0.01 in. of water) under ASTME 814, Standard Method of Fire Tests of Through – Penetration Fire Stops.

(5) All air ducts and air transfer openings passing through fire-resistant-rated construction shall be provided with automatic fire and smoke dampers installed in accordance with *NFPA 90A, Standard for the Installation of Air-Conditioning and Ventilating Systems*.

(6) Every opening in the fire-resistant-rated construction shall be protected to limit the spread of fire and to restrict the movement of smoke from one side of the fire-resistant-rated construction to the other. The fire resistance rating for doors shall be as follows:

(a) 2-hour fire-resistant-rated construction — 1 ½-hour fire-resistance-rated doors

(b) 1-hour fire-resistant-rated construction — ¾-hour fire-resistance-rated doors

(7) The fire-resistant-rated construction shall be in accordance with *NFPA 101, Life Safety Code*, and applicable building and fire codes.

(8) Emergency lighting shall be provided in the IT Server room in case of power outage.

(9) The Server room area shall not be located above, below or adjacent to areas or other structures where hazardous processes are located unless approved protective features are provided.

(10) The IT Server room area should be located to minimize exposure to fire, water, corrosive fumes, heat and smoke from adjoining areas and activities.

(11) The IT equipment room shall be separated from other occupancies in the information technology equipment area by fire-resistant rated construction.

(12) Access to the IT Server room shall be restricted to authorized persons only.

(13) Interior floor finishes used in information technology equipment areas shall be Class I in accordance with *NFPA 101, Life Safety Code*.

(14) All interior wall and ceiling finishes in the information technology equipment area shall have a Class A rating in accordance with *NFPA 101, Life Safety Code*.

(15) For the IBWC, there is a critical need to protect data in process, reduce equipment damage and facilitate return to service in case of a fire, so the installation of sprinkler systems within the IT server room will not be permitted. Instead, portable fire extinguishers of the carbon dioxide type or a halogenated agent type shall be provided for the protection of electronic equipment within the server room (in accordance with *NFPA 10, Standard for Portable Fire Extinguishers*).

(16) A sign shall be located adjacent to each portable extinguisher and shall plainly indicate the type of fire for which it is intended.

D. Also, the following <u>specific</u> requirements shall be included as part of the design requirements in the Technical Specifications and/or Scopes of Work for Construction or Rehabilitation of USIBWC Facilities:

(1) Walls for IT Server room must extend all the way to ceiling to prevent anyone from crawling over ceiling tiles into room and for fire protection (CMU)

(2) A separate AC unit specifically for server/computer rooms is required to be installed in order to maintain a consistent 67 to 74 degree Fahrenheit temperature range within the IT Server room.

(3) No plumbing carrying water or sewage should be permitted to be run directly over the IT Server room or anywhere that would allow a break of plumbing to cause water or sewage to seep or accumulate in, over or near the room.
(4) The door to the server room requires strict access control with logs of access and ability to set authorized employee's access the room.

(5) An analog phone line is necessary within the server room in order to enable remote access to the equipment if internet/network access becomes unavailable.

(6) The server room should have an environmental detector installed that will automatically alert designated personnel of smoke, temperature, moisture, power outage and other reportable conditions within the room.

(7) Emergency lighting must be installed inside the server room that are activated in case of power outage.

(8) Backup Generator needs to power all circuits installed within the IT Server Room.

(9) Data cabling should be completed with category 6A F/UTP copper cabling and include direct "home runs" from identified data port locations at each workspace to the designated server room.

(10) Each cable should be terminated at the office/workspace location and also terminated and punched down into a patch panel within the server room.

(11) Cable will have a service loop (6 to 10 ft) at the outlet end to allow for moving or re-termination. Service loops must conform to specifications to include total length and bend radius limitations.

(12) The server room will contain a lockable/secured rack enclosure provided by the USIBWC. All data cable runs should terminate at an appropriate category 6A F/UTP patch panel mounted within the IBWC server rack or mounted on the server room wall (patch panel to be provided by the contractor i.e. Trendnet TCP24C6 – 48-Port CAT6 RJ-45 UTP Rack Mount Patch Panel or equivalent).

(13) At the patch panel, 7 Ft CAT 6 patch cables will be installed to run from the patch panel to the IBWC provided switch.

(14) All wires running from wall jacks will need to be punched down using the 568B wiring schematic.

(15) Each office space location shall contain at least one dual-ported faceplate/gang box with category 36A F/UTP jacks. At least 2 data ports should be located within each office space.

(16) A cable tray or cabling suspension solution (i.e. J-hooks, cable ladders) must be installed above or below suspended ceilings of the office space and/or suite so that the category 6A F/UTP cable is not damaged and is provided a suspended pathway to enter the server room via a fire-stopping fitting. All cable, cable bundles, faceplates/ports, and patch panels shall be neatly identified by printed labels/tags.

(17) The server room should include two 120v/30 amp circuits installed near the patch panel location. Two 30-amp circuits are required for the rack with a dedicated isolated ground to the panel. The high capacity UPS's for the rack will require this type of special outlet. This type of connector requires a NEMA L5-15R receptacle for proper operation.

(18) Materials required (Numbers of each to be determined by total amount of data ports identified in plans): Category 6A UTP Plenum cable:

(a) Category 6A F/UTP jacks

(b) Category 6A F/UTP face plates

(c) Category 6A F/UTP 48-port patch panel

(d) Category 6A patch cables

(e) Cable trays or J-hooks or other hardware to manage cable above office suite above the recessed ceiling.

5. **Supersession**: This is a new manual.

Approved:

///ORIGINAL SIGNED/// 04/09/14
Edward Drusina, P.E. Date
Commissioner

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
United States Section

United States Section Directive

Volume: III
Chapter: 501
Date: March 13, 2002

SUBJECT: NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) PROCEDURES FOR USIBWC REAL PROPERTY ACTIONS AND MANAGEMENT OF ENVIRONMENTAL IMPACTS

TO: USIBWC Executive Staff; Division, Office and Project Managers

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CONTROL: Principal Engineers, Engineering and Operations Departments

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501.1 Requirement/Authority

This directive is issued under the authority of the United States Section Directive Volume I, Chapter 001, dated March 12, 1999, entitled "United States Section Issuance System."

The National Environmental Policy Act (NEPA) [42 U.S. Code (USC) 4321-4370c], as last amended in November 1990, established and implemented a national policy to prevent or eliminate damage to the environment due to major Federal actions and to stimulate the health and welfare of humans (42 USC 4321). The Act also provided for the establishment of a Council on Environmental Quality (CEQ). The procedural provisions for the implementation of NEPA policies are found in 40 Code of Federal Regulations (CFR) 1500 to 1508. The United States Section, International Boundary and Water Commission (USIBWC) was mandated to have agency regulations for implementing NEPA which are entitled "Operational Procedures for Implementing Section 102 of the National Environmental Policy Act of 1969, Other Laws Pertaining to Specific Aspects of the Environment and Applicable Executive Orders" (46FR44083, September 2, 1981) (Appendix 501-A).

The underlying intent of NEPA is to encourage productive harmony between humans and their environment. Under NEPA, the continuing policy of the Federal Government is to use all practicable planning, policy, and regulatory means and measures in a manner calculated to foster and promote the general welfare501-1; to create and maintain conditions under which humans and nature can exist in productive harmony; and to fulfill the social, economic, and other needs of present and

future generations of Americans (42 USC 4221 (a)).

The Act of Congress approved on August 27, 1935 (49 Stat. 906) delegated to the Commissioner of the USIBWC the authority to issue revocable licenses and leases on USIBWC real property. The USIBWC is responsible for the construction, operation and maintenance of all United States properties under its jurisdiction and, the administration of laws for the protection and preservation of these properties. Licenses for all work to be performed on rights-of-way (ROW) must be approved by the USIBWC Commissioner before such work is begun. The authorization is ordinarily granted in the form of a revocable license. Under NEPA and related laws, it is the continuing responsibility of the Federal Government to manage, monitor, preserve, and protect the important historic, cultural, and natural aspects of our national heritage (42 USC 4331 (b)(4)). NEPA requires the Federal Government to make environmentally informed decisions when implementing major Federal actions. The granting of a license, contract, lease, easement, ROW, permit, or grant-in-aid by the USIBWC to another party to perform an activity or implement a project on Federal real property constitutes a Federal action which must be evaluated for its significance in the context of NEPA.

The Federal Property Management Regulations (FPMR) system is prescribed by the Administrator of General Services under authority of the Federal Property and Administrative Services Act of 1949 (63 Stat. 377, as amended), and other laws and authorities and applies to all Federal Agencies to the extent specified in the Act. The procedural provisions for the implementation of FPMR policies are found in 41 CFR, Volume 2, Subtitle C, Chapter 101.

The Treaty to Resolve Pending Boundary Differences and Maintain the Rio Grande and Colorado River as the International Boundary, signed on November 23, 1970 (1970 Boundary Treaty) resolved all pending boundary differences between the United States and Mexico, and provided for maintaining the Rio Grande and the Colorado River as the international boundary. It provides procedures designed to avoid the loss or gain of territory by either country incident to future changes in the courses of these rivers, and for the joint consideration and approval of any activities which may deflect or obstruct the normal or flood flows within the international reaches of the two rivers.

501.2 Purpose

The purpose of this directive is to formalize the internal NEPA procedures for the issuance, denial, renewal, or cancellation of revocable USIBWC permits, licenses, leases, and easements for actions and projects which cross or encroach upon the USIBWC Flood Control Project works, floodplains, and ROW, and any resulting environmental impacts from these activities.

NEPA directs all Federal agencies to use a systematic, interdisciplinary approach in planning and decision making where there may be an impact on the environment. In essence, it requires all Federal agencies to prepare documentation showing consideration of alternatives to minimize and/or avoid adverse environmental impacts of projects and decisions. This documentation takes the form of actions which are candidates for Categorical Exclusions (CXs), Environmental Assessments (EAs), and Environmental Impact Statements (EISs) depending on the degree to which a project

affects the quality of the human environment. In addition, Federal agencies are subject to requirements of related laws and regulations pertaining to the assessment, documentation, management, avoidance, minimization, monitoring, and mitigation of environmental impacts resulting from the actions and policies of Federal agencies, and the construction and operation of Federal facilities. Federal agency commitments made in NEPA documents should include monitoring and assessment of the environmental impacts of an activity or project in relation to agreements made in the document.

Failure to comply with NEPA can result in procedural risks such as court injunction, delayed or stopped projects, and poor management decisions. Compliance with NEPA will ensure that the substantive environmental laws that can result in fines and/or imprisonment are not violated.

501.3 Definitions

1. Major Federal Action - Includes actions with effects that may be major and which are potentially subject to Federal control and responsibility. "Major" reinforces but does not have a meaning independent of "significantly" (40CFR1508.27). Actions include the circumstance where the responsible officials fail to act and that failure to act is reviewable by courts or administrative tribunals under the Administrative Procedure Act or other applicable law as agency action. Actions include new and continuing activities, including projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by Federal agencies; new or revised agency rules, regulations, plans, policies, or procedures; and legislative proposals (40CFR1506.8 and 1508.17. For additional information please refer to 40CFR1508.18.

2. License - Authorization given to a project wherein permanent structures would be established within, or crossing, a Government ROW.

3. Permit - Authorization given to a temporary, short-term, or annually recurring activity or project established within, or crossing, a Government ROW.

4. Lease - A written contract between the Government (lessor) and a tenant (the lessee) that transfers the right to exclusive possession and use of the Government's real property to the lessee for a specified period of time and for a stated consideration (rent).

5. Easement - A right to use Government land for a specific purpose, such as for a ROW or utilities. An easement is an incorporeal interest in Government land. An easement privilege passes with the land when conveyed.

501.4 Appendices

Appendix 501-A	USIBWC Agency Operational Procedures for Implementing Section 102 of the National Environmental Policy Act of 1969, Other Laws Pertaining to Specific Aspects of the Environment and Applicable

Executive Orders (46FR44083, September 2, 1981)

Appendix 501-B	USIBWC Agency Procedures for the Implementation of Executive Orders11988-Floodplain Management and 11990-Protection of Wetlands published in the Federal Register on December 29, 1978 (43FR61023-6102)
Appendix 501-C	USIBWC Agency Procedures Pertaining to Historic and Cultural Properties published in the Federal Register on October 15,1981 (46FR50859-50863)
Appendix 501-D	USIBWC Agency Procedures for the Protection of Archaeological Resources published in the Federal Register on May 10, 1991 (56FR21590-21596)
Appendix 501-E	Background for NEPA Reviewers: Grazing on Federal Lands, dated February 1994 (EPA-300-B94-004)

501.5 Responsibilities

All requests for permits, licenses, leases and easements must be reviewed by appropriate USIBWC staff elements before such approvals are issued, renewed, denied, or cancelled. Requests will be reviewed and completed by USIBWC staff elements in a timely manner and properly coordinated with all affected parties.

The USIBWC Commissioner has the authority to issue revocable licenses and leases on USIBWC real property and has delegated this authority to the Division Engineer, Operations and Maintenance Division (OMD).

The USIBWC management staff will make efforts each budget cycle to plan for and ensure the adequate assignment of resources and personnel for the monitoring of contractual agreements made with regard to USIBWC real property to include the physical inspection of property subject to such agreements.

The Principal Engineer, Engineering Department, and the Division Engineer, Environmental Management Division (EMD), will ensure that appropriate provisions for complying with NEPA and related environmental laws are considered prior to, and are included in, contractual agreements made with regard to USIBWC real property. The Division Engineer, EMD, will plan for and, with adequate resources, execute studies for the preparation of NEPA documents and long-term management plans for USIBWC projects, in alignment with international treaties and agreements, to protect and enhance the environment, wildlife, and cultural and natural resources. The Division Engineer, EMD, will work with other USIBWC support divisions and field offices to assist in the monitoring of contractual agreements made with regard to USIBWC real property. The Division

Engineer, EMD, will make recommendations to the Chief, Boundary and Realty Division (BRD), and the Division Engineer, OMD, regarding the issuance, denial, renewal or cancellation of USIBWC contractual agreements related to USIBWC real property, including corrective action for environmental impacts. The Investigations, Design, Construction Division (IDCD) will review the request for engineering concerns and determine whether coordination with the Mexican Section of the IBWC (MxIBWC) is required in accordance with international treaties and agreements in force. If coordination with Mexico is required, the IDCD, through the Foreign Affairs Office (FAO), will carry out this coordination.

The Chief, BRD, will administer the USIBWC real property program and prepare or oversee the preparation of contractual agreements for USIBWC real property activities or works. All licenses, leases, permits, and easements will be initiated and coordinated through the BRD. The Chief, BRD, will coordinate and work with other USIBWC support divisions and field offices to assist in the monitoring of contractual agreements made with regard to USIBWC real property. The Chief, BRD, will regularly review fees assessed for real property contractual agreements to ensure: adherence to OMD Circular A-45; consideration of costs for services performed by lessees instead of by the government; and consideration of USIBWC administrative costs. With input from appropriate staff elements, the Chief, BRD, has the authority to request corrective action of a lessee if a violation of an agreement is found, and/or to issue a notice of termination of the agreement.

The Principal Engineer, Operations Department, and the Division Engineer, OMD, will ensure that appropriate provisions for adhering to USIBWC Project operation and maintenance requirements and conditions and impact potentials are considered prior to, and are included in, contractual agreements made with regard to USIBWC real property. The Division Engineer, OMD, with input from appropriate staff elements, will issue revocable USIBWC contractual agreements for USIBWC real property activities or works on behalf of the USIBWC Commissioner. The Division Engineer, OMD, and USIBWC Field Office Managers will plan for and, with adequate resources, ensure that the affected USIBWC field offices, with assistance from other USIBWC support divisions, monitor the contractual agreements made with respect to USIBWC real property and perform physical inspections of such properties.

Those USIBWC field offices with authority to act on such requests will coordinate with the project proponent and ensure that the proposed activity complies with that USIBWC Project operation and maintenance requirements prior to forwarding the request to BRD. All USIBWC Field Office Managers will document and report suspected or unauthorized activity occurring on USIBWC real property to the Division Engineer, OMD, who will coordinate the USIBWC response with appropriate support divisions.

The Legal Advisor, with input from appropriate staff elements, will provide legal opinions regarding requests for issuance, denial, renewal, corrective action, and/or cancellation of contractual agreements on USIBWC real property.

All USIBWC employees working in the field have an obligation to protect the environment, wildlife,

and cultural and natural resources, and to document and report suspected or unauthorized activity occurring on USIBWC real property to their immediate supervisor who will in turn report it up the chain of command, and then to BRD for coordination of the USIBWC response.

501.6 Procedure

1. The BRD will receive requests for approval or renewal of a contract for an activity or constructed works on USIBWC real property from a project proponent or a USIBWC Field Office with the authority to coordinate such requests. A request originating from a USIBWC Field Office will include a memorandum indicating that coordination and site inspection with the proponent has occurred at the Field Office level, and that the proposed activity complies with that USIBWC project operation and maintenance requirements. The Field Office will also ensure that the package is complete and includes all of the appropriate information stated below before submitting the request to the BRD.

2. The BRD will ensure that the package for a new request is complete and includes the required coordination letters and/or documentation from the United States Army Corps of Engineers (USACE), the United States Fish and Wildlife Service (USFWS), and the State Historical Preservation Officer (SHPO) and other federal, state, or tribal agencies, as appropriate [e.g., United States Bureau of Reclamation (USBR), the Texas Natural Resource Conservation Commission (TNRCC), the New Mexico Environment Department (NMED), etc.] The BRD will ensure that lease renewals contain adequate information for review, including the nature of the proposed activity, location maps, and general lease conditions. Lease renewals do not require the coordination letters as stated above unless a substantial change in the nature or frequency of the activity is proposed. If a USIBWC Field Office has not yet done so, the BRD will prepare a draft permit, license, lease, or easement.

3. The IDCD will review the request for engineering concerns and determine whether coordination with the Mexican Section of the IBWC (MxIBWC) is required in accordance with the 1970 Boundary Treaty or IBWC Minute No. 244 (Maintenance of Boundary Monuments). The IDCD and the BRD must be satisfied that the request will not have adverse impacts under the 1970 Treaty or IBWC Minute No. 244 and may request additional information from the USIBWC Field Office or project proponent, through the BRD, to make that determination.

   A. If coordination with Mexico is necessary and sufficient information is available for the Field Office or IDCD to make the determination that the request is acceptable to the USIBWC in terms of the 1970 Treaty and Minute No. 244, the IDCD will prepare a letter from the Principal Engineer, Engineering Department, summarizing the project and requesting Mexico's review of the project and joint consideration of: 1) the impacts to the normal

or flood flows in the international reaches of the Rio Grande or the Colorado River; and/or 2) the impacts to the permanence of, access to, and line of sight between the boundary monuments. The request package will not be considered complete until a letter has been received from the Principal Engineer in Mexico, and letters of approval for the project or activity have been exchanged by both Commissioners.

B. If coordination with MxIBWC is not required, or while USIBWC is awaiting the exchange of letters with Mexico, the IDCD and the OMD will also review the proposed project (if appropriate) for adherence to Volume IV, Chapter 315, Criteria for Construction Activities Within the Limits of USIBWC Floodways, dated July 31, 2000.

4. If coordination with MxIBWC is not required, or while USIBWC is awaiting response from Mexico, and when BRD, IDCD, and OMD are satisfied that the proposed project meets their requirements, the EMD will review the proposed project in accordance with: the USIBWC Agency Procedures for Implementing NEPA published in the Federal Register on September 2, 1981 (46FR44083-44094) (Appendix 501-A); the USIBWC Agency Procedures for the Implementation of Executive Orders11988-Floodplain Management and 11990-Protection of Wetlands published in the Federal Register on December 29, 1978 (43FR61023-6102) (Appendix 501-B); the USIBWC Agency Procedures Pertaining to Historic and Cultural Properties published in the Federal Register on October 15,1981 (46FR50859-50863) (Appendix 501-C); the USIBWC Agency Procedures for the Protection of Archaeological Resources published in the Federal Register on May 10, 1991 (56FR21590-21596) (Appendix 501-D); and any other USIBWC NEPA documents related to the proposed project. EMD staff members will also utilize Pollution Prevention/ Environmental Impact Reduction Checklists for NEPA Reviewers found at http://es.epa.gov/oeca/ofa/pollprev.html.

A. If the proposed project is a candidate within a general class of actions which do not normally require the preparation of an EA or an EIS, as established in Appendix 501-A, EMD will prepare a CX checklist authorizing the action and return the license to BRD.

B. If the proposed project is found to significantly affect the quality of the human environment, EMD will make a determination on the CX checklist indicating that an EA or an EIS must be prepared. EMD will return the license to BRD with instructions to notify the proponent of the findings from the environmental review and of additional information necessary to acquire a license.

C. Request for renewals of grazing leases will be reviewed in accordance with "Background for NEPA Reviewers: Grazing on Federal Lands,"

dated February 1994 (EPA-300-B94-004) (Appendix 501-E), and the Pollution Prevention/Environmental Impact Reduction Checklist for Grazing found at http://es.epa.gov/oeca/ofa/pollprev/graze.html.

5. The Division Engineer, OMD, will sign for the Commissioner and issue complete licenses and leases through the BRD. The Division Engineer, OMD, will plan for and, with adequate resources, establish a monitoring schedule (including the frequency of physical inspections), for compliance with the contract provisions with the appropriate USIBWC Field Office and Headquarters support divisions.

6. The BRD will transmit the final contract to the originating USIBWC Field Office or applicant, in duplicate, for the applicant's signature. The applicant shall send, if applicable, a postal money order or certified check, made out to the USIBWC in the amount of the appropriate fee, as determined by BRD, for each agreement. No fee will be charged to cities, states or political subdivisions, non-profit organizations, or for those projects that benefit the public. Upon final execution of the agreement, a duplicate-original copy will be sent to the applicant for his or her files.

7. The USIBWC Field Office Manager with jurisdiction over the project, or his or her designated representative, will inspect and approve the contractual activity to determine if it is being performed in conformance with the plans, as approved. The USIBWC Field Office Manager or designated representative may temporarily suspend the work at any time if, in his or her judgment, the interests of the Commission so require.

501.7 Monitoring

Monitoring of USIBWC contracts will primarily be the responsibility of the affected USIBWC Field Offices and will include physical inspection of USIBWC property such as agricultural areas, grazing pastures, lease areas, construction, dredging and excavation sites, floodplains, shorelines, river banks, and levees. A general assessment of the condition and management of the property will be documented and reported by the USIBWC Field Office to the Division Engineer, OMD. Conditions which will require immediate follow-up action by appropriate staff elements include the unauthorized clearing, excavation or any other form of ground disturbance on USIBWC property, and unsound agricultural practices.

With input from appropriate USIBWC staff elements, impact mitigation measures will be developed and proposed to the lessee with specific time frames for compliance. USIBWC contractual agreements will be amended by BRD to include agreed-to mitigation measures (if mitigation measures are not already included in the contract).

501.8 Cancellation

The contractual agreement will be valid as long as, in the opinion of the Commissioner or his

designee, it is considered to be expedient and not detrimental to the public interests. With input from appropriate staff elements, a USIBWC contractual agreement will be revoked for failure to comply with contract requirements or agreed-to mitigation measures. The agreement shall be revocable by the Commissioner upon 90 days written notice to the lessee or licensee. Upon such revocation, or if the project is abandoned, the structure or other works shall be removed by the licensee without delay and at his or her sole expense.

501.9 Supersession

This Directive does not cancel or supersede any previous issuances.

501.10 Effective Date

This Directive will be effective upon issuance.

FOR THE COMMISSIONER

[Original Signed]

Debra J. Little, Principal Engineer
Engineering Department

[Original Signed]

Carlos Marin
Principal Engineer

TRANSPORTATION COMPANY, P.O.B. G, Greeley, CO 80632. Representative: John T. Wirth, 717 17th St., Ste. 2600, Denver, CO 80202. *Food and related products*, from Larimer Cty., CO to Chicago, IL; Los Angeles, San Francisco and Stockton, CA; Oklahoma City, OK; Kansas City, MO; Omaha, NE; Salt Lake City and West Jordan, UT; and Wichita, KS, for 270 days. An underlying ETA seeks 120 days authority. Supporting shipper: Donolo Beef Co., Inc., 3541 E. Vine Dr., Ft. Collins, CO 80524.

MC 153896 (Sub-6-2TA), filed August 19, 1981. Applicant: LONNIE POWELL, d.b.a. PACIFIC TANK LINES, 825 W. Olympic Blvd., Montebello, CA 90640. Representative: Lonnie Powell (same address as applicant). *Contract Carrier*, Irregular routes: *Lacquers, Paint Resins and related commodities* from Los Angeles, CA and its commercial zone to points in NM and TX for the account McCloskey Varnish for 270 days.

Supporting shipper: McCloskey Varnish, 31 E. Slauson, Commerce, CA 90040.

MC 157770 (Sub-6-1TA), filed August 17, 1981. Applicant: RUBIN SINGH, d.b.a. PALOMINO EXPRESS, P.O. Box 859, Verdi, NV 98439. Representative: Norman A. Cooper, 145 W. Wisconsin Ave., Neenah, WI 54956. *Contract carrier*, irregular routes: *epoxy resin, plastic materials and molding compounding, granules or pellets* from the facilities of Morton Chemicals, a Division of Morton-Norwich Products, Inc., at McHenry County, IL and Milwaukee, WI to Long Beach, Los Angeles, Oakland, San Francisco, San Pedro and Wilmington, CA and Seattle, WA for 270 days under continuing contract(s) with Morton Chemicals. An underlying ETA seeks 120 days authority. Supporting shipper: Morton Chemicals, A Division of Morton-Norwich Products, Inc., 1275 W. Lake Avenue, Woodstock, IL 60098.

MC 157625 (Sub-6-1TA), filed August 21, 1981. Applicant: DEAN M. RETTINGER, d.b.a. RETTINGER RANCH AND TRUCKING, R.R. 2, Box 39, New England, ND 58647. Representative: Renée Rettinger, (same as applicant). *Processed wood* from Billings, MT to New England, ND for 270 days. An underlying ETA seeks 120 days authority. Supporting shipper: Scenic Construction, New England, ND 58647.

MC 157824 (Sub-6-1TA), filed August 20, 1981. Applicant: SCOTT FREIGHT LINES, INC., 1765 6th Avenue So., Seattle, WA 98134. Representative: Robert G. Gleason, 1127 10th E., Seattle, WA 98102. *General commodities*, between points in WA and OR, for 270 days. Supporting shipper(s): There are nine supporting shippers. Their statements may be examined at the Regional office listed.

MC 155155 (Sub-6-2TA), filed August 17, 1981. Applicant: E. S. VAN ETTEN and LYLE E. VAN ETTEN, d.b.a. VAN ETTEN TRUCKING, P.O.B. 267, Umatilla, OR 97882. Representative: E. S. Van Etten and Lyle E. Van Etten (same as above). *Contract Carrier*; Regular routes: *Gravel and Sand*, in bulk from Jones Scott pit at Umatilla, OR to the St. Michelle job site at Patterson, WA on Hwy 14 and country roads for 270 days. Supporting shipper: Jones Scott Company, P.O.B. 29, Umatilla, OR 97882.

MC 157706 (Sub-6-1TA), filed August 21, 1981. Applicant: KENNETH LEON and KATHRYN WALKER, P.O. Box 286, Fort Laramie, WY 82212. Representative: Leon and Kathryn Walker (same as above). *Contract Carrier*, Irregular routes: *Limestone*, from Goshen County, WY to points in NE for the account of Holly Sugar Company for 270 days. An underlying E.T.A. seeks 120 authority. Supporting shipper: Holly Sugar Corporation, P.O. Box 1052, Colorado Springs, CO 80901.

MC 112989 (Sub-6-19TA), filed August 13, 1981. Applicant: WEST COAST TRUCK LINES, INC., 85647 Hwy. 99 So., Eugene, OR 97405. Representative: John T. Morgans (same as applicant). *Containers, container closures and container accessories*, from points in CA to points in AZ and NV, for 270 days. An underlying ETA seeks 120 days authority. Supporting shipper: Glass Containers Corp., 535 North Gilbert Ave., Fullerton, CA 92634.

MC 142573 (Sub-6-1TA), filed August 20, 1981. Applicant: WORTHEN VAN SERVICE, INC., P.O.B. 2578, Gillette, WY 82716. Representative: Jack B. Wolfe, 1600 Sherman St., #665, Denver, CO 80203. *Contract carrier*, irregular routes: *passengers and their baggage in the same vehicle with passengers*, between points in Red Willow County, NE on the one hand, and, on the other points in Cheyenne, Sherman, Rawlings, Thomas, Decatur, Sheridan, Norton and Phillips Counties, NE and Logan and Washington Counties, CO, for the account of Burlington Northern Railroad for 180 days. An underlying ETA seeks 90 days authority. Supporting shipper: Burlington Northern Railroad, 3700 Globeville Rd, Denver, CO 80216.

Agatha L. Mergenovich,

Secretary.

[FR Doc. 81-25823 Filed 9-1-81; 8:45 am]

BILLING CODE 7035-01-M

INTERNATIONAL BOUNDARY AND WATER COMMISSION, UNITED STATES AND MEXICO (UNITED STATES SECTION)

Operational Procedures for Implementing Section 102 of the National Environmental Policy Act of 1969, Other Laws Pertaining to Specific Aspects of the Environment and Applicable Executive Orders

AGENCY: United States Section, International Boundary and Water Commission, United States and Mexico.

ACTION: Notice of Final Operational Procedures for Implementing Section 102 of the National Environmental Policy Act of 1969, Other Laws Pertaining to Specific Aspects of the Environment and Applicable Executive Orders.

SUMMARY: This document prescribes policies and procedures utilized or to be utilized by the United States Section in implementing Section 102 of the National Environmental Policy Act of 1969, Other Laws Pertaining to Specific Aspects of the Environment and Applicable Executive Orders in the planning, design and construction of treaty projects along the United States and Mexico international boundary and to the United States Section's operation and maintenance activities in connection with treaty projects.

EFFECTIVE DATE: September 2, 1981.

FOR FURTHER INFORMATION CONTACT: Mr. Frank P. Fullerton, Legal Adviser, United States Section, International Boundary and Water Commission, United States and Mexico, 4110 Rio Bravo, El Paso, Texas 79902. Telephone: (915) 543-7393—FTS: 572-7393.

SUPPLEMENTARY INFORMATION: On October 26, 1979, the Section published proposed procedures in the Federal Register (44 FRR 61665), governing its procedures for implementing Section 102 of the National Environmental Policy Act of 1969, Other Laws, Pertaining to Specific Aspects of the Environment and Applicable Executive Orders. A 57-day period was provided during which comments were to be received from other federal agencies, state agencies, private businesses, universities, and individuals.

Comments were received only from the Council on Environmental Quality in response to the Federal Register notice containing the proposed procedures. The Council on Environmental Quality suggested revision of §100.3, *Applicability*, to provide that the Section shall comply with the procedures and CEQ regulations except where compliance would be inconsistent

with statutory or Treaty requirements and the deletion of those parts of the procedures inconsistent therewith; certain editing for clarity, consultation with CEQ regarding emergency actions; and provisions should be included for seeking recommendations from the Advisory Council on Historic Preservation. All the above recommendations are incorporated in the final version. Certain typographical errors were corrected as a result of internal United States Section review.

By letter dated August 3, 1981, the General Counsel, Council on Environmental Quality (CEQ) advised the Legal Adviser of the United States Section that the council has determined that the proposed procedures, as revised, address all the section's regulations of the Council required to be addressed by Section 1507.3(b) of the regulations.

Dated: August 24, 1981.

Frank P. Fullerton,

Legal Adviser, United States Section, International Boundary and Water Commission, United States and Mexico.

100. National Environmental Policy Act

The National Environmental Policy Act of 1969, as amended, (NEPA) (Public Law 91-190, 42 U.S.C.A. 4321); Executive Order No. 11514 (E.O. 11514), Protection and Enhancement of Environmental Quality, dated March 5, 1970; Executive Order No. 11991 (E.O. 11991), Relating to Protection and Enhancement of Environmental Quality, dated May 24, 1977; and the Regulations of the Council on Environmental Quality (CEQ or Council), dated November 29, 1978; provide that environmental considerations are to be given careful attention and appropriate weight in every recommendation or report on proposals for legislation and for other federal actions significantly affecting the quality of the humnan environment. The requirements of NEPA are to be integrated with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively. The United States Section will hereafter be referred to as the Section.

100.1 Purpose

The Operational Procedures:

a. Prescribe guides to be utilized by the Section to implement NEPA and supplement CEQ Final Regulations for Implementation of NEPA, dated Novembver 29, 1978 (43 FR 55978).

b. Insure commencement of NEPA process by the Section at the earliest possible time, provide for assistance and consultation to individuals and non-federal entities who plan to take action before involvement of the Section, appropriate state and local agencies, and with interested private persons and organizations.

d. Designate the major decision points for principal programs of the Section.

e. Advise where interested persons may obtain information or status reports on environmental impact statements and other elements of the NEPA process.

f. Identify categorical exclusions.

g. Provide that environmental information is to be made available to the public before decisions are made about actions that significantly affect the human environment.

h. Direct that documents are to concentrate on the issues that are timely and significant to the action in question.

i. Establish early identification of actions that have significant effects on the human environment.

100.2 Policy

The Section's Policy is to:

a. Give proper attention to actions that could impact the environment to enable early and appropriate consideration of such actions on all environmental values, and achieve the purposes and goals of Section 101 of NEPA and provide the means (Section 102) for carrying out the policies of NEPA.

b. Invite early and continued cooperation, where appropriate, from federal, state, local and regional authorities and the public, in the Section's planning and decision-making processes to develop alternatives and measures which will protect, restore or enhance the quality of the environment, and minimize and mitigate unavoidable harmful effects.

c. Recognize the international and long-range character of environmental concerns and, when consistent with the foreign policy of the United States and its own responsibilities, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation, anticipating and preventing a decline in the quality of the world environment.

d. Implementing domestic legislation to the extent practicable without impairing the Section's international mission because the international projects under the jurisdiction of the International Boundary and Water Commission are partly or wholly located within the United States.

100.3 Applicability

The operational Procedures apply to all Section programs and activities to the maximum extent possible without impairing its international mission. Domestic requirements must not impair the Section's performance of the United States' international obligations with are carried out consistent with the treaties and foreign policy of the United States. The Section shall comply with these procedures and the CEQ regulations except where compliance would be inconsistent with statutory or treaty requirements.

100.4 References

a. *Treaties and International Agreements.* 1. Convention between the United States and Mexico concerning the equitable distribution of the waters of the Rio Grande (T.S. 455, 54 Stat. 2953, signed May 21, 1906, entered into force January 16, 1907).

2. Treaty Between the United States of America and Mexico entitled "Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande" (T.S. 994, 59 Stat. 1219, signe February 3, 1944, entered into force November 8, 1945).

3. Convention Between the United States of America and Mexico entitled "Rectification of the Rio Grande" (T.S. 864, 48 Stat. 1621, signed February 1, 1933, entered into force November 13, 1933).

4. Convention Between the United States of America and the United Mexican States for the Solution of the Problem of the Chamizal (T.S. 5515-15 U.S.T. 21, signed August 29, 1963, entered into force January 14, 1964).

5. Treaty Between the United States of America and the United Mexican States entitled "Treaty to Resolve Pending Boundary Differences and Maintain the Rio Grande and Colorado River as the International Boundary (TIAS 7313, signed November 23, 1970, entered into force April 18, 1972).

b. *International Agreements.* International projects were constructed in accordance with the provisions of the above-referenced treaties. In addition, the United States and Mexico, through the International Boundary and Water Commission, have constructed international projects in accordance with each of the following agreements.

1. Minute No. 144, "Plans for Final Location of Rectified Channel of the Rio Grande in the El Paso-Juarez Valley," signed June 14, 1934.

2. Minute No. 148, "Allocation of Works for each Government to Undertake on the Rio Grande Rectification Project in Accordance with the Convention of February 1, 1933," signed October 28, 1935.

3. Minute No. 165, "Adoption of Rules and Regulations for the Maintenance and Preservation of the Rio Grande Rectification Project, in the El Paso-Juarez Valley," signed August 13, 1938.

4. Minute No. 174, "Supplemental Construction Work Which Each Government Should Undertake Under the Convention of February 1, 1933 to Preserve the Benefits that Have Been Obtained by Previous Construction on Rio Grande Rectification Project in the El Paso-Juarez Valley," signed March 3, 1942.

5. Minute No. 182, "Approval of Joint Report on Engineering Conference on Studies, Investigations and Procedures for the Planning of Works to be Built in Accordance with the Treaty of February 3, 1944," signed September 23, 1946.

6. Minute No. 187, "Determinations as to Site and Required Capacities of the Lowest Major International Storage Dam to be Built on the Rio Grande, in Accordance with the Provisions of Article 5 of the Treaty Concluded February 3, 1944," signed December 20, 1947.

7. Minute No. 190, "Allocation to the Two Sections of the Commission of Remaining Items of Work Preparatory to Construction of Falcon Dam," signed August 13, 1948.

8. Minute No. 192, "Plans and Procedures for Construction of Falcon Dam and Recommendations for Construction of Falcon Hydroelectric Plants," signed September 7, 1949.

9. The Lower Rio Grande Flood Control Project was approved in an exchange of Notes in 1932 between the two Governments in which each country agreed to a coordinated plan for flood protection and to perform the work within its own territory. Subsequently, additions and modifications to the plan were adopted in the following agreements: Minute No. 212, "Improvement of the Channel of the Lower Rio Grande," signed December 22, 1961; and Minute No. 238, "Improvement of the International Flood Control Works of the Lower Rio Grande," signed September 10, 1970.

10. The Joint Report of the United States and Mexican Commissioners for a coordinated plan of international flood protection facilities for Nogales, Arizona and Nogales, Sonora, signed on November 22, 1932, was subsequently approved by the two Governments by an exchange of Notes.

11. Minute No. 202, "Bases for Joint Operation and Maintenance of the Falcon Dam and Hydroelectric Plant and for Division of Costs Thereof," signed January 11, 1955.

12. Minute No. 207, "Consideration of Joint Report of the Principal Engineers on Site, Capacities and Type of Dam for the Second Major International Storage Dam on the Rio Grande," signed June 19, 1958.

13. Minute No. 210, "Recommendations Regarding Construction of Amistad Dam," signed January 12, 1961.

14. Minute No. 215, "Design and procedures for Construction of Amistad Dam," signed September 28, 1963.

15. Minute No. 217, "Clearing of the Colorado River Channel Downstream From Morelos Dam," signed November 30, 1964.

16. Minute No. 220, "Improvement and Expansion of the International Plant for the Treatment of Douglas, Arizona and Agua Prieta, Sonora Sewage," signed July 16, 1965.

17. Minute No. 222, "Emergency Connection of the Sewage System of the City of Tijuana, Baja California to the Metropolitan Sewage System of the City of San Diego, California," signed November 30, 1965.

18. Minute No. 224, "Recommendations Concerning the Lower Rio Grande Salinity Problem," signed January 16, 1967.

19. Minute No. 225, "Channelization of the Tijuana River," signed June 19, 1967.

20. Minute No. 227, "Enlargement of the International Facilities for the Treatment of Nogales, Arizona and Nogales, Sonora Sewage," signed September 5, 1967.

21. Minute No. 235, "Division of Operation and Maintenance Costs of Amistad Dam," signed December 3, 1969.

22. Minute No. 236, "Construction of Works for Channelization of the Tijuana River," signed July 2, 1970.

23. Minute No. 242, "Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River," signed August 30, 1973.

24. Minute No. 247, "International Plan for the Protection of the Presidio-Ojinaga Valley Against Floods of the Rio Grande," signed February 7, 1975.

25. Minute No. 258, "Modification of the United States Portion of the Plan for the Channelization of the Tijuana River," signed may 27, 1977.

26. Minute No. 262, "Recommendations for Works to Preserve for the Rio Grande its Character as the International Boundary in the Reach from Cajoncitos, Chihuahua to Haciendita, Texas," signed December 26, 1979.

c. *Laws.* 1. National Environmental Policy Act of 1969, as amended, 42 U.S.C.A. 4321.

2. Fish and Wildlife Coordination Act, 16 U.S.C.A. 661.

3. Endangered Species Act Amendments of 1978, 16 U.S.C.A. 1531.

4. National Historic Preservation Act of 1966, 16 U.S.C.A. 470 *et seq.*

5. Archeological and Historic Preservation Act of 1974, 16 U.S.C.A. 469a-1.

6. Archeological Resources Protection Act of 1979, 16 U.S.C.A. 470aa.

7. Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C.A. 1251.

8. Clean Water Act of 1977, 33 U.S.C.A. 1251 *et seq.*

9. The Clean Air Act Amendments of 1977, 42 U.S.C.A. 7401 *et seq.*

10. Safe Drinking Water Act, 42 U.S.C.A. 300f *et seq.*

11. Coastal Zone Management Act Amendments of 1976, 16 U.S.C.A. 1451 *et seq.*

12. Estuary Protection Act, 16 U.S.C.A. 1221 *et seq.*

13. Federal Water Project Recreation Act, 16 U.S.C.A. 4601-12 *et seq.*

14. Wild and Scenic Rivers Act, 16 U.S.C.A. 1271 *et seq.*

15. Resource Conservation and Recovery Act of 1976, 42 U.S.C.A. 6901 *et seq.*

16. Watershed Protection and Flood Prevention Act, 16 U.S.C.A. 1001 *et seq.*

17. River and Harbor Act of 1899, as amended, 33 U.S.C.A. 401 *et seq.*

18. Rio Grande Bank Protection Act, Public Law 40, 59 Stat. 89; Act of April 25, 1945.

d. *Executive Orders.* 1. Executive Order No. 11514, "Protection and Enhancement of Environmental Quality," March 5, 1970; 35 FR 4247.

2. Executive Order No. 11593, "Protection and Enhancement of the Cultural Environment," May 13, 1971; 36 FR 8921.

3. Executie Order No. 11752, "Prevention, Control, and Abatement of Environmental Pollution at Federal Facilities," December 17, 1973; 38 Fr 34793.

4. Executive Order No. 11988, "Floodplain Management," May 24, 1977; 42 FR 26951.

5. Executive Order No. 11990, "Protection of Wetlands," May 24 1977; 42 FR 26961.

6. Executive Order No. 11991, "Relating to Protection and Enhancement of Environmental Quality," May 24, 1977; 42 Fr 26967.

7. Executive Order No. 12114, "Environmental Effects Abroad of Major Federal Actions," Janury 4, 1979; 44 FR 1957.

e. *Regulation.* Council on Environmental Quality: "National Environmental Policy Act, Implementation of Procedural

Provisions; Final Regulations," dated November 29, 1978; 43 FR 55978.

100.5 Responsibilities Within the Section

a. *Chief, Planning and Report Branch.* The Chief, Planning and Reports Branch, under the supervision of the Principal Engineer, Investigations and Planning Division, is designated as the responsible official within the meaning of Section 102 of NEPA and is responsible for the preparation and the processing of environmental assessments, environmental impact statements (EIS) (draft and final), and memorandums in implementing the requirements of the Act. For each proposed action, he will submit through the Principal Engineer to the Commissioner, Head of the Agency, an outline of the environmental actions to be taken including analyses and the coordination and consultation with other agencies, groups and individuals. When it is appropriate to obtain supplemental information in evaluating the environmental impact of a proposed action, he will solicit information from within the Section, other government agencies (federal, state and local) with jurisdiction by law or special expertise with respect to any environmental impact involved, and interested individuals, associations or groups.

Chief, Planning and Reports Branch, will draft and obtain Section approval of all notices to be published in the Federal Register except when another agency or agencies act as agent for the Section.

In the case of an agency or agencies acting as agent for the Section in the design and construction of a project (as distinguished from merely preparing an EIS for the Section's use) that agent will prepare, distribute, and coordinate the review of the EIS according to established procedures, except that the formal transmittal of the EIS to the Department of State and to EPA (as representing CEQ) will be by the Commissioner. The agent has the responsibility to confer with the Section through the agency's responsible official and to keep it fully informed.

Persons interested in obtaining information of status reports on EIS and other elements of the NEPA process should address their requests to: Chief, Planning and Reports Branch, United States Section, International Boundary and Water Commission, 4110 Rio Bravo, El Paso, Texas 79902.

b. *Principal Engineer, Investigations and Planning Division.* In addition to responsibilities under subparagraph a. above, the Principal Engineer, Investigations and planning Division, will assure review is made of studies and analyses to insure the professional and scientific integrity of discussion, analyses and conclusions in the environmental documents, and that an interdisciplinary approach has been used in the evalutions.

The Principal Engineer will also be responsible for consultation with the Fish and Wildlife Service on mitigation and/or enhancement measures, the Advisory Council on Historic preservation regarding recommendations concerning historical properties and the transmittal to agencies, associations and individuals of draft statements.

c. *Secretary.* The Secretary will be responsible for providing policy guidance on the international aspects of proposals, inputs to the environmental documents pertaining to international consideration, including treaties and agreements, and review of draft environmental documents for international considerations.

d. *Legal Adviser.* The Legal Adviser shall provide staff advice concerning legislative actions covered by NEPA, interpretations of NEPA and other acts, executive orders, regulations, and all legal requirements pertaining to environmental actions.

When uncertainty exists within the Section as to the requirement in a specific case for preparing an environmental assessment or an EIS, the Legal Adviser will initiate consultations with the Office of Environment and Health (OES/ENH—Department of State), and follow through to a final determination. In every case where the Section determines from an environmental assessment that an EIS is not required, the Legal Adviser shall so inform OES/ENH.

The Legal Adviser will approve and be responsible for the publication of the necessary notices in the Federal Register.

100.6 Categories of Environmental Actions

a. *Categorical Exclusions.* Some Section program or activities, or parts thereof, do not normally create significant or cumulative impacts and therefore will not be considered a major federal action significantly affecting the quality of the human environment for the purposes of NEPA. For example, the following general classes of actions ordinarily do not require the preparation of an environmental assessment or an EIS.

1. Normal Section housekeeping functions (procedural, ministerial, internal) including, but not limited to, personnel actions, procurement for general supplies, contract for personal services.

2. Reports or recommendations on legislation not initiated by the Section.

3. Legislative proposals that only request apropriations.

4. Participation in research or study projects which do not cause significant environmental impacts.

5. Actions specifically required under any treaty or international agreement, or pursuant thereto, to which the United States is a party, or required by the decision of international organizations (including courts), authorities or consultations in which the United States is a member or participant.

6. Mapping and surveying activities.

7. Stream gaging and sampling, routine hydrologic test drilling, well logging, aquifer response testing, and similar data-gathering activities in connection with water resources investigations.

8. Leases of government land for grazing and agricultural purposes.

9. Emergency actions after consultation with CEQ.

10. Recreational leases to any city, county, state or federal agency.

11. Leases of licenses regarding buried utilities, including gas, water and sewer pipelines, and telephone cables, irrigation drains, and storm sewers, sanitary sewers discharging treated effluent, telephone and electric power poles and lines, irrigation pumps, drain structures and ditches, fences, roads, highways and bridges, water wells, boat docks and boat launching facilities.

12. Temporary or single-time permit of project facilities.

13. Any actions or works for which an EIS or environmental assessment has been submitted and filed by others.

In an extraordinary circumstance, as determined by the Commissioner, in which a normally excluded action may have a significant environmental effect, an environmental assessment will be prepared.

b. *Criteria for Environmental Assessments.* An environmental assessment will be prepared for any proposed action which is not categorically excluded, or when there is not sufficient information to indicate whether the preparation of an EIS should be initiated. The environmental assessment will describe the proposed action, the need for the action, alternatives to the proposed action, discussion of the extent of impacts, if any, of the proposed action and alternatives, a summary of the agencies and persons consulted and the view of each, and conclude with a supported recommendation of whether to prepare

an EIS or a finding of no significant impact.

c. *Criteria for Environmental Impact Statements.* An EIS will be prepared when the proposed action is a "major Federal" action which involves the quality of the human environment, either by directly effecting human beings or by indirectly affecting human beings through adverse effects on the environment and are not listed as categorical exclusions. The following criteria will be employed in deciding whether a proposed action requires the preparation of an EIS.

1. "Major actions," defined by these operational procedures include, but are not limited to:

(a) Projects and activities, existing and proposed, that are part of treaties or other international commitments which significantly affect the quality of the human environment in the United States and to which domestic requirements may be applied without impairing the ·tional obligations of the United .es.

(b) Recommendations or reports to the Congress, or to others, for legislation authorizing a project or affecting existing projects, except for emergency measures.

(c) Initiation of construction or land acquisition on projects which are not yet started for which funds have been appropriated or are provided by an Appropriation Act.

(d) Budget submissions requesting funds for the initiation of construction or land acquisition on authorized projects.

(e) Policy and procedure making, especially proposed actions which are highly controversial.

2. The statutory clause "major Federal actions significantly affecting the quality of the human environment" is to be ·trued with a view to the overall, .ulative impact of the action proposed (and of further actions contemplated) and reasonable alternatives thereto, including those not within the authority of the Section. Such actions may be localized in their impact, but if there is potential that the quality of the human environment may be significantly affected, an EIS is to be prepared.

Proposed action, the environmental impact of which is likely to be highly controversial or where unresolved conflicts concerning alternative use of available resources exist, shall be covered by an EIS. In considering what constitutes a "major Federal action significantly affecting the quality of the human environment," the Section personnel will bear in mind that the effect of many federal decisions about a project or complex of projects can be individually limited, but cumulatively significant. This can occur when one or more agencies over a period of years, put into a project, individually minor, but collectively major resources, when one decision involving a limited amount of money is a precedent for action in much larger cases, or represents a decision in principle about a future major course of action, or when several government agencies individually make decisions about partial aspects of a major federal action. The lead agency shall prepare an EIS if it is reasonable to anticipate a cumulatively significant effect on the quality of the human environment from the federal action.

3. Section 101(b) of NEPA indicates the broad ranges of aspects of the environment to be surveyed in any assessment of significant effect. NEPA also indicates that adverse significant effects include those that degrade the quality of the environment, curtail the range of beneficial uses of the environment or serve short-term, to the disadvantage of long-term, environmental goals.

Significant effects can also include actions which may have both beneficial and detrimental effects even if, on balance, an agency believes that the effect will be beneficial. Significant adverse effects on the quality of the human environment include both those that directly affect human beings and those that indirectly affect human being through adverse effects on the environment.

Careful attention will be given to identifying and defining the purpose and scope of the action which would most appropriately serve as the subject of the EIS. In many cases, broad program statements will be required to assess the environmental effects of a number of individual actions on a given geographical area, or environmental impacts that are common to a series of agency actions, or the overall impact of a large-scale program or chain of contemplated projects. Subsequent EIS on major individual actions will be necessary where such actions have significant environmental impacts not adequately evaluated in the program statement.

d. *Criteria for Supplemental Statements.* A supplement may be prepared to either a draft or final EIS if the Section determines that:

1. The proposed action has been significantly changed to involve environmental concerns; or

2. New environmental concerns are found which had not been covered in the previously circulated document; or

3. One or more additional alternatives should be discussed; or

4. The purposes of NEPA will be furthered by doing so.

100.7 Procedures

a. *Categorical Exclusions.* An environmental memorandum will be prepared which includes a description of the proposed action, and a finding that the action is categorically excluded and no further environmental action is needed to comply with NEPA, executive orders, regulations and other acts. This memorandum shall be referenced in decision documents.

b. *Environmental Assessments.*—1. *Proposed Action and Alternatives.* The possible environmental effects of a proposed action must be considered along with technical, economic and other factors, in the earliest planning. At this stage, the responsible official shall take the necessary steps to comply with the requirements of NEPA by the preparation of an environmental assessment. The assessment, to be meaningful for review and decision, will provide a concise description of the proposed action, need for action, and alternatives to be considered. The assessment will be prepared using an interdisciplinary approach, with the discipline of the preparers appropriate to the environmental impacts of the proposed action and alternatives to be considered.

2. *Environmental Impacts.* The assessment is to be brief, yet provide sufficient evidence of environmental impacts to determine whether to prepare an EIS. It shall include an appraisal of environmental effects, good and bad, if any, of the proposed action and the alternatives. In no case will adverse effects, either real or potential be ignored or slighted. Similarly, care must be taken to avoid overstating favorable effects, unless a categorical exclusion applies. The National Register of Historic Places will be consulted and notation made whether National Register properties or properties eligible for listing in the Register will be affected by the proposed action and whether historical or archeological resources would be affected.

If the Chief, Planning and Reports Branch, determines, as a result of cultural resources investigations and coordination that there will be an effect on sites included in or determined by the Secretary of the Interior as being eligible for inclusion in the National Register, he will provide the Advisory Council on Historic Preservation an opportunity to comment on the matter. Any comments provided by the Advisory Council will be considered by the Chief, Planning and Reports Branch,

when he takes into account the effect of the project or other undertaking on any property included in or eligible for inclusion in the National Register. Section 106 of the National Historic Preservation Act states that the Advisory Council for Historic Preservation will have an opportunity to comment on any proposed federal undertaking which will affect a historic property which is listed or is eligible for listing in the National Register of Historic Places.

The assessment will note the result of the review of the lists of historic properties designated or proposed for designation, of the endangered species in the area, and have a sufficient basis to state the impact the proposed action will have on the historic properties, the endangered species or habitat critical to the continuation of these species. Discussion will be included in connection with the existing federal, state or local legislation action program or study on which the proposed action would have an effect.

3. *Consultation with Agencies and Individuals.* After preparing the draft description of the proposed action and alternatives, representatives of appropriate federal, state and local legislative agencies, conservation associations and individuals in the area will be consulted to obtain their views, comments, and suggestions on the effects, if any, of the proposed action and alternatives. The extent of these consultations will vary with the type and subject matter of the action being considered, with consideration being given to consultation on most matters with the Environmental Protection Agency, Fish and Wildlife Service, State Fish and Wildlife Agency, State Historical Preservation Officer and the regional council of governments or planning council. Individuals and environmental associations who have expressed an interest in specific areas or subjects will be contacted for their comments. The assessment will list the agencies and individuals consulted and summarize their views.

4. *Finding of No Significant Impact.* When an environmental assessment concludes the proposed action will not have a significant effect on the human environment, a draft "Finding of No Significant Impact" shall accompany the assessment through the Section's internal review process. The draft finding shall include a description of the proposed action and the alternatives considered, shall state an assessment has been made and the findings thereof, and the name and address of the person from whom additional information can be obtained. The finding shall be circulated for comments to agencies, associations and individuals in the general area, or who have expressed an interest in the proposed action, with at least thirty (30) days allowed for comments, and be published in the Federal Register.

5. *Recommendation.* Findings in the environmental assessment, supported by the information obtained from various sources, will be summarized and lead to the recommendation that the Section:

(a) Prepare a finding of no significant impact, or

(b) Prepare an EIS.

The internal routing memorandum for Section review of the assessment will describe what further actions, if any, are necessary under other acts, regulations and executive orders, and recommend actions to accomplish such actions. As appropriate to the recommendation in the assessment, one of the following will accompany the assessment:

(a) A draft finding of no significant impact, including a mailing list for the finding.

(b) For the initiation of a draft EIS:

(1) A draft notice of intent to prepare an EIS.

(2) A mailing list for the notice.

(3) A draft letter inviting participation in a meeting for determining the scope of the EIS; and

(4) A list of individuals, associations and agencies to invite to participate in the scoping.

6. *Circulation.* After internal Section approval of the assessment one of the following two procedures will be adopted:

a. The finding of no significant impact shall be published in the Federal Register and mailed to federal, state and local agencies, conservation associations and individuals, and include the sentence, "An environmental impact statement will not be prepared unless additional information which may affect this decision is brought to our attention within thirty (30) days of the date of this Notice."

b. A Notice of Intent to Prepare an Environmental Impact Statement will be circulated to federal, state and local agencies, conservation associations and individuals, be published in the Federal Register and sent to news media. This notice should describe the proposed action and include an invitation to federal, state and local agencies, conservation associations and individuals to participate in the scoping of the studies to be done.

c. Environmental Impact Statement.

The EIS process will usually have the following major stages, with some variations depending upon the nature and extent of the proposed action:

(1) Defining the environmental studies to be done;

(2) Performing the studies;

(3) Concurrent action under other laws and executive orders;

(4) Assessing the impacts;

(5) Writing the draft EIS;

(6) Circulating the draft EIS; and

(7) Preparation of and circulation of the final EIS.

(1) *Defining the Environmental Studies to be Done.* CEQ Regulation 1501.7 describes the purpose and extent of the scoping process, and Regulation 1508.25 defines the scope and the range of actions, alternatives and impacts to be considered in an EIS. In scoping the Section will:

(1) Identify and categorize significant environmental issues so that an analytical EIS can be prepared that will reduce paperwork and avoid delay.

(b) Arrange "Scoping meeting" with federal, state or local agencies that ha special expertise or legal jurisdiction concerning resource values that may be significantly affected. The meeting will identify agencies that may become cooperating agencies.

(c) Determine and define the range of actions, alternatives and impacts to be included in the EIS. Tiering may be used to define the relation of the proposed EIS to other statements.

(d) Schedule periodic meetings of the cooperating agencies which are to be held at important decisionmaking points to provide timely interagency interdisciplinary participation.

(e) Include the items listed in Section 1501.7(a) of the CEQ Regulation dated November 29, 1978, and may also include any of the activities in Section 1501.7(b).

(f) Promote public participation by making timely notifications. The objective of the scoping process is to determine the significant issues to be analyzed in depth in the EIS, to eliminate from detailed study the issues which are not significant, and to narrow the discussion of these issues in the EIS to a brief presentation of why they do not have a significant impact.

Where appropriate and possible, a field examination of the area of the proposed action should be made in conjunction with the scoping meeting. The invitation to participate in the scoping meeting should include a description of the proposed action and the alternatives to be considered.

The time schedule for the studies will be established, the preparation of the draft EIS will be initiated at or immediately following the scoping

meeting, consistent with Regulation 1501.8, and agreement will be reached between the Section and cooperating agencies on the details of assignments and the time schedule for completing the assignments. In drafting the time schedule, consideration will be given to having periodic meetings between representatives of the Section, other interested agencies, associations and individuals to discuss the results being obtained and to receive further input on the studies.

A federal agency which has jurisdiction by law regarding a specific aspect of the environent shall be a cooperating agency. In addition, any other federal agency which has special expertise with respect to any environmental issue which should be addressed in the EIS may be a cooperating agency upon request of the Section while acting as the lead agency.

The Section will request the participation of each cooperating agency at the earliest possible time and in advance of the initial scoping meeting.

The extent of participation desired from each cooperating agency will be described by the Section in accordance with CEQ Regulation 1501.6.

The Section's staff will make diligent efforts to involve the public in implementing its NEPA procedures in accordance with CEQ Regulation 1506.6. Notices of public meetings and of the availability of environmental documents will be sent to interested conservation associations, individuals, and to the news media. The notices of public meetings will include requests for information from the public and encourage their participations. The notices will also provide a clear description of the proposed action and the alternatives being considered so the public can provide meaningful information and data contributions. Additional meetings with the public may be scheduled at intervals during the planning stage to provide additional opportunities for public participation in the environmental considerations. The Section's responsible official shall maintain lists of agencies, associations and individuals to whom notices will be provided.

(2) *Performing the Studies.* Environmental studies to provide basic information and to forecast changes under proposed conditions will be performed by professionally competent personnel using generally recognized and accepted scientific methods. The disciplines of the preparers shall be appropriate to the scope and issues identified in the scoping process. Studies may be performed by the staff, by consultants, including university personnel, and by federal, state or local agencies. Staff studies will be scheduled with the approval of the Principal Engineer, Investigations and Planning Division. The scope of studies to be performed by consultants and agencies and the agencies or consultants to perform the studies will be recommended to the Commissioner by the Principal Engineer, Investigations and Planning Division. The Section's responsible official will be the Section's representative in monitoring studies being performed for it, and be responsible for review of the draft reports of the studies.

(3) *Concurrent Action Under Other Laws, Regulations and Executive Orders.* During planning and environmental studies, the responsible official will take all appropriate actions to assure that there will be concurrent consideration of the requirements established in other laws, regulations and in executive orders, as stated in CEQ Regulation 1502.25 and by these operational procedures. This concurrent consideration will be documented and summarized in the draft EIS.

(4) *Assessing the Impacts.* Interdisciplinary evaluations will be made of the proposed actions and alternatives considered, and will include comparison between the proposed action and the no-action alternative. Evaluations will give emphasis to the significant issues selected in the scoping process for in-depth analysis. For evaluations of proposed projects, the analyses shall consider separately the impacts from initial construction, and from the operation and maintenance. The evaluations shall be objective appraisals of the effects, good and bad, and where possible, include the benefit to cost ratios of the alternatives or the differences in annual costs. In no case will adverse effects, either real or potential, be ignored or slighted in an attempt to justify a proposed action. Similarly care must be taken to avoid overstating favorable effects.

Impacts should be quantified where possible, and described and compared qualitatively where it is not possible to quantify impacts. The comparisons should describe the impacts of alternatives in terms and with understandable illustrations so that the severity or mildness of the adverse or beneficial impacts is clear.

Evaluations should provide responses to the five points in NEPA and the international considerations and, as appropriate, the engineering, hydraulic and hydrologic, social and economic, and the ecological consequences of the alternatives. The engineering analyses shall include a comparison of initial and annual energy requirements.

The reports of investigations and of the analyses of impacts should contain a description of the methodology used and make explicit reference to the scientific and other sources relied upon. Methods which are in general use can be referenced by name and publication citation, while new or relatively unknown methods should be described.

Analyses shall include the requirements for mitigation, if needed, for proposed action and each alternative, in accordance with CEQ Regulations 1502.14(f), 1502.16(h), 1503.3(d), 1505.2(c), 1505.3 and 1508.20. The methodology used in determining mitigation needs shall be described in a supporting memorandum. Mitigation may include a monitoring and/or enforcement program where such is applicable.

(5) *Writing the Draft Statement.* The EIS shall be written in plain language and make use of appropriate illustrations so that the public can readily understand its contents, meaning and application and the effect of the proposed project. The preliminary draft EIS shall be prepared minimizing the use of technical terms and shall be rewritten or edited to assure clarity. The edited draft shall be given a thorough review by qualified personnel to assure its accuracy. The statement length shall be limited to not more than 150 pages, and the appended material (appendix) limited to not more than 150 pages.

The format shall follow that described in CEQ Regulations 1502.10 through 1502.18. The focus of the EIS should be on the alternatives including the proposed action, the affected environmental and the environmental consequences. The EIS will be analytic and be directed to the significant issues determined during the scoping process while avoiding unnecessary detail. The affected environment will be described only in sufficient detail for the reviewer to understand the alternatives and consequences. Where possible, photographs which assist in understanding important topics will be used. Extraneous data and information should be omitted from the statement and be included in the investigation's supporting information file or record.

The EIS will cover the five points in NEPA; primary and secondary impacts; impacts on environmental resources of national or regional significance when the impact extends beyond the immediate area; and discuss the significant relationships between the proposal and other existing, authorized or proposed developments. A section

will be included describing the scoping, coordination and consultation procedures; the views including objections raised by other agencies, interested individuals, associations and groups; and the disposition of these issues.

The EIS shall state which of the alternatives the Section considers to be (1) its preferred alternative, and (2) the environmentally preferred alternative; and the reasons for the selection of each.

Where international consequences of the proposed action are a significant factor, the preliminary draft EIS shall be provided to the Department of State for its consideration and comment.

The approach to preparing the appendix shall be to limit its length and include only that information which is required in the CEQ Regulations and relevant to the decision to be made. Other information shall be included in supporting reports which will be prepared in limited number and be provided to libraries and specific agencies for the convenience of the public when reviewing the EIS. The appendix shall include the list of preparers, the list of supporting reports, the list of agencies, organizations and persons to whom copies of the statement are sent, the listing of references, bibliography, a summary of the scoping meeting(s), tables, photographs, and exhibits. Generally correspondence, reports and methodology will be included where appropriate as supporting reports, but a particularly relevant letter, such as the Fish and Wildlife Service advice on endangered species, may be included in the appendix.

(6) *Circulating the Draft Statement.* The draft EIS shall be circulated in accordance with CEQ Regulations 1502.19 and 1503.1, with five copies sent to the Environmental Protection Agency, Washington, D.C. which acts as the reviewer for CEQ. A notice of availability of the EIS shall be published in the Federal Register and information furnished to news media should include a description of the proposed action and alternatives considered, the environmental consequences, the coordination and consultation procedure, and prior public meetings. The letter transmitting the draft EIS should include the date and place for a public meeting on the draft EIS, if such a meeting is planned. This information will also be furnished to the news media.

The letter of transmittal shall specify the date when comments are requested, and unless prior approval has been obtained from the CEQ for a shorter time, at least forty-five days will be allowed for the receipt of comments.

The draft EIS shall be transmitted by the Commissioner or his designee to the United States Department of State and with their concurrence to the Environmental Protection Agency.

For international undertakings the United States Commissioner shall consult with the Mexican Commissioner and provide him a copy of the draft EIS at the time he deems appropriate for consideration by Mexico and submittal of such views and comments as it may desire to provide.

(7) *The Final Statement.* The final EIS shall be prepared in accordance with CEQ Regulations 1502.9(b) and 1503.4. .

In instances where only minor comments are received, the final EIS may take the form of a description of comments received, the changes made to the text of the draft EIS, the change, if any, in the conclusions as a result of the comments and copies of the significant comments received.

For clarity or where the comments raise significant questions or issues, the Section may prepare the final EIS as a revision of the draft EIS, making such changes and additions as are determined appropriate to accurately reflect the pertinent comments received.

The final EIS shall contain a discussion of the pertinent comments received and the actions taken by the Section in response to the comments.

The final EIS will be circulated by providing copies to Environmental Protection Agency and to each agency, organization and individual who provided comments on the draft EIS. A notice of the availability of the final statement shall be published in the Federal Register and information furnished to news media on the availability of the final EIS.

d. *Supplemental Environmental Impact Statements.* The supplemental EIS will be prepared, circulated and filed in the same manner as a draft EIS except that the scoping process may be omitted.

(1) When a supplemental is issued to a draft EIS:

(a) Combined comments should be requested on the original draft, plus the supplement; and

(b) The final EIS should be issued as a new document covering the draft EIS as amended by the supplement and as a result of the comments received on the combined draft and supplement EIS.

(2) When a supplement is issued to a final EIS:

(a) Combined comments should be requested on the previously circulated final EIS, plus the supplement; and

(b) A revised final EIS shall be issued and include a discussion of the comments received on the combined EIS, and the responses made to these comments. If the supplement considers alternatives not previously considered or considers significant impacts not covered in the first EIS, the revised final EIS should reflect that the agency has reconsidered its preferred alternative and provide further discussion, as appropriate, for its selection of the preferred alternative.

e. *Exceptions.* The nature of negotiations and relations at the international level may make it necessary to depart in some instances from the procedures in the CEQ Regulations. CEQ foresaw the need for such departures in its Regulation 1507.3(c). Exceptions applicable to the Section are set forth below.

(1) The environmental documents which are written to comply with NEPA should not normally include any classified or administratively controlle material nor should they normally include statements with respect to positions other than the preferred position of the United States in any ensuing negotiation or discussion. Although environmental documents should, whenever possible, be unclassified and hence available to the public, there may be situations where such documents cannot adequately discuss environmental effects without disclosure of classified information. In these instances the EIS will be appropriately classified. Whenever possible, the classification should terminate on a specified date or upon the happening of a described event. Such EIS, so long as it is classified, will not be made available to the public. Consultation will be carried on with appropriate agencies on classified matters.

(2) Since final EIS may not be available until the conclusion of negotiations for an agreement or of a discussion, the 30-day time delay between submission of such a document and final federal action set out in CEQ Regulation 1506.10(b)(2) will not apply to actions taken in these situations. Every attempt will be made to comply with the 90-day period which Regulation 1506.10(b)(1) requires between submission of the draft EIS and final EIS, with the draft EIS circulation being limited to appropriate agencies. Where schedules of international conferences make this impossible, the Section will notify CEQ as soon as possible of the circumstances with the purpose of fulfilling the intent of NEPA insofar as possible.

(3) In certain exceptional instances it may be necessary to reduce the 45-day period for agency comments set out in CEQ Regulation 1506.10(c). When this is the case, all agencies to whom the draft EIS has been sent will be informed by the Section of the reduced time period. The reduced time period must also be included in the public notice published in the Federal Register.

(4) From time to time there will arise good and valid reasons for a deviation from these procedures. The procedures are not intended to be a substitute for sound professional judgment. Accordingly, if and as problems arise which justify a deviation, the proposed deviation and supporting rationale shall be forwarded to the United States Commissioner.

(5) Section 2(b) of Executive Order 11514 and CEQ Regulation 1506.6 establish requirements for providing public information on federal actions and impact statements, and envisions ensive use of public hearings. Public hearings will be utilized by the Section only upon a determination by the head of the Section (United States Commissioner) that the requirements of carrying on international relations, including the constraints of time and the posture of the United States in negotiations allow such hearings to be carried out without prejudice to the national interests.

(6) In those instances wherein the draft and/or final EIS is submitted to the Department of State (OES/ENH) for concurrence before distribution outside the Section, the Department has agreed to make its comments within thirty (30) days of receipt of an EIS from the Section.

f. *Decision Documents.* Environmental uments shall upon completion be de available to decision makers at each decision point.

At the time of the decision or, if appropriate, its recommendation to the Congress, a concise public record of decision shall be prepared in accordance with CEQ Regulation 1505.2 and shall:

(1) State what the decision was;

(2) Identify all alternatives considered and specify the Section's preferred alternative and the environmentally preferred alternative;

(3) Identify and discuss the factors leading to the decision including international consideration, national policy, economic and technical factors, and the Section's statutory mission; and

(4) Describe mitigation measures which are being included if the proposed action adversely impacts the environment.

No administrative action, to the maximum extent possible, is to be taken sooner than ninety (90) days after a draft EIS has been furnished to and received by the Environmental Protection Agency for CEQ, circulated for comment and, except where advance public disclosure will result in significantly increased cost of procurement to the Government, made available to the public. Further, no administrative action should be taken sooner than thirty (30) days after the final EIS, together with comments, has been received by the Environmental Protection Agency and made available to the public. In the event the final EIS is filed within ninety (90) days after a draft EIS has been circulated for comment, received by the Environmental Protection Agency and made public pursuant to these procedures, the thirty (30) day period and ninety (90) day period may run concurrently to the extent that they overlap. The time periods shall be computed from the date the Environmental Protection Agency publishes in the Federal Register that the EIS has been received and is available for public comment.

g. *Actions Planned by Private Applicants.* Actions planned by a private applicant or non-federal entities prior to or concurrent with the initiation of the Section's studies, or involving an existing project shall be handled in the following manner in accordance with CEQ Regulations 1501.2(d)(1), 1501.4(b), 1501.8(a), 1502.19(b), 1503.1(a)(3), 1506.1(d), 1506.5(a) and 1506.5(b):

(1) The potential applicant shall be advised by letter of the action being studied by the Section and that information pertaining to the studies is available and that the policies and types of information which may be required of a future applicant can be obtained from the Section's responsible official;

(2) Applicants shall be requested to participate in the Section's scoping process and any subsequent meetings;

(3) The Section shall provide time limits for processing the application if the applicant requests them;

(4) Copies of environmental documents prepared by the Section will be furnished to the applicant with a request for comments;

(5) The applicant will be informed of the results of studies conducted by the Section as to whether development by applicants of plans or designs or performance of other work necessary to support an application for federal, state or local permits or assistance is appropriate;

(6) The Section will assist the applicant by outlining the types of information required for either an environmental assessment or an EIS;

(7) The Section will review any assessment or EIS prepared by a private applicant or a non-federal entity to verify its accuracy and shall make its own evaluation of the environmental document.

100.8 Definition of Key Terms

The definition contained within CEQ Regulations, Part 1508, apply to these Procedures.

100.9 Budget Process

The requirement of NEPA, Water Quality Improvement Act, Executive Order No. 11514, applicable Regulations and Office of Management and Budget Bulletin No. 72-8, shall be met through the Section's budget process to the maximum extent practicable. The following requirements of the budget process will be met:

a. *Legislation.* This Section is responsible for indentifying those of its legislative proposals, or favorable reports on bills on which it is the principal agency concerned, that would require the preparation of the EIS and receipt of the comments required under Section 102 of NEPA. When there is doubt as to which is the principal agency concerned the Legal Adviser shall consult with the Office of Management and Budget's Legislative Reference Division.

The proposed Section 102(2) EIS and the required comments shall accompany legislative proposals and reports when these are sent to the Office of Management and Budget for clearance. Copies of this material shall have been previously furnished directly to the CEQ for its information. As a part of the normal clearance process, the Office of Management and Budget will circulate the proposed statements along with the proposals or reports to appropriate federal agencies and will consult with CEQ. In certain cases the clearance process may disclose the need for a Section 102(2)(C) EIS where none has been prepared. In this event the Office of Management and Budget will request the Section to develop and submit an EIS.

After differences, if any, with other agencies over the legislative proposals or report have been resolved and after the legislative proposal or report has been cleared by the Office of Management and Budget, the final EIS and comments shall accompany the proposal or report to the Congress as supporting material.

b. *Annual Budget Estimates.* In the event the Section has major program

actions which significantly affect the quality of the human environment, annual budget estimates shall be accompanied by a special summary statement explaining generally the environmental impact expected to result from those activities and programs for which it is not possible to make an assessment of the potential impact on specific areas of the environment. Special summary statements shall include relevant information about general environmental problems that may be caused by proposed actions but which still must be assessed as plans for programs and activities are further refined. The special summary statement shall also include the following information by appropriation or fund account:

1. *Action, project or activity.* Identify the agency actions and individual projects and activities and the amounts of funds involved that are considered subject to Section 102(2)(C). Where the action is a part of a larger activity, identify only the project or action subject to Section 102(2)(C) and the amount involved.

2. *Final EIS completed.* If there are significant unresolved issues with other agencies, include a copy of the EIS with the submission to the Office of Management and Budget.

3. *EIS being prepared.* Give the status (e.g.—awaiting comments from interested parties) and estimated completion date.

If the Section prepares an EIS for any of its authorizing legislation it shall submit the EIS in lieu of a special summary statement required by paragraph b. above, except that the information required for the special summary exhibit shall be submitted along with the EIS. Copies of the special summary statement or the EIS (accompanied by information for the special summary exhibit) shall be furnished directly to the CEQ.

100.10 Lease, License, and Permit Applications

Lease, license and permit applications except for those types of leases and licenses which were previously enumerated as Categorical Exclusions, will be coordinated with federal, state and local agencies which are authorized to develop and enforce environmental standards. (Comments from such agencies or from the Section will be presented to the applicant who will be given the opportunity to modify the application so as to remove the cause, if any, for an agency's objection that there will be a significant effect on the quality of the human environment.

The applicant may be required to develop at the applicant's expense the necessary environmental assessment as may be required by the Section, in addition to any information the applicant may wish to furnish in order to demonstrate that granting of the lease, license or permit is in the public interest. A summary of the information on which the EIS is based will be furnished to the public in the notice of public hearing and at the hearing if one is held. In the event an applicant does not take action to remove an objection, the Section will prepare the assessment or EIS required by Section 102(2)(C) of NEPA at the applicant's expense.

The applicant may propose mitigation measures to offset the ecological impacts of the proposed action, or the section may prescribe such mitigation measures as it deems appropriate. Any such measures will be made a requirement of the lease, license or permit.

The granting of the lease, license or permit is the "federal action" which may require an environmental document. While the applicant has the duty and responsibility to undertake the environmental assessment and investigation, the Section has the primary and non-delegable responsibility for determining environmental impact of an action at every distinctive and comprehensive state. The Section may adopt the assessment after verifying it and concurring with the scope and conclusions of the assessment.

Failure of an applicant to furnish the requested information shall result in the denial of an application.

Leases, licenses or permits granted or approved by the Section will contain provisions to assure compliance with applicable air and water quality standards; to conserve and protect the environment including wetlands and to avoid, minimize or correct hazards to the public health and safety. The lessee, licensee or permittee will be required to provide adequate measures (mitigation) to avoid, control, minimize or correct erosion, contamination or other abuses and damages to the environment within or without the premises under lease, license or permit that may result from or have been caused by operations conducted on the premises.

Farming and grazing operations shall be conducted in accordance with recognized principles of good practice, conservation and prudent management. Land use stipulations or conservation plans to define such use and the measures necessary for the conservation, protection and control of the environment shall be incorporated in and made a part of the lease, license or permit.

Commercial and industrial developments may be permitted to be conducted on the premises under lease, license or permit if appropriate measures are taken so that the quality of the human environment will not be significantly affected, and providing such developments are in accord with the requirements of Executive Order No. 11988, "Floodplain Management," Executive Order No. 11990, "Protection of Wetlands," and the 1970 Boundary Treaty. Leases, licenses and permits shall contain provisions for the lessee, licensee or permittee to submit for advance approval, general and comprehensive plans of any proposed construction or developments for the use and conduct of operations as authorized for the premises prior to commencing any actual construction or development activities. Such plans, including architects' designs, construction specifications, machinery or equipmer installation and operation or specifications for other operations or developments, shall provide measures necessary to protect, control or abate environmental pollution or abuses and avoid, minimize or correct hazards to the public health and safety.

Other uses as authorized by leases, licenses or pemits issued shall conform to the requirements and provisions formulated for each such use as adapted to local conditions and the environmental factors which are in need of protection and control measures.

Due to the nature of this Section's leasing, licensing and permit program, all factors are to be carefully considered before determining what is needed for the protection of the environment, conservation and land use requiremen[t]

Application involving power transmission lines will be prepared in accordance with the Bureau of Land Management, Department of the Interior, Regulations as published in Subchapter B, Subpart 2850 of Title 43 CFR 2851.2-1 or any revisions or amendments thereto.

100.12 Operations at Construction Sites

Some operations that contribute to pollution and noise at construction sites and therefore require close surveillance, are enumerated in the following list:

a. *Air Pollution.*

1. Burning.
2. Earth moving operations (dust).
3. Sandblasting.
4. Sprayed-on coatings.
5. Soil stabilization operations (cement or lime).
6. Concrete mixing plant (dust).

7. Batch truck operation (dust).
8. Winter heating equipment (smoke and fumes).
9. Gunite operations (rebound).
10. Asphalt operations (dust, smoke, volatiles).

b. *Water Pollution.*
1. Solid wastes.
2. Earth moving operations (runoff).
3. Clearing operations (erosion).
4. Core drilling and grouting operations (waste water).
5. Wellpoint system runoff (erosion).
6. Concrete operations:
(a) Aggregate washing.
(b) Spillage.
(c) Water curing.
(d) Washing of mixers and batch trucks.

c. *Noise.*
1. Pile driving.
2. Equipment noise.
3. Drilling and blasting.
4. Rock crushing.

The construction engineer should ascertain that the contractor complies with:

1. The current applicable federal regulations.
2. The current applicable local regulations.
3. Methods and restrictions of operations that are contract, permit and license requirements.

On projects where regulations and contract requirements do not specifically outline procedures, the contractor's cooperation should be encouraged in an effort to obtain a clean and safe operation.

Appropriate provisions will be included in the contract specifications for the works to be performed requiring compliance with federal, state and local pollution laws, regulations and rules. Examples of contract specifications are attached at Appendix A.

100.1 Section 309 of the Clean Air Act Amendments of 1970

Sections 1504.1 and 1508.19 of the CEQ's Regulation's require that, in addition to normal coordination procedures, the following procedures shall apply to coodination with the EPA:

a. Upon circulation of draft EIS to the EPA, comments shall be requested under both the NEPA and Section 309 of the Clean Air Act.

b. Comments of the administrator, EPA, or his designated representative will accompany each final EIS on matters related to air or water quality, noise control, solid waster disposal, radiation criteria and standards or other provisoins relating to the authority of EPA.

c. Copies of basic proposals (studies, proposed legislation, rules, leases, permits, etc.) will be furnished to EPA with each statement. For actions for which EIS are not being prepared but which involve the authority of EPA, EPA will be informed that no EIS will be prepared and that comments are requested on the proposal.

d. In the event EPA should, as a result of their considerations of factors covered during continuing coordination, indicate that the proposed action as presented is unsatisfactory from the standpoint of public health or welfare or invironmental quality, the Principal Engineer, Investigations and Planning Division, shall make every attempt to resolve the differences with EPA prior to completion of the draft EIS.

100.13 *Predecision Referrals to CEQ*

If a federal agency should refer an unresolved difference to CEQ for decision under Regulation 1504, the responsible official shall in fifteen (15) days after the Section's response to the referring agency's recommendation addressing fully the issues raised in the referral, and providing evidence to support the Section's position.

If the Section determines, after unsuccessful attempts to resolve differences with a lead agency, an EIS for a proposed action has potential adverse environmental impacts, Chief, Planning and Reports Branch, shall document the impacts, the differences with the lead agency, the actions taken to resolve the differences, and include all information identifed in CEQ Regulation 1504.3. The Legal Adviser shall prepare the outgoing documents listed in Regulation 1504.3 for consideration by the Commissioner after review by the Principal Engineer, Investigations and Planning.

100.14 *Responsibility as a Commenting Agency*

The Chief, Planning and Reports Branch, will review draft and final EIS submitted by other agencies and prepare the draft letter of comments for the Section in keeping with the intent of CEQ Regulations 1503.2 and 1503.3. Such comments should be as specific, substantive and factual as possible without undue attention to matters of form as in an EIS. Emphasis should be placed on the assessment of the environmental impacts of the proposed action, including the international aspects of the acceptability of those impacts on the quality of the environment, particularly as contrasted with impacts of reasonable alternatives to the action. The Section may in its comments recommend modifications to the proposed action and/or new alternatives that will enhance environmental quality and avoid or minimize adverse environmental impacts. The Section's comments should indicate the environmental interrelationship of the proposed action to any of our existing projects, or those being planned. The comments may include the nature of any monitoring of the environmental effects of the proposed project that appears particularly appropriate. If comments cannot be provided in the forty-five (45) day comment period, a request should be made for an extension of time, normally fifteen (15) days. In the event there are significant international factors to be considered, and completion of comments will require a longer extension of time, the request should explain the reason for the longer periods.

100.15 Effective Date

These procedures supersede any draft of proposed procedures which has been published in the Federal Register and/or circulated to other agencies (local, state or federal), interested individuals, associations or groups. These procedures become effective upon the date of their publication in final form in the Federal Register.

Frank P. Fullerton,
Legal Adviser.

Appendix A

SC Landscape Preservation

A. General—The Contractor shall exercise care to preserve the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, for approved construction roads and for excavation operations, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage which may be caused by the Contractor's construction operations and equipment. Movement of crews and equipment within the right-of-way and over routes used for access to the work shall be performed in a manner to prevent damage to grazing land, crops, or property.

No special reseeding or replanting will be required under these specifications; however, on completion of the work all work areas shall be smoothed and graded in a manner to conform to the natural appearance of the landscape. Where unnecessary destruction, scarring, damage, or defacing may occur as a result of the Contractor's operations, as determined by the Contracting Officer, the same shall be repaired, replanted, reseeded, or otherwise corrected at the Contractor's expense.

B. Construction roads—The locations, alignment, and grade of construction roads shall be subject to approval of the Contracting Officer. When no longer required

by the Contractor, construction roads shall be made impassable to vehicular traffic and the surfaces shall be scarified and left in a condition which will facilitate natural revegetation.

C. Contractor's yard area—The Contractor's shop, office, and yard area shall be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent. On abandonment, all storage construction buildings including concrete footings and slabs, and all construction materials and debris shall be removed from the site, or subject to the Contracting Officer's approval, may be buried on the site. The yard area shall be left in a neat and natural appearing condition.

D. Costs—Except as otherwise provided, the cost of all work required by this paragraph shall be included in the prices bid in the schedule for other items of work.

SC Prevention of Water Pollution

The Contractor shall comply with applicable federal and state laws, orders, and regulations concerning the control and abatement of water pollution.

The Contractor's construction activities shall be performed by methods that will prevent entrance, or accidental spillage of solid matter, contaminants, debris, and other objectionable pollutants and wastes into streams, flowing or dry watercourses, lakes and underground water sources. Such pollutants and wastes include, but are not restricted to, refuse, garbage, cement, concrete, sewage effluent, industrial waste, radioactive substances, oil and other petroleum products, aggregate processing tailings, mineral salts, and thermal pollution. Sanitary wastes shall be disposed of in accordance with state and local laws and ordinances.

Unwatering work for structure foundations or earthwork operations near streams or watercourses shall be conducted in a manner to prevent excessive muddy water and eroded materials from entering the streams or watercourses by construction of intercepting ditches, bypass channels, barriers, settling ponds, or by other approved means.

Waste waters from aggregate processing, concrete batching, or other construction operations shall not enter streams, watercourses, or other surface waters without the use of such turbidity control methods as settling ponds, gravel filter entrapment dikes, approved flocculating processes that are not harmful to fish, recirculation systems for washing of aggregates, or other approved methods. Any such waste waters discharged into surface waters shall be essentially free of settleable material. For the purpose of these specifications, settleable material is defined as that material which will settle from the water by gravity during a 1-hour quiescent detention period.

Sanitary facilities shall be provided and maintained in accordance with the Department of Labor "Safety and Health Regulations for Construction."

The costs of complying with this paragraph shall be included in the prices bid in the schedule for the various items of work.

SC *Abatement of Air Pollution*

The Contractor shall comply with applicable federal, state, interstate, and local laws and regulations concerning the prevention and control of air pollution.

In the conduct of construction activities and operation of equipment, the Contractor shall utilize such practicable methods and devices as are reasonably available to control, prevent, and otherwise minimize atmospheric emissions or discharges of air contaminants. Equipment and vehicles that show excessive emissions shall not be operated until corrective repairs or adjustments are made.

The Contractor's methods of storing and handling cement shall include means of controlling atmospheric discharges of dust.

Burning of materials resulting from clearing of trees and brush, combustible construction materials, and rubbish will be permitted only when atmospheric conditions for burning are considered favorable and the burning is done in accordance with Texas Air Control Board and local air pollution regulations. In lieu of burning, such combustible materials shall be removed from the site and disposed of in accordance with applicable regulations and laws.

During the performance of the work required by these specifications or any operations appurtenant thereto, whether on right-of-way provided by the Government or elsewhere, the Contractor shall furnish all the labor, equipment, materials, and means required, and shall carry out proper and efficient measures wherever and as often as necessary to reduce the dust nuisance, and to prevent dust which has originated from his operations from damaging crops, vegetation, lands and dwellings, or causing a nuisance to persons. The Contractor will be held liable for any damages resulting from dust originating from his operations under these specifications on the Government right-of-way or elsewhere.

If the Contractor does not provide and perform the necessary dust control measures within a reasonable time after need for such control arises, the Government will cause the work to be performed and will backcharge the Contractor for such work.

The costs of complying with this paragraph, including the cost of sprinkling for dust control or other methods of reducing formation of air pollution shall be included in the prices bid in the schedule for the various items of work.

[FR Doc. 81-25670 Filed 9-1-81; 8:45 am]
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INTERNATIONAL TRADE COMMISSION

Certain Tobacco; Report to the President on Investigation No. 22-43

August 21, 1981.

Findings and recommendations

On the basis of the information developed in the course of the investigation, the Commission[1] finds and recommends that tobacco, provided for in items 170.3210, 170.3500, 170.6040, and 170.8045 of the Tariff Schedules of the United States Annotated (TSUSA), is not being and is not practically certain to be imported into the United States under such conditions and in such quantities as to render or tend to render ineffective, or materially interfere with, the flue-cured tobacco program or the burley tobacco program of the Department of Agriculture, or to reduce substantially the amount of any product being processed in the United States from such tobacco.

Background

The Commission instituted its investigation on March 5, 1981, following the receipt on January 16, 1981, of a request from the President. The investigation was instituted pursuant to section 22(a) of the Agricultural Adjustment Act (7 U.S.C. 624(a)) to determine whether tobacco, provided for in items 170.3210, 170.3500, 170.6040, and 170.8045 of the TSUSA, is being or is practically certain to be imported into the United States under such conditions and in such quantities as to render or tend to render ineffective or materially interfere with, the tobacco program of the Department of Agriculture, or to reduce substantially the amount of any product being processed in the United States from such tobacco.

Notice of the Commission's investigation was published in the Federal Register of March 11, 1981 (46 F.R. 16162). A public hearing was held in Washington, D.C., on June 24 and 25, 1981. All interested parties were afforded an opportunity to appear and to present information for consideration by the Commission.

This report is being furnished to the President in accordance with section 22(a) of the Agricultural Adjustment Act. The information in the report was obtained at the public hearing, from interviews by members of the Commission's staff, from information provided by other Federal and State agencies, and from the Commission's files, submissions from the interested parties, and other sources.

[1] Commissioner Bedell dissents in part. Commissioner Bedell finds that flue-cured tobacco, provided for in items 170.3210, 170.3500, 170.6040, and 170.8045 of the TSUSA, is being or is practically certain to be imported into the United States under such conditions and in such quantities as to render or tend to render ineffective, or materially interfere with, the flue-cured tobacco program of the Department of Agriculture, or to reduce substantially the amount of any product being processed in the United States from such tobacco

SEC. 4. *Effective Date.* This notice is effective immediately and will continue in effect until the issuance of the amendment to Secretarial Order No. 3029.

Dated: December 26, 1978.

LEO KRULITZ,
Solicitor.

[FR Doc. 78-36334 Filed 12-28-78; 8:45 am]

[4710-07-M]

INTERNATIONAL BOUNDARY AND WATER COMMISSION, UNITED STATES AND MEXICO

United States Section

IMPLEMENTATION OF EXECUTIVE ORDERS 11988 (FLOODPLAIN MANAGEMENT) AND 11990 (PROTECTION OF WETLANDS)

AGENCY: United States Section, International Boundary and Water Commission, United States and Mexico.

ACTION: The purpose of this document is to publish the United States Section's Final Procedures to be effective March 29, 1979.

SUMMARY: The procedures proscribes policies and procedures utilized or to be utilized by the United States Section in implementing Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands) in the planning, design and construction of treaty projects along the United States and Mexican international boundary and to the United States Section's operation and maintenance activities in connection with treaty projects. The final procedures are designed to be coordinated with the environmental review of requirement established in the National Environmental Policy Act (NEPA).

FOR FURTHER INFORMATION CONTACT:

Mr. Frank P. Fullerton, Legal Adviser, International Boundary and Water Commission, United States Section, United States and Mexico, 4110 Rio Bravo, 200 IBWC Building, El Paso, Texas 79902, FTS: 572-7893.

PROCEDURES OF THE UNITED STATES SECTION, INTERNATIONAL BOUNDARY AND WATER COMMISSION, TO IMPLEMENT THE OBJECTIVES OF EXECUTIVE ORDERS 11988 (FLOODPLAIN MANAGEMENT) AND 11990 (PROTECTION OF WETLANDS)

Executive Order 11988—Floodplain Management (May 24, 1977)—requires each Federal agency to issue or amend existing regulations and procedures to ensure that the potential effects of any action it may take in a floodplain are evaluated and that its planning programs and budget requests reflect

consideration of flood hazards and floodplain management. Guidance for implementation of the Order is provided in the Water Resources Council "Guidelines for Implementing Executive Order 11988", dated February 10, 1978.

Executive Order 11990—Protection of Wetlands (May 24, 1977)—requires all Federal agencies to issue or amend existing procedures to insure consideration of wetlands protection in decision making.

It is the intent of both Executive Orders that Federal agencies implement the floodplain/wetlands requirement through existing procedures such as those established to implement the National Environmental Policy Act of 1969 (NEPA). In those instances where the impact of actions in floodplain/wetlands are not significant enough to require the preparation of an environmental impact statement (EIS) under Section 102(2)(C) of NEPA, alternative floodplain/wetlands evaluation procedures are to be established.

PURPOSE

The United States Section has adopted or reaffirms the following described policy and procedures to assure responsiveness to the objectives, needs and intent of Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands) to: (1) reduce the risk of flood loss, (2) minimize the impact of floods on human safety, health and welfare, (3) restore and preserve the natural and beneficial values served by floodplains along the limitrophe section of the Rio Grande and the Colorado River, (4) prohibit the destruction or modification of wetlands, (5) prohibit new construction in the floodplains and wetlands within the United States along the limitrophe section of the Rio Grande and the Colorado River, (6) describe the decision-making process to be utilized by the Section, including public notice, (7) provide the opportunity for early public review of any proposed action of the Section by means of meetings and hearings, to assure input of public concerns as well as the consideration of the provisions of any treaty and agreement between the United States and Mexico, (8) describe the evaluations to be made by the Section of practicable alternatives of proposed actions in the floodplains and the wetlands in the limitrophe section of the Rio Grande and the Colorado River, (9) describe the limitations on activities in floodplains and wetlands, (10) provide conspicuous delineation of structures and other places, where appropriate, of past and probable flood heights, (11) provide appropriate restrictions in permits, licenses, and in conveyances and uses of Federal property under the jurisdiction of the United States Section, and (12) seek the cooperation of the city, county and state officials in preventing construction of work in the floodplains along the limitrophe section of the Rio Grande and Colorado River which may obstruct the normal or flood flows of those rivers.

POLICY

The United States Section has a general mandate and broad responsibility to reduce to a minimum the shifting of the channels of the Rio Grande and Colorado River by prohibiting the construction of works in the floodplain/wetlands which may cause deflection or obstruction of the normal flow of the rivers or of their flood flows. In the boundary area (United States and Mexico), the policy of the United States Section is to exercise leadership and take action to avoid the adverse impacts caused by the occupancy and modification of floodplains and wetlands.

The United States Section will integrate floodplain management and wetland protection requirements into its programs and missions and will utilize, to the extent practicable, existing consultation, planning and decision-making processes.

The United States Section shall:

1. Avoid to the extent possible the long- and short-term adverse impacts associated with the destruction of wetlands and the occupancy and modification of floodplains and wetlands, and avoid direct and indirect support of floodplain and wetlands development wherever there is a practicable alternative;

2. Incorporate floodplain management goals and wetlands protection considerations into its planning, regulatory, and decision-making processes, and shall to the extent practicable:

a. Reduce the hazard and risk of flood loss;

b. Minimize the impact of floods on human safety, health, and welfare;

c. Restore and preserve natural and beneficial values served by floodplains;

d. Require the construction of United States Section structures and facilities to be in accordance with the standards and criteria, and consistent with the intent, of the regulations promulgated pursuant to the National Flood Insurance program;

e. Minimize the destruction, loss, or degradation of wetlands;

f. Preserve and enhance the natural and beneficial values of wetlands.

3. Undertake a careful evaluation of the potential effects of any United States Section action taken in a floodplain and any new construction undertaken by United States Section in wetlands not located in floodplain;

4. Identify, evaluate, and implement, as appropriate, alternative actions, which may avoid or mitigate adverse floodplain/wetlands impacts;

5. Provide opportunity for public review of actions proposed in floodplains and wetlands; and

6. Prohibit the construction of works in the floodplain/wetlands which may cause deflection or obstruction of the normal flow of the Rio Grande and the Colorado River or of their flood flows.

DEFINITIONS

For the purpose of these procedures, the following terms shall have the meaning indicated:

1. "The Commissioner" means the United States Commissioner, United States Section, International Boundary and Water Commission, United States and Mexico.

2. "United States Section" means the United States Section, International Boundary and Water Commission, United States and Mexico.

3. "Executive Order" means Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands).

4. "Limitrophe parts of the Rio Grande and Colorado River" means those reaches of the rivers that form the international boundary between the United States and Mexico.

5. "Wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats and natural ponds.

6. "Action" means any United States Section activity, including:

a. Acquiring, management, and disposing of Federal lands and facilities;

b. Providing federally undertaken, financed, or assisted construction and improvements; and

c. Conducting Federal activities and programs affecting land use, including but not limited to water and regulated land resources planning, regulating and licensing activities.

7. "Base Flood" means that flood which has a one percent chance of occurrence in any given year (also known as a 100-year flood). This term is used in the National Flood Insurance Program (NFIP) to indicate the minimum level of flooding to be used by a community in its floodplain management regulations.

8. "Base Floodplain" means the 100-year floodplain (one percent chance

floodplain). Also see definition of floodplain.

9. "Channel" means a natural or artificial watercourse of perceptible extent, with a definite bed and banks to confine and conduct continuously or periodically flowing water.

10. "Critical Action" means any activity for which even a slight chance of flooding would be too great.

11. "Facility" means any man-made or man-placed item other than a structure.

12. "Flood" or "Flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland and/or tidal waters, and/or the unusual and rapid accumulation of runoff of surface waters from any source.

13. "Floodplain" means lowlands and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year. The base floodplain shall be used to designate the 100-year floodplain (one percent chance floodplain). The critical action floodplain is defined as the 500-year floodplain (0.2 percent chance floodplain).

14. "Floodproofing" means the modification of individual structures and facilities, their sites, and their contents to protect against structural failure, to keep water out or to reduce effects of water entry.

15. "Minimize" means to reduce to the smallest possible amount or degree.

16. "One Percent Chance Flood" means the flood having one chance in 100 of being exceeded in any one-year period (a large flood). The likelihood of exceeding this magnitude increases in a time period longer than one year. For example, there are two chances in three of a larger flood exceeding the one percent chance flood in 100-year period.

17. "Ordinary High Water Mark" means the line on the shore established by an analysis of all daily high waters. It is established as that point that is inundated 25 percent of the time and is derived by a flood duration curve for the particular water body that is based on available water stage data. It may also be estimated by erosion or easily recognized characteristics such as shelving, change in the character of the soil, destruction of terrestrial vegetation or its inability to grow, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area.

18. "Practicable" means capable of being done within existing constraints. The test of what is practicable depends upon the situation and includes consideration of the pertinent factors, such as environment, cost, technology, natural, social, economic, legal and implementation time.

a. Natural—topography, habitat, and hazards, etc.

b. Social—aesthetics, historic and cultural values, land use patterns, population and its characteristics, etc.

c. Economic—cost of space, construction, services, relocation, gain or loss of employment.

d. Legal—international treaties and agreements, congressional acts, leases and deeds.

19. "Preserve" means to prevent modification to the natural floodplain/wetlands environment or to maintain it as closely as possible to its natural state.

20. "Restore" means to re-establish a setting or environment in which the natural functions of the floodplain can again operate.

21. "Structures" means a walled or roofed building, including mobile homes and gas or liquid storage tanks that are primarily above ground (as set by the NFIP).

22. "Environmental Assessment" means a document prepared by the Section pursuant to the National Environmental Policy Act (NEPA) and the Section's procedures for implementing Section 102 of NEPA dated March 5, 1974, which assesses whether a proposed Section action would be "major federal action" and would "significantly affect" the quality of the human environment and which serves as the basis for a determination as to whether an environmental impact statement is required.

23. "Environmental Impact Statement" (EIS) means a document prepared in accordance with the requirements of Section 102(2)(C) of NEPA.

24. "New Construction" for the purpose of compliance with the Executive Orders shall include draining, dredging, channelizing, filling, diking, impounding and related activities and any structures or facilities begun or authorized after May 24, 1977 (date of the Executive Orders), and not granted a specific exemption by the Executive Orders.

25. "Negative Declaration" (ND) means a document prepared pursuant to the Section's procedures for implementing Section 102 of NEPA to certify a decision that an EIS will not be prepared for a proposed Section action.

26. "Public Notification" (PN) means a brief notice published in the FEDERAL REGISTER which describes a proposed floodplain/wetlands action and affords the opportunity for public review.

27. "Statement of Findings" means a statement issued pursuant to Executive Order 11988 which explains why a Section action is proposed in a floodplain, lists the alternatives considered, indicates whether the action conforms to applicable floodplain protection standards, and describes steps to be taken to minimize harm to or within the floodplain.

AUTHORITY

1. Executive Order 11988, which revoked and replaced Executive Order 11296, issued August 10, 1966, was issued in furtherance of the National Flood Disaster Protection Act of 1973, and the National Environmental Policy Act of 1969. Section 2(d) requires issuance of new or amended agency regulations.

2. Executive Order 11990 was issued in furtherance of the National Environmental Policy Act of 1969. Section 6 requires issuance of new or amended procedures.

[illegible] occupancy and [illegible] and wetlands.

The following references are made an integral part of these procedures:

1. National Environmental Policy Act of 1969 (P.L. 91-190; 42 U.S.C.A. 4332);

2. Executive Order 11514, Protection and Enhancement of Environmental Quality, March 5, 1970;

3. Executive Order 11988, Floodplain Management, May 24, 1977;

4. Executive Order 11990, Protection of Wetlands, May 24, 1977;

5. "Unified National Program for Floodplain Management", Water Resources Council, July 1976;

6. "Guidance for Floodplain Management", Water Resources Council, 42 FEDERAL REGISTER 52590, September 30, 1977;

7. "Guidelines for Implementing Executive Order 11988", Water Resources Council, 43 FEDERAL REGISTER 6030, February 10, 1978;

8. "Operational Procedures for Implementing Section 102 of the National Environmental Policy Act of 1969", March 5, 1974, United States Section, International Boundary and Water Commission;

9. 1970 Boundary Treaty (Treaties and other International Acts Series 7313);

10. American Mexican Boundary Treaty Act (Public Law 92-548);

11. 1944 Water Treaty (Treaty Series 994);

12. National Flood Insurance Program, Federal Insurance Administration (Department of Housing and Urban Development), 41 FEDERAL REGISTER 46962 and 43 FEDERAL REGISTER 2570.

APPLICABILITY

Except as stated hereinafter, these procedures are applicable to all activities under the jurisdiction of the

United States Section to carry out the United States obligations as defined in the boundary and water treaties with Mexico which may involve the construction or development in the floodplains or the modification or destruction of wetlands. Existing and proposed projects and programs, including licensing and permitting are included. Activities to which these provisions will not be applicable are:

1. Actions taken during and immediately following flood or other emergencies to save lives and to protect property and public health and safety;

2. The repair and maintenance of existing facilities and structures;

3. Modification of stream gaging stations;

4. Flood proofing or flood protection of existing structures or facilities within the floodplain; and

5. Actions which may be in conflict with Treaty obligations.

However, where unusual circumstances exist, the Section shall consider the need for a floodplain/wetlands assessment of these type of actions.

REPAIR OR IMPROVEMENT OF EXISTING STRUCTURES AND FACILITIES

The following actions relating to repair or improvement of existing structures and facilities will be accomplished in a manner to increase the useful life of the facility, reduce flood hazards, and protect and, where practical, restore natural values.

1. *Improvement and Maintenance of River Channels.* In compliance with the treaties and other agreements between the United States and Mexico and acts of the Congress, the United States Section excavates material from the channels of certain reaches of boundary rivers by use of mechanical equipment to maintain a definite channel for boundary location purposes, to conserve water and make required treaty water deliveries, and to maintain effective control of floods. The need for these actions is specified in the international agreements.

The material removed from the river is deposited in the following locations: within the project floodplain, land side of the project levees, and on other lands—private and government-owned, beyond the project, subject to the approval of the owners or those having jurisdiction. None of the excavated material will be deposited on wetlands. The selection of the particular area of deposition will be based upon available alternatives, ecological considerations, costs, flood hazards, and impact upon the floodplain. The removed material in some cases is made available to the private sector for utilization away from the project and the Section may authorize such removal by the private sector in accordance with its requirements, provided it does not dispose of materials on wetlands.

2. *Bank Stabilization, Boundary Preservation and Flood Control.* In carrying out its operational and maintenance activities where necessary to stabilize United States banks of the boundary rivers to preserve the international boundary between the United States and Mexico and to maintain its effective flood channel capacity, the Section may need to grade the banks, and to add riprap or other types of bank protection. Bank protection may also be required for public facilities, such as municipal water intakes, bridge abutments and sewage and irrigation wasteway outfalls.

3. *Clearing Vegetation.* To maintain the water carrying capacity of the river channels and to preserve the international boundary, the clearing operations of the United States Section, at times and in some areas, require the removal of vegetation from certain portions of the banks and main channel of the rivers.

4. *Construction, Operation and Maintenance of Structures.* The United States Section constructs, operates and maintains structures along and across river boundaries and near the mouths of tributaries, including dams, grade control structures, levees, gaging stations and appurtenant works for measuring waters to provide data for effective project operation and to determine the national ownership of water, in accordance with treaties with Mexico.

The construction of these structures at times and in some places, requires construction of temporary works to protect the construction area from river flows. Maintenance of these structures is performed as necessary, and may include the addition of material in the channel or on lands adjacent to the channel.

CONSTRUCTION OF NEW WORKS

The actions of this Section involving construction of new works will comply with the procedures described herein.

PROCEDURES FOR COMPLIANCE

1. For activity requiring compliance with the Executive Orders, the United States Section staff will use the procedure as described herein, and will concurrently apply its procedures for environmental considerations under the National Environmental Policy Act.

2. Floodplain management principles and procedures will be taken into account when formulating or evaluating any water or land use proposal to insure that land and water resource use will be appropriate to the degree of hazard involved. Review of applications for licenses and permits shall include full consideration of flood hazards to assure appropriate floodplain management.

3. Flood hazards and, to the degree they are quantifiable, floodplain values, will be expressed in terms of:

a. Potential (or residuals) for monetary loss;

b. Human safety, health and welfare;

c. Shifting of costs or damage to others; and

d. Potential for affecting the natural and beneficial floodplain values.

4. The procedures established herein shall, at a minimum, require the construction of Federal structures and facilities to be in accordance with the standards and criteria and consistent with the intent of those promulgated under the National Flood Insurance Program. Deviations shall be acceptable only to the extent that the standards of the Flood Insurance Program are demonstrably inappropriate for a given type of structure or facility or are in conflict with treaty obligations.

5. The evaluation of whether an alternative is practicable shall include:

a. Whether it is allowable under existing international treaties and agreements;

b. In conformance with the Federal Insurance Administration's criteria and methods for minimizing flood damage; and

c. Environmental, social, economic, and legal considerations.

DECISION MAKING PROCESS

STEP 1. Delineate the floodplain and determine if the proposed action is located in or may impact the floodplain.

a. Determine the base flood and delineate on an appropriate map the base floodplain, using the best available information.

b. In the event a critical action is being considered, the critical action floodway will be defined.

c. Define wetland areas and delineate these areas on the map with base floodplain delineation.

If the proposed action is not in the base floodplain (or critical floodplain as applicable), proceed to Step 4.

STEP 2. Issue a public notice as early as possible of possible action which may be in or impact the floodplain. The notice shall include a description of the proposed action, a listing of alternatives being considered, and an invitation to provide comments throughout the decision making process.

STEP 3. Identify and evaluate the practicable alternatives to locating in the floodplain. This evaluation shall include avoidance of the floodplain through alternative siting and alternative actions which would accomplish the intended functions but which would minimize harm to or within the floodplain, including no action.

STEP 4. Identify and evaluate impacts of the alternatives on the applicable floodplain and the direct and indirect effects which may support floodplain development that would have additional impacts. If the proposed action is outside the floodplain and has no identifiable impacts or support of floodplain development, it can be implemented (Step 8), providing it complies with wetland requirements defined later herein.

STEP 5. If the alternatives have adverse impacts in the floodplains or supports floodplain development, means are to be described to minimize the adverse impacts and where practical, restore natural values.

STEP 6. Reevaluate the alternatives, taking into account the flood hazards, identified impacts, opportunities to restore and preserve floodplain values, and environmental, social, economic and legal factors.

STEP 7. If it is determined that the only practicable alternative is locating in the floodplain, a statement of findings and public notice will be prepared, distributed and published. Depending upon the public input, a public hearing may be scheduled.

STEP 8. After a reasonable period to allow for public response, not less than fifteen (15) days, the Commissioner may take steps to implement the alternative.

Following are more detailed discussions of the procedures to implement the decision making process.

DELINEATION OF THE FLOODPLAIN

1. The procedure in delineating the base floodplain (base floodplain uses 100-year frequency flood and critical floodplain uses 500-year frequency flood) will be generally in accord with the "Guidance for Floodplain Management" published by the Water Resources Council, 42 Federal Register 52590, September 30, 1977.

2. The floodplain will be based on Flood Insurance Administration (FIA) maps. When FIA maps are not available, USGS quadrangle maps will be used with United States Section hydraulic studies and Flood Insurance Administration criteria for delineation of the extent of the base or critical floodplain.

PUBLIC INVOLVEMENT

1. For proposed floodplain/wetlands actions for which an Environmental Assessment or Environmental Impact Statement is required, the opportunity for early public review will be provided through existing NEPA procedures specified in this Section's Operational Procedures for Implementing Section 102 of NEPA. In these cases, either the Notice of Intent to prepare an Environmental Impact Statement or the Negative Declaration shall be used to satisfy the requirements for early public notification.

2. For proposed floodplain/wetlands actions for which no Environmental Assessment or Environmental Impact Statement is required, the Section shall provide the opportunity for early public review through preparation of a Public Notification, which shall:

a. Describe the proposed action, segment of floodplain involved, and alternative being considered, and include a location map.

b. State the time and place of public hearing if one is to be held.

c. Be published in the FEDERAL REGISTER and one or more newspapers of general circulation in the area.

d. Be distributed to:

(1) Property owners in immediate vicinity of the proposed action.

(2) City and county governments in the vicinity of the proposed action.

(3) Council of Governments and other agencies.

(4) Conservation associations.

(5) State and Federal agencies, including U.S. Fish and Wildlife Service and State Fish and Wildlife Agency.

(6) Other interested agencies and individuals.

For floodplain action subject to the Office of Management and Budget Circular A-95, the Section shall submit a copy of the Public Notice to the State and area wide A-95 clearing houses for the geographic area affected.

The procedure to be followed for obtaining public input will vary with the proposed action to be undertaken. For more significant actions a public hearing will be held. This hearing may be preceded and/or followed by periodic consultation meetings with representatives of appropriate groups and agencies to scope the studies to be made. In contrast, a relatively insignificant action such as location in the floodplain of a new buried pipeline may be handled solely by a mailed and published notice without meetings or hearings.

IDENTIFICATION AND EVALUATION OF PRACTICABLE ALTERNATIVES

Alternatives to be evaluated include:

1. Carrying out the proposed action outside the applicable floodplain (alternative sites).

2. Other means which accomplish the same purpose as the proposed action (alternative actions); and

3. No action.

If a practicable site exists outside the applicable floodplain, the proposed action cannot be located in the floodplain. When a floodplain site is the only practicable alternative, the agency's analysis supporting this conclusion should be fully documented. In determining the practicability of a non-floodplain site, the general concepts of site feasibility apply. At a minimum, site practicability shall include consideration of natural, social, economic, legal and environmental factors.

Alternative actions to be considered are those which can be substituted for the proposed action in that they comprise new solutions or approaches which serve the same function or purpose as that proposed, but which have less potential for harm.

For the alternative of no action, an evaluation should be made of the harm to or within the floodplain resulting from not undertaking the proposed action.

IDENTIFICATION OF IMPACTS OF THE PROPOSED ACTION

The impacts of the proposed action to be identified are impacts upon:

1. Lives and property.

2. Natural and beneficial floodplain values, including environmental values.

The basic types of impacts to be evaluated are:

1. Positive and negative.

2. Concentrated and dispersed.

3. Short-term and long-term.

Factors to be considered are:

1. The nature of the hazard and risk.

a. Historical floods.

b. Probability floods.

2. High hazard areas.

3. Natural moderation of floods.

4. Water quality maintenance.

5. Groundwater recharge.

6. Living resources—flora and fauna.

7. Cultural resources.

8. Agricultural, aquacultural, and forestry resources.

REQUIREMENTS TO MINIMIZE, RESTORE AND PRESERVE

The evaluation of a proposed action shall include consideration of means to minimize potential harm to or within the floodplain and shall include:

1. Reduction of potential harm to life and property within the floodplain with a goal of avoiding increased flood loss potential associated with the level of the base flood prior to the proposed action.

2. Minimizing potential harm applies to:

a. The investment risk, or the flood loss potential of the action itself;

b. The impact the action may have on others; and

c. The impact the action may have on floodplain values.

3. In the context of the Orders, "restore" focuses upon conditions existing as a result of prior actions, while "preserve" focuses upon the impacts of proposed action.

When a proposed action will result in harm to the natural floodplain environment, the Section will design or

modify the action to assure that it will be carried out in a manner which preserves as much of the natural and beneficial floodplain values as is possible. Guidance for possible means of preserving the floodplain are given by the Water Resources Council in its "Guidelines for Implementing Executive Order 11988 (Floodplain Management)", 43 Federal Register 6030, February 10, 1978.

REEVALUATION OF ALTERNATIVES

1. Determine which, if any, of the alternatives which are located outside or do not impact the base floodplain are implementable. Where such an alternative exists, the proposed action cannot be located in the floodplain.

2. Where an implementable alternative exists outside the floodplain but which has impact on or supports floodplain development, actions will be taken to minimize that impact and support.

3. If no implementable alternative exists outside the floodplain, the impacts of the floodplain alternative shall be thoroughly evaluated and measures to minimize those impacts and restore natural values shall be identified.

FINDINGS AND PUBLIC EXPLANATION

If the reevaluation results in the determination that there is no practicable alternative to locating in or impacting the floodplain, a statement of findings and public explanation shall be published in the FEDERAL REGISTER and provided to news media and sent to agencies, groups, and individuals previously contacted. The statement and public explanation shall include:

1. An explanation indicating why the proposed action is to be located in the floodplain;

2. A description of all significant facts considered in making the determination including alternative sites and actions;

3. A statement indicating whether the actions conform to applicable state or local floodplain guidelines;

In addition, and in keeping with the concept of the over all public involvement process discussed in Step 2, the following items should be included in the statement of findings and public explanation:

1. A description of why the National Flood Insurance Program criteria are demonstrably inappropriate for the proposed action;

2. A description of how the activity will be designed or modified to minimize harm to or within the floodplain;

3. A statement indicating how the action affects natural or beneficial floodplain values;

4. A statement listing other involved agencies and individuals;

5. A provision for a brief comment period prior to agency action (15 to 30 days).

IMPLEMENTING THE ACTION

The proposed action can be implemented after:

1. Steps 1 through 7 of the decision-making process have been completed.

2. Comments received have been considered and a conclusion reached that the findings are still valid.

3. Environmental procedures have been completed under the National Environmental Policy Act.

4. A determination has been made that the proposed action is in accord with Executive Order 11990 in regard to wetlands.

WETLANDS

Wetlands will be delineated on appropriate maps for areas in and adjacent to projects of the United States Section, and in reaches of the Rio Grande, Colorado River, and other streams crossing the international boundary which may be considered for proposed activity. In making the wetlands determination, the Section shall utilize United States Fish and Wildlife Service National Wetlands Inventory Map, where available.

Operation and maintenance activities will be programmed to not adversely impact wetlands.

Evaluations of proposed new activities shall include consideration of an alternative which does not adversely impact wetlands. One or more alternative will be considered which include mitigation features for wetlands impacted in the event that alternative is selected as the proposed action.

MANAGING AND DISPOSAL OF FEDERAL LANDS

1. Management:

a. Licenses or Permits:

An application for a license must be accompanied by an environmental impact assessment as required under the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 *et seq.*), and where major adverse impact will result, the applicant shall furnish a detailed environmental impact statement as required by the National Environmental Policy Act.

Since all of the lands administered by the United States Section are within floodplain areas, no permanent improvements will be licensed except those that are not subject to flood damages or are floodproofed in accordance with the Unified National Program for Flood Plain Management of the Water Resources Council. If, upon examination of the application, it is found that the proposed work or its operation and maintenance will not interfere with the construction, operation and maintenance of any project works of the United States Section, and is consistent with permissible floodplain uses defined in the National Flood Insurance Program (Federal Insurance Administration), a license will be prepared by the Commission and transmitted to the applicant.

b. Leases:

All leases will contain provision to assure that the activities authorized are consistent with permissible floodplain uses defined in the National Flood Insurance Program (Federal Insurance Administration), and comply with the Executive Orders.

2. Disposal:

a. By United States Section:

The conveyances from the United States of America will, where applicable, incorporate a prohibition against filling of areas identified as wetlands and will contain a statement defining the potential flood hazards.

(1) Typical Provisions are:

Wetlands: That portion of the above-described land lying within the old riverbed of the Rio Grande, consisting of approximately——acres, is classed as "wetlands", as defined in Executive Order 11990, May 24, 1977, and is therefore protected and prohibited from destruction or degradation.

Flood Hazards: As directed by Executive Order 11988 (Floodplain Management, May 24, 1977), the Grantee is put on notice that all the lands described above are subject to a one percent or greater chance of flooding in any given year.

b. By General Services Administration:

The Report of Excess for Real Property (SF118, GSA) submitted by the United States Section, will reflect detailed information regarding known wetlands and any known flood hazards or flooding of the property.

PROCEDURES FOR DELINEATION OF PAST AND PROBABLE FLOOD HEIGHTS

The following procedures have been adopted in order to meet the requirements of Executive Order 11988 (Floodplain Management):

1. Issuance of public notices to the general public, all owners, lessees, and users of lands along the Rio Grande each year prior to the beginning of the flood season notifying that lands along the banks of the river are subject to flooding by releases from Commission dams and flood inflows from tributaries to the Rio Grande. The information provides data with respect to highest flood on record and possible river stages for different flood frequencies.

2. Prior to anticipated floods, issue information to the public by use of radio, television, state and local authorities and United States Section flood patrols, to evacuate flood danger areas.

3. At dams, place signs delineating areas restricting access and usage by the general public.

4. Encourage local, county and state agencies to seek legislation restricting the use of flood danger areas by public where the United States Government does not have authority to restrict the use of such areas.

5. Along floodways used during major floods, place signs at intersections with public roads informing the public the area is subject to flooding.

PROHIBITION OF CONSTRUCTION

To assure compliance with the Boundary Treaty of 1970, annually, usually in January or February, the Section will seek in writing, the cooperation of the city and county officials and their staffs, along the limitrophe parts of the Rio Grande and Colorado River, as well as state officials, to advise those who may desire to construct works on lands within the floodplain and adjacent to the main channel of the Rio Grande and Colorado River, where it forms the international boundary between the United States and Mexico, that plan for works be approved by the International Boundary and Water Commission before any work is performed. The appropriate officials will be requested to confer with the Section prior to approving plans for works along the limitrophe part of the rivers unless they have the prior approval of the Commission.

REFINING PROCEDURES

Refinements will be made to these procedures from time to time as experience is gained in their implementation.

(FR Doc. 78-36340 Filed 12-28-78; 8:45 am)

[4410-01-M]

DEPARTMENT OF JUSTICE

Antitrust Division

UNITED STATES v. NU-PHONICS, INC., ET AL.

Proposed Final Judgment and Competitive Impact Statement Thereon

Notice is hereby given pursuant to the Antitrust Procedures and Penalties Act, 15 U.S.C. § 16(b) through (h), that a proposed Final Judgment and a Competitive Impact Statement as set out below have been filed with the United States District Court for the Eastern District of Michigan, Southern Division, Civil No. 671378, *United States v. Nu-Phonics, Inc., et al.* The Complaint in this case alleges that four corporations (Nu-Phonics, Inc.; Lucas, Inc.; Ferndale Hearing Aid Center, Inc.; and Eastside Hearing Aid Center, Inc.), one partnership (Downriver Hearing Aid Center), and four in-

INTERNATIONAL BOUNDARY AND WATER COMMISSION, UNITED STATES AND MEXICO

Operational Procedures Pertaining to Historic and Cultural Properties, and Applicable Executive Orders

AGENCY: United States Section, International Boundary and Water Commission, United States and Mexico.

ACTION: Notice of Final Operational Procedures for Implementing the National Historic Preservation Act of 1966, Other Laws Pertaining to Historic and Cultural Properties, and Applicable Executive Orders.

SUMMARY: This document prescribes policies and procedures utilized or to be utilized by the United States Section in implementing the National Historic Preservation Act of 1966, Other Laws Pertaining to Historic and Cultural Properties, and Applicable Executive Orders.

EFFECTIVE DATE: The procedures become effective October 15, 1981.

FOR FURTHER INFORMATION CONTACT: Mr. Frank P. Fullerton, Legal Adviser, United States Section, International Boundary and Water Commission, United States and Mexico, 4110 Rio Bravo, El Paso, Texas 79902 Telephone: (915) 543-7393——FTS: 572-7393.

SUPPLEMENTARY INFORMATION: On February 26, 1981, the Section published proposed procedures in the Federal Register (46 FR 14225), which prescribed the policies and procedures utilized or to be utilized in implementing the National Historic Preservation Act of 1966, Other Laws Pertaining to Historic and Cultural Properties, and Applicable Executive Orders.

A forty-six (46) day period was provided during which comments were to be received from other federal agencies, state agencies, private businesses, universities and individuals.

Comments were received only from the Director of the Office of Cultural Resource Preservation of the Advisory Council on Historic Preservation in response to the Federal Register notice containing the proposed procedures. The Director noted that since the proposed procedures had been published that the National Historic Preservation Act (NHPA) had been substantially amended and suggested additions to be considered which would take explicit cognizance of Section 110 of NHPA which clarifies the affirmative preservation responsibilities of federal agencies.

The suggestion of the Director of the Office of Cultural Resource Preservation are reflected in the final operational procedures. As a result of the review by the staff of the United States Section, certain nonsubstantative revisions were made, and typographical errors were corrected.

Dated: October 2, 1981.

Frank P. Fullerton,

Legal Adviser, United States Section, International Boundary and Water Commission, United States and Mexico.

Operational Procedures for Implementing the National Historic Preservation Act of 1966, Other Laws Pertaining to Historic and Cultural Properties, and Applicable Executive Orders

200. National Historic Preservation Act

The National Historic Preservation Act (hereafter NHPA) of 1966, as amended (80 Stat. 915, 16 U.S.C.A. 470, as amended; Pub. L. 91-243, 84 Stat. 204; Pub. L. 93-54, 87 Stat. 139; Pub. L. 94-422, 90 Stat. 1319; Pub. L. 96-244, 94 Stat. 346), Executive Order No. 11593, May 13, 1971, Protection and Enhancement of the Cultural Environment (36 FR 8921, 16 U.S.C.A. 470), the President's Memorandum on Environmental Quality Water Resources Management, July 12, 1978 and the Regulations of the Advisory Council on Historic Preservation [ACHP or Council] dated January 30, 1979 provide that certain considerations are to be given and actions taken in proposing any Federal undertaking which may affect a historical or cultural property which has National, State or local significance. The requirements of the NHPA are to be integrated with other planning and environmental review procedures required by law or by agency practice so that all such a procedures run concurrently rather than consecutively.

200.1 Purpose

The Operational Procedures:

a. Prescribe guides to be utilized by the United States Section of the International Boundary and Water Commission, hereafter referred to as the Section, to implement NHPA and supplement ACHP Final Regulations for Protection of Historic and Cultural Properties, dated January 30, 1979 (44 FR 6072).

b. Insure initiation of the ACHP process at the earliest possible time, provide for assistance and consultation to individuals and non-federal entities who plan to take action before involvement of the Section, the State Historic Preservation Officer (hereafter SHPO), appropriate state and local agencies, and with interested private persons and organizations.

c. Establish early identification of undertakings that may have an affect on a significant historical or cultural property.

d. Provide procedures for decision documents pertaining to historical and cultural properties.

e. Provide that information is to be made available to the public before decisions are made about undertakings that may affect historical or cultural properties.

f. Direct that documents are to concentrate on the issues and properties that pertain to the proposed undertaking.

g. Define responsibilities within the Section.

200.2 Policy

The Section's Policy is to:

a. Give proper attention to undertakings that could affect significant historic and cultural properties to enable early and appropriate consideration of such actions on all historical and cultural values.

b. Invite early and continued cooperation, where appropriate, from the SHPO and Council, federal, state, regional and local authorities and the public, in the Section's planning and decision-making processes to develop alternatives and measures which will protect, restore or enhance historical and cultural properties, and to minimize and mitigate unavoidable adverse effects on such properties.

c. Implement domestic legislation and directives to the extent practicable without impairing the Section's international mission because the international projects under the jurisdiction of the International Boundary and Water Commission are partly or wholly located within the United States.

200.3 Applicability

The Operational Procedures apply to all Section programs and activities insofar as is possible or practicable without impairing its international mission. Domestic requirements must not impair the Section's performance of the United States international obligations which are carried out consistent with the treaties and foreign policy of the United States.

200.4 References

a. *Treaties.* (1) Convention between the United States and Mexico concerning the equitable distribution of the waters of Rio Grande (T.S. 455, 34 Stat. 2953, signed May 21, 1906, entered into force January 18, 1907).

(2) Treaty between the United States of America and Mexico entitled "Utilization of the Waters of the Colorado and Tijuana Rivers and of the Rio Grande" (T.S. 994, 59 Stat. 1219, signed February 3, 1944, entered into force November 8, 1945).

(3) Convention between the United States of America and Mexico entitled "Rectification of the Rio Grande" (T.S. 864, 48 Stat. 1621, signed February 1, 1933, entered into force November 13, 1933).

(4) Convention between the United States of America and the United Mexican States for the Solution of the Problem of the Chamizal (T.I.A.S. 5515, signed August 29, 1963, entered into force January 14, 1964).

(5) Treaty between the United States of America and the United Mexican States entitled "Treaty to Resolve Pending Boundary Differences and Maintain the Rio Grande and Colorado iver as the International Boundary" (T.I.A.S. 7313, signed November 23, 1970, entered into force April 18, 1972).

b. *International Agreements.* International projects were constructed in accordance with the provisions of the above-referenced treaties and exchange of Notes between the Governments of the United States and Mexico. The United States and Mexico, through the International Boundary and Water Commission or its predecessor have constructed international projects in accordance with each of the following agreements:

(1) Minute No. 144, "Plans of Final Location of Rectified Channel of the Rio Grande in El Paso-Juarez Valley," signed June 14, 1934.

(2) Minute No. 148, "Works Which ach Government Shall Undertake on the Rio Grande Rectification Project in Accordance with the Convention of February 1, 1933," signed October 28, 1935.

(3) Minute No. 165, "Rules and Regulations for the Maintenance and Preservation of the Rio Grande Rectification Project, in the El Paso-Juarez Valley," signed August 13, 1938.

(4) Minute No. 174, "Supplemental Construction Work Which Each Government Should Undertake Under the Convention of February 1, 1933 on Account of Existing Conditions in the Rio Grande Rectification Project in the El Paso-Juarez Valley," signed March 3, 1942.

(5) Minute No. 182, "Approval of Joint Report on Engineering Conference on Studies, Investigations and Procedures for the Planning of Works to be Built in Accordance with the Treaty of February 3, 1944," signed September 23, 1946.

(6) Minute No. 187, "Determinations as to Site and Required Capacities of the Lowest Major International Storage Dam to be Built on the Rio Grande, in Accordance with the Provisions of Article 5 of the Treaty Concluded February 3, 1944," signed December 20, 1947.

(7) Minute No. 190, "Allocation to the Two Sections of the Commission of Remaining Items of Work Preparatory to Construction of Falcon Dam," signed August 13, 1948.

(8) Minute No. 192, "Plans and procedures for Construction of Falcon Dam and Recommendations for Construction of Falcon Hydroelectric Plants," signed September 7, 1949.

(9) The Lower Rio Grande Flood Control Project was approved in an exchange of Notes in 1932 between the two Governments in which each country agreed to a coordinated plan for flood protection and to perform the work within its own territory. Subsequently, additions and modifications to the plan were adopted in the following agreements: Minute No. 196, "Modification of the Original Plan for the Lower Rio Grande International Flood Control Project," signed December 18, 1950; Minute No. 212, "Improvement of the Channel of the Lower Rio Grande," signed December 22, 1961; and Minute No. 238, "Improvement of the International Flood Control Works of the Lower Rio Grande," signed September 10, 1970.

(10) The Joint Report of the United States and Mexican Commissioners for a coordinated plan of international flood protection facilities for Nogales, Arizona and Nogales, Sonora, signed on November 12, 1932, was subsequently approved by the two Governments by an exchange of notes.

(11) Minute No. 202, "Bases for Joint Operation and Maintenance of the Falcon Dam and Hydroelectric Plant and for Division of Cost Thereof," signed January 11, 1955.

(12) Minute No. 207, "Consideration of Joint Report of the Principal Engineers on Site, Capacities and Type of Dam for the Second Major International Storage Dam on the Rio Grande," signed June 19, 1958.

(13) Minute No. 210, "Recommendations Regarding Construction of Amistad Dam," signed January 12, 1961.

(14) Minute No. 215, "Design and Procedures for Construction of Amistad Dam," signed September 28, 1963.

(15) Minute No. 217, "Clearing of the Colorado River Channel Downstream from Morelos Dam," signed November 30, 1964.

(16) Minute No. 220, "Improvement and Expansion of the International Plant for the Treatment of Douglas, Arizona and Agua Prieta, Sonora Sewage," signed July 16, 1965.

(17) Minute No. 222, "Emergency Connecton of the Sewage System of the City of Tijuana, Baja, California to the Metropolitan Sewage System of the City of San Diego, California," signed November 30, 1965.

(18) Minute No. 224, "Recommendations Concerning the Lower Rio Grande Salinity Problem," signed January 18, 1967.

(19) Minute No. 225, "Channelization of the Tijuana River," signed June 19, 1967.

(20) Minute No. 227, "Enlargement of the International Facilities for the Treatment of Nogales, Arizona and Nogales, Sonora Sewage," signed September 5, 1967.

(21) Minute No. 235, "Division of Operation and Maintenance Cost of Amistad Dam," signed December 3, 1969.

(22) Minute No. 236, "Construction of Works for Channelization of the Tijuana River," signed July 2, 1970.

(23) Minute No. 242, "Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River," signed August 30, 1973.

(24) Minute No. 247, "International Plan for the Protection of the Presidio-Ojinaga Valley Against Floods of the Rio Grande," signed February 7, 1975.

(25) Minute No. 258, "Modification of the United States Portion of the Plan for the Channelization of the Tijuana River," signed May 27, 1977.

(26) Minute No. 262, "Recommendations for Works to Preserve for the Rio Grande its Character as the International Boundary in the Reach from Cajoncitos, Chihuahua to Haciendita, Texas," signed December 26, 1979.

c. *Laws.* (1) National Environmental Policy Act, as amended, 83 Stat. 258, 42 U.S.C. 4331.

(2) National Historic Preservation Act, as amended, 80 Stat. 915–99, 16 U.S.C.A. 470.

(3) The Act of May 24, 1974 (Archeological and Historic Preservation), 88 Stat. 174, 16 U.S.C.A. 469–1.

(4) The Act of April 25, 1945 (Rio Grande Bank Protection Act), Pub. L. 40, 59 Stat. 89 (Appropriations Act).

d. Executive Orders. (1) Executive Order No. 11514, "Protection and Enhancement of Environmental Quality," March 7, 1970; 35 FR 4247.

(2) Executive Order No. 11593, "Protection and Enchancement of the

Cultural Environment," May 13, 1971; 36 FR 8921.

(3) Executive Order No. 11752, "Prevention, Control, and Abatement of Environmental Pollution at Federal Facilities," December 17, 1973; 38 FR 34793.

(4) Executive Order No. 11988, "Floodplain Management," May 24, 1977; 42 FR 26951.

(5) Executive Order No. 11990, "Protection of Wetlands," May 24, 1977; 42 FR 26961.

(6) Executive Order No. 11991, "Relating to Protection and Enhancement of Environmental Quality," May 24, 1977; 42 FR 26967.

(7) Executive Order No. 12114, "Environmental Effect Abroad of Major Federal Actions," January 4, 1979; 44 FR 1957.

e. Regulation. ACHP Regulations, "Protection of Historic and Cultural Properties," dated January 30, 1979; 44 6087.

200.5 Responsibilities Within the Section

a. *Chief, Planning and Reports Branch.* The Chief, Planning and Reports Branch, under the supervision of the Principal Engineer, Investigations and Planning Division, is the designee authorized to act as the Agency's "Preservation Officer" in compliance with section 110(c) of NHPA and is responsible for the preparation of reviews of individual undertakings, the identification of National Register and eligible properties, coordination with appropriate SHPOs, making determinations of the effect of proposed undertakings, and preparation of documented determinations of no adverse effect and of adverse effects. For each proposed undertaking, he will submit to the Principal Engineer an outline of the actions to be taken pertaining to historic and cultural properties, including analyses surveys, and the coordination and consultation with SHPO, other agencies, groups and individuals. When it is appropriate to obtain supplemental information in evaluating effects of a proposed undertaking, he will solicit information from other government agencies (federal, state and local) with jurisdiction by law or special expertise with respect to any historical or cultural effect involved, and interested universities, individuals, associations, or groups.

Chief, Planning and Reports Branch will draft and obtain Section approval of all notices to be published in the Federal Register except when another agency or agencies act as agent for the Section.

Persons interested in obtaining information or status reports on studies or evaluations pursuant to these procedures should address their requests to: Chief, Planning and Reports Branch, United States Section, International Boundary and Water Commission, 4110 Rio Bravo, El Paso, Texas 79902.

In the case of an agency or agencies acting as agent for the Section in the preparation of project feasibility studies and/or similar type studies, that agent will prepare evaluations and coordinate activities with the SHPO according to its established procedures, except that transmittals to the Department of State and the ACHP will be by the Commissioner, Head of the Agency (Section). The agent has the responsibility to confer with the Section through the Agency's responsible representative and to keep it fully informed.

b. *Principal Engineer, Investigations and Planning Division.* In addition to responsibilities under Item a., the Principal Engineer, Investigations and Planning Division, will assure review is made of studies and analyses to insure the professional and scientific integrity of discussion, analyses and conclusions in the historical and cultural documents, and that a technically sound approach has been used in the evaluations.

The Principal Engineer will also be responsible for consultation with the SHPO and the ACHP on mitigation measures, and the transmittal to agencies, associations and individuals of information pertaining to mitigation.

c. *Secretary.* The Secretary will be responsible for providing policy guidance on the international aspects of proposed undertakings, inputs to the historical and cultural documents pertaining to international considerations, including treaties and agreements, and review of draft historical and cultural documents for international considerations.

d. *Legal Adviser.* The Legal Adviser shall provide staff advice concerning interpretation of NHPA and other acts, executive orders, regulations, and all legal requirements pertaining to proposed undertakings.

When uncertainty exists within the Section as to the requirement in a specific case for action under NHPA or other acts, executive orders or regulations, the Legal Adviser will initiate consultations with the Office of Environment and Health (OES/ENH) of the Department of State, and follow through to a final determination. In every case where the Section determines from its evaluation that a Determination of No Adverse Effect will be make, the Legal Adviser shall so inform OES/ENH.

The Legal Adviser will be responsible for the publication of the necessary notices in the Federal Register.

200.6 Review of Individual Undertakings

a. *Responsibility of the Section.* As early as possible before the Section makes a final decision concerning an undertaking, and in any event prior to taking any action that would foreclose alternatives, the following steps will be taken to comply with requirements of Sections 106 and 110(a)(1) and (2) of NHPA and Section 2(b) of E.O. 11593:

Identifying historical and cultural resources, including any necessary surveys;

Initiating eligibility determinations;

Determining effects, if any, of the proposed undertaking on National Register or eligible properties;

Applying the criteria of adverse effect when the proposed undertaking has an effect on a property;

Identifying and evaluating alternatives to the proposed undertaking, including the no-action alternative;

Identifying mitigation measures;

Coordination as appropriate throughout the evaluation with the SHPO and the ACHP; and

Informing the public at appropriate times.

b. *Identifying Resources.* The objective of this step is to examine the area of the undertaking's potential environmental impact for the presence of historic, cultural, architectural, and archeological resources in order to determine whether such resources are included in or eligible for the National Register. The National Register shall be checked and contact made with the SHPO to ascertain if there are any proposed eligible properties in the area of the undertaking. Contacts may be made with professional archeological organizations and academic archeologists, historical societies, and landmark commissions, as applicable, to obtain information to identify potential resources. Consultations will be had with the State Archeologist (if applicable to the particular State) through the SHPO. A log will be maintained of all actions taken in this identification step for use in demonstrating that the Section has made a reasonable effort to identify National Register and eligible properties.

The examination of the area will vary with the type, location and size of the proposed undertaking, with the scope of

the surveys to be made considering the likelihood of finding eligible resources and with the kinds of resources potentially present.

Studies and surveys to provide basic information and to forecast changes under proposed conditions will be performed by professionally competent personnel using generally recognized and accepted scientific methods. The disciplines of the preparers shall be appropriate to the scope and issues identified in preliminary reviews of the undertaking. Studies may be performed by the staff, by consultants, including university personnel, and by federal, state or local agenices. Staff studies will be scheduled with the approval of the Principal Engineer, Investigation and Planning Division. The scope of the studies to be performed by consultants and agencies and the agencies or consultants to perform the studies, will be recommended to the Commissioner, by the Principal Engineer, Investigations and Planning Division. The Chief, Planning and Reports Branch will be the Section's representative in monitoring studies being performed for it, and be responsible for review of the draft reports of the studies.

As such studies, surveys and tests will provide information important to compliance with both the requirements of NHPA and the National Environmental Policy Act (NEPA) the scope of work to be done should be designed to provide the information required for compliance with both acts.

c. *Initiating National Register Eligibility Determinations.* The National Register Criteria (36 CFR 60.6) will be applied to those resources located by the Surveys which have either not been listed in nor previously have been determined to be eligible for listing in the National Register. The SHPO will be consulted on these determinations. If any property appears to be eligible or there is a question about eligibility for listing under one or more of the four criteria, a request will be made to the Secretary of the Interior for a formal determination.

d. *Determining Effects.* An effect is any alteration to the National Register quality of a property which may result from an undertaking or any of its related activities. Effects may be either beneficial or adverse, may be direct or indirect, may be concentrated or dispersed, caused or induced, and short- or long-term. In order for there to be an effect, the potential to change must relate to the characteristics of the property that qualify its inclusion in the National Register. The basis for the determination of the change in the characteristics should be described. A copy will be requested form the SHPO of the National Register form or the documentation submitted to support a determination of eligibility to provide information on the qualities of the property that make it eligible for inclusion in the National Register and, hence, to determine the effect of the undertaking.

(1) *No effect.* Basically a determination of no effect means that the proposed undertaking, or a preferred alternative, and related activities have no potential to alter the National Register qualities of the resources present within the area of the undertaking's potential environmental impact. There would also be no effect if a determination has been made that there are no National Register or eligible properties within the impact area of the undertaking.

(2) *Documentation.* A summary memorandum should be prepared fully describing the actions taken and the evaluations made which led to determination of no effect. The memorandum shall summarize the coordination with the SHPO and the information and comments from SHPO.

e. *Applying Criteria of Effect.* When any effect on a National Register or eligible property is determined to be a potential of the proposed undertaking the Criteria of Effect shall be applied to determine if the effect is adverse or beneficial. An effect will be considered to be adverse if it will cause:

(1) Destruction or alteration of all or part of a property;

(2) Isolation from or alteration of the property's surrounding environment;

(3) Introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting;

(4) Neglect of a property resulting in its deterioration or destruction.

(5) Transfer or sale of a property without adequate conditions or restrictions regarding preservation, maintenance or use.

f. *Determination of No Adverse Effect.* The Determination of No Adverse Effect shall be submitted to the Executive Director of the Council for review in accordance with § 800.6 of ACHP Regulations.

g. *Determination of Adverse Effect.* When a determination has been made that the effect on a property is adverse, or if the Executive Director of ACHP does not accept the Section's Determination of No Adverse Effect, the following actions will be taken by the Principal Engineer, Investigations and Planning Division:

(1) Prepare and submit a Preliminary Case Report requesting the comments of the Council in accordance with § 800.13(b) of ACHP Regulations.

(2) Notify the SHPO of the request, providing him a copy of the Preliminary Case Report.

(3) Proceed with the consultation process outlined in § 800.6(b) of ACHP Regulations.

h. *Consultation Process.* In the consultation process the Principal Engineer, Investigations and Planning Division, and the Chief, Planning and Reports Branch, meeting with the SHPO and the Executive Director, will consider feasible and prudent alternatives to the undertaking that could avoid, mitigate or minimize effects on a National Register or eligible property. The alternatives to be evaluated shall include the alternatives being considered in environmental evaluations being made for NEPA. If the consulting parties cannot agree on an alternative to avoid the adverse effects on a National Register or eligible property, they shall consult further to determine if there are alternatives that could satisfactorily mitigate the adverse effects. The purpose of mitigation is to avoid, reduce, or counter damages to archeological or historical sites in a systematic manner that results in the least losses, or minimizes the impact on the characteristics of historical structures. Total avoidance of adverse effects is to be considered.

If the consulting parties agree upon a feasible and prudent alternative to avoid or satisfactorily mitigate the adverse effects of the undertaking on the National Register or eligible property, a Memorandum of Agreement shall be executed by the Principal Engineer, the SHPO and the Executive Director in accordance with § 800.6(c) of ACHP Regulations acknowledging this determination and specifying any recording, salvage, or other measures to minimize the adverse effects that shall be taken before the undertaking proceeds.

i. *Failure to Agree.* Upon the failure of the consulting parties to agree upon the terms of a Memorandum of Agreement, or upon notice of such failure by any of the consulting parties to the Executive Director, the Executive Director shall notify the Chairman of the Council within fifteen (15) days and shall recommend whether or not the matter should be scheduled for consideration at a Council meeting. The Agency "preservation officer" and the SHPO shall be notified in writing of the Executive Director's recommendation. The Agency "preservation officer" shall provide such reports and information as

may be required to assist the Chairman in this determination.

In the event the Chairman or the Council determines to consider an undertaking at a meeting, the Section, through the Commissioner, will provide reports requested at least twenty-one (21) days before a Council or panel meeting.

Upon receipt of the comments of a Panel or of the Council, the Commissioner shall take these comments into account in reaching a decision in regard to the proposed undertaking. If the Commissioner determines not to follow the Panel or the Council's comments, a written notice shall be immediately provided to the Council.

When a final decision regarding the proposed undertaking is reached by the Commissioner, a written report shall be submitted to the Council describing the actions taken by the Section in response to the Council's comments; the actions taken by other parties pursuant to the actions of the Section; and the effect that such actions will have on the affected National Register or eligible property. Receipt of this report by the Chairman shall be evidence that the Section has satisfied its responsibilities for the proposed undertaking under the NHPA, the Executive Order and the ACHP Regulations.

200.7 Concurrent Action Under Other Laws, Regulations and Executive Orders

During inventory and evaluation studies of historic and cultural properties, the designated official will take all appropriate actions to assure that there will be concurrent consideration of the requirements established in other laws, regulations, and in Executive Orders, including but not limited to studies and actions under NEPA. This concurrent consideration will be documented and summarized in any documentation described hereinbefore.

200.8 Consultation With Agencies and Individuals

After preparing a draft description of the proposed undertaking, the SHPO, historical and archeological societies and individuals in the general area will be consulted to obtain their views, comments, and suggestions on the effects, if any of the proposed undertaking. The extent of these consultations will vary with the type and subject matter of the undertaking being considered, with the SHPO being consulted on most matters. Individuals and historical and archeological societies who have expressed an interest in specific areas or subjects will be contacted for their comments. Subsequent required documentation will list the agencies, societies and individuals consulted and summarize their views.

200.9 Preparing Documentation

Documentation necessary to comply with these procedures shall be written in plain language and make use of appropriate illustrations so that users, including the public, can readily understand its contents, meaning and applications, and the effects on National Register or eligible properties. The draft documentation shall be prepared minimizing the use of technical terms and shall be rewritten or edited to assure clarity. The edited draft shall be given a thorough review by qualified personnel to assure its accuracy. The documentation shall include only sufficient detail to understand the proposed undertaking, alternatives, and the consequences. Where possible, photographs which assist in understanding important topics will be used. Extraneous data and information should be omitted from the documentation and be included in the investigation's supporting information file or record.

200.10 Exceptions

The nature of negotiations and relations at the international level may make it necessary to depart in some instances from the procedures in the ACHP Regulations. Exceptions applicable to the Section are set forth below.

a. The documents which are written to comply with NHPA should not normally include any classified or administratively controlled material nor should they normally include statements with respect to positions other than the preferred position of the United States in any ensuring negotiation or discussion. Although such documents should, whenever possible, be unclassified and hence available to the public, there may be situations where such documents cannot adequately discuss effects without disclosure of classified information. In these instances the documents will be appropriately classified. Whenever possible, the classification should terminate on a specified date or upon the happening of a described event. Such documentation, so long as it is classified, will not be made available to the public. Consultation will be carried on with appropriate agencies on classified matters.

b. Every attempt will be made to comply with coordination and time requirements provided in ACHP Regulations. Where schedules of international conferences make this impossible, the Section will notify ACHP as soon as possible of the circumstances with the purpose of fulfilling the intent of NHPA insofar as possible.

c. From time to time there will arise good and valid reasons for a deviation from these procedures. The procedures are not intended to be a substitute for sound professional judgement. Accordingly, if and as problems arise which justify a deviation, the proposed deviation and supporting rationale shall be forwarded to the United States Commissioner, the head of the Agency.

d. Section 800.15 of ACHP Regulations encourages maximum public participation in the review process, and envisions use of public information meetings. Public meetings will be utilized by the Section only upon a determination by the United States Commissioner that the requirements of carrying on international relations, including the constraints of time and the posture of the United States in negotiations allow such meetings to be carried out without prejudice to the national interests.

200.11 Definition of Key Terms

The definitions contained within ACHP Regulations, Part 800, apply to these procedures.

200.12 Effective date

These procedures will become effective upon the date of their publication in final form in the Federal Register. (October 15, 1981).

Frank P. Fullerton,

Legal Adviser.

[FR Doc. 81-29631 Filed 10-14-81; 8:45 am]

BILLING CODE 4710-03-M

INTERSTATE COMMERCE COMMISSION

Appointment of Agents to Require Emergency Routings of Amtrak Passenger Trains; Delegation of Authority

Section 402(c) of the Rail Passenger Service Act of 1970 [45 U.S.C. 526(c)] requires the Commission to take emergency actions pertaining to the use of the National Railroad Passenger Corporation (Amtrak) of the tracks and facilities of other railroads.

Under certain conditions the necessity of immediate action may be such as to require determination and action by a single individual because of the time

INTERNATIONAL BOUNDARY AND WATER COMMISSION

22 CFR Part 1104

Protection of Archaeological Resources

AGENCY: United States Section, International Boundary and Water Commission.

ACTION: Final rule.

SUMMARY: The United States Section, International Boundary and Water Commission (IBWC), by this rule intends to implement the provisions of the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa–470ll), as amended. The purpose of the Act is to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data which were obtained before October 31, 1979.

EFFECTIVE DATE: This rule is effective on May 10, 1991.

ADDRESSES: United States Section, International Boundary and Water Commission, 4171 North Mesa, suite C–310, El Paso, Texas 79902–1422.

FOR FURTHER INFORMATION CONTACT: Mr. Douglas Echlin, U.S. Section Staff Environmentalist, (915) 534–6704.

SUPPLEMENTARY INFORMATION: Section 470 of the Archaeological Resources Protection Act of 1979 (15 U.S.C. 470aa, *et seq.*) requires each Federal agency to promulgate regulations for the protection of archaeological resources located on public lands under its control. The United States Forest Service, United States Department of Agriculture, developed a uniform agency regulation for that purpose, which is found at 36 CFR part 296.

The following final regulation is based upon the above-referenced uniform regulation, pursuant to the above-referenced Act. It applies to all public lands controlled by the United States Section, International Boundary and Water Commission, United States and Mexico. This agency controls various public lands, generally situated along the international boundary between the United States and Mexico, some of which contain known archaeological sites.

This final regulation expressly prohibits certain activities with regard to archaeological resources located on such public lands under the agency's control, and it establishes procedures for issuance of permits for other activities. It establishes procedures for imposition of civil penalties for violations, and provides for rewards for information leading to civil or criminal punishment of violators, in accordance with the underlying act. It also contains other rules pertaining to the agency's responsibilities for the protection of archaeological resources, including reporting requirements.

The proposed rule was published in the Federal Register (56 FR 389–395) on January 4, 1991. The comment period ended February 4, 1991, without comments received on the proposed rule.

List of Subjects in 22 CFR Part 1104

Protection of archaeological resources.

Title 22 CFR is amended by adding part 1104 as follows:

PART 1104—PROTECTION OF ARCHAEOLOGICAL RESOURCES

Sec.

Sec.
1104.11 Relationship to section 106 of the National Historic Preservation Act.
1104.12 Custody of archaeological resources.
1104.13 Determination of archaeological or commercial value and cost of restoration and repair.
1104.14 Assessment of civil penalties.
1104.15 Civil penalty amounts.
1104.16 Other penalties and rewards.
1104.17 Confidentiality of archaeological resource information.
1104.18 Report to the Secretary of the Interior.

Authority: Pub. L. 96-95, 93 Stat. 721 (16 U.S.C. 470aa-11) (Sec. 10(a).) Related Authority: Pub. L. 59-209, 34 Stat. 225 (16 U.S.C. 432, 433); Pub. L. 86-523, 74 Stat. 220, 221 (16 U.S.C. 469), as amended, 88 Stat. 174 (1974); Pub. L. 89-665, 80 Stat. 915 (16 U.S.C. 470a-t), as amended, 84 Stat. 204 (1970), 87 Stat. 139 (1973), 90 Stat. 1320 (1976), 92 Stat. 3467 (1978), 94 Stat. 2987 (1980); Pub. L. 95-341, 92 Stat. 469 (42 U.S.C. 1996).

§ 1104.1 Purpose.

(a) The regulations in this part implement provisions of the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-11) by establishing the definitions, standards, and procedures to be followed by the Commissioner in providing protection for archaeological resources, located on public lands through permits authorizing excavation and/or removal of archaeological resources, through civil penalties for unauthorized excavation and/or removal, through provisions for the preservation of archaeological resource collections and data, and through provisions for ensuring confidentiality of information about archaeological resources when disclosure would threaten the archaeological resources.

(b) The regulations in this part do not impose any new restrictions on activities permitted under other laws, authorities, and regulations relating to mining, mineral leasing, reclamation, and other multiple uses of the public lands.

§ 1104.2 Definitions.

As used for purposes of this part:

(a) *Archaeological resource* means any material remains of human life or activities which are at least 100 years of age, and which are of archaeological interest.

(1) *Of archaeological interest* means capable of providing scientific or humanistic understandings of past human behavior, cultural adaptation, and related topics through the application of scientific or scholarly techniques such as controlled observation, contextual measurement, controlled collection, analysis, interpretation and explanation.

(2) *Material remains* means physical evidence of human habitation, occupation, use, or activity, including the site, location, or context in which such evidence is situated.

(3) The following classes of material remains (and illustrative examples), if they are at least 100 years of age, are of archaeological interest and shall be considered archaeological resources unless determined otherwise pursuant to paragraph (a)(4) or (a)(5) of this section:

(i) Surface or subsurface structures, shelters, facilities, or features (including, but not limited to, domestic structures, storage structures, cooking structures, ceremonial structures, artificial mounds, earthworks, fortifications, canals, reservoirs, horticultural/agricultural gardens or fields, bedrock mortars or grinding surfaces, rock alignments, cairns, trails, borrow pits, cooking pits, refuse pits, burial pits or graves, hearths, kilns, post molds, wall trenches, middens);

(ii) Surface or subsurface artifact concentrations or scatters;

(iii) Whole or fragmentary tools, implements, containers, weapons and weapon projectiles, clothing, and ornaments (including, but not limited to, pottery and other ceramics, cordage, basketry and other weaving, bottles and other glassware, bone, ivory, shell, metal, wood, hide, feathers, pigments, and flaked, ground, or pecked stone);

(iv) By-products, waste products, or debris resulting from manufacture or use of human-made or natural materials;

(v) Organic waste (including but not limited to, vegetable and animal remains, coprolites);

(vi) Human remains (including, but not limited to, bone, teeth, mummified flesh, burials, cremations);

(vii) Rock carvings, rock paintings, intaglios and other works of artistic or symbolic representation;

(viii) Rockshelters and caves or portions thereof containing any of the above material remains;

(ix) All portions of shipwrecks (including but not limited to, armaments, apparel, tackle, cargo);

(x) Any portion or piece of any of the foregoing.

(4) The following material remains shall not be considered of archaeological interest, and shall not be considered to be archaeological resources for purposes of the Act and this part, unless found in a direct physical relationship with archaeological resources as defined in this section:

(i) Paleontological remains;

(ii) Coins, bullets, and unworked minerals and rocks.

(5) The Commissioner may determine that certain material remains, in specified areas under the Commissioner's jurisdiction, and under specified circumstances, are not or are no longer of archaeological interest and are not to be considered archaeological resources under this part. Any determination made pursuant to this subparagraph shall be documented. Such Determination shall in no way affect the Commissioner's obligations under other applicable laws or regulations.

(b) *Arrowhead* means any projectile point which appears to have been designed for use with an arrow.

(c) *Commissioner* means the head of the United States Section, International Boundary and Water Commission, United States and Mexico, and his delegate.

(d) *Public lands* means lands to which the United States of America holds fee title, and which are under the control of the U.S. Section, International Boundary and Water Commission, United States and Mexico.

(e) *Indian tribe* as defined in the Act means any Indian tribe, band, nation, or other organized group or community. In order to clarify this statutory definition for purposes of this part, *Indian tribe* means:

(1) Any tribal entity which is included in the annual list of recognized tribes published in the Federal Register by the Secretary of the Interior pursuant to 25 CFR part 54;

(2) Any other tribal entity acknowledged by the Secretary of the Interior pursuant to 25 CFR part 54 since the most recent publication of the annual list;

(f) *Person* means an individual, corporation, partnership, trust, institution, association, or any other private entity, or any officer, employee, agent, department, or instrumentality of the United States, or of any Indian tribe, or of any State or political subdivision thereof.

(g) *State* means any of the fifty states, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands.

(h) *Act* means the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-11.), as amended.

§ 1104.3 Prohibited acts.

(a) No person may excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands unless such activity is pursuant to a permit issued under

§ 1104.7 or exempted by § 1104.4(b) of this part.

(b) No person may sell, purchase, exchange, transport, or receive any archaeological resource, if such resource was excavated or removed in violation of:

(1) The prohibitions contained in paragraph (a) of this section; or

(2) Any provision, rule, regulation, ordinance, or permit in effect under any other provision of Federal law.

§ 1104.4 Permit requirements and exceptions.

(a) Any person proposing to excavate and/or remove archaeological resources from public lands, and to carry out activities associated with such excavation and/or removal, shall apply to the Commissioner for a permit for the proposed work, and shall not begin the proposed work until a permit has been issued. The Commissioner may issue a permit to any qualified person, subject to appropriate terms and conditions, provided that the person applying for a permit meets conditions in § 1104.7(a) of this part.

(b) Exceptions:

(1) No permit shall be required under this part for any person conducting activities on the public lands under other permits, leases, licenses, or entitlements for use, when those activities are exclusively for purposes other than the excavation and/or removal of archaeological resources, even though those activities might incidentally result in the disturbance of archaeological resources. General earth-moving excavation conducted under a permit or other authorization shall not be construed to mean excavation and/or removal as used in this part. This exception does not, however, affect the Commissioner's responsibility to comply with other authorities which protect archaeological resources prior to approving permits, leases, licenses, or entitlements for use; any excavation and/or removal of archaeological resources required for compliance with those authorities shall be conducted in accordance with the permit requirements of this part.

(2) No permit shall be required under this part for any person collecting for private purposes any rock, coin, bullet, or mineral which is not an archaeological resource as defined in this part, provided that such collecting does not result in disturbance of any archaeological resource.

(3) No permit shall be required under section 3 of the Act of June 8, 1906 (16 U.S.C. 432) for any archaeological work for which a permit is issued under this part.

(c) Persons carrying out official agency duties under the Commissioner's direction, associated with the management of archaeological resources, need not follow the permit application procedures of § 1104.5. However, the Commissioner shall insure that provisions of §§ 1104.7 and 1104.8 have been met by other documented means, and that any official duties which might result in harm to or destruction of any Indian tribal religious or cultural site, as determined by the Commissioner, have been the subject of consideration under § 1104.6.

(d) Upon the written request of the Governor of any State, on behalf of the State or its educational institutions, the Commissioner shall issue a permit, subject to the provisions of §§ 1104.4(b)(5), 1104.6, 1104.7(a) (3), (4), (5), (6), and (7), 1104.8, 1104.9, 1104.11, and 1104.12(a) to such Governor or to such designee as the Governor deems qualified to carry out the intent of the Act, for purposes of conducting archaeological research, excavating and/or removing archaeological resources, and safeguarding and preserving any materials and data collected in a university, museum, or other scientific or educational institution approved by the Commissioner.

(e) Under other statutory, regulatory, or administrative authorities governing the use of public lands, authorizations may be required for activities which do not require a permit under this part. Any person wishing to conduct on public lands any activities related to but believed to fall outside the scope of this part should consult with the Commissioner, for the purpose of determining whether any authorization is required, prior to beginning such activities.

§ 1104.5 Application for permits and information collection.

(a) Any person may apply to the Commissioner for a permit to excavate and/or remove archaeological resources from public lands and to carry out activities associated with such excavation and/or removal.

(b) Each application for a permit shall include:

(1) The nature and extent of the work proposed, including how and why it is proposed to be conducted, proposed time of performance, locational maps, and proposed outlet for public written dissemination of the results.

(2) The name and address of the individual(s) proposed to be responsible for conducting the work, institutional affiliation, if any, and evidence of education, training, and experience in accord with the minimal qualifications listed in § 1104.7(a).

(3) The name and address of the individual(s), if different from the individual(s) named in paragraph (b)(2) of this section, proposed to be responsible for carrying out the terms and conditions of the permit.

(4) Evidence of the applicant's ability to initiate, conduct, and complete the proposed work, including evidence of logistical support and laboratory facilities.

(5) Where the application is for the excavation and/or removal of archaeological resources on public lands, the names of the university, museum, or other scientific or educational institution in which the applicant proposes to store all collections, and copies of records, data, photographs, and other documents derived from the proposed work. Applicants shall submit written certification, signed by an authorized official of the institution, of willingness to assume curatorial responsibility for the collections, records, data, photographs and other documents and to safeguard and preserve these materials as property of the United States.

(c) The Commissioner may require additional information, pertinent to land management responsibilities, to be included in the application for permit and shall so inform the applicant.

(d) Paperwork Reduction Act. The information collection requirement contained in § 1104.5 of these regulations has been approved by the Office of Management and Budget under 44 U.S.C. 3501 *et seq.* and assigned clearance number 1024-0037. The purpose of the information collection is to meet statutory and administrative requirements in the public interest. The information will be used to assist the Commissioner in determining that applicants for permits are qualified, that the work proposed would further archaeological knowledge, that archaeological resources and associated records and data will be properly preserved, and that the permitted activity would not conflict with the management of the public lands involved. Response to the information requirement is necessary in order for an applicant to obtain a benefit.

§ 1104.6 Notification to Indian tribes of possible harm to, or destruction of, sites on public lands having religious or cultural importance.

(a) If the issuance of a permit under this part may result in harm to, or destruction of, any Indian tribal

religious or cultural site on public lands, as determined by the Commissioner, at least 30 days before issuing such a permit the Commissioner shall notify any Indian tribe which may consider the site as having religious or cultural importance. Such notice shall not be deemed a disclosure to the public for purposes of section 9 of the Act.

(1) Notice by the Commissioner to any Indian tribe shall be sent to the chief executive officer or other designated official of the tribe. Indian tribes are encouraged to designate a tribal official to be the focal point for any notification and discussion between the tribe and the Commissioner.

(2) The Commissioner may provide notice to any other Native American group that is known by the Commissioner to consider sites potentially affected as being of religious or cultural importance.

(3) Upon request during the 30-day period, the Commissioner may meet with official representatives of any Indian tribe or group to discuss their interests, including ways to avoid or mitigate potential harm or destruction such as excluding sites from the permit area. Any mitigation measures which are adopted shall be incorporated into the terms and conditions of the permit under § 1104.8.

(4) When the Commissioner determines that a permit applied for under this part must be issued immediately because of an imminent threat of loss or destruction of an archaeological resource, the Commissioner shall so notify the appropriate tribe.

(b)(1) In order to identify sites of religious or cultural importance, the Commissioner shall seek to identify all Indian tribes having aboriginal or historic ties to the lands under the Commissioner's jurisdiction and seek to determine, from the chief executive officer or other designated official of any such tribe, the location and nature of specific sites of religious or cultural importance so that such information may be on file for land management purposes. Information on site eligible for or included in the National Register of Historic Places may be withheld from public disclosure pursuant to section 304 of the Act of October 15, 1966, as amended (16 U.S.C. 470w-3).

(2) If the Commissioner becomes aware of a Native American group that is not an Indian tribe as defined in this part but has aboriginal or historic ties to public lands under the Commissioner's jurisdiction, the Commissioner may seek to communicate with official representatives of that group to obtain information on sites they may consider to be of religious or cultural importance.

(3) The Commissioner may enter into agreement with any Indian tribe or other Native American group for determining locations for which such tribe or group wishes to receive notice under this section.

§ 1104.7 Issuance of permits.

(a) The Commissioner may issue a permit, for a specified period of time appropriate to the work to be conducted, upon determining that:

(1) The applicant is appropriately qualified, as evidenced by training, education, and/or experience, and possesses demonstrable competence in archaeological theory and methods, and in collecting, handling, analyzing, evaluating, and reporting archaeological data, relative to the type and scope of the work proposed, and also meets the following minimum qualifications:

(i) A graduate degree in anthropology or archaeology, or equivalent training and experience;

(ii) The demonstrated ability to plan, equip, staff, organize, and supervise activity of the type and scope proposed;

(iii) The demonstrated ability to carry research to completion, as evidenced by timely completion of theses, research reports, or similar documents;

(iv) Completion of at least 16 months of professional experience and/or specialized training in archaeological field, laboratory, or library research, administration, or management, including at least 4 months experience and/or specialized training in the kind of activity the individual proposes to conduct under authority of a permit; and

(v) Applicants proposing to engage in historical archaeology should have had at least one year of experience in research concerning archaeological resources of the prehistoric period.

(2) The proposed work is to be undertaken for the purpose of furthering archaeological knowledge in the public interest, which may include but need not be limited to, scientific or scholarly research, and preservation of archaeological data;

(3) The proposed work, including time, scope, location, and purpose, is not inconsistent with any management plan or established policy, objectives, or requirements applicable to the management of the public lands concerned;

(4) Where the proposed work consists of archaeological survey and/or data recovery undertaken in accordance with other approved uses of the public lands, and the proposed work has been agreed to in writing by the Commissioner pursuant to section 106 of the National Historic Preservation Act (16 U.S.C. 470f), paragraphs (a)(2) and (a)(3) of this section shall be deemed satisfied by the prior approval;

(5) Evidence is submitted to the Commissioner that any university, museum, or other scientific or educational institution proposed in the application as the repository possesses adequate curatorial capability for safeguarding and preserving the archaeological resources and all associated records; and

(6) The applicant has certified that, not later than 90 days after the date the final report is submitted to the Commissioner, the following will be delivered to the appropriate official of the approved university, museum, or other scientific or educational institution, which shall be named in the permit:

(i) All artifacts, samples, collections, and copies of records, data, photographs, and other documents resulting from work conducted under the requested permit where the permit is for the excavation and/or removal of archaeological resources from public lands.

(b) When the area of the proposed work would cross jurisdictional boundaries, so that permit applications must be submitted to more than one Federal agency, the Commissioner shall coordinate the review and evaluation of applications and the issuance of permits.

§ 1104.8 Terms and conditions of permits.

(a) In all permits issued, the Commissioner shall specify:

(1) The nature and extent of work allowed and required under the permit, including the time, duration, scope, location, and purpose of the work;

(2) The name of the individual(s) responsible for conducting the work and, if different, the name of the individual(s) responsible for carrying out the terms and conditions of the permit;

(3) The name of any university, museum, or other scientific or educational institutions in which any collected materials and data shall be deposited; and

(4) Reporting requirements.

(b) The Commissioner may specify such terms and conditions as deemed necessary, consistent with this part, to protect public safety and other values and/or resources, to secure work areas, to safeguard other legitimate land uses, and to limit activities incidental to work authorized under a permit.

(c) Initiation of work or other activities under the authority of a permit

signifies the permittee's acceptance of the terms and conditions of the permit.

(d) The permittee shall not be released from requirements of a permit until all outstanding obligations have been satisifed, whether or not the term of the permit has expired.

(e) The permittee may request that the Commissioner extend or modify a permit.

(f) The permittee's performance under any permit issued for a period greater than 1 year shall be subject to review by the Commissioner, at least annually.

§ 1104.9 Suspension and revocation of permits.

(a) *Suspension or revocation for cause.* (1) The Commissioner may suspend a permit issued pursuant to this part upon determining that the permittee has failed to meet any of the terms and conditions of the permit or has violated any prohibition of the Act or § 1104.3. The Commissioner shall provide written notice to the permittee of the suspension, the cause thereof, and the requirements which must be met before the suspension will be removed.

(2) The Commissioner may revoke a permit upon assessment of a civil penalty under § 1104.14 upon the permittee's conviction under section 6 of the Act, or upon determining that the permittee has failed after notice under this section to correct the situation which led to suspension of the permit.

(b) *Suspension or revocation for management purposes.* The Commissioner may suspend or revoke a permit, without liability to the United States, its agents, or employees, when continuation of work under the permit would be in conflict with management requirements not in effect when the permit was issued. The Commissioner shall provide written notice to the permittee stating the nature of and basis for the suspension or revocation.

§ 1104.10 Appeals relating to permits.

Any affected person may appeal permit issuance, denial of permit issuance, suspension, revocation, and terms and conditions of a permit.

§ 1104.11 Relationship to section 106 of the National Historic Preservation Act.

Issuance of a permit in accordance with the Act and this part does not constitute an undertaking requiring compliance with section 106 of the Act of October 15, 1966 (16 U.S.C. 470f). However, the mere issuance of such a permit does not excuse the Commissioner from compliance with section 106 where otherwise required.

§ 1104.12 Custody of archaeological resources.

(a) Archaeological resources excavated or removed from the public lands remain the property of the United States.

(b) The Commissioner may provide for the exchange of archaeological resources among suitable universities, museums, or other scientific or educational institutions, when such resources have been excavated or removed from public lands under the authority of a permit issued by the Commissioner.

§ 1104.13 Determination of archaeological or commercial value and cost of restoration and repair.

(a) *Archaeological value.* For purposes of this part, the archaeological value of any archaeological resource involved in a violation of the prohibitions in § 1104.3 of this part or conditions of a permit issued pursuant to this part shall be the value of the information associated with the archaeological resource. This value shall be appraised in terms of the costs of the retrieval of the scientific information which would have been obtainable prior to the violation. These costs may include, but need not be limited to, the cost of preparing a research design, conducting field work, carrying out laboratory analysis, and preparing reports as would be necessary to realize the information potential.

(b) *Commercial value.* For purposes of this part, the commercial value of any archaeological resource involved in a violation of the prohibitions in § 1104.3 of this part or conditions of a permit issued pursuant to this part shall be its fair market value. Where the violation has resulted in damage to the archaeological resource, the fair market value should be determined using the condition of the archaeological resource prior to the violation, to the extent that its prior condition can be ascertained.

(c) *Cost of restoration and repair.* For purposes of this part, the cost of restoration and repair of archaeological resources damaged as a result of a violation of prohibitions or conditions pursuant to this part, shall be the sum of the costs already incurred for emergency restoration or repair work, plus those costs projected to be necessary to complete restoration and repair, which may include, but need not be limited to, the costs of the following:

(1) Reconstruction of the archaeological resource;

(2) Stabilization of the archaeological resource;

(3) Ground contour reconstruction and surface stabilization;

(4) Research necessary to carry out reconstruction or stabilization;

(5) Physical barriers or other protective devices, necessitated by the disturbance of the archaeological resource, to protect it from further disturbance;

(6) Examination and analysis of the archaeological resource including recording remaining archaeological information, where necessitated by disturbance, in order to salvage remaining values which cannot be otherwise conserved;

(7) Reinterment of human remains in accordance with religious custom and State, local, or tribal law, where appropriate, as determined by the Commissioner;

(8) Preparation of reports relating to any of the above activities.

§ 1104.14 Assessment of civil penalties.

(a) The Commissioner may assess a civil penalty against any person who has violated any prohibition contained in § 1104.3 or who has violated any term or condition included in a permit issued in accordance with the Act and this part.

(b) *Notice of violation.* The Commissioner shall serve a notice of violation upon any person believed to be subject to a civil penalty, either in person or by registered or certified mail (return receipt requested). The Commissioner shall include in the notice:

(1) A concise statement of the facts believed to show a violation;

(2) A specific reference to the provision(s) of this part or to a permit issued pursuant to this part allegedly violated;

(3) The amount of penalty proposed to be assessed, including any initial proposal to mitigate or remit where appropriate, or a statement that notice of a proposed penalty amount will be served after the damages associated with the alleged violation have been ascertained;

(4) Notification of the right to file a petition for relief pursuant to paragraph (d) of this section, or to await the Commissioner's notice of assessment, and to request a hearing in accordance with paragraph (g) of this section. The notice shall also inform the person of the right to seek judicial review of any final administrative decision assessing a civil penalty.

(c) The person served with a notice of violation shall have 45 calendar days from the date of its service (or the date of service of a proposed penalty amount, if later) in which to respond. During this time the person may:

(1) Seek informal discussions with the Commissioner;

(2) File a petition for relief in accordance with paragraph (d) of this section;

(3) Take no action and await the Commissioner's notice of assessment;

(4) Accept in writing or by payment the proposed penalty, or any mitigation or remission offered in the notice. Acceptance of the proposed penalty or mitigation or remission shall be deemed a waiver of the notice of assessment and of the right to request a hearing under paragraph (g) of this section.

(d) *Petition for relief.* The person served with a notice of violation may request that no penalty be assessed or that the amount be reduced, by filing a petition for relief with the Commissioner within 45 calendar days of the date of service of the notice of violation (or of a proposed penalty amount, if later). The petition shall be in writing and signed by the person served with the notice of violation. If the person is a corporation, the petition must be signed by an officer authorized to sign such documents. The petition shall set forth in full the legal or factual basis for the requested relief.

(e) *Assessment of penalty.* (1) The Commissioner shall assess a civil penalty upon expiration of the period for filing a petition for relief, upon completion of review of any petition filed, or upon completion of informal discussions, whichever is later.

(2) The Commissioner shall take into consideration all available information, including information provided pursuant to paragraphs (c) and (d) of this section or furnished upon further request by the Commissioner.

(3) If the facts warrant a conclusion that no violation has occurred, the Commissioner shall so notify the person served with a notice of violation, and no penalty shall be assessed.

(4) Where the facts warrant a conclusion that a violation has occurred, the Commissioner shall determine a penalty amount in accordance with § 1104.15.

(f) *Notice of assessment.* The Commissioner shall notify the person served with a notice of violation of the penalty amount assessed by serving a written notice of assessment, either in person or by registered or certified mail (return receipt requested). The Commissioner shall include in the notice of assessment:

(1) The facts and conclusions from which it was determined that a violation did occur;

(2) The basis in § 1104.15 for determining the penalty amount assessed and/or any offer to mitigate or remit the penalty; and

(3) Notification of the right to request a hearing, including the procedures to be followed, and to seek judicial review of any final administrative decision assessing a civil penalty.

(g) *Hearings.* (1) Except where the right to request a hearing is deemed to have been waived as provided in paragraph (c)(4) of this section, the person served with a notice of assessment may file a written request for a hearing with the adjudicatory body specified in the notice. The person shall enclose with the request for hearing a copy of the notice of assessment, and shall deliver the request as specified in the notice of assessment, personally or by registered or certified mail (return receipt requested).

(2) Failure to deliver a written request for a hearing within 45 days of the date of service of the notice of assessment shall be deemed a waiver of the right to a hearing.

(3) Any hearing conducted pursuant to this section shall be held in accordance with 5 U.S.C. 554. In any such hearing, the amount of civil penalty assessed shall be determined in accordance with this part, and shall not be limited by the amount assessed by the Commissioner under paragraph (f) of this section or any offer of mitigation or remission made by the Commissioner.

(h) *Final administrative decision.* (1) Where the person served with a notice of violation has accepted the penalty pursuant to paragraph (c)(4) of this section, the notice of violation shall constitute the final administrative decision;

(2) Where the person served with a notice of assessment has not filed a timely request for a hearing pursuant to paragraph (g)(1) of this section, the notice of assessment shall constitute the final administrative decision;

(3) Where the person served with a notice of assessment has filed a timely request for a hearing pursuant to paragraph (g)(1) of this section, the decision resulting from the hearing or any applicable administrative appeal therefrom shall constitute the final administrative decision.

(i) *Payment of penalty.* (1) The person assessed a civil penalty shall have 45 calendar days from the date of issuance of the final administrative decision in which to make full payment of the penalty assessed, unless a timely request for appeal has been filed with a United States District Court as provided in section 7(b)(1) of the Act.

(2) Upon failure to pay the penalty, the Commissioner may request the Attorney General to institute a civil action to collect the penalty in a United States District Court for any district in which the person assessed a civil penalty is found, resides, or transacts business. Where the Commissioner is not represented by the Attorney General, a civil action may be initiated directly by the Commissioner.

(j) *Other remedies not waived.* Assessment of a penalty under this section shall not be deemed a waiver of the right to pursue other available legal or administrative remedies.

§ 1104.15 Civil penalty amounts.

(a) *Maximum amount of penalty.* (1) Where the person being assessed a civil penalty has not committed any previous violation of any prohibition in § 1104.3 or of any term or condition included in a permit issued pursuant to this part, the maximum amount of the penalty shall be the full cost of restoration and repair of archaeological resources damaged plus the archaeological or commercial value of archaeological resources destroyed or not recovered.

(2) Where the person being assessed a civil penalty has committed any previous violation of any prohibition in § 1104.3 or of any term or condition included in a permit issued pursuant to this part, the maximum amount of the penalty shall be double the cost of restoration and repair plus double the archaeological or commercial value of archaeological resources destroyed or not recovered.

(3) Violations limited to the removal of arrowheads located on the surface of the ground shall not be subject to the penalties prescribed in this section.

(b) *Determination of penalty amount, mitigation, and remission.* The Commissioner may assess a penalty amount less than the maximum amount of penalty and may offer to mitigate or remit the penalty.

(1) Determination of the penalty amount and/or a proposal to mitigate or remit the penalty may be based upon any of the following factors:

(i) Agreement by the person being assessed a civil penalty to return to the Commissioner archaeological resources removed from public lands;

(ii) Agreement by the person being assessed a civil penalty to assist the Commissioner in activity to preserve, restore, or otherwise contribute to the protection and study of archaeological resources on public lands;

(iii) Agreement by the person being assessed a civil penalty to provide information which will assist in the detection, prevention, or prosecution of violations of the Act or this part;

(iv) Demonstration of hardship or inability to pay, provided that this factor shall only be considered when the

person being assessed a civil penalty has not been found to have previously violated the regulations in this part;

(v) Determination that the person being assessed a civil penalty did not willfully commit the violation;

(vi) Determination that the proposed penalty would constitute excessive punishment under the circumstances;

(vii) Determination of other mitigating circumstances appropriate to consideration in reaching a fair and expeditious assessment.

(2) When the penalty is for a violation which may have had an effect on a known Indian tribal religious or cultural site on public lands, the Commissioner should consult with and consider the interests of the affected tribe(s) prior to proposing to mitigate or remit the penalty.

§ 1104.16 Other penalties and rewards.

(a) Section 6 of the Act contains criminal prohibitions and provisions for criminal penalties. Section 6(b) of the Act provides that archaeological resources, vehicles, or equipment involved in a violation may be subject to forfeiture.

(b) Section 8(a) of the Act provides for rewards to be made to persons who furnish information which leads to conviction for a criminal violation or to assessment of a civil penalty. The Commissioner may certify to the Secretary of the Treasury that a person is eligible to receive payment. Officers and employees of Federal, State, or local government who furnish information or render service in the performance of their official duties, and persons who have provided information under § 1104.15(b)(1)(iii) shall not be certified eligible to receive payment of rewards.

§ 1104.17 Confidentiality of archaeological resource information.

(a) The Commissioner shall not make available to the public, under subchapter II of chapter 5 of title 5 of the United States Code or any other provision of law, information concerning the nature and location of any archaeological resource, with the following exceptions:

(1) The Commissioner may make information available, provided that the disclosure will further the purposes of the Act and this part, or the Act of June 27, 1960, as amended (16 U.S.C. 469-469c), without risking harm to the archaeological resource or to the site in which it is located.

(2) The Commissioner shall make information available, when the Governor of any State has submitted to the Commissioner a written request for information, concerning the archaeological resources within the requesting Governor's State, provided that the request includes:

(i) The specific archaeological resource or area about which information is sought;

(ii) The purpose for which the information is sought; and

(iii) The Governor's written commitment to adequately protect the confidentiality of the information.

§ 1104.18 Report to the Secretary of the Interior.

The Commissioner, when requested by the Secretary of the Interior, shall submit such information as is necessary to enable the Secretary to comply with section 13 of the Act.

Dated: April 15, 1991.

Conrad G. Keyes, Jr.,

Principal Engineer, Planning.

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BACKGROUND FOR NEPA REVIEWERS:

GRAZING ON FEDERAL LANDS

February 1994

U.S. Environmental Protection Agency
Office of Federal Activities
401 M Street SW
Washington, DC 20460

DISCLAIMER AND ACKNOWLEDGEMENTS

The mention of company or product names is not to be considered an endorsement by the U.S. Government or by the U.S. Environmental Protection Agency (EPA). This document was prepared by Science Applications International Corporation (SAIC) in partial fulfillment of EPA Contract 68-C8-0066, Work Assignment C-4-71.

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The primary purpose of the Guidance for NEPA Reviewers - Grazing On Federal Lands is to assist U.S. Environmental Protection Agency (EPA) staff in providing scoping comments and comments on National Environmental Policy Act (NEPA) documents associated with grazing on Federal lands, such as grazing Environmental Impact Statements (EISs) and Resource Management Plans. Pursuant to NEPA and Section 309 of the Clean Air Act (CAA), EPA reviews and comments on proposed major Federal agency actions significantly affecting the quality of the human environment. This document has been developed to assist the EPA reviewer in considering issues related to grazing in the development of NEPA/Section 309 comments.

This guidance is not intended to be all inclusive; rather, the document focuses on EPA's major concerns with surface and ground water, soils, and ecosystems as related to livestock overgrazing and provides technical background material explaining these issues. It does not restate traditional NEPA concerns about impacts on archaeological resources, economics, and so on, but rather addresses the technical environmental concerns related to overgrazing.

EPA realizes that rangeland management is often complex, and recognizes that each livestock grazing operation and each EIS is unique. Thus, reviewers will have to conduct additional analyses to fully understand projected impacts. The reviewer should not rely solely on this document as a definitive list of potential impacts or areas that should be covered by NEPA documentation. This document is more of a guide or introduction to issues associated with livestock overgrazing on Federal lands and does not replace early involvement in the NEPA process, defining objectives, developing alternatives, and determining effects based on knowledge of the issues and characteristics of specific areas.

Overview of Grazing Practices and Associated Impacts

Grazing on the open ranges of the Great Basin began in the mid 1800's and became a major industry in the western U.S. as early as the 1870's, with peak numbers of cattle and sheep being grazed by 1890. By 1900, many unrestricted lands were overstocked and significantly, sometimes even permanently, impacted. Impacts included trampled and compacted soils, lowered water tables in some areas, and replacement of quality vegetation with less desirable, more shallow-rooted species. As early as 1889, writers acknowledged that destructive grazing appeared responsible for denuding slopes of vegetation, increased runoff, erosion, and severe flooding in some western States (Gifford, NRC 1984).

In 1934, the system of free access to Federal lands ended with the passage of the Taylor Grazing Act and the establishment of the Division of Grazing, later to become the Bureau of Land Management, within the Department of the Interior. Although the Act was intended to rehabilitate rangelands, livestock numbers were not controlled and little rehabilitation occurred. This act was the first of many statutes directing the use of public lands for grazing. These statutes include the Multiple Use - Sustained Yield Act of 1960, the Forest and Rangelands Renewable Resources Planning Act of 1974, the National Forest Management Act of 1976, the Federal Land Policy and Management Act of 1976, and the Public Rangelands Improvement Act of 1978. National grasslands were bought under Forest Service management through the Bankhead-Jones Farm Tenant Act. The Fish and Wildlife Service oversees grazing on National Wildlife Refuges and in National Parks.

Both the Bureau of Land Management (BLM) and the Forest Service, acting as caretakers for lands under their jurisdiction, use an allotment system to control livestock grazing on Federal lands. Ten year renewable permits are issued for each allotment with the total fee based on the number of livestock and length of stay, calculated in terms of Head Months (HMs), or Animal Unit Months (AUMs). The Forest Service defines a Head Month as one month's use and occupancy of the range by one animal (one weaned or adult cow with or without calf, bull steer, heifer, horse, burro, mule or 5 sheep or goats). An AUM is defined as the amount of forage needed to support a 1000 pound cow and calf or 5 sheep for one month and consists of between 800 to 1000 pounds of forage. Currently, Federal grazing allotments cover approximately 30 percent of the total 853 million acres grazed nationwide, with most grazing on Federal Lands occurring in the western U.S.

Both the Forest Service and the BLM have separate requirements that apply to grazing. As part of their management responsibilities, both the Bureau of Land Management and the Forest Service develop area-specific management plans called Resource Management Plans or Forest Plans. These plans provide a comprehensive framework for managing and allocating uses of public lands and resources, such as fluid and locatable minerals, riparian resources, wildlife and fish habitat, and livestock grazing. Based on the management plans, the Bureau of Land Management and the Forest Service develop allotment management plans and issue grazing permits for those allotments, which present decisions on grazing at a more detailed level. More detail on these activities is provided in Forest Service and BLM Handbooks.

Each of these activities or decisions, ranging from developing a plan to issuing a lease or taking a specific range management action, may be subject to NEPA review. Typically the Bureau of Land Management or the Forest Service prepares an EIS for each Resource Management Plan or Forest Plan. For more detailed or allotment-specific activities, additional NEPA documentation is usually tiered (based on the existing Resource Management or Forest Plan EISs). Activities that are not addressed in existing NEPA documentation may require additional NEPA review, such as an Environmental Assessment (EA) and/or an EIS, if the proposed action "significantly affects the quality of the human environment." Under the CAA Section 309, EPA has the authority to review and comment on each EIS.

Despite attempts to control environmental impacts caused by overgrazing and recent improvement in rangelands according to some sources (Platts, 1990), many problems still exist in both upland and riparian areas. Issues characterizing upland areas, especially in arid environments, include the sensitivity of desert ecosystems and the extreme difficulty in reclaiming upland areas after impacts have occurred. Riparian areas are often of more concern to the public and Federal land managers for several reasons. Cattle tend to congregate in riparian areas, using them for shade and drinking water and spending a disproportionate amount of time foraging and trampling these areas rather than upland areas, posing a potentially higher level of damage. Also, riparian areas support a higher diversity of terrestrial and aquatic organisms than upland areas and provide critical habitat for both terrestrial and aquatic organisms. Erosion caused by overgrazing can reduce a streambank's water retention capabilities, lowering the surrounding water table and often changing the character of the stream from perennial to intermittent (GAO, June 1988a). Livestock and wildlife overgrazing can cause direct impacts on upland and riparian areas, such as loss of vegetation and soil compaction that lead to indirect impacts on the hydrology of an area and the ecosystems, both terrestrial and aquatic, that rely on it.

The remainder of this document describes important issues associated with the grazing of livestock on Federal Lands. Specifically, the document is arranged in the following sections:

- technical description of grazing;
- potential environmental impacts, both direct and indirect, associated with grazing;
- possible prevention/mitigation measures;
- types of questions that can be posed as part of the Agency's response to review of NEPA documentation; and
- explanation of the statutory and regulatory framework under which grazing on Federal lands occurs.

As discussed above, this document does not substitute for indepth knowledge of rangeland management concepts and site-specific issues.

TECHNICAL DESCRIPTION OF GRAZING ON FEDERAL LANDS

National and Regional Perspectives

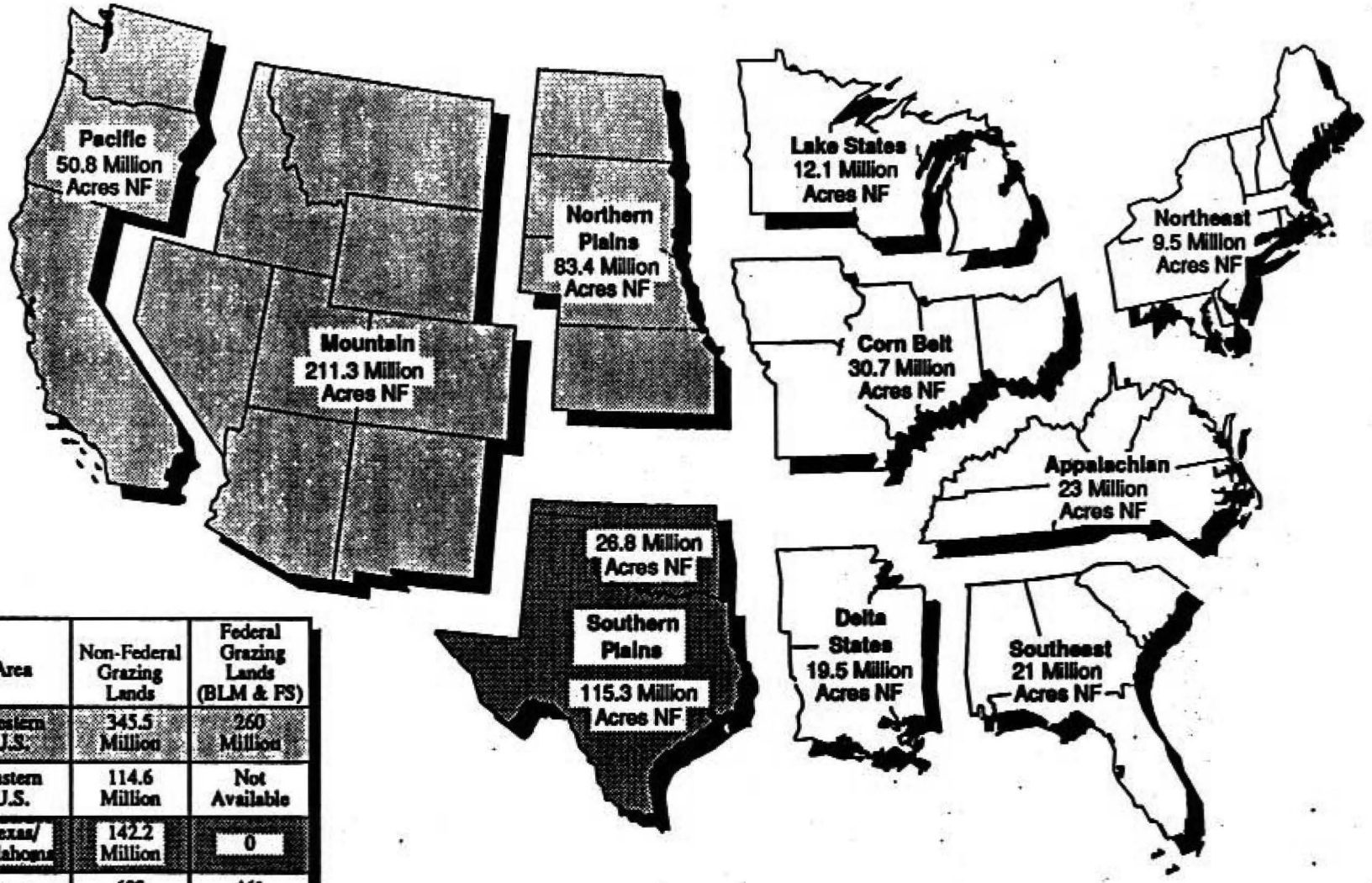
Over 95 percent of livestock grazing on Federal lands occurs in the western U.S. The BLM and the Forest Service manage a total of 461 million acres of public land. Of this, approximately 367 million acres are in the western U.S.[1] with grazing allotments covering about 70 percent of this area. Specifically, the BLM has approximately 165 million acres with approximately 22,000 separate grazing allotments (BLM, 1990). Of the Forest Service's 191 million acres, 104 million acres are allotted to grazing (95 percent of these allotments are located in the west) with approximately 50 million acres classified as suitable for grazing (e.g., slopes are not too steep) (GAO, May 1991). This compares with private grazing lands of approximately 603 million acres nationwide with 372 million acres of private grazing acreage in the western states[1]. Figure 1 shows both Federal and non-Federal grazing lands in the U.S. Texas has the most non-federal grazing lands with approximately 115 million acres; however, there are no BLM or Forest Service lands in Texas (Department of Agriculture, 1982).

BLM and the Forest Service manage public lands through allotments that typically have ten year permits and sometimes yearly or seasonal licenses (which are more specific than 10 year permits). Permits specify the number and type of livestock, an authorized season of use, and the AUMs (a measure of the amount of grazing available). The acreage required to provide one AUM varies from region to region, ranging from a low of 6.1 acres in Montana to a high of 21.8 acres in Nevada. The overall average AUM is 13.7 acres. The average grazing allotment is approximately 8,500 acres (13 square miles) with allotments as small as 40 acres and as great as 1 million acres (GAO, June 1988b). In many cases, allotments are interspersed with private lands, creating the checkerboard pattern seen on most Federal lands maps. This checkerboard pattern hampers effective control by Federal land managers, and requires constant cooperation between land mangers and ranchers.

According to 1990 statistics, BLM had about 165 million acres of grazing allotments, with almost 20,000 operators and 4 million head of livestock using 13.5 million AUMs (BLM, 1990). In 1986, the Forest Service had about 102 million acres in grazing allotments (in 36 states) with 13,805 permits using a total of 8.6 million AUMs. GAO estimates that 25 to 30 percent of the Forest Service allotments are in a declining condition and/or are overstocked.

As described above, Federal livestock grazing allotments cover about 30 percent of the total area grazed in the U.S. (not including Alaska); however, Federal lands produced 13 percent of the total AUMs nationally. According to 1988 estimates, less than 5 percent of the nations beef cattle and 30 percent of the sheep graze on Federal lands. In western states, one third of the beef cattle is grazed at least part of the year on Federal Lands. About 2.2 million cattle and 2.1 million sheep graze on BLM allotments each year. In many cases, large (greater than 500 head of cattle) livestock operators use the public rangelands (15 percent of the operators use 58 percent of the allotments) (GAO, June 1988a and b).

[1] Includes the states of Arizona, California, Colorado, Idaho, Kansas, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Oklahoma, Utah, Washington and Wyoming.



Area	Non-Federal Grazing Lands	Federal Grazing Lands (BLM & FS)
Western U.S.	345.5 Million	260 Million
Eastern U.S.	114.6 Million	Not Available
Texas/ Oklahoma	142.2 Million	0
Total	603 Million	461 Million

*NF - Non-Federal lands, acreage based on 1982 figures.

Figure 1. Federal and Non-Federal grazing land in the United States, by Farm Production Regions.
Source: U.S. Grazing Lands: 1950-1982, Department of Agriculture.

Grazing Fundamentals

Livestock grazing on Federal lands usually involves either cattle or sheep operations. Typically, cattle are grazed in one of two types of operations, "cow/calf" or "steer." In cow/calf operations, cows and their calves are grazed until the calves are weaned to produce a calf crop. Each year, the calf crop is sold between the ages of 6 and 12 months, to feed lot operations or to other ranchers as breeding stock. A limited number of calves may be retained by the rancher to become breeding stock. Unlike cow/calf operations, steer operations are seasonal and use forage for 3 to 9 months to fatten cattle that are then sold to feedlots. Unlike cow/calf and steer operations, sheep are typically herded through allotments and graze on a seasonal basis to take advantage of more succulent and palatable forage. As the prime forage is consumed, the sheep are moved to new areas. Different species of livestock graze in different ways. Herded sheep usually use slopes and upland areas, while unherded cattle prefer lesser slopes or bottom lands. Of the forage consumed by livestock, cattle consume the most, estimated by the Bureau of Land Management and Forest Service as 87 to 89 percent of allotted Federal land forage (GAO, June 1988b). Wildlife grazing, in addition to livestock grazing, will also impact forage allotments.

When and where to graze livestock in order to optimize profits and provide ecologically-desirable results depends on many factors. Availability of forage such as grasses, forbs, or even brush is one of the prime considerations, as is easy access to water. Grazing animals prefer leaf tissue over stem tissue, and green plant material over dry material (Wallace, 1984). As would be suggested by these general rules, in some areas, streamside grazing by cattle often is more than twice the overall pasture use, with reports of riparian areas comprising less than 2 percent of the total allotments providing over 80 percent of the forage (Platts, 1986). Allotment management plans, however, can moderate this phenomenon.

Although prediction of forage growth and proper grazing may be scientifically modelled, sustainability of forage production from one year to the next depends on how heavily the area is grazed, as well as other site specific factors and variables such as annual precipitation. Most plants can withstand some loss of foliage and maintain their competitive position in the ecosystem and, in some instances, moderate grazing may increase the production of plant material. However, the approach to estimating the proper grazing intensity is complex, weighing site specific factors such as plant physiology, soils, micrometeorology, plant demography, and competitive ecology.

In monitoring grazing areas, plant vigor and species composition and diversity are major elements in determining if the area is too heavily grazed. Plant vigor reflects the capacity to rapidly produce both vegetative and reproductive shoots, the storage of nutrient reserves and effective root system volume, especially depth, when soil moisture and temperature are conducive to growth. Specific measures of vigor include numbers of tillers produced following defoliation, total plant height, leaf length, seed production, soluble carbohydrate concentrations, and root growth (Caldwell, 1984). In some cases, empirical measures are used to evaluate plant vigor. These include the ability to overwinter, to endure subsequent drought following defoliation, or to produce seed in a year following defoliation. However, less than positive results of empirical evaluations may not be known until the impact has occurred.

In general, livestock grazing can be characterized in terms of intensity, duration and timing. In a simplistic manner, grazing intensity is indicative of the amount of forage in a pasture that is grazed. Grazing intensity is measured by number of animals per unit month and ranges from light to heavy; light grazing is considered as use of 20 to 40 percent of the available forage, and moderate grazing is

estimated as use of between 40 and 60 percent of available forage. The term moderate grazing also indicates that stocking rates are between those in a lightly grazed pasture and those in a heavily grazed pasture. Heavy grazing, 60 to 80 percent of available forage, is still practiced, and is considered a likely cause of poor conditions of riparian and other areas. Heavy grazing may also be defined as the amount of forage consumed in a pasture in excess of its sustainable capability. In assessing the impacts, however, much more is required than just the level of forage use. No grazing strategy is implemented the same on every allotment. Rangeland management requires the integration of complex site-specific factors, only a few of which are described here.

The timing for a first release of livestock into an area is an important factor in grazing management, sustaining plant growth from season to season, and in trapping of sediment to rebuild riparian areas. Early grazing begins when the cool season plant growth has peaked and warm season plants are beginning their growth. Early grazing ends with the flowering of key species. Late grazing is conducted only after seed ripe time when the period of maximum warm season plant growth is over and seeds have been produced; the seeds then may be trampled into the ground by livestock. Some growth of cool season plants may occur if moisture and soil temperatures allow. In order to maintain seasonal grazing, livestock are often rotated from pasture to pasture, utilizing different pastures at different stages of the growing season. Though rotation of livestock has typically been associated with heavy stocking for short durations, it has also been used for short or long periods and with light stocking.

Using these concepts, grazing systems have been developed to manage livestock. Grazing systems are plans that differ with respect to periods of grazing, intensity of grazing, season, and stage of growth of vegetation. Grazing systems are useful in that they may increase productivity of the land and, ultimately, of livestock, by controlling grazing by both wildlife and livestock. Certain specific systems have proven to be especially effective in riparian areas that are more susceptible to degradation from overgrazing. Examples of various grazing systems are provided below for descriptive purposes. Actual design and implementation of a grazing system requires the collection of site-specific data and the analysis and integration of complex site-specific variables by personnel trained in the field.

In addition, no grazing system is implemented the same on every allotment. Allotments are unique, and management can only be designed through a comprehensive, integrated approach. Management strategies are only as good as the permittee responsible for implementing the system. The best possible system will fail without the commitment from the permittee to make it work. It should not be assumed that a system will work in every situation. For example, while rotational grazing using sheep is generally a good system for riparian protection, the system may not work if the herder concentrates the sheep in streamside areas. Examples of grazing strategies are described below (Platts, 1986, 1990, and 1991).

Continuous Season-Long. Under this grazing scenario, livestock have unrestricted access to a specified range area for an entire vegetation growing season. Advantages are that season-long continuous grazing permits maximum forage selectivity, while minimizing disturbances to livestock by gathering, moving, and change in quality of vegetation (Platts, 1990). Drawbacks may be that livestock overgraze certain vegetation or areas before others. In addition, livestock will generally obtain much of their diet along riparian areas, typically minor portions of grazing allotments (Platts, 1986).

A 1977 study by Marcuson found that average channel width in a riparian area to be much wider after season long grazing at 0.11 ha/AUM than in a comparable ungrazed area. This study also found that heavy grazing and trampling by cattle left only 224 meters of undercut bank per kilometer in the grazed area versus 686 meters of undercut bank per kilometer in the ungrazed area. As a result of these erosional impacts to riparian areas under this grazing scenario, Platts does not consider this strategy to be useful in those areas, as fishery productivity would be seriously impacted.

Short Duration - High Intensity. Short duration, high intensity grazing generally describes high stocking, high intensity use in a designated area, over a short period of time. Livestock are placed in an area for a period of one day to several weeks before being moved to the next area. This type of strategy requires numerous pastures in order to ensure that a grazed section is unused for a significant amount of time to permit regrowth. The layout of pastures is sometimes subdivided to resemble a "wagon-wheel." This method requires almost daily checks on vegetative conditions to prevent overuse. In general, this method is out-dated and is infrequently used.

Three Herd - Four Pasture. Also referred to as the Merrill Pasture System, this strategy allows each pasture a period of nonuse within one four year cycle. Useful in upland areas, the Merrill Pasture System requires less animal movement than other heavy use strategies, and has succeeded in generating higher plant productivity in conditions with sufficient precipitation. However, one four-month period of nonuse over a four year period is not sufficient to rehabilitate a heavily impacted riparian area.

Seasonal Suitability. This strategy requires substantial fencing and frequent movement of animals from pasture to pasture, providing heavily used areas with periods of nonuse for regeneration, during selected periods of the grazing season. Depending on the extent of use prior to periods of nonuse, riparian areas may not be able to regenerate sufficiently before livestock are re-introduced to the area. In addition, there is seasonal variation in streambank stability, with greater potential for erosion during the dryer hot season.

Holistic Method. This grazing strategy may be less straight-forward than others, requiring training and management skills to enable heavy stocking and frequent movement dependant upon the growth cycle of plants and other environmental factors. This method also utilizes livestock as a soil churning mechanism to break up the soils, and increase soil porosity (its effectiveness is under debate). While upland areas may benefit from this type of management, this grazing method may erode streambanks in riparian areas, impacting streamside vegetation and overall riparian habitats.

Deferred. Deferred grazing strategy defers grazing in one or more pastures to permit desired growth or regrowth or to produce ripe seeds prior to being grazed. The period of deferment may continue for several years to allow vegetation to reestablish itself. This grazing strategy requires a substantial amount of fencing and cattle movement, though the periods of rest offer opportunity for regrowth of preferred grazing vegetation. Deferred rotation in a riparian area may be a useful grazing strategy in a riparian area if overstocking is prevented in order to avoid streambank shear and erosion.

Deferred Rotation. The deferred rotation strategy delays grazing of key species until seeds have matured by systematically rotating livestock among a number of pastures. If one pasture is grazed early one year, pasture use sequence would change the following year so that a different pasture was grazed early. This method requires a fair amount of fencing, however, vegetation is able to store carbohydrates and set seed every other year. The period of nonuse will vary throughout the each year, allowing areas of nonuse during critical periods to allow plant cover to increase.

Stuttered Deferred Rotation. Similar to the deferred rotation strategy, one pasture is deferred for part of the plant growth period. The deferment is passed on to a different pasture but in the stuttered method grazing use occurs on one pasture early for the first two years and another late the following two years, whereas deferred rotation changes every year. A great deal of fencing, and movement of livestock is required under this grazing scenario. However, as with the use of Deferred Rotation, brushy species are given an opportunity for regrowth.

Rest-Rotation. This grazing strategy involves rotating livestock from one range area to another in order to prevent overgrazing. Though this method may be costly since it may require fencing to carve out range areas within an allotment, it allows grazed rangeland to rehabilitate while cattle are occupying another portion of an allotment. This strategy has shown measurable success in some habitats.

The rest rotation strategy is a multi-pasture design strategy that provides at least one year of rest for a grazed pasture. This strategy is frequently combined with deferred, early, and late grazing techniques so that pastures are rested until seed ripe time, and rested for seedling establishment. Depending upon vegetation types and soil moisture content and temperature, three or more pastures are needed for rest rotation to be successful.

Double Rest-Rotation. Under this strategy, an area or pasture with the highest riparian and stream values would receive twice the amount of rest compared to the amount of rest allocated under the normal rest-rotation grazing cycle. In a three pasture system, the most valuable riparian-stream area would receive 2 years rest. A Forest Service study of a double-rest-rotation system, graze early then rest 2 years, then graze late and rest 2 years, showed no adverse riparian-stream impacts.

Rest-Rotation with Seasonal Preference. This strategy is most often applied to sheep since this method requires frequent movement of the livestock in response to signs of range, riverine or riparian habitat deterioration. The strategy encourages use of areas during periods of least impact to vegetation, allowing plants to be grazed at particular times to allow rest to recover from past grazing use.

Riparian Pasture. This grazing strategy places the riverine-riparian system within a controlled unit, to permit grazing only in those areas of the stream that can provide vegetation without being negatively impacted. Additional fencing is required under this scenario to prepare riparian pastures that encourage utilization of both riparian and upland areas. Overuse of upland areas of the pastures is also a concern in the event of increased sediment, or overland flows impacting the stream. The advantage of individual pastures is the ability to encourage distribution evenly within each pasture.

Seasonal Riparian Preference. As with the Riparian pasture method, use of this strategy encourages grazing of plants and streambanks during periods when the vegetation is less vulnerable to sustaining damaging impacts. Fencing and frequent animal movement are also necessary in order for this strategy to be successful, and grazing within each pasture must happen over a narrow period of time.

Winter. A form of seasonal grazing, winter grazing takes place when range vegetation is dormant and streambanks frozen. Impacts to riparian areas may diminish under these conditions, since streambanks tend to be more capable of withstanding the impacts of hooves while frozen. In riparian areas, winter grazing in areas of low temperatures but little snow can be beneficial to the extent that streambanks are sturdier, and vegetation dormant.

Holding. The holding strategy is a short to long term method of containing livestock in a specific area of land prior to moving them. This strategy permits animals freedom to move within a designated area. These holding areas are useful not only to allow other pastures to be prepared for grazing, but can also be used as disease treatment facilities, and for breeding purposes. Pros and cons associated with this grazing strategy are similar to those under the season long continuous strategy, such as preferred plants and riparian areas receiving excessive use (Platts, 1990).

Corridor fencing. Stream corridor fencing in riparian areas prevents overuse of streamside vegetation, and assists in the rehabilitation of denuded portions of a riparian zone. This strategy usually requires extensive fencing and involves high maintenance costs.

Rest. Certain areas may be rested until vegetation and/or riparian habitats are permitted to re-establish themselves and regrow.

Rangeland Management

Modifications to rangelands can be used to mitigate impacts of livestock and wildlife grazing and are discussed in a later section on mitigation. While modifications to rangeland can enhance grazing opportunities, modifications may also result in adverse effects on water quality, as well as aquatic and terrestrial ecosystems, if not properly planned and managed. Platts (1991) alluded to the variety of activities that could occur as part of rangeland management, including the fertilization of lands; irrigation and drainage of wetlands; brush, forb, and pest control; debris disposal; mechanical treatment of the soil; seeding, prescribed burning; water supply development; fencing; and timber thinning. Depending on the frequency, extent and appropriate implementation of these range improvement practices, both positive and negative effects can occur. Potential negative impacts include erosion and sedimentation, hydrologic modification, chemical contamination (pesticide and fertilizer), and unfavorable ecosystem alteration. However, if rangeland improvements are tied to the attainment of specific resource objectives, then such improvements may reduce the severity of grazing impacts, thus the implementation of sound grazing practices.

POTENTIAL SIGNIFICANT ENVIRONMENTAL IMPACTS

Both livestock and wildlife overgrazing may cause direct impacts resulting in physical changes to the rangeland, such as the removal of protective plant cover and damage from hoof action and trampling to ground surfaces. These direct impacts may contribute to a host of indirect impacts such as erosion and stream channel modification. Both direct and indirect physical impacts often result in changes to terrestrial and aquatic ecosystems. These changes to the rangeland from overgrazing occur in both upland and riparian areas. Impacts in both environs can affect stream water quality, although activities in the riparian zone often cause more immediate and severe impacts. While it is difficult to make generalizations concerning the effects that livestock and wildlife grazing practices have on rangeland due to the geographic variability of vegetation, soils, climate, and topography, the majority of the research reviewed for this document points out some common trends. To fully assess the applicability of these trends, a knowledge of the site-specific conditions is important. Even the grazing species is important; cattle and sheep have different impacts on streambanks. The stream and its watershed function as a unit and therefore, management is most effective on a basin-wide approach (Platts, 1986). Because much Federal land is intermingled with private land in a checkerboard pattern, it is important to plan for the total ecosystem, considering grazing activities on adjacent and nearby private land, as well as the activities on Federal land. For example, overgrazing on private land upstream of public land may cause impacts to the public land. Although the land manager's administrative responsibility does not apply on private land, recognizing impacts on a watershed basis and integrating these into grazing management strategies is important.

One of the more significant hydrologic and water quality effects associated with overgrazing results from impacts on soil from livestock hoof action and trampling. For example, hoof action and trampling can disrupt natural soil conditions (e.g., soil structure, bulk density, and permeability) and cause soil compaction, which leads to increased runoff and associated soil erosion and loss. The removal of plant cover by the grazing animals exacerbates these problems by leaving even more soil bared to disruption and compaction. Also, the removal of plant cover by grazing animals frequently changes the overall density and composition of the native vegetation. As grazing-related activities create conditions that increase runoff and soil erosion from the rangeland, stream water quality is primarily affected by the increased amount of sedimentation. Also, hydrologic changes to the stream channel due to increased water velocity and flow can occur. The reduction in plant cover can indirectly affect water temperatures, especially expanding the range of temperatures experienced in the stream and increasing maximum temperatures. Compaction can also affect the ability of vegetation to establish, thus exacerbating erosion.

The effects caused by overgrazing result from a variety of interrelated factors such as climate, vegetation, topography, soil characteristics, and the intensity, type and duration of livestock and wildlife grazing. Therefore, the nature and extent of impacts from overgrazing will vary from location to location due to the normal variability of ecosystem specific factors. Despite these variabilities, the mechanisms causing the impacts (e.g., soil compaction and increased runoff) are similar. Impacts can also vary significantly between grazing strategies. Because activities throughout a stream's watershed (i.e., upland and riparian areas) can affect stream water quality, grazing strategies should address both areas.

Livestock and wildlife grazing activities are associated with other causes of surface water degradation such as bacterial/fecal contamination of water bodies, stream bank erosion and modification associated with hoof or head (scratching, butting or digging) action, withdrawal of water for irrigation of grazing areas, and drainage of wet meadows.

Figure 2 illustrates some of the interrelated impacts that stem from livestock and wildlife foraging and trampling, such as changes in vegetative cover (density and type), affecting physical soil condition or surface water hydrology. In general, the adverse effects associated with grazing increase as the intensity of grazing increases.

This chapter is divided into two major sections: Direct Impacts and Indirect Impacts. Indirect Impacts are further divided into physical impacts and ecosystem impacts. The major direct effects includes a description of the effects of overgrazing and livestock trampling on vegetation and ground surface conditions and the ensuing changes to physical characteristics of the rangeland, and changes to infiltration rates. The discussion of the indirect impacts addresses erosion and sedimentation, channel modification, water table changes, bacterial contamination, and temperature changes. While not all grazing results in adverse impacts, and there may be some favorable impacts that are the result of grazing, this section focuses on the potential adverse impacts of grazing activities.

Direct Impacts

Overgrazing of livestock and wildlife can affect rangeland in two major ways: (1) by reducing the density (i.e., percent-cover) and quality of vegetation, and (2) by disrupting soil conditions and causing soil compaction by hoof action and trampling. Each of these effects creates conditions which lead to increased surface water runoff, sedimentation, and erosion. Livestock foraging reduces the amount of cover provided by vegetation (including plant litter), which in turn creates a situation where soil compaction, reduced rainfall infiltration, increased runoff, and soil erosion can occur. The trampling by livestock further compacts soil, reducing infiltration and increasing surface runoff and resulting soil erosion. (Blackburn, 1984 and Kauffman and Krueger, 1984)

Vegetation. Livestock overgrazing can reduce the health and vitality of rangeland vegetation, therefore, reducing the amount of ground cover provided by the vegetation. Vegetation is specifically affected by livestock in the following ways:

- trampling causes soil compaction, thus decreasing water infiltration, causing increased runoff, and decreased water availability to plants;
- herbage is removed, which allows soil temperatures to rise and increases evaporation to the soil surface;
- physical damage to the vegetation occurs by rubbing, trampling, and browsing (Kauffman and Krueger, 1984).

An additional factor is that as foliage is removed, plants put a greater portion of energy into regrowth of leaves and less toward root growth which has the effect of reducing root biomass which in turn reduces soil stability and leads to increased erosion. Altering vegetation patterns can result in greater susceptibility to draught, fire, insects, and exotic plant competition.

As vegetation is harvested, total plant density and cover may decline, and a compositional change may occur (e.g., decrease of grasses and forbs and increase of sagebrush). In some cases, less desirable species may result. By altering the amount of vegetative cover and composition, overgrazing ultimately increases the amount of bare soil on the rangeland that is subject to runoff and erosion. It also creates conditions that can modify stream temperatures, thus causing a host of ecological changes. Also, changes to vegetation from overgrazing can often result in an overall decrease in the grazing capacity of the rangeland.

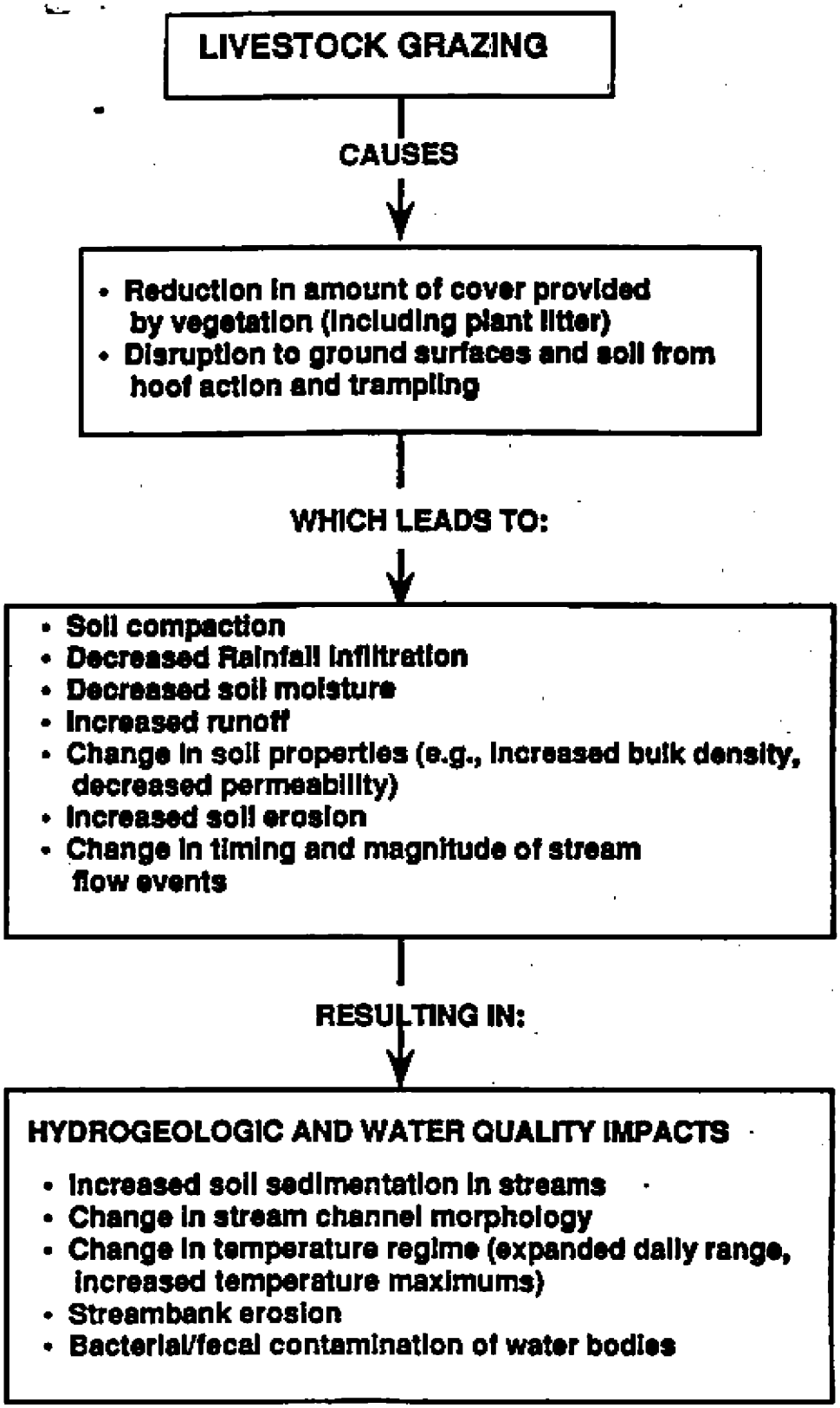


Figure 2. The Interrelationship of Grazing Impacts.

Impacts to the rangeland (and ensuing water quality impacts) are intensified as the amount of vegetative cover decreases. Blackburn (1984) summarized two studies which attempted to define a cover threshold (i.e., percentage cover by vegetation) below which serious impacts to soil infiltration and associated increased runoff (and soil erosion) occurred.

For example, Figure 3 shows that sediment production increases exponentially as plant cover decreased. These findings represent one study area, and the percent cover that serves as the threshold point varies with location according to a variety of site specific conditions. Generally the cover thresholds range from 50 percent cover (Dadkhah and Gifford, 1980) to 70 percent cover (Packer, 1953). However, the threshold point can vary depending on the initial amount of vegetation at the site and the intensity of use at the site.

Grazing intensity (as measured by the percentage of ground trampled) is one of the major factors that affects the maintenance of the cover threshold. As common sense dictates, the impacts of grazing on vegetation increase with increased grazing intensity; high intensity grazing (i.e., high density) causes serious impacts, while there may be little difference between light, moderate, and ungrazed areas.

The impacts of overgrazing on vegetation result in surface water quality problems and hydrologic modification largely due to the amount of soil that is exposed from the reduction in vegetative cover. This can increase the impact of raindrops on soil, possibly causing a decrease in infiltration rates, increase in surface runoff, and/or an increase in soil erosion. In a similar manner, livestock hoof action and trampling can also affect soil properties and ground surface conditions which can cause a range of subsequent impacts to water quality. Each of these impacts (infiltration rates, sedimentation) are described below.

Infiltration Rates. Not only does livestock grazing affect the rangeland through foraging, but the hoof action and trampling causes soil compaction which leads to decreased infiltration rates, and increased runoff, and/or soil erosion. Innumerable studies have shown that infiltration rates decrease as a result of trampling. These impacts increase as the intensity of grazing increases (Warren et al., 1986; Wood and Wood, 1988; Wood and Blackburn, 1981; Weltz and Wood, 1986). The most important factors affecting infiltration rates are: soil aggregate stability, bulk density, organic matter content, and initial soil moisture content; and extent of mulch, standing crop, ground cover, perennial grass cover, and total grass cover (Wood and Blackburn, 1981).

Dadkhah and Gifford (1980) conducted research on the effects of different grazing intensities on infiltration rates. Infiltration rates decreased significantly with increased trampling percentages up to 40 percent trampling. In this study, 40 percent trampling served as the threshold for infiltration reductions; at trampling rates 40 percent or higher, the researchers found no significant differences in infiltration rates regardless of the extent of vegetative cover. Blackburn (1984) also summarized a number of infiltration studies conducted on the Northern Great Plains that compared infiltration rates to grazing intensity (Table 1).

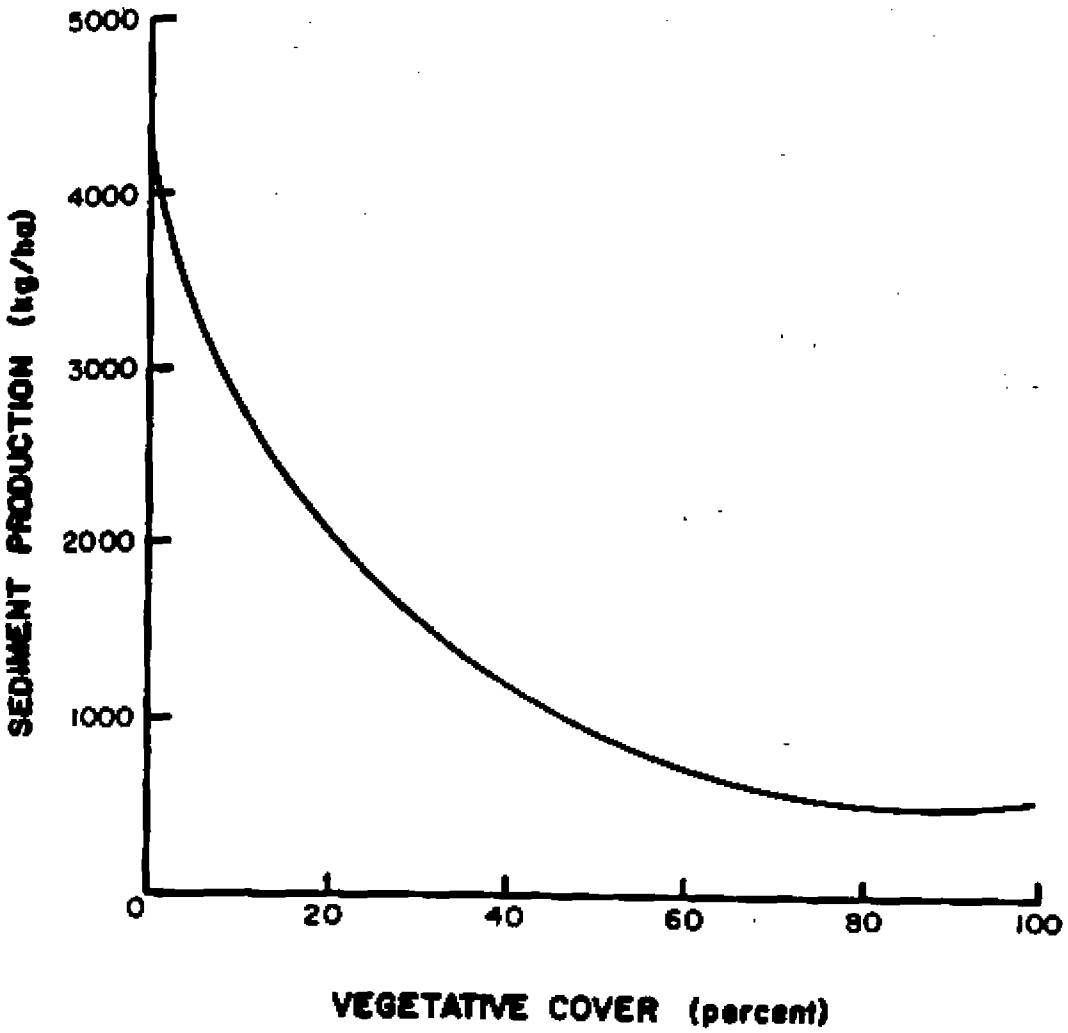


Figure 3. Sediment production as a function of vegetation cover*.
Source: Dadkhah and Gifford, 1980.
* will vary widely depending on geography, soils, climate

Table 1. Summary of studies of the influence of livestock grazing on infiltration on the Northern Great Plains.

Study Site and Reference	Equipment	Infiltration Capacity (cm/h) by Grazing Intensity: Ungrazed	Light	Moderate	Heavy	Remarks
Fort Peck, Montana Nuttail saltbush and crested wheatgrass (Branson et al., 1962)	USGS tube-type sprinkling infiltrometer	0.65 3.02	0.45 2.29	-- --	0.92 1.10	Unfurrowed Furrowed, seeded averaged over soil type and years
Southwest Alberta Fescue grassland (Johnson, 1962)	Mobile infiltrometer	--	5.69	4.06	4.14 3.53	Very heavy grazing
Hays, Kansas Blue grama and Buffalograss (Knoll and Hopkins, 1959)	Single-ring infiltrometer	6.55	--	5.28	4.01	Exclosure had not been grazed for 13 years
Mandan, North Dakota Mixed Prairie (Rauzi, 1963)	Mobile infiltrometer	10.84	--	6.10	3.76	Exclosure had not been grazed for 21 years
Cottonwood, South Dakota Mixed Prairie (Rauzi and Hanson, 1966)	Mobile infiltrometer	--	7.49	4.24	2.76	
Nunn, Colorado Blue grama and Buffalograss (Rauzi and Smith, 1973)	Mobile infiltrometer	-- -- --	1.40 4.32 5.00	1.14 5.33 5.13	1.27 2.03 2.03	Shingle sandy loam Nunn loam Ascalon sandy loam
Miles City, Montana Mixed Prairie (Reed and Peterson, 1961)	Single-ring infiltrometer	18.58 --	11.04 12.29 17.12	10.96 -- --	7.19 5.69 6.74	Blue grama upland Western wheatgrass bench Western wheatgrass bench
Western North Dakota Mixed Prairie (Whitman et al., 1964)	Single-ring infiltrometer	15.24	--	--	7.87	

While there was some variability among the results due to site-specific conditions and variations in study methodology, the following general trends were noted for all of the research evaluated:

- Differences between light and moderate grazing were usually very small.
- Heavy grazing almost always caused a reduction in infiltration rate.
- Soil bulk densities appeared to increase with grazing intensity and were higher on grazed pastures than on ungrazed pastures.

Some researchers have attempted to examine infiltration rates in the context of different grazing strategies. In general, these findings supported the above assertions that as stocking intensity and density increase, infiltration rates tend to decrease. Wood and Blackburn (1981) noted that infiltration rates in deferred-rotation treatments approached the near-optimum infiltration rates demonstrated in the grazing exclosures and exceeded those in the heavily stocked, continuously grazed treatment. Infiltration rates in a high intensity, low frequency (HILF) treatment were similar to those of the heavily stocked, continuously grazed treatment (Figure 4). Research by McGinty, et al. (1978) also found that infiltration rates for a pasture subject to a 4-pasture deferred-rotation grazing system were similar to those of a 27-year exclosure, while infiltration rates were significantly lower for a heavily, continuously grazed pasture.

Indirect Physical Impacts

The previous section described how poor management of livestock grazing may create conditions that can decrease infiltration, increase runoff, and increase sedimentation and erosion from rangelands. These direct impacts can affect the hydrologic regime and water quality of receiving streams, ranging from channel modification to problems associated with sedimentation. The following section describes some of these indirect impacts, including sedimentation, channel modification, changes in the water table, bacterial contamination, and changes to a stream's temperature regime.

Erosion and Sedimentation. The decrease in infiltration normally associated with increased grazing intensities results in an increase in overland flow. This increase in runoff (especially volume and velocity) often results in increased erosion and sediment production. Also, the loss of vegetation resulting from livestock grazing leaves more ground bare further exacerbating the sedimentation problems associated with grazing. As mentioned earlier, Dadkhah and Gifford (1980) found that sediment yield increased exponentially as the amount of plant cover decreased.

Lusby (1979) conducted extensive research on the effects of overgrazing on the hydrology of salt-desert shrub rangeland in west central Colorado. Runoff and sediment were measured in reservoirs at the lower end of grazed and ungrazed reservoirs and watersheds. Runoff from grazed watersheds averaged from 131 to 140 percent of that from ungrazed watersheds from 1954 through 1966. Sediment yields during the same time period ranged from 134 to 196 percent of that from ungrazed watersheds.

Studies examining sediment production as function of grazing intensity generally echoed the results of the studies examining infiltration rates, finding that sedimentation increases as grazing intensity increases. Wood and Blackburn (1981 a,b) conducted research examining the effects of various grazing strategies on sediment production, as well as a number of other physical parameters at the Texas Experimental Ranch. Table 2 summarizes these results. Wood and Blackburn (1981a) found that sedimentation rates from the heavily stocked, continuously-grazed pastures and the HILF pasture exceeded those of the deferred-rotation pastures and exclosures at the site in Texas.

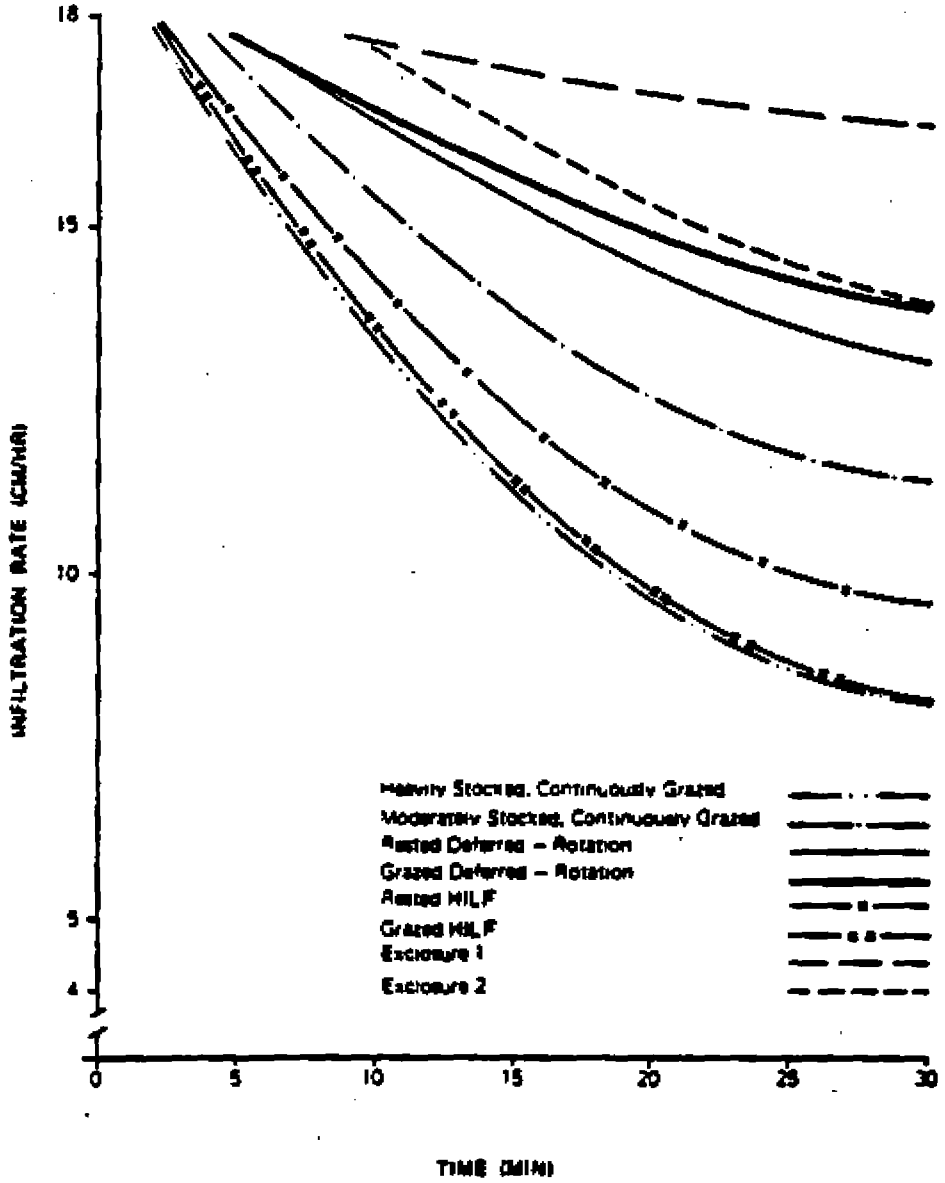


Figure 4. Mean infiltration rates of the midgrass community for various grazing practices at the Texas Experimental Ranch. Source: Wood and Blackburn, 1981a.

Grazing Treatment	Grass Standing Crop (kg/ha)	Mulch (ton/ha)	Bare Ground (%)	Bulk Density (g/cc)	Organic Matter (%)	Aggregate Stability (%)	Infiltration rate after 30 min (cm/h)	Sediment Production (kg/ha)
Heavy continuous	1508 d [1/]	1.2 d	35 a	1.8 a	2.6 c	35 d	8.1 c	115 a
Moderate continuous	3333 abc	4.5 bc	6 b	1.6 b	3.7 b	48 bc	11.4 bc	28 abc
Rested deferred-rotation	3865 ab	5.1 bc	1 b	1.6 b	5.5 a	57 ab	13.1 ab	10 c
Grazed deferred-rotation	2894 c	4.1 b	5 b	1.8 a	4.1 b	56 ab	13.9 ab	14 bc
Rested HILF	2437 c	3.2 cd	17 b	1.9 a	4.3 b	60 a	9.6 bc	28 abc
Grazed HILF	2414 c	4.5 bc	17 a	1.9 a	3.5 b	45 c	8.2 c	39 ab
Exclosure 1	4569 a	12.2 a	1 b	1.3 c	4.3 b	62 a	16.5 a	4 c
Exclosure 2	4243 a	11.5 a	4 b	1.8 a	2.3 c	39 cd	13.9 ab	17 bc
All treatments	2988	6.1	9	1.7	3.8	50	11.6	32

[1/] Means followed by the same letter within each column are not significantly different at the .05 level of probability.

Table 2. Watershed parameter means for the midgrass interspace areas in each grazing treatment at the Texas Experimental Ranch.
Source : Wood and Blackburn, 1981a, 1981b.

Weltz and Wood (1986) also conducted research supporting the above assertions. At a study site in central New Mexico, they asserted that total sediment production was greater on all grazed treatments than on the exclosure. Doubling the stocking rate and applying a short-duration system resulted in significantly greater sediment concentrations and total sediment production. The researchers attributed these findings to the changes in vegetation to a less desirable weedy condition, a decrease in the amount of litter load, and an increase in bare ground resulting from overgrazing. Overall, the researchers concluded that after rangelands were grazed in a short-duration paddock the soil surface was susceptible to accelerated erosion, whereas scattering the cattle over a larger area created problems with distribution and herd control, but seemed to have lower risks of environmental damage as expressed by soil erosion, at least in the short-term.

One of the primary impacts of livestock overgrazing to surface water bodies is the increase in sedimentation associated with grazing activities (e.g., vegetation removal, trampling). The increase in runoff and sedimentation from rangelands can significantly increase sediment loads in water bodies. This can result in many serious water quality impacts, particularly those relating to the health of the aquatic ecosystem. The water quality impacts associated with sedimentation are discussed in more detail in a later section of this document on aquatic ecosystems.

Channel Modification. As described in the previous section, the impacts of livestock overgrazing associated with vegetative removal and trampling can create conditions (i.e., bared and compacted soil) which may result in increased volume and velocity of runoff and increased peak flow discharges. This input of additional runoff water into streams can result in fairly significant channel modification and a host of related effects (e.g., reduction in the cover and area suitable for fish habitat). Depending on soil and subsurface conditions, these rapid adjustments may take two forms: excessive downcutting or incision, including head-cutting (not just down cutting, but cutting back upstream as well), or excessive lateral or sideward migration of the stream (Bureau of Land Management, 1990).

Incised channels typically occur when the stream is in early stages of development and/or is characterized by unresistant bottom materials. For example, channels in fine, deep alluvial soils are prone to incision. They result from either downstream base-level lowering or localized gullying initiated by increased runoff rates and/or lowered resistance to erosion. This type of deep channel incision can result in the following two important changes in the local stream environment, particularly in riparian areas: (1) advancing gully systems increase peak discharge making the stream very efficient at scouring channel beds and banks and transporting sediment, and (2) degrading channel beds produce a drop in the local water table therefore creating a water stress on the riparian vegetation. The subsequent loss of riparian vegetation further exacerbates hydrologic changes. For example, it may result in an even lowered resistance to surface runoff and higher flow velocities during flood events.

Channels will widen and become laterally unstable if stream bottoms are comprised of relatively resistant materials. For example, coarse alluvial channels or channels with structurally controlled beds tend to respond to increased runoff and flow by becoming wider and shallower with less steep banks. Channels that are laterally unstable may be less capable of carrying high flows and thus can cause serious riparian damage by bank cutting or channel realignment during times of high flow. Increased sedimentation from upstream sources can greatly exacerbate these effects (Bureau of Land Management, 1990). An illustration of the channel changes is shown in Figure 5.

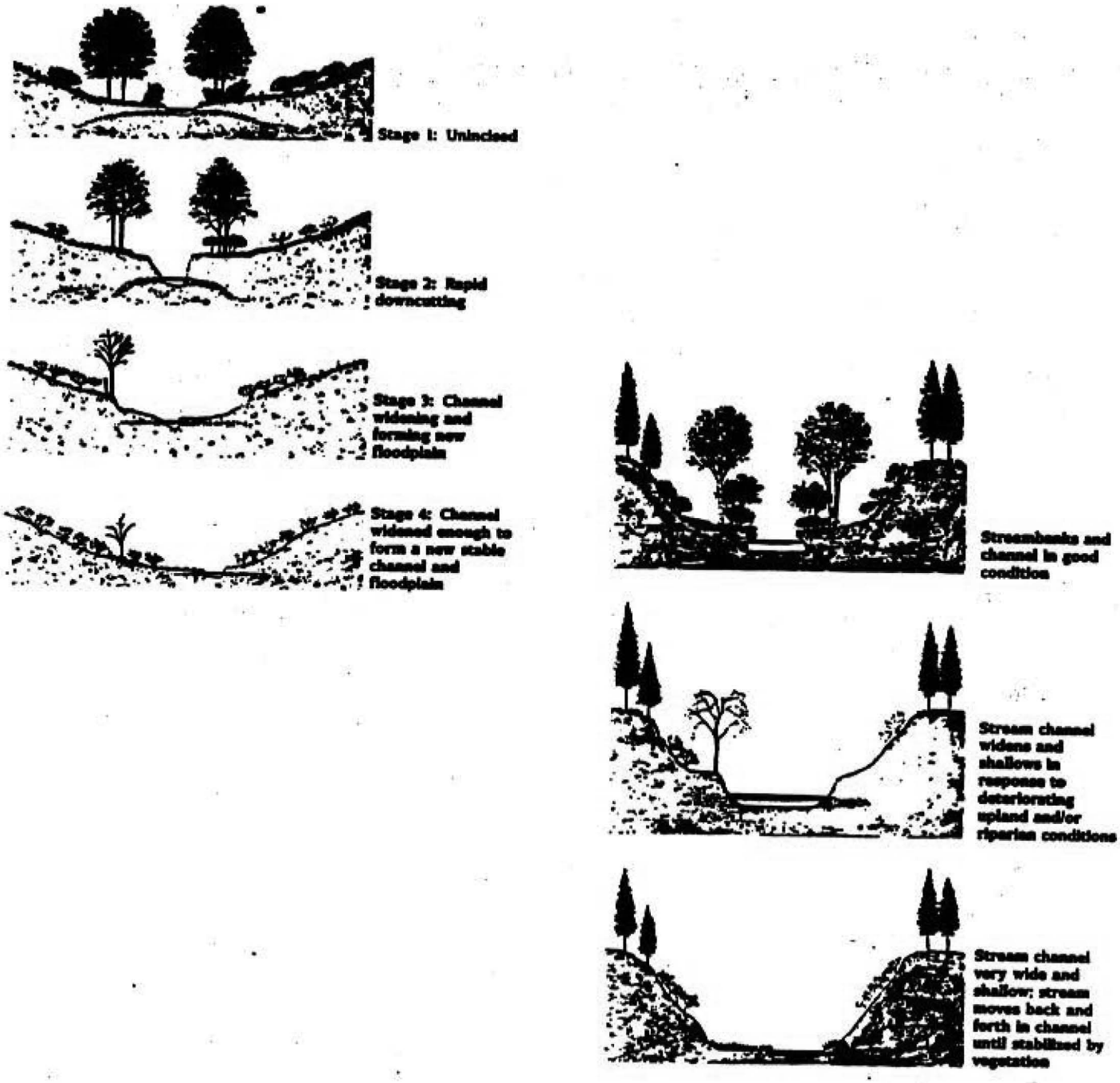


Figure 5: Stream Channel Morphology
Source: "Livestock Grazing on Western Riparian Areas"
Northwest Resource Information Center, Inc., July 1990.

Hubert et al. (1985) examined the impact of various grazing strategies and intensities on the hydrologic conditions of streams. The study examined selected stream parameters (e.g., width) and noted the range of responses to light versus heavy grazing (Table 3). The data showed that, for the most part, intensive grazing caused the widening and shallowing of streams and a subsequent reduction in cover. These conditions lead to a reduction in the abundance of native brook trout, which the authors attributed to increased water temperatures associated with the changes in stream morphology.

Overgrazing can also affect channel morphology and water quality through impacts to stream banks. Bohn and Buckhouse (1986) compared bank stability under five different grazing options. They found that the amount of streambank retreat differs statistically between ungrazed treatments and grazed treatments, but does not differ significantly between the grazed treatments. The study also suggested that bank retreat increases with animal use. Because the study was somewhat limited in scope, the authors stated that it probably failed to simulate the full effects of large-scale cattle grazing on stream bank morphology.

Changes in the Water Table. The water table is the naturally occurring saturated zone contained in the pore space of soil or rock beneath the ground surface. The water table typically refers to the first encountered or shallowest saturated water zone, although there may be isolated lenses of groundwater above the water table. Deeper bodies of water occur as aquifers or isolated lenses of groundwater.

Lowering of the water table may have adverse impacts in that less water is available for plant root systems, the local hydrologic conditions are disrupted, and any other use of the groundwater may be affected such as availability for irrigation or human usage.

Precipitation is the principal source for most groundwater, although groundwater may also come from surface water (stream or lake), agricultural activity such as irrigation, or other human activity. Through an unconfined soil or rock layer, groundwater is recharged (replenished) by the downward infiltration of rainwater through pore space in rock masses.

Factors influencing the location of the water table include site and regional geology, water distribution, climate and precipitation, soil characteristics, vegetation, and land use. Aquifers are dynamic systems with natural fluctuations occurring, usually, on a seasonal basis. The direction of groundwater flow and the depth from the surface are constantly in flux. Human activities such as pumping of groundwater wells or crop irrigation add to the fluctuations in the water table. A lowering of the water table occurs when the input (recharge) is reduced or the output (discharge) is increased. In considering the effects of overgrazing on groundwater or water table conditions, the watershed or drainage basin and its uses, not just the specific rangeland, must be considered because of the complex interrelationships of the hydrologic system.

Because water tables are strongly influenced by surface topography, changes in the ground surface affect the level, quantity, volume, occurrence and flow direction of the water table. Thus, grazing activities that affect the surface topography can adversely affect the water table.

In discussing the effects of overgrazing, there are two geographic zones to consider. First, there is the broader regional upland area, then the more localized riparian stream bed area, which is composed of the stream itself (water column), the stream channel, and the banks of the stream. Beyond and above the banks is the flood plain, which forms an intermediary area between the uplands and the stream zones.

Table 3. Mean Values of Stream Habitat Variables Measured in Heavily and Lightly Grazed Reaches of Pete Creek in 1984.

Variable	Mean Value (n = 3)	
	Heavily Grazed	Lightly Grazed
Width (m)	2.9	2.2*
Depth (m)	0.07	0.11*
Width/depth ratio	43	21
Coefficient of variation in depth	47.3	66.6*
% greater than 22 cm deep	9.0	22.3**
% silt substrate	35	52
% gravel substrate	35	31
% rubble substrate	24	14
% bedrock-boulder substrate	1	3
SRI/CSI	112	110
% overhanging bank cover	2.7	30.0*
% overhanging vegetation	0.0	11.7*
% shaded area	0.7	18.3*
% bare soil along banks	19.7	13.3
% litter along banks	7.0	6.0

* indicates statistically significant difference at p 0.05
** indicates difference at p ≤ 0.10

In both the uplands and riparian stream zones, overgrazing can adversely impact the water table. Direct effects of upland grazing are loss of vegetation, compaction of soil, and increased runoff (with subsequent decrease in infiltration). Bare soil is exposed to greater evaporation of soil moisture. Stream impacts include all of the upland impacts, plus physical degradation of the stream banks. These effects combine to cause greater erosion of the stream channel. Increased runoff, greater sediment load, sloughing of stream banks, loss of ground cover, and loss of root biomass all contribute to the instability of the stream system causing increased incision (down cutting and head or back cutting) and widening of the stream channel. Changes in the channel morphology may impact groundwater by altering the direction and rate of groundwater flow and the depth to groundwater. Downcutting lowers the streambed and the groundwater table.

Depending on site-specific conditions, groundwater may regularly or periodically flow from the subsurface strata (water table) into stream beds, adding water to the stream flow. Such conditions would add to the vitality of the stream life. Groundwater seeps from the stream banks or up from the bottom into the stream. Conversely, water may discharge from a stream to the water table.

Lowering of the water table may significantly reduce or halt water flow into a stream thus accentuating stream degradation. Physical degradation of stream banks by livestock can alter the flow of groundwater and reduce discharge to streams by compacting the soil or otherwise altering the water flow.

Another adverse impact of lowering the water table is the potential effects on plants. Roots obtain their necessary moisture through capillary action that draws water (moisture) upwards through the soil to the root zone where it is available for plant use. Excessive or improper grazing activities may cause greater evaporation of soil moisture by denuding the ground of vegetative cover and increasing soil temperature, thus drying out the soil and leaving insufficient moisture needed for plant life.

Bacterial Contamination. Livestock grazing can also cause increases in the level of bacterial pollutants (i.e., fecal coliform) in water, as well as nutrient enrichment. The level of severity is related to the intensity of grazing activities and the proximity of animals to the water. Tiedemann et al. (1988) presented research results suggesting that increasing the intensity of cattle grazing can increase the amount of fecal coliform (FC) in water to very high and potentially problematic levels. In their research, Tiedemann et al. (1988) measured concentrations of fecal coliform weekly during summer 1984 in streamwater of 13 wildland watersheds managed under four management scenarios: (A) no grazing, (B) grazing without management, (C) grazing with management for livestock distribution, and (D) grazing with management for livestock distribution and with cultural practices to increase forage. Scenario D equated intensive grazing management to maximize livestock production, including practices to attain uniform livestock distribution and improve forage production with cultural practices such as seeding, fertilizing, and forest thinning.

The researchers found that FC levels in streams associated with scenario D were significantly higher than those of the other streams. Most of the A and C areas had FC levels less than 100 FC/L. Only one sample was available for scenario B and it was 150/L. FC levels for scenario D, on the other hand, ranged from 190/L to 2,270/L. A single sample from C was almost as high, 650/L. The higher elevations in these areas were attributed to the higher density of cattle in Strategy D areas (2.8 ha per animal unit month (AUM) compared to 8.2 and 7.7 ha/AUM for B and C. Also, vegetative characteristics played a role in that the areas with higher FC levels also had meadows desirable for grazing right beside the streams (Tiedemann et al, 1988).

Tiedemann et al (1988) also cited studies demonstrating that cattle noticeably increased fecal coliform counts. Some of these studies noted fecal coliform levels having up to a 10-fold increase over background levels (Coltharp and Darling, 1973; Doran and Linn, 1979; Gary et al., 1983; Skinner et al, 1974). In an earlier study, Tiedemann et al. (1987) found significant increases in streamwater FC counts with increased intensity of grazing management. The largest differences in FC concentrations (10X) occurred between control watersheds (no grazing) and watershed managed for maximum livestock production. Counts of FC in excess of 20000/L were observed when intensive management was used to maximize livestock production. These levels of FC can remain a problem even after the livestock is removed.

Stream Temperature Changes. Livestock can be extremely damaging to vegetation, as described earlier in this section. This disruption in vegetative cover can contribute to serious water quality degradation, especially if riparian areas are disrupted. In particular, vegetative damage (especially in riparian areas) can result in serious damage to aquatic habitats. Therefore, most of these impacts will be discussed in more detail in a later section of this document on aquatic ecosystems.

In terms of water quality, however, damage to vegetation can significantly alter a stream's temperature regime, leading to changes in fisheries and other aquatic life. Streamside vegetation is critical in terms of moderating stream temperatures. Because riparian vegetation intercepts and reduces the intensity of incoming solar radiation and reduces back-radiation, it serves as a form of insulator to the stream, preventing it from experiencing extreme temperatures or temperature ranges. Its shading effects in summer help to reduce excessive heating of the water. If the vegetation cover is decreased, summer stream temperatures can greatly increased, which contributes to a host of water quality problems, particularly a decrease in the amount of dissolved oxygen in the water. These changes to stream water quality may cause a shift in fish species, from salmonids to less sensitive species in many areas. By reducing the amount of back-radiation/reflection from the stream, vegetation also serves a moderating effect in winter. This also can enhance native fish survival, because if winter temperatures fall low enough, anchor ice can form on the bottom of the stream (Platts, 1991). The ability of plants to control stream temperatures depends on the size of the stream and the plant type. As a general rule, the larger the stream, the higher the streamside vegetation must be to effectively intercept the sun's rays over water (Platts, 1991).

Indirect Impacts on Terrestrial Ecosystems

Terrestrial Ecosystem Impacts. Most grazing studies examine changes in vegetation composition and the reduced range quality in terms of a loss of livestock carrying capacity. Little is known about impacts of sustained grazing on an ecosystem-wide level, particularly, impacts on wildlife. Dwyer et al. (1984) note that range management has focused on improvements to support increased livestock production, with little attention to maintaining plant and wildlife diversity within an ecosystem. Dwyer et al. (1984) cites both direct and indirect impacts on wildlife from livestock overgrazing. Direct impacts include competition for palatable species, while stress-producing modifications to the ecosystem induced by livestock (e.g. reduction in protective vegetation cover) are more indirect.

A consistent, direct impact of livestock overgrazing on rangeland is loss of vegetative diversity. Selective grazing by livestock tends to reduce the presence of palatable species while allowing a few, typically unpalatable and undesirable species to increase. The resulting change in plant composition lowers species diversity, changes species function, and reduces both the numbers and the variety of wildlife species the area can support (Dwyer, et al., 1984) To sustain a given wildlife population, the pre-grazing plant composition, structure and function within an ecosystem must remain in balance,

following the introduction of livestock. Wildlife that depend on a limited number of plant species to provide a nutritionally optimal diet may be impacted as livestock can rapidly deplete limited food sources within a given area. The depletion of desirable vegetation species within an allotment forces wildlife into marginal, less desirable habitat and into eating less desirable/nutritious vegetation (GAO, 1991; Dwyer, et al., 1984).

Livestock impacts on rangelands extend beyond the direct loss of vegetation to modification of native habitat. Whole ecosystems may be impacted, and depending upon the fragility of the ecosystem, may be permanently altered. Some ecosystems are better able to withstand livestock and wildlife use; water sources, either in the form of precipitation or riparian zones, increase an ecosystem's ability to recover from stress. The increase of sagebrush and other bushy species in place of grasses is an indicator that fragile desert ecosystems have already been significantly impacted by overgrazing. The low rainfall, high temperatures, and high evaporation rates of these areas have produced plants and wildlife uniquely adapted to these regions. The adaptation of these ecosystems and their occupants to inherently harsh environments reduces their capacity to recover from disturbances, such as overgrazing (GAO, November 1991).

Over 250 native species are endangered, threatened or candidate species, in the southwestern Mojave, Sonoran, and Chihuahuan deserts. Poor management and/or overgrazing are factors identified as contributing to a decrease in preferred-diet plant species, destruction of habitat, and reduction of cover needed to hide from predators. In other cases, diseases may be transmitted from domestic to wild animals. In addition to their consumption of prime vegetation, poor management of livestock in the Sonoran desert have forced Sonoran pronghorn antelope away from traditional birthing grounds to less protected areas (GAO, November 1991).

Cosby (1978) noted that livestock grazing does not always impact wildlife negatively. Cosby observed several benefits of rotation grazing systems on wildlife when he found that deferring grazing in several units and altering the season of use actually increased vegetation diversity and cover. Cosby found sandhill cranes utilized grazed units regularly due to an increase in insect populations in the vicinity of "cowpattis". Similarly, native deer utilized units previously grazed to graze on new plant regrowth. Despite these findings, Cosby explains that this same scenario may not be feasible in a different region, and that all grazing treatments must be chosen carefully, on a site-specific basis.

Many livestock grazing researchers acknowledge the importance of avoiding grazing practices which result in the displacement of wildlife species, and to manage rangeland to maintain a healthy ecosystem complete with plant and wildlife diversity (Dwyer, et al., 1984; Carpenter, 1984). However, not all changes in species distribution, should be viewed as adverse impacts. The successional ecosystem stage (early, middle, or late) will help determine the appropriateness of maintaining species diversity and distribution as part of an overall range management plan.

Indirect Impacts on Aquatic Ecosystems

Effects of poor livestock and wildlife grazing management on stream hydromodification and water quality can have serious ramifications on aquatic ecosystems. Potential impacts such as bacterial contamination, increased sedimentation, and temperature changing can reduce the quality of the stream's ambient environment so as to affect the composition and health of aquatic organisms. Likewise, reduction of vegetation and increased runoff and flow may damage the stream's usefulness as aquatic habitat. Such impacts can originate from livestock and wildlife overgrazing in upland and riparian areas, although damage to riparian areas typically cause the most serious stresses to aquatic

ecosystems. The following discussion focuses on overgrazing's adverse effects in riparian areas as these most closely and directly effect stream ecosystems. Also, much of the discussion will center on adverse effects on fish habitat; one important measure of the health of an aquatic ecosystem is by the nature and type of fish species present. The ability of an aquatic system to produce and support game fish is one way of measuring a healthy aquatic environment. For example, Van Velson (1979) found that rough fish comprised 88 percent of a fish population before relief from grazing and only 1 percent of the population after 8 years rest from grazing. Platts (1991) also examined a number of research studies, finding that in 20 of 21 studies, stream and riparian habitats were degraded by livestock grazing and that those habitats improved when grazing was eliminated. The majority of the studies also found reductions in salmonid fish populations related to the grazing-related habitat destruction.

Earlier sections of this document described how overgrazing of livestock and wildlife can affect the density and composition of vegetative cover. In upland areas, these impacts can lead to soil compaction and increased runoff. The hydrologic modifications to streams associated with increased runoff effectively destroys much of the desirable stream habitats.

As reported in Platts (1990), ideal trout spawning area is typically devoid of boulders, low in fine sediments, and high in gravel and small rubble. It also has a number of deep pools, well-aerated water, and ample cover and shade. Many of these necessary qualities of trout habitat can be wiped out by excess runoff and sedimentation. For example, increased flows can wipe out cover and habitat provided by fallen trees and brush.

Impacts of overgrazing on vegetation in riparian areas can affect aquatic ecosystems in a number of ways. Some of the impacts are similar to those associated with upland areas, but the impacts from damage to riparian areas are much more extensive and severe. Because of the proximity of riparian areas to streams, they are intimately connected to the stream ecosystem. Also, they are the preferred grazing ground of livestock and winter range for wildlife, thus concentrating much of the grazing-related damage to those areas. Livestock prefer to graze in riparian areas because they provide easily accessible water, favorable terrain, good cover, soft soil, a more favorable microclimate, and an abundant supply of lush palatable forage. Even though riparian areas represent a very small proportion of total rangeland, they provide much of the vegetation consumed by livestock because it is such a preferred grazing area. For example, Roath and Krueger (1982) reported that although the riparian zone constituted only 1.9 percent of the area on one allotment in Oregon's Blue Mountains, it produced 81 percent of the vegetation removed by cattle. Some of the ways that overgrazing (especially in riparian areas) can impact aquatic ecosystems are summarized below.

Disruption/Reduction to Ecosystem Sources. The riparian area serves as a source of energy to the aquatic ecosystem, by providing energy to streams in the form of dissolved organic compounds and particulate organic detritus. Benthic detritivores, the stream bottom bacteria, fungi and invertebrates that feed on the detritus, form the basis of the aquatic food chain. They pass on this energy when they are consumed in turn by larger benthic fauna and eventually by fish (U.S. Department of Agriculture, Forest Service, 1991). Riparian vegetation produces the bulk of the detritus that provides up to 90 percent of the organic matter necessary to support the headwater stream communities (Kauffman and Krueger, 1984). Platts (1991) stated that organic matter from riparian vegetation comprised roughly 50 percent of the stream's nutrient energy supply for the food chain. Disruption (i.e., change in cover density and composition) to riparian vegetation can severely reduce the extent of organic inputs to the stream, thus alter the energy of the ecosystem. Streamside

vegetation is also important to the production of fish food. It provides habitat for terrestrial insects which are important food for salmonids and other fish species.

Moderator of Stream Temperatures. Streamside vegetation is critical when it comes to moderating the temperature of streams. It shades the stream and therefore influences water temperature. A loss of vegetative cover can result in increased temperatures in summers, decreased temperatures in winter, and a greater daily range of temperatures at all times. Kauffman and Krueger (1984) reported on literature that showed damage to riparian areas caused increases in stream temperature (one study showed that maximum daily temperatures outside of a grazing enclosure averaged 7 degrees centigrade higher than those within the enclosure) and a greater range in temperature fluctuation (average daily fluctuation was 15 C outside of the enclosure and 7 C inside the enclosure). The increase in summer temperatures increases a trout's demand for dissolved oxygen, while at the same time, reduces the amount of dissolved oxygen in the water. This can cause a shift in fish species, from salmonids to nongame fish in many areas. Vegetation also serves a moderating effect in winter, which can enhance native fish survival. If winter temperatures fall low enough, anchor ice can form on the bottom of the stream. Streams with little or no vegetative canopy are very susceptible to the formation of anchor ice (Platts, 1991; U.S. Department of Agriculture, 1991).

Habitat Benefits. Riparian vegetation strongly influences the quality of habitat for anadromous and resident coldwater fish by providing shade, ameliorating in-stream temperature fluctuations, and providing cover (Kauffman and Krueger, 1984). Many studies have demonstrated the importance of cover to fish by showing that declines in salmonid abundance occur as stream cover is reduced and an increase in salmonid abundance as cover is added. The fringe of bordering riparian vegetation is essential for building and maintaining the stream structure necessary for productive aquatic habitats. This vegetation not only provides cover, but buffers the stream from incoming sediments and other pollutants and the effects of excessive flow (Platts, 1991). For one, fisheries habitat in streams is enhanced by the addition of large woody debris to the stream channel which forms pools and important rearing areas. This debris also provides cover from predators and protection from high flows. Large stable debris also provides the mechanism by which the detritus is held long enough to be processed by the invertebrate community. Without debris dams, much of the organic input from streamside vegetation would be washed downstream without contributing to the life processes of the aquatic food chain (U.S. Department of Agriculture, Forest Service, 1991). Each type of vegetation exerts a special function, as summarized in Platts (1991):

- Trees, shrubs, and sedges provide shade and streambank stability because of their large size and massive root systems. As trees mature and fall into or across streams, they create high quality pools and rifles. Their large mass also helps control the slope and stability of the channel. Input of this large organic debris is essential for maintaining stream stability. In many aquatic habitats, if it were not for this type of input, the channel would degrade and soon flow on bedrock, leaving insufficient spawning gravels and few high-quality rearing pools for fish.

- Brush also builds stability in stream banks through its root systems and litter fall.

- Grasses form the vegetative mats and sod banks that reduce surface erosion and mass wasting of stream banks.

Sediment Trapping. Riparian vegetation is important in slowing the overland flow of water and trapping sediment, therefore contributing to the building of bank form (Platts, 1990). Streamside

vegetation is also important as it creates streambank stability. Vegetative mats reduce water velocity along the stream edge, causing sediments to settle out and become part of the bank. This helps to contribute nutrients to the bank soils and increases plant production and vigor. It also reduces the amount of sediments input to the stream (Platts, 1991).

In sum, by affecting the health and vigor of vegetation (especially riparian areas), poor grazing management practices can cause a number of problems that can damage aquatic ecosystems. These are briefly reiterated in the following bullets presented in Platts (1990). Reductions/loss in vegetation can:

- Increase average stream temperatures in summer, decrease them in winter, and expand daily temperature ranges.
- Reduce stream bank strength, enabling sedimentation and erosion, and reducing bank building through sediment deposition.
- Increase the erosive energy of water.
- Amplify effects of floods, ice, or debris flow, or animal trampling.
- Reduce water purification benefits that vegetation provides through infiltration and sediment removal.
- Reduce the ability of riparian areas to contribute to ground water recharge.
- Reduce flood control benefits.

POSSIBLE PREVENTION/MITIGATION MEASURES

This section identifies techniques that may be appropriate for mitigation of potential impacts caused by grazing activities. Mitigation should be evaluated on a site-specific basis and the following measures should only be used as a guide to measures that might be available should the reviewer determine they may be appropriate.

- Active management of livestock grazing allotments typically includes consideration of the following variables in different combinations : 1. grazing frequency, includes complete rest ; 2. livestock stocking rates; 3. livestock distribution; 4. season and timing of forage use; 5. livestock kind and class; 6. control of wildlife herd size and conflicts; 7. forage utilization; and 8. rehabilitation. Active management using these variables may increase forage, as well as improve habitat.

- Avoid high intensity, long duration grazing. The level of utilization must allow for regrowth of vegetation in order to maintain the productive capacity of the pasture.

- Encourage a greater level of control over the numbers of livestock and wildlife and time spent on each allotment.

- Encourage a greater level of oversight on allotments: more frequent assessment of utilization levels and quicker response to move livestock when utilization levels are attained may keep the area from being overgrazed.

- Separate riparian zone from other pastures and develop separate management plans, and if necessary, exclude livestock from riparian (or upland) areas until the desired level of recovery is attained.

- Fence or prevent direct access to streams in riparian areas to reduce trampling, damage of vegetation and the associated channel modification problems (may be costly to maintain, however).

- Use permanent exclosures in areas of high risk or extreme sensitivity where the likelihood of damage is high and the potential for restoration is low.

- Control livestock and wildlife grazing in areas predisposed to damage during periods of high sensitivity (adequate management plans).

- Use planned grazing systems to maintain plant vigor and desired species composition.

- Intensive practices (reseeding, weed control) may be necessary for extremely degraded pastures.

- Late season grazing should occur after the growth of warm season species has peaked and seeds have been produced.

- Know dynamics of plant species within an allotment and their capacity for regrowth.

- Evaluate type of livestock grazed and grazing intensity based on predicted impact to wildlife.

- Periodic minor ground shaping may be necessary to encourage dispersed flow and prevent concentrated flow.
- Plant compatible native trees or shrubs to reduce runoff, establish roots, and provide shade.
- Monitor progress of vegetation growth, bank and channel stability, and overall vitality of rangeland and riparian areas. Seasonal photographs may aid in this effort.
- Stabilize streambanks against erosion, although natural vegetative cover is preferred, artificial means of stabilization such as rubble, concrete or riprap may be necessary.
- Consider use of "in-stream" structures such as gabions, small rock dams, debris catchers, individual boulder placement, rock jetties, or silt log drops, to stabilize stream channels against excessive incision and/or widening.
- Plan periods of rest from grazing to stabilize streams.
- Consider changes in land use allocations, especially in or adjacent to degraded areas.
- Retain flexibility in allotment permits to account for special circumstances, such as excluding livestock during drought periods or other special circumstances, if necessary.
- Monitoring of rangelands is an important activity that will provide opportunity to identify and mitigate impacts. Conduct follow-up monitoring of range trends including conditions and utilizations. Alter actions based on monitoring data.

SUMMARY OF INFORMATION THAT SHOULD BE ADDRESSED IN NEPA DOCUMENTATION

The following is a list of questions that may be appropriate to ask about grazing when reviewing NEPA documentation.

What are the objectives of the management plan? Has a clear idea of the management plan objectives been presented?

Determine what factor, such as bank instability or loss of woody plants, is of primary concern.

Is the area suitable for grazing? Has the kind and class of livestock and the duration and intensity of livestock grazing best suited to the area been determined?

Has the document identified specific species (plant and animal) in the area, what sources were used to determine this, how does it compare with other information on the area?

Are utilization levels related to the specific species of vegetation present?

What utilization levels are planned for this allotment? What is the planned monitoring frequency for the allotment?

How will action be altered or modified based on monitoring information? What are the triggers for determining alterations?

Are there any endangered or threatened species in the area?

Has sufficient forage been allocated to wild herbivores in the riparian management plan? What is considered sufficient?

What tools (fencing, herding cattle/sheep regularly, duration) are proposed to effectively manage the allotment?

What is the seasonal distribution of the allotment (spring, summer have higher production than fall/spring)?

Are any special managements employed in riparian areas? How will stream areas be protected, especially stream banks?

What is the estimated impact on local groundwater, and how will this be monitored?

Have the potential cumulative impacts been described?

What are the designated beneficial uses of water bodies potentially affected by the grazing allotment?

Are these beneficial uses impaired due to exceedance of water quality standards? What is the cause of the impairment?

STATUTORY AND REGULATORY FRAMEWORK

In addition to the National Environmental Policy Act of 1969 (NEPA), there are specific statutes that provide Federal land managers with authority to allow and control grazing on Federal lands under their jurisdiction. Typically, each land managing agency has its own implementing regulations that correlate to each statute's authorities and requirements. In addition to these statutes, there are broad-reaching Federal statutes oriented toward environmental protection, such as the Clean Water Act, and the Federal Insecticide, Fungicide and Rodenticide Act, that may also apply to grazing operations on Federal lands. Explained briefly below are the statutes most appropriately described in the context of grazing.

Taylor Grazing Act. As discussed above, the system of free access to Federal lands ended with the passage of the Taylor Grazing Act in 1934. This was the first official Federal effort at livestock management and placed the administration of the public lands under the U.S. Grazing Service, later to become the BLM.

Multiple Use Sustained Yield Act of 1960. This statute promoted multiple-use management of national forest lands, not limiting the uses based solely on economic returns. The term "multiple-use" denotes management of the lands and their renewable resources in a combination of ways that would "best meet the needs of the American people."

Forest and Rangelands Renewable Resource Planning Act. Passed in 1974, four years after the Public Land Law Review Commission completed its broad review of Federal land policies, this act was an attempt to encourage better economic management of the national forests, as well as providing opportunity for public participation, timber sales, and reforestation.

National Forest Management Act. This statute, passed in 1976, continued an initiative to engage in land-use and resource planning. Like the Forest and Rangelands Renewable Resource Planning Act of 1974, NFMA emphasizes resource inventory, cost/benefit analysis, improvement of the environment, interdisciplinary planning, and public involvement (Clawson, 1983). Though this act encouraged high economic standards, some sections maintain constraints on attainment of full economic management of the federal lands and provided terms for carrying out a multiple-use/sustained yield policy. National grasslands were bought under Forest Service management through the Bankhead-Jones Farm Tenant Act.

Federal Land Policy and Management Act (FLPMA). Passed in 1976, this Statute serves as comprehensive multiple-use legislation for public lands managed by the BLM and supports the notion of public land retention to manage these lands on the basis of sustained yield. FLPMA is also a planning act endorsing multiple-use of resources. Basic principles of the FLPMA include land use planning with public participation, protection of the environment with the cost of damage supplied by the user, receipt of fair market price for private use of public resources, and cooperation with state and local officials. (Brubaker, 1984)

Public Rangelands Improvement Act. Congress passed this Act in 1978 intending to improve the condition of the nation's public rangelands, roughly 268 million acres, and alter the grazing fee formula on Federal lands. The Act prompted an increase in grazing fees from $1.51 per animal unit month (AUM) to $1.89 per AUM. In 1986, Executive Order 12548 extended use of the formula indefinitely. The Public Rangelands Improvement Act also directed the Departments of Agriculture

and Interior to maintain an on-going inventory of range conditions, authorized additional funding for range improvement, and encouraged the development of improved allotment management plans.

Clean Water Act. Two main provisions within the Clean Water Act affect grazing activities. Both of these provisions primarily consider grazing as an activity that contributes to nonpoint source pollution; grazing is, therefore, addressed within the context of nonpoint source pollution programs and regulations, specifically, the following:

- Clean Water Act Section 319 - Nonpoint Source Program: This is the principal provision in the CWA that addresses nonpoint source pollution. The program provides Federal funding to qualifying states for the control of nonpoint sources of pollution. To be eligible for funding, States must develop an assessment report detailing the extent of nonpoint source pollution and a management program specifying nonpoint source programs and controls.

- Clean Water Act Section 320 - National Estuary Program: This program may affect grazing activities if such activities occur in one of the estuaries targeted for the program (e.g., Puget Sound, Galveston Bay). This program focuses on point and nonpoint source pollution. EPA assists state, regional, and local governments in developing comprehensive conservation and management plans that recommend corrective actions to restore estuarine water quality. Currently, the majority of the NEP targeted estuaries are located near fairly urbanized areas and issues associated with grazing on Federal lands are not likely to be a high priority.

- Coastal Zone Act Reauthorization Amendments (CZARA): A relatively new program, currently being developed jointly by EPA and NOAA, CZARA has great potential for promoting broad-based nonpoint source pollution controls (including approaches affecting grazing) in coastal areas. Specifically, section 6217 of CZARA requires that states with an approved coastal zone management program develop Coastal Nonpoint Pollution Control Programs to be approved by EPA and NOAA. The major emphasis of the CZARA program is to develop and implement "management measures" for nonpoint source control to restore and protect coastal waters. Management measures defined as economically achievable measures (e.g. best management practices, citing criteria, operating methods) that will control nonpoint source pollution to the greatest degree possible, are required for many different categories of nonpoint source pollution, including grazing.

  The management measure for grazing was developed as part of the agricultural component of the coastal nonpoint source program. The measure focuses on the protection of sensitive areas and the implementation of conservation management systems and/or activity plans. Figure 6 defines the grazing management measure in detail.

  Each CZARA defined management measure essentially represents a specific nonpoint source program goal. Although the States are given a great deal of flexibility in achieving the specified management measures, EPA provided extensive technical guidance (EPA, 1993) on practices that could be used to meet the management measure goals. In the area of grazing, EPA recommended some of the following practices:

- Grazing Management Systems (as defined by the SCS) - deferred grazing, planned grazing, proper grazing use, proper woodland grazing, pasture and hay land management;

- Alternate Water Supplies (as defined by the SCS) - pipelines, ponds, troughs or tanks, wells, spring development;

- Livestock Access Limitation (as defined by the SCS) - fencing, livestock exclusion, stabilized stream crossings;

- Vegetative Stabilization (as defined by the SCS) - pasture and hay land planting, range seeding, critical area planting, brush and weed management, prescribed burning.

The CZARA program provides another important approach to reducing the effects of overgrazing on the natural environment. Although CZARA currently only applies to coastal states, there is a chance that its scope may be expanded inland as part of the overall CWA Reauthorization Amendments.

Figure 6. CZARA Grazing Management Measure (EPA, 1993)

Protect range, pasture and other grazing lands:

(1) By implementing one or more of the following to protect sensitive areas (such as streambanks, wetlands, estuaries, ponds, lake shores, and riparian zones):

(a) Exclude livestock,
(b) Provide stream crossings or hardened watering access for drinking,
(c) Provide alternative drinking water locations,
(d) Locate salt and additional shade, if needed, away from sensitive areas, or
(e) Use improved grazing management (e.g., herding)

to reduce the physical disturbance and reduce direct loading of animal waste and sediment caused by livestock; and

(2) By achieving either of the following on all range, pasture, and other grazing lands not addressed under (1):

(a) Implement the range and pasture components of a Conservation Management System (CMS) as defined in the Field Office Technical Guide of progressive planning approach of the USDA-Soil Conservation Service (SCS) to reduce erosion, or
(b) Maintain range, pasture, and other grazing lands in accordance with activity plans established by either the Bureau of Land Management of the U.S. Department of the Interior or the Forest Service of USDA.

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Operations Department

Policies, Practices, Procedures

HANDBOOK

UNITED STATES SECTION
INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
The Commons, Building C, Suite 310
4171 North Mesa Street
El Paso, Texas 79902- 1441
April 26, 2001

VOLUME IV
CHAPTER 001
HANDBOOK 001

Operations Department
Policies, Practices, and Procedures Handbook

VOLUME IV
CHAPTER 001
HANDBOOK H 001
DATE:

H 001-1 Requirement/Reference

Various offices of the United States Section, International Boundary and Water Commission, United States and Mexico (USIBWC) issue Directives, Handbooks, Manuals, Plans, etc., to provide both direction and guidance to all offices of the USIBWC. It is expected that all offices of the Operations Department will adhere to the requirements stated in such documents.

The United States Section Issuance System Directive states that the official practices, procedures, and policies of the USIBWC are to be recorded and made available to all employees of the USIBWC as well as any other interested party because these issuances are public documents. The Operations Department is required to identify and record its individual policies, practices, and procedures, and that is the purpose of this Handbook.

H 001-2 General

Each element of the Operations Department is unique in its organization, operations, and mission. Recognizing this, the policies, practices, and procedures of the Department will be crafted so as to address the individual needs of the various elements of the Department while addressing the overall need for efficient, economical operations. Variations introduced to address the needs of individual offices will be identified by specific office title.

H 001-3 Control

The final responsibility for this Handbook rests with the Principal Engineer of the Operations Department. The responsibility for developing, issuing, and maintaining this Handbook for all offices of the Department is delegated to the Division Engineer, Operations and Maintenance Division.

H 001-4 Supersession

There has been no previous Handbook of Policies, Practices, and Procedures for the Operations Department. Therefore, this Handbook does not cancel or supersede any previous document.

H 001-5 Communications Protocols

The USIBWC is currently using a variety of communications tools including telephones. FAX, E-mail, CC-mail, and the traditional "hard copy" of letters, memoranda, reports, etc. In order to assure that information is communicated as rapidly and efficiently as possible, and to assure that action items and/or important informational items are appropriately addressed as rapidly and efficiently as possible, offices will observe the communcations protocols outlined below.

a. Written Communications - Office managers will assure that they have designated an individual or individuals to review incoming written communications in the absence of the manager so that necessary actions are not delayed. The designated individual(s) will be provided operating instructions through the use of Standard Operating Procedures (SOP's).

b. FAX Communications - Office managers will assure that they have designated an individual or individuals to review incoming FAX communications in the absence of the manager so that necessary actions are not delayed. The designated individual(s) will be provided operating instructions through the use of SOP's.

c. Voice Mail Communications

1. Office managers will assure that they have designated an individual or individuals to review the manager's voice mail in the absence of the manager a minimum of twice each workday. This review should take place approximately one hour after the beginning of the workday, and one hour before the end of the work day. The designated individual(s) will have to be provided the appropriate passwords, and will be provided operating instructions through the use of SOP's. [NOTE: At those offices which have "Call Forwarding" available on individual telephones, the manager can have all calls forwarded to the individual(s) who will be present during the manager's absence. However, if the telephone system records messages in the manager's voice mail if the telephone is not answered, the manager's voice mail will still have to be reviewed twice a day.]

2. When the office manager is on duty at his or her regular duty station, he or she will, as a minimum, check voice mail messages during the first hour on duty and during the last hour on duty each workday.

d. E-mail and CC-mail Communications

1. When the office manager is on duty at his or her regular duty station, he or she will, as a minimum, check their E-mail and CC-mail during the first hour they are on duty, and during the last hour of the workday.

2. Office managers will assure that they have designated an individual or individual to review incoming E-mail and CC-mail communications in the absence of the manager a minimum of twice each work day - one hour after the beginning of the work day, and one hour before the end of the work day. The designated individual(s) will be provided the appropriate passwords so that they will have access to the managers/supervisor's computer.

3. The individual(s) designated to review and act upon incoming communications will be advised orally and in writing of the need for assuring the confidentiality of any communications of a sensitive nature.

H001-6 Routing Requests for Personnel Actions

All requests for Personnel Actions shall be sent directly to the Division Engineer with an attached routing form SF-52 Coordination Routing Form (IBWC 312).

H001-7 Routing Requests for Purchase in Excess of Delegated Purchasing Authority

Requests for purchase in excess of delegated purchasing authority shall be sent directly to the Division Engineer for review and/or authorization.

H001-8 Routing Responses to Headquarter's Requests for Reports/Information/Action

Responses to all non-routine requests for reports/information/action shall be routed through the Division Engineer to the requesting office.

H001-9 Required Periodic Reports

Periodic reports required by the Operation and Maintenance Division shall be sent directly to the Division Engineer. Routing Water Accounting reports shall be sent directly to the Chief, Water Accounting Division.

H001-10 Responding to Congressional Inquiries

a. General Guidelines at Headquarters

C&R makes a hold copy of written inquiry and hand delivers document in "special jacket folder" to Secretary of Commissioner (if addressed to Commissioner) or alternately to other executive staff level person (if so addressed.) The special jacket folder is marked:

(1) CONGRESSIONAL,
(2) FOR IMMEDIATE ATTENTION. MUST BE ANSWERED OR ACKNOWLEDGED WITHIN THREE DAYS, and
(3) IMPORTANT...PLEASE KEEP CORRESPONDENCE WITH FOLDER.

b. General Guidelines of Other Offices

Office receiving written inquiries or other correspondence from Federal congressional (Senate/House) offices should acknowledge receipt of the correspondence within three workdays of receipt, and advise that the correspondence has been forwarded to Headquarters for official response. In the acknowledgment letter, provide the full name, job title, address, and telephone number of the individual at Headquarters to whom the correspondence was referred.

For offices receiving telephone inquiries, the head of any office receiving a telephone inquiry will need to respond to such inquiry as it is received, or if received when the office manager is out of the office, immediately upon his or her return to the office. In the event the call is received at a time when the office manager is away form the office for more than a few hours, the designated voice mail reviewer should return the call with the information as to when the office manager is expected to return, and provide a name and telephone number at Headquarters which can respond to the question. (The individual in Headquarters should be advised in advance to expect the call, and also to make sure that the individual will be in the office to receive the call.)

In responding to telephone inquiries, stick to factual information. Do not speculate. In the event the questions concern matters of which you have no knowledge, state that you do not have the information and either (1) offer to obtain the information and call the congressional inquirer with the information, or (2) provide the congressional office with the name and telephone number of an individual or office at Headquarters which can respond fully to the inquiry. Again, advise the individual in Headquarters to expect the call.

Submit Memo of Telephone conversations by email or fax to the attention of the appropriate Principal Engineer and Secretary of Commissioner relative to congressional phone calls

H 001-11 Responding to News Media Inquiries

A. The purpose of this policy is to provide guidance to the Field Office Supervisors and employees on the type of information that can be released to the public and the news media. Field Office Supervisors shall encourage the news media to refer to the IBWC Web page for information. When in question, direct the news media to the Public Affairs Officer.

B. There are different types of information the Field Office Supervisor and employees must be familiar with:

1. **Public Information**: This is any information from records and other sources under the control of the U.S. Section that is covered under the Section's published regulations for the implementation of the Freedom of Information Act. Such information may be technical or non-technical in nature, and may be available in a variety of forms such as books, booklets, pamphlets, leaflets, summaries, fact sheets, maps, charts, graphs, drawings, recordings, videos, photographs, etc.

2. **Technical Information**: This is information or data pertaining to specific U.S. Section operations and activities. Some examples of technical information would be: streamflow measurements both normal and during flood emergencies, international reservoir storage and river conditions, water quality data for the Rio Grande or Colorado including salinity content, international boundary monument and marker locations and distances, etc.

3. **Routine Non-Technical Information**: This is information of a general nature pertaining to U.S. Section history, background, responsibilities, jurisdiction, activities, projects and operations, etc.

C. Guidelines:

1. Field Office Supervisor and Employees can respond to news media inquiries, and provide only public information of a routine, non-sensitive, and factual nature. Information provided can not be information regarding divergent views of the United States and Mexican Commissioners.

2. The Field Office Supervisor will keep the Public Affairs Officer apprised of any significant news media inquires.

3. All requests for information concerning ongoing negotiations with Mexico, matters concerning policy, non-routine information, sensitive or potentially sensitive matters, will be referred to the Public Affairs Officer for appropriate action.

4. All request for information under the Freedom of Information Act, will be processed through the Public Affairs Office.

H 001-12 Responding to Inquiries From State and Local Government Offices

a. Written Inquiries - Offices receiving written inquiries or other correspondence from State and Local Governmental offices should acknowledge receipt of the correspondence within **five** workdays of receipt, and advise the originating office that the correspondence has been forwarded to Headquarters for official response. In the acknowledgment letter, provide the full name, job title, address, and telephone number of the individual in Headquarters to whom the correspondence was referred.

b. In responding to written inquiries, the Headquarters Operations Department shall officially respond within **ten** workdays of receipt.

c. Telephone Inquiries - The head of any office receiving a telephone inquiry will need to respond to such inquiry as it is received, or if received when the office manager is out of the office, immediately upon his or her return to the office. In the event the call is received at a time when the office manager will be away from the office for more than a few hours, the designated voice mail reviewer should return the call with the information as to when the office manager is expected to return, and provide a name and telephone number in Headquarters which can respond to the question. (The individual in Headquarters should be advised in advance to expect the call, and also to make sure that the individual will be in the office to receive the call.)

d. In responding to telephone inquiries, stick to factual information. Do not speculate. In the event the questions concern matters of which you have no knowledge, state that you do not have the information and either (1) offer to obtain the information and call the State and Local Governmental office with the information, or (2) provide the State and Local Government office with the name and telephone number of an individual or office in Headquarters which can respond fully to the inquiry. Be certain the individual in Headquarters is advised to expect the call.

H001-13 Responding to Inquiries from Environmental/Other Special Interest Groups

The U.S. Section employees a group of professionally trained staff members in the Environmental Management Division whose function is to provide guidance and direction to the staff of other divisions to assure that the U.S. Section's operation, maintenance, and construction activities are executed in a manner consistent with the Clean Air Act, Clean Water Act, Safe Drinking Water Act, Toxic Substances Control Act, Federal Insecticide, Fungicide, and Rodenticide Act, National Historic Preservation and Cultural Resources Act, Endangered Species Act, and the National Environmental Policy Act.

Offices receiving written inquiries from environmental interest groups should route these to the attention of the Chief of Environmental Management Division at Headquarters immediately in the most expeditious way possible since the various laws

above dictate how and when the U.S. Section is to respond. As usual, field managers shall also keep their supervisors informed of such written inquiries or visits to their projects and phone calls from environmental groups.

H001-14 Employee Communications

A. In some instances, employees are authorized, and encouraged, to communicate directly with Headquarters offices such as the Human Resources Office, the Compliance Office for EEO, financial disclosure, and Ethics questions, and with the Financial Services Division for pay and allotment matters. In these cases, the employee is only required to advise his or her supervisor that they need to contact the office. The employee **does not** have to disclose the nature of his or her business with the office they are going to contact. The supervisor will automatically authorize the employee to use government telephones to make these calls. If the employee needs to contact the office in person, the supervisor will work with the employee to set up a time when the employee can be absent from his or her duty station for the purpose of contacting the Headquarters office. Whether by telephone or in person, the employee is expected to plan and outline the contact so that the time the employee is absent from work is kept to a minimum.

B. 1. There will be times when employees wish to address employment situations which are disagreeable to the employee, but the employee does not wish to use one of the grievance procedures. To do this, the employee must observe the management chain, and first contact his or her supervisor to discuss the matter. If the matter is not resolved in this first contact, the employee should then contact the next person in the chain of command. The next person in the chain of command will contact the first line supervisor to discuss the matter before discussing the matter with the employee. If an employee contacts a higher level supervisor or manager before contacting the first line supervisor, the employee will be referred to the lower level supervisor or manager to discuss the matter before the higher level supervisor or manager will discuss the matter with the employee. In most instances, the matter can be resolved by the first line supervisor or manager in a much shorter period of time than can the higher level supervisor or manager.

2. Managers and supervisors in the Operations Department will always assure that the management chain is observed in dealing with employees, in passing information up and down the chain, and in advising each other of problem resolutions which have been reached. Only in an absolute emergency will a higher level manager or supervisor by-pass an intermediate manager or supervisor to direct work or resolve an employee issue.

United States Section
International Boundary and Water Commission

Directives Management System

Volume III	: Operations
Part 0100	: Operations Management
Chapter 0101	: Operations General Administration
Directive 01011	: Policies, Practices, and Procedures
SOP	: Morillo Drain Minute 223 and 303 Approval Processes
Citation	: SD.III.01011-S-1
Proponent	: Principal Engineer, Operations
Effective Date	: 17 May 2013

1. **Purpose**: The purpose of this memo is to identify and obtain approval from all involved departments on the internal USIBWC approval process for obligating and paying bills related to operations and maintenance of the Morillo Drain (under Minutes 223 and 303) Coordination with CILA and their internal processes are not included herein.

   Routine operating expenses are covered under international agreement in Minute 223. These expenses are primarily electrical costs to operate the pumps. In 2000, through Minute 303, it was agreed that necessary rehabilitation and routine maintenance for the pumps, electrical system and canals would be conducted jointly. USIBWC pays 50% of the costs to operate and maintain the Morillo Drain system as a major water quality improvement project.

   Currently, while funding for both Minutes is included in the Salaries & Expenses budget, they are in different accounts and have different approval processes. This memo attempts to outline those processes to ensure full coordination and avoid confusion in the approval process.

   Due to the international nature of our agency, our authority flows from both Treaty and by extension Minute, obligations and US Federal Acquisition requirements. The process described below intends to assure that proposed projects under both Minutes will be reviewed and documented for compliance with Minutes and US Federal Acquisitions requirements.

2. **Minute 223**: These routine expenses are a line item in the Lower Rio Grande Flood Control Project's ('Mercedes') annual S&E budget. The Mercedes Area Operations Manager ('AOM') is the Cost Center Manager for these funds. In chronological order:

   A. Annual Budget Development

(1) AOM includes an estimate of annual expenditures (after consultation with his CILA counterpart) and includes it in his budget request to O&M Chief.

(2) O&M Chief reviews and adjusts as appropriate and submits consolidated O&M budget to PE of Operations.

(3) PE Operations reviews and adjusts as appropriate and consolidates to produce Operations budget request.

(4) Budget consolidates all budget requests and prepares annual budget request to Commissioner through the Chief Administrative Officer ('CAO').

(5) Commissioner makes desired adjustments to annual budget.

(6) Budget informs AOM of amount authorized by Congress.

B. Annual Budget Execution

(1) AOM initiates an obligation letter to Budget for estimated Minutes 223 expenses.

(2) Budget obligates funds.

(3) CILA submits invoices to O&M (HQ) engineer for expenditures. Historically this has been done annually, but CILA is now requesting more frequent repayment, and O&M is proposing quarterly payments.

(4) O&M (HQ) engineer reviews and approves invoices. He consults with CILA if there are questions.

(5) O&M (HQ) engineer informs AOM of amount to authorize for payment.

(6) AOM sends Budget payment request.

(7) Budget authorizes Finance to pay invoice.

(8) Finance initiates bank transfer to CILA account.

C. Annual Budget True-up. Near the end of the fiscal year, AOM determines whether initial budget estimate was adequate to cover expenses.

(1) If the estimate was high and there are additional funds available, AOM consults with CILA to determine if there are additional routine needed projects that could be accomplished this fiscal year.

(a) If so, AOM consults with O&M Chief to approve additional project expenditures. O&M Chief will consult with PE Operations for final decision.

(b) If there are no additional routine projects at Morillo Drain, the excess is spent on needed Mercedes maintenance activities with priority to those projects which can have a positive impact on Morillo Drain area or improve water quality.

(2) If the estimate was low, and additional funds are necessary, AOM informs O&M Chief.

(3) O&M Chief reviews all O&M budgets to determine if a transfer of funds between field offices is possible.

(a) If transfer within O&M is possible, O&M Chief authorizes such for Budget.

(b) If transfer within O&M is not possible, O&M Chief informs PE Operations and requests additional funds.

(4) PE Operations reviews Operations budget to determine if a transfer of funds between Operations Divisions is possible.

(a) If transfer within Operations is possible, PE authorizes such for Budget.

(b) If transfer within Operations is not possible, PE requests additional funds from D99 account from Commissioner.

(5) If Commissioner approves, funds are authorized from D99.

(6) If Commissioner disapproves, operations of Morillo are curtailed to remain within existing budget.

3. **Minute 303**: These projects are major maintenance items paid through S&E funds. However, currently these projects are Unfunded Requirements that require a separate approval process (described below) than that for Minute 223 expenditures. The Cost Center Manager for these funds is the Commissioner, through the CAO. The following process will be followed to ensure fully coordinated processes.

A. Plan Development: A Long-Range Major Five Year Improvement Plan (the 'Plan', currently called a 'Capital Improvement Plan') has been developed for the period 2011-2016 in consultation with the CILA local manager.

(1) Each year the AOM will meet with the CILA counterpart in May (per Joint Report of 2000) to review the work progress and develop a new proposed Plan. This proposed Plan will be for a rolling five year period, with the past

fiscal year deleted and a new fiscal year added to the future. The next proposed Plan will be for the period 2013-2017. To the extent possible, the proposed Plan will attempt to develop a uniform expenditure amount for the years covered to reduce funding fluctuations. However, it is understood that significant improvements need to be made during the 2013-2015 period, and normalization of the expenditures will not be possible. AOM and CILA counterpart sign the proposed Plan.

(2) The O&M Chief will review, adjust and approve in writing the proposed Plan and refer it to the PE Operations.

(3) PE Operations will review, adjust and approve the proposed Plan. Once satisfactory, PE Operations will submit the proposed Plan to the Commissioner through the CAO.

B. Budget Approval for current budget year

(1) The Commissioner will review and modify as desired the proposed Plan for (1) the general direction of the five year Plan, (2) approval to place the 'current' budget year needs on the Unfunded Requirements list, and (3) approval to execute these expenditures as soon as the CAO identifies the amount of funding available in the D99, subject to the priority assigned by the Commissioner relative to other projects on the Unfunded Requirements list.

(2) The Commissioner approves the proposed expenditures for the budget year in total (for example, Projects as identified on the FY 2013 Plan). Funds may be moved between the identified projects within that year as necessary to accommodate over or under estimates of costs.

(3) CAO will inform PE Operations and Budget of the amount of funding approved, any modifications desired by the Commissioner and the relative priority of the projects.

(4) PE Operations relays this information to O&M Chief.

(5) O&M Chief documents all changes and provides the approved Plan to AOM and Budget.

C. Budget Execution

(1) AOM sends letter of obligation to Budget.

(2) Budget obligates funds of Unfunded Requirements.

(3) CILA submits contracts, if any, as they are developed for Plan work to AOM.

(4) AOM reviews and approves as being in accordance with the approved Plan work and after consultation with Budget, that funds are available.

(5) CILA submits invoices to O&M (HQ) engineer for expenditures.

(6) O&M (HQ) engineer reviews and approves invoices. He consults with CILA if there are questions.

(7) O&M (HQ) engineer informs AOM of amount to authorize for payment.

(8) AOM sends Budget payment request.

(9) Budget authorizes Finance to pay invoice.

(10) Finance initiates bank transfer to CILA account.

D. End of Year Budget Process. Near the end of the fiscal year, AOM determines whether initial budget estimate was adequate to cover expenses.

(1) If the estimate was high and there are additional funds available, AOM consults with CILA to determine if there are additional approved Plan projects that could be accomplished this fiscal year.

(a) If so, AOM consults with O&M Chief to approve additional project expenditures. O&M Chief will consult with PE Operations for final decision.

(b) If there are no additional approved Plan projects, the excess is returned to the D99 account.

(2) If the estimate was low, and additional funds are necessary, AOM informs O&M Chief.

(3) O&M Chief reviews all O&M budgets to determine if a transfer of funds between field offices is possible.

(a) If transfer within O&M is possible, O&M chief authorizes such for Budget.

(b) If transfer within O&M is not possible, O&M Chief informs PE Operations and requests additional funds.

(4) PE Operations reviews Operations budget to determine if a transfer of funds between Operations Divisions is possible.

(a) If transfer within Operations is possible, PE authorizes such for Budget.

(b) If transfer within Operations is not possible, PE requests additional funds from D99 account from Commissioner.

(5) If Commissioner approves, additional funds are authorized from D99.

(6) If Commissioner disapproves, operations of Morillo are curtailed to remain within existing budget.

4. **Supersession**: There is no previous guidance on this matter

Approved:

///ORIGINAL SIGNED/// 17 May 2013
Sheryl L. Franklin P.E. Date
Chief, Operations & Maintenance Division

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION

United States Section Directive

Volume: IV
Chapter: 315
Date: July 27, 2000

SUBJECT	:	**Criteria For Construction Activities Within The Limits of USIBWC Floodways**
TO	:	**Division Engineers, Project Managers, Presidents - AFGE Locals 3060 & 3309**
CONTROL	:	**Principal Engineer, Operations Department**

315.1 Requirement/Authority

This Directive is issued under the authority of the United States Section Directive Volume I, Chapter 001, Dated March 12, 1999, SUBJECT: United States Section Issuance System.

315.2 Purpose

The purpose of this Directive is to transmit Handbook H 315 which contains criteria and guidelines for the review, approval and inspection of construction activities within the limits of United States Section, International Boundary and Water Commission (USIBWC) floodways which are currently maintained and operated by the USIBWC.

315.3 Responsibilities

The recipients of this Directive shall be responsible for applying the criteria when reviewing and inspecting the construction of facilities within the limits of existing USIBWC floodways.

315.4 **Supersession**

There has been no previous Directive on this subject.

315.5 **Effective Date**

This Directive shall be effective upon issuance.

FOR THE COMMISSIONER

(b) (6) [redacted]

Carlos Marin
Principal Engineer, Operations

CB:cb
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7/27/00

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION

CRITERIA FOR CONSTRUCTION ACTIVITIES WITHIN THE LIMITS OF USIBWC FLOODWAYS

Volume IV
Chapter 315
Handbook H315
Date: July 27, 2000

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION

CRITERIA FOR CONSTRUCTION ACTIVITIES WITHIN THE LIMITS OF USIBWC FLOODWAYS

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INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION

CRITERIA FOR CONSTRUCTION ACTIVITIES WITHIN THE LIMITS OF USIBWC FLOODWAYS

I PURPOSE

The purpose of this document is to present criteria and guidelines for the review, approval and inspection of construction activities within the limits of United States Section, International Boundary and Water Commission (USIBWC) flood protection works which are currently maintained and operated by the USIBWC.

II APPLICABILITY

This document applies to all USIBWC Divisions and Project field offices having responsibility for reviewing and inspecting the construction of facilities within the limits of existing USIBWC floodways.

III GENERAL

The USIBWC retains right of approval on all improvements which are to pass over, under, or through the walls, levees, improved channel, or floodways of the following USIBWC Flood Control Projects:

-Upper Rio Grande Flood Control Project
Rio Grande Canalization Project
Rio Grande Rectification Project

-Presidio Valley Flood Control Project

-Lower Rio Grande Flood Control Project

-Colorado River Project

-Tijuana River Flood Control Project

In addition, approval must be received from the USIBWC prior to commencement of construction of any facility which passes over, under, or within the floodplain of the international reaches of the Rio Grande and Colorado Rivers.

IV GENERAL CRITERIA

A License or Permit is required from the USIBWC for any proposed activities crossing or encroaching upon the floodplains of USIBWC Flood Control Projects and Right-of-Way. The License/Permit is issued by the General Services Division which coordinates the review and approval process with the Operation and Maintenance, Design, and Environmental Management Divisions and the appropriate Project field office. If required, a review from our legal office is conducted.

To obtain a License/Permit from the USIBWC, the Sponsor or Owner (hereafter referred to as Sponsor) of the proposed project shall comply with the National Environmental Policy Act (P.L. 91-190, as amended), the Endangered Species Act (P.L. 93-205, as amended), the National Historic Preservation Act (P.L. 89-665, as amended), the Clean Water Act (Federal Water Pollution Control Act)(P.L. 92-500, P.L. 93-243, and P.L. 95-217; 33 U.S.C. Sec. 1251, et seq.), the Clean Air Act (42 U.S.C.A. 7401 et seq.) and the USIBWC implementing procedures published in the Federal Register.

In addition to other requirements set forth in this document, the Sponsor must submit to the USIBWC all necessary permits, environmental studies and documents as required by the above U.S. agencies assuring adherence to all environmental laws and regulations for work within a floodway.

The USIBWC requires coordination with several agencies in the approval of proposed works along the international boundary with Mexico, including but not limited to the United States Fish and Wildlife Service, United States Environmental Protection Agency, United States Army Corps of Engineers, and the appropriate State Historical Commissions. The USIBWC will also coordinate with the Mexican Section of the IBWC when required or is appropriate.

Construction shall not start until final plans and specifications have been approved in writing by the USIBWC. In addition, final construction plans shall be stamped and signed by a Registered Professional Engineer prior to USIBWC approval.

V. PIPELINES CROSSING EXISTING LEVEES

A. General

Levee integrity is to be maintained with any pipeline crossing. Each pipeline crossing should be evaluated for its potential damage which would negatively impact the integrity of the flood protection system and could eventually lead to catastrophic failure. Serious damage to levees can be caused by inadequately designed or constructed pipelines, utility conduits, or culverts (all hereafter referred to as "pipes") beneath or within levees. During high water, seepage tends to concentrate along the outer surface of pipes resulting in piping of fill or foundation material. Seepage may also occur because of leakage from the pipe through joints. In the case of pipes crossing over levees, leakage can cause erosion in the slopes. In addition, loss of fill or foundation material into the pipe can occur if joints are open. Some of the principal inadequacies that are to be avoided or corrected are as follows:

- Pipes having inadequate strength to withstand loads of overlying fill or stresses applied by traffic.
- Pipe joints unable to accommodate movements resulting from foundation or fill settlement.
- Unsuitable backfill materials or inadequately compacted backfill.

Major factors to be considered in deciding if an existing pipe can remain in place under a new levee or must be rerouted over the levee, or if a new pipe should be laid through, under or over the levee are as follows:

- The height of the levee.
- The duration and frequency of high water stages against the levee.
- The susceptibility to piping and settlement of levee and foundation soils.
- The type of pipeline (low or high pressure line, or gravity drainage line).
- The structural adequacy of existing pipe and pipe joints, and the adequacy of the backfill compaction.
- The feasibility of providing closure in event of ruptured pressure lines, or in the event of failure of flap valves in gravity lines during high water.
- The ease and frequency of required maintenance.
- The cost of acceptable alternative systems.
- Possible consequences of piping or failure of the pipe.
- Previous experience with the owner in constructing and maintaining pipelines.

The methods of pipe installation should be understood by the designer to anticipate problems with: over excavating around the pipe, type of backfill materials, compaction of the pipe backfill, piezometric head acting on the pipe for the design flood, grouting of the pipe annulus, and high pressures from directional drilling that could result in hydro-fracturing the surrounding materials. In areas where backfill compaction is difficult to achieve, flowable low strength concrete fill has been used to encapsulate pipe in narrow trenches.

B. Small Diameter Pipelines Crossing Through Levees

1. General

a. Small diameter pipes (2"-8" dia.) shall be placed a minimum of two feet below the levee road surface and side slopes. See Attachment I, for details.

b. Small diameter pipes must be properly designed and constructed to prevent (a) flotation if submerged, (b) scouring or erosion of the embankment slopes from leakage or currents, and (c) damage from debris carried by currents, etc.

c. Valve or junction boxes shall not be permitted within the levees. All valves located within 15 feet either side of the toe of the levee shall be housed in a concrete box enclosure with a manhole type cover and shall have a minimum cover of one foot (1').

d. Sewer manholes within the floodway is strictly prohibited. All sewer manholes shall be placed on the land side of levees.

e. Pipeline installations shall not parallel the levees on either the channel or land side of the levees (this will avoid utility corridors). Pipelines are allowed only to cross perpendicular to channels, rivers or USIBWC right-of-way and levees.

f. Leakage from or infiltration into any pipe crossing over, through, or beneath a levee must be prevented. Therefore, the pipe joints as well as the pipe itself must be watertight. All pressure pipes should be pressure tested at the maximum anticipated pressure before they are covered and put into use.

g. During the design, the potential for electrochemical or chemical reactions between the substratum materials or groundwater and construction materials should be determined. If it is determined that there will be a reaction, then protective measures to be taken may include the use of cathodic protection, coating of the pipe, or use of a corrosion-resistant pipe material.

h. All pipes on the crown and riverside of the levee should have sufficient cover to withstand heavy equipment traffic during maintenance activities or debris during high water. Where mounding of soil is required, the slope should be gentle to allow mowing equipment or other maintenance equipment to operate safely on the slopes and to allow traffic to move safely on the levee crown.

2. Pressure Pipelines

Pressure pipelines (2"-8" dia.) shall be placed a minimum of two feet below the levee road surface and side slopes. See Attachment I, for details. Before consideration is given to allowing a pressure pipe to extend through or beneath the levee, the pipe owner should provide an engineering study to support the request for such installation. It is imperative that pressure pipes be fitted with rapid closure valves or devices to prevent escaping gas or fluid from damaging the levee.

C. Pipelines Crossing Through Levees

1. General

Pipes constructed through a levee are very susceptible to seepage along the pipe surface and piping of the levee embankment material can occur. **Directional drilling through levees is strictly prohibited.** Provisions for maintaining flood protection will be made and become an enforceable criterion with all pipe crossings. As an example, the Sponsor will be required to maintain a 24 hour emergency service equipment and personnel during construction work in order to backfill and compact all excavated trenches and to reconstruct the levee to its original condition in case of a flood situation.

The installation of pipes (10"diameter and larger) through levees shall be performed using the open cut method. See Section V.G.2 and Attachment No. II, for installation requirements.

2. Gravity Pipelines

Generally, the only pipelines allowed to penetrate the foundation or embankments of the levee are gravity drainage lines. The number of gravity drainage structures should be kept to an absolute minimum.

a. Gravity flow pipes and conduits shall be designed with a positive cut-off structure (gatewell) located on the riverside of the levee crown to prevent water from the riverside to flow through the pipeline to the landside. The cut-off structure shall be extended to the levee crown elevation. This structure must be accessible no matter what flood condition may exist. The closure device must be operational by manpower. See Sections V.G.2.i,j,k for equipment requirements.

b. All gravity storm drains discharging into a river or channel shall contain means of positive closure such as an automatic flap gate or sluice gate at the discharge end of the line and energy dissipators, as required. The Sponsor, as per license agreement, shall be responsible for inspection and maintenance to ensure proper operation of the gates and energy dissipators.

c. The Sponsor shall provide scour protection at the outfall consisting of riprap or a stilling basin depending upon the issuing jet velocity. Pipelines discharging into a river or channel, may be required to be aligned 45 degrees toward the flow of water, this will prevent possible erosion to the opposite bank of the river or channel.

D. Pipelines Crossing Under Levees

1. General

Pipes crossing beneath levees shall be constructed with open excavation methods and in accordance with the requirements stated in Section V.G.2.

2. Nearsurface Directional Drilling

Directional crossings include pipelines that carry natural gas, oil, petrochemicals, water, sewerage, and other products. Ducts are also installed to carry electric and fiber optic cables. Directional crossings have the least environmental impact to any alternate method. The technology also offers maximum depth of cover under the obstacle thereby, affording maximum protection and minimizing maintenance costs. In addition, river traffic and flow are not interrupted, as most of the work is confined to either bank.

If directional drilling methods are used, seepage conditions may be aggravated by the collapse of levee foundation materials into the void left by the drilling and washing of the pipe runs. Penetration through the top stratum of fine grained materials may concentrate seepage at those locations. Pipes constructed with directional drilling methods should proceed only after a comprehensive evaluation of the following: comprehensive understanding of the subsurface soil and groundwater conditions to a minimum depth of 20 feet below the lowest pipe elevation, locations of the pipe penetration entry and exit, drilling procedure, allowable

uplift pressures, on-site quality control and quality assurance monitoring during drilling operation, grouting of the pipe annulus, backfilling of any excavated areas, and repair of the construction-staging areas. For installation requirements, see Section V.G.3.

3. Boring and Jacking of Sleeves for Gravity Pipeline

Installation of pipes in existing levees by tunneling or jacking is strictly prohibited.

4. Electrical, Telephone, Telegraph and T.V. Cables

All cables shall be placed a minimum of two feet below the levee road surface and side slopes. See Attachment I, for details.

E. Antiseepage Devices

Antiseepage devices have been employed in the past to prevent piping or erosion along the outside wall of the pipe. The term "antiseepage devices" usually referred to metal diaphrams (seepage fins) or concrete collars that extended from the pipe into the backfill material. The diaphrams and collars were often referred to as "seepage rings." However, many piping failures have occurred in the past where seepage rings were used. Assessment of these failures indicated that the presence of seepage rings often results in **poorly compacted backfill at its contact with the structure.**

Where pipes or conduits are to be constructed through new or existing levees to depths greater than the design freeboard allowance, then concrete collars shall be provided for the purpose of increasing seepage resistance. See Attachment III for details. The number of collars required based on the pipe diameter, length, soil conditions and hydraulic head shall be determined by the Sponsor and calculations of such determinations shall be submitted to the USIBWC for review and approval.

F. Closure Devices

1. All pipes allowed to penetrate the embankment or foundation of a levee must be provided with devices to assure positive closure. Gravity lines should be provided with flap-type or slide-type service gates on the water side of the levee. Automatic flap-type gates are usually used where the water is likely to rise to the "Gate Closing Stage" rather suddenly and where the water stage is likely to fluctuate within a few feet above and below the "Gate Closing Stage" for prolonged periods of time during flood season. For an emergency gate to be effective it must be located so that its controls are accessible during flood stage.

2. Slide-type gates are usually preferred as service gates where the rate of rise of the water during major floods is slow enough (minimum of 12-hr flood predication time) to give ample time for safe operation. The principal advantages of the slide gate in comparison with automatic flap gates are greater reliability of operation and the ease with which emergency closure can be made in event obstructions prevent closure of the gate. Usually an emergency closure can be made by filling a pipe manhole with sandbags. The obvious disadvantage of slide-type gates is that personnel must be on hand for their operation. Also their initial cost is generally greater than that for a flap-type gate.

3. A slide-type gate with a flap-type gate attachment is often used and affords the advantages of automatic flap gate operation with the added safety of the slide-type gate.

4. Pressure pipes should be fitted with valves at various stations that can be closed rapidly to prevent gas or fluid from escaping within or beneath a levee should the pipe rupture within these areas.

G. Installation Requirements

1. General

a. The installation of pipes or other structures within the levee or foundation probably requires the greatest care and the closest supervision and inspection of any aspect of levee construction. Most failures of levee systems have initiated at the soil-structure interface and therefore every effort must be made to ensure that these areas are not susceptible to piping. Of overriding importance is good compaction of backfill material along the structure. Pipes and seepage collars should be installed in the dry and a dewatering system should be used where necessary.

b. The Sponsor shall practice approved construction methods to minimize erosion at the construction site. Construction equipment, supplies, forms, etc., shall not be stored in the floodway during the construction. Any item that might float during a flood shall not be stored in the floodway. The sponsor must obtain approval from the Commission, before placing any excess material excavated from the structure, and the material excavated from the drain ditch on USIBWC right-of-way.

c. The Sponsor shall furnish all necessary environmental studies and documents as required by U.S. environmental laws and regulations. The Sponsor shall furnish plans and specifications for the proposed work to the USIBWC, sufficiently in advance of construction to allow adequate time for review and approval. USIBWC personnel will discuss proposals at the concept level prior to preparation of plans to avoid major revisions. Concept proposals may be submitted for review. Proposals should include the proposed construction starting date and the construction schedule prior to initiation of work.

d. See Section VII, for additional requirements during the installation of pipelines through USIBWC floodways.

2. Pipelines Crossing Through or Beneath Levees

a. The preferred method of installing pipes within the embankment or foundation of a levee is by the open cut method. The trench should be excavated to a depth of 2 feet below the bottom of the pipe and at least 4 feet wider than the outside diameter of the pipe. Pipe collars shall be constructed in undisturbed or compacted soil where required. See Attachment II for details.

Work requiring the open cut method shall be scheduled during the following non-flood seasons:

Upper Rio Grande Flood Control Project: October 16th thru May 31st
Presidio Flood Control Project: October 16th thru May 31st
Lower Rio Grande Flood Control Project: November 1st thru May 31st
Tijuana Flood Control Project: April 1st thru October 31st

When installing pipelines through new levees, the levee embankment should be brought to grade about 2 feet above the proposed crown of the pipe. This allows the soil to be preconsolidated before excavating the trench and installing the pipe.

b. The excavation through the levee and berm area (35 feet from the levee toe) for the length of the structure shall meet OSHA criteria and have a side slope of one vertical foot to one horizontal foot (1:1) minimum or flatter and shall be excavated to maintain the 1:1 slope from the top of the levee or berm area to the bottom of the cut as shown on Attachment II. During the excavation for the structure, if unsuitable material is encountered, the Sponsor shall keep it separate from suitable material and shall not use it for backfill. Unsuitable materials shall be any soil classified in accordance with ASTM D2487 as organic (OL, OH, or PT), elastic silts (MH), fat clays (CH), clean sands (SW, SP, SW-SM, SW-SC, SP-SM, or SP-SC), or clean gravels (GW, GP, GW-GM, GW-GC, GP-GM, or GP-GC). Where imported material is required for backfill, it shall consist of natural soil which is not judged unsuitable according to the above criteria. All fill material shall be free from roots, trash, organic matter, and other objectionable material. The Sponsor shall submit to the USIBWC for approval, soil classification test results for any borrow source proposed for use.

c. For small diameter pressure pipelines (2" to 8" diameter), the pipeline shall be installed by the open cut method with a minimum of two feet below the levee road surface and side slopes. See Attachment I, for details.

d. After the trench has been excavated, it should be backfilled and compacted to the pipe invert elevation. The backfill should be brought up and compacted evenly on both sides of the pipe to avoid unequal side loads that could fail or move the pipe. Special care must be taken in the vicinity of any protrusions such as joint collars to ensure proper compaction. Trench backfill through the levee and berm area (35 feet from levee toe), including any bedding material for the pipe, shall consist of suitable material placed in horizontal lifts not exceeding six (6) inches in compacted thickness. Suitable material shall be imported material as defined in the above Paragraph V.G.2.b, or material excavated from the levee or foundation which is not judged unsuitable according to Paragraph V.G.2.b. Backfill material used shall have a uniform moisture content within plus or minus 3% optimum. Each layer of material shall be bonded to the next and shall be compacted to not less than 95% of maximum density, as determined by ASTM Designation: D 698, Method A. Backfill outside the levee and berm area, shall approximate that of the surrounding natural ground.

The Sponsor shall repair any settlement in the trench which may occur within one (1) year of completion of the work. Tests to verify moisture content, compaction or soil classification, as may be determined to be necessary by the USIBWC, shall be performed by an independent testing laboratory at the expense of the Sponsor. A USIBWC representative shall designate the times and locations of the tests.

All pipes shall be installed in the dry, and a dewatering system shall be used where necessary.

e. The Sponsor shall restore the surfaces of the levee crown, slopes, and ramps, along with all gravel surfacing disturbed by the excavation with a minimum thickness of six (6) inches of compacted surfacing material. The surfacing shall be compacted to not less than 90% of maximum density, as determined by ASTM Designation: D 698, Method A. Should settlement of the repaired roadway occur within one year following completion of work, Licensee shall rework and relay the road surface, bringing it up to its original grade and structural stability.

Gravel surfacing material shall be uniformly graded and shall conform to the following specifications:

Lower Rio Grande Flood Control Project Only:
Surfacing material shall be composed of caliche (argillaceous limestone, calcareous or calcareous clay particles, with or without stone, conglomerate gravel, sand or granular materials.)

Retained on Square Sieves		Percent Retained
2"	(50 mm)	0
1/2"	(12.5 mm)	20-60
No. 4	(4.75 mm)	40-75
No. 40	(0.425 mm)	75-85

Max Liquid Limit 40
Max Plasticity Index 12

All other IBWC Projects:
Surfacing material shall be crushed stone produced from oversized quarried aggregate, sized by crushing and produced from a naturally occurring single source. Crushed gravel or uncrushed gravel shall not be acceptable for this type of material. No blending of sources and/or additive materials will be allowed.

Retained on Square Sieves		Percent Retained
1-3/4"	(45 mm)	0
1"	(25.4 mm)	0-10
No. 4	(4.75 mm)	35-70
No. 40	(0.425 mm)	65-90

Max Liquid Limit 35 Max Plasticity Index 12

f. The Sponsor shall install and maintain suitable markers or signs indicating the location of the pipeline where it crosses the levee, pilot channel or river and where the pipeline changes direction within the Project right-of-way where practicable. The markers or signs should be a minimum height of five feet (5') above the ground. No markers are to be installed on the levee slopes or fifteen (15) feet from the toe of the levee.

g. All pipes on the river side of the levee shall have a minimum of 3 ft of soil cover for protection from heavy equipment.

h. Leakage from or infiltration into any pipe crossing through or beneath a levee must be prevented. Therefore, the pipe joints as well as the pipe itself must be watertight. For pipes located within or beneath the embankment, the expected settlement and outward movement of the soil mass must be considered. **Corrugated metal pipes will not be allowed to cross USIBWC levees.**

i. The Sponsor shall be required to install a gatewell operation platform at least three (3') feet from the levee crownline. The Sponsor shall be required to install and maintain a galvanized, or equivalent, grill/grating over the gatewell opening.

j. HYDRO 50-10 WATER CONTROL GATE or equal shall be used. All anchor bolts in the gatewell and the gate stem shall be stainless steel.

k. Steps shall be installed in accordance with OSHA requirements in the gatewell on twelve-inch (12") centers for access.

3. Installing Pipelines by Nearsurface Directional Drilling

a. Pipe Location

For installation under both levees and the river or pilot channel: The proposed pipeline entry or exit location, when located landside of a levee, shall be set back sufficiently from the landside levee toe to ensure that: (a) the pipeline reaches its horizontal level (maximum depth), and/or (b) the pipeline contacts the substratum sands or some other significant horizon but is no less than 300 feet landside from the levee centerline.

For installation under river or pilot channel only: The proposed pipeline entry or exit location, when located on the riverside of the levee, shall be located at least 35 feet from the levee toe.

The Sponsor shall determine the minimum cover under the bed of the river channel and submit plans for review and approval.

b. Drilling Requirements

The Sponsor shall furnish information addressing the following concerns and give specific dimensions, distances, pressures, weights, and all other pertinent data.

The pilot hole cutter head shall not be advanced beyond/ahead of the wash pipe more than a distance such that return flow is lost. Also, the wash pipe ID shall be sufficiently greater than the OD (cutting diameter) of the pilot cutter head such that return flow is enhanced. The applicant shall directly address the methodology which he plans to employ in his efforts to keep the return of flow up the drill hole during his entire operation. These requirements are to assure that blockage of the annular space between the wash pipe and drill pipe and associated pressure build-up do not occur.

Drilling fluid (mud) shall be of sufficient viscosity, be of sufficient weight and contain sufficient noncolloidal lubricating admixtures to: (a) assure complete suspension and removal of sands and other "solids' cuttings/materials; and (b) provide adequate lubrication to minimize bridging by cohesive materials.

The fly cutter used in the prereamer run shall have an OD (cutting diameter) sufficiently greater than the OD of the production pipe to assure that the hole diameter remains adequate to minimize hang-ups of the production run and thereby, associated stresses on surrounding soils.

The prereamer boring diameter shall be of sufficient size to ensure that the production pipe can be advanced without delay and undue stress to the surrounding soils. The prereamer boring operation shall be a continuous operation for the down-slope and up-slope cutting sections to prevent undue stress on the surrounding soils during re-start operations.

The depth of the pipe under the levee shall be at a level to maintain a minimum factor of safety of 3.0 against uplift from the pressurized drilling fluid during the drilling operation. A positive means of maintaining an open vent to the surface will be required whether through bored holes or downhole means while installing the drill pipe.

Automatic shut-off capability in the production pipeline shall be provided to immediately cutoff flow through the pipeline should leakage occur.

Excessive drilling fluid pressures can hydraulically fracture the levee foundation and levee embankment and shall be avoided. Should evidence of sinkholes, depressions, unexpected settlements, drilling fluid or grout manifest themselves on the ground surface or levee during the pipe installation, hydraulic fracturing of the levee foundation should be suspected and repairs to the levee shall be accomplished immediately. The Sponsor is liable for replacing/repairing the damaged levee to the USIBWC's satisfaction. The levee repair includes: degrade the levee embankment, open an inspection trench, excavate the damaged levee foundation, backfill under controlled conditions, and reconstruct the levee by placing and compacting with satisfactory levee construction materials and methods (See Section V.G.2). As example of the damage to levees which occurred on similar projects, the levee was hydraulically fractured and drilling fluid exited on the crown and/or toe of the levee. Repair may include total replacement of the levee and installation of a grout curtain to the depth of the pipe.

4. Reseeding of Levee and Berm Areas

Upon completion of any construction with USIBWC right-of-way, the worksite area shall be left in a clean and neat appearing condition with all debris and excess material removed from the site. That portion of the levee and berm area disturbed in the process of constructing a structure shall be re-seeded with "bermuda-type NK-37" or other native sod grasses such as Buffalo Grass. Seeds may be broadcast along with a good commercial grade fertilizer 16-20-0 or 16-8-8. The Sponsor shall water as frequently as necessary for a period of twenty-one (21) days to ensure a germination rate of not less than eighty percent (80%).

5. Headwalls, Chutes, Gate Valves, Flap (Automatic) Gates, etc.

The Sponsor shall provide a headwall, chutes, gate valve, flap (automatic) gates, energy dissipators, and other types of outfall structures in such a manner to prevent obstruction of flow or creation of scouring conditions in the floodway. In addition, the Sponsor shall provide scour protection at the outfall such as riprap. The Sponsor shall design the riprap based upon the issuing jet velocity. Pipelines discharging into a river or pilot channel, shall be required to be aligned 45 degrees toward the flow of water, this will prevent possible erosion to the opposite bank of the river or channel.

VI PIPELINES CROSSING RIVERS, PILOT CHANNELS OR DRAINAGE DITCHES

A. Pipelines Crossing Under Rivers

Restrictions must be placed on all construction activities involving temporary water diversions or constrictions placed in the river channel. No constrictions or diversions will be allowed during the flood seasons listed below:

Upper Rio Grande Flood Control Project: June 1st thru October 15th
Presidio Flood Control Project: June 1st thru October 15th
Lower Rio Grande Flood Control Project: June 1st thru October 31st
Tijuana River Flood Control Project: November 1st thru March 31st

Note: flood conditions may exist before or after the flood season that would require restrictions.

During the non-flood seasons (listed in Section V.G.2.a), river constriction or diversion shall not exceed more than 50% of the river channel width at any one time. Any temporary embankments or similar constructions to divert water from a portion of the river channel must be limited to an elevation of one foot lower than the over bank floodway surface. As much work as possible should be performed during the "non-irrigation" season that usually extends from mid-October to mid-January.

The Sponsor shall determine the minimum cover under the bed of the river channel and submit plans for review and approval. The pipeline shall be constructed in a straight alignment for a minimum distance of 15 feet beyond the landside of the levee toe.

The Sponsor will assure that no borrowed material will be left in the floodplain.

The Sponsor will replace to its predisturbed condition rip-rap material along the levee or river bank.

See Section V.G for installation requirements.

B. Pipelines Crossing Under Pilot Channels or Drainage Ditches

The pipeline shall be installed with a minimum cover of five feet (5') under the channel side slopes and bed of the pilot channel or drainage ditch. However, the Sponsor shall submit to the USIBWC scour calculations to justify depth. See Attachment IV for details.

C. Pipelines Crossing Over Rivers and Pilot Channels

Where the pipeline crosses over a river, the pipeline shall be placed on piers (the piers must not obstruct flood flows of the river). See Section VIII for additional requirements that apply to the construction of pipelines crossing over rivers.

The Sponsor shall submit final plans and hydraulic computations to indicate the effects the proposed project would produce on flows and floodway capacity.

Pipes crossing over the Rio Grande and Colorado Rivers shall require a Department of Transportation permit (US Coast Guard). Clearances and requirements shall be directed by the US Coast Guard.

VII CONSTRUCTION REQUIREMENTS FOR LICENSES

A. General

A License or Permit is required from the USIBWC for any proposed activities crossing or encroaching upon the floodplains of USIBWC Flood Control Projects and Right-of-Way. Each License/Permit shall contain different construction requirements, depending on the type and method of construction. Therefore, the following requirements shall apply to most USIBWC Licenses:

- The Licensee shall maintain a 24 hour flood emergency service equipment and personnel during construction work on USIBWC right-of-way. The Licensee will be required to take immediate action upon notification by USIBWC to backfilling and compacting all excavated trenches and to reconstruct the levee to its original condition to prevent any flooding. The Licensee will also be required to remove all excess material from the floodplain and levees. The Licensee shall furnish to the USIBWC, the names and telephone numbers of two persons responsible for this emergency service. Any damages and cost associated with such, to person(s) or property resulting from the Licensee's failure to conduct the necessary emergency measures, will be the Licensee's responsibility. The following requirements shall be included in all USIBWC Licenses for construction within USIBWC Right-of-Way.

- Upon completion of the construction work, the site of the work shall be restored to a clean and neat appearing condition. Restore the areas disturbed by the project to pre-project conditions. All debris and excess materials shall be removed from the site to the satisfaction of the USIBWC.

- The Licensee shall provide a full-time construction inspector for the duration of the work. The construction inspector shall be responsible for overall construction requirements and must be on-site during all compacted embankment work.

- Licensee shall notify the USIBWC at least one week prior to the start of work authorized by each License.

- Protection of Existing Improvements

  During construction of work within USIBWC Right-of-Way, care shall be exercised to prevent damage to existing United States facilities. Any facilities damaged as a result of the construction shall be repaired or replaced at the Licensee's expense to the satisfaction of the USIBWC. United States facilities include but are not limited to levee roads and slopes and ramps.

- Safety to the Public

  The Licensee shall provide, erect, and maintain all necessary barricades, suitable and sufficient flasher lights, flagmen, danger signals, and signs; and shall take all necessary precautions for the protection of the work and the safety of the public. Roads closed to traffic shall be protected by effective barricades on which shall be placed acceptable warning and detour signs. All barricades and obstructions shall be illuminated at night by lights kept burning from sunset until sunrise.

- Landscape Preservation

  The Licensee shall exercise care to preserve the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent work, for approved construction roads and for excavation operations, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage which may be caused by the Licensee's construction operations and equipment. Movement of crews and equipment within the right-of-way and over routes used for access to the work shall be performed in a manner to prevent damage to United States' facilities.

- Prevention of Water Pollution

  The Licensee shall comply with applicable Federal and State laws, orders, and regulations concerning the control and abatement of water pollution.

  The Licensee's construction activities shall be performed by methods that will prevent entrance, or accidental spillage of solid matter, contaminants, debris, and other objectionable pollutants and wastes into the river/channel, flowing or dry watercourses, and underground water sources. Such pollutants and wastes include, but are not restricted to refuse, garbage, cement, concrete, sewage effluent, industrial waste, radioactive substances, oil and other petroleum products, aggregate processing tailings, mineral salts, and thermal pollution. Sanitary wastes shall be disposed of in accordance with State and local laws and ordinances.

Dewatering work for structure foundations or earthwork operations near streams or watercourses shall be conducted in a manner to prevent excessive muddy water and eroded materials from entering the river or watercourses by construction of intercepting ditches, bypass channels, barriers, settling ponds, or by other approved means. Mechanized equipment shall not be unnecessarily operated in flowing water.

- Abatement of Air Pollution

The Licensee shall comply with applicable Federal, State, interstate, and local laws and regulations concerning the prevention and control of air pollution.

In conduct of construction activities and operation of equipment, the Licensee shall utilize such practicable methods and devices as are reasonably available to control, prevent, and otherwise minimize atmospheric emissions or discharges of air contaminants. Equipment and vehicles that show excessive emissions shall not be operated until corrective repairs or adjustments are made.

The Licensee's methods of storing and handling cement shall include means of controlling atmospheric discharges of dust.

During the performance of the work required by these specifications or any operations appurtenant thereto, whether on right-of-way provided by the United States or elsewhere, the Licensee shall furnish all of the labor, equipment, materials, and means required, and shall carry out proper and efficient measures wherever and as often as necessary to reduce the dust nuisance, and to prevent dust which has originated from his operations from damaging crops, lands, and dwellings, or causing a nuisance to persons. The Licensee will be held liable for any damage resulting from dust originating from his operations under these specifications on United States right-of-way or elsewhere.

- Temporary Erosion Control

Erosion and sedimentation control devices shall be constructed or installed as needed based upon site conditions during construction activities. These preventive measures are required to minimize the potential for soil erosion or sedimentation of streams and rivers and to restore the construction site.

Erosion control techniques may be vegetative or physical. The vegetative techniques includes reseeding with native grasses as stated in Section V.G.4. The physical structure techniques include sediment barriers such as hay bale berms or silt fences.

VIII BRIDGE CROSSING OF FLOODWAYS AND RIVERS

A. General

The Sponsor shall submit final plans and hydraulic computations to indicate the effects the proposed project would impact on flows and floodway capacity. The plans shall include cross and transverse section drawings covering the floodplain bound by levees or high ground in both the United States

and Mexico and reasonable distances up and downstream of the proposed structure. The drawings should have sufficient detail on existing vegetation, roads and structures along with proposed improvements in the overbanks such as paved roads and ramps.

B. International Bridges

1. General

Pursuant to the International Bridge Act of 1972 (P.L. 92-434, 86 States. 731, approved September 26, 1972) and Executive Order 11423, the U.S. bridge sponsor must acquire a Presidential Permit through the Department of State authorizing the construction, operation and maintenance of the international bridge.

After issuance of Presidential Permit, the bridge Sponsor must apply to the Department of Transportation (U.S. Coast Guard) for issuance of a bridge permit to construct a bridge crossing over a navigable waterway. The USIBWC and MXIBWC must approve the bridge conceptual plans prior to U.S. Coast Guard action on the application.

Approval of any proposed structure to be constructed within an international river floodplain will be required from the IBWC to assure compliance with provisions of Article IV, B of the 1970 Boundary Treaty. At the present time, the U.S. and Mexican Sections have informal agreements to use criterion or design flood flow data, requiring two meters of freeboard between the lowest bridge chord and the design water surface elevation to help facilitate approval of bridge structure and to minimize effects which would be in contravention to Article IV, B of the 1970 Boundary Treaty.

The bridge designers or owners will seek design coordination and assistance from the U.S. and Mexican Sections, IBWC by forwarding their request through the appropriate sponsoring authority in each country.

2. Items to Review

a. The bridge structure must be designed to pass the project design or criterion flood (although there is no official flow policy, the two sections use informal agreements) at the bridge site without causing an obstruction to normal or flood flows. No significant increase in water surface elevation is allowed, and the proposed structure may not deflect the normal or flood flow to one bank or the other.

b. A minimum clearance of 6.6 feet (two meters) must be provided between the bottom of the lowest bridge chord (usually at abutments) and the design water surface for the project design or criterion flood at the bridge site. This freeboard provides extra capacity for passage of debris, wave buildup and uncertainties in the hydraulic analysis (i.e. variable conditions of an alluvial river).

c. For bridges crossing over levees, a minimum vertical clearance of 14.5 feet (4.42 meters) shall be provided above the levee crown to allow for the safe passage of heavy equipment.

d. Pier bents are to be aligned with the direction of the river flow to prevent the least obstructive area to the flood flows and floating debris. Piers will be sufficiently founded to preclude scour failure.

e. Provisions must be incorporated into the bridge design for installation of an international boundary monument(s) over the centerline of the normal flow channel. The Commission will provide the exact location for the monument(s). In addition, demarcation of the international boundary shall be provided on the road surface. The criteria for demarcation shall be provided by the USIBWC.

f. Generally, earth fills or approach roadway embankments within the floodplain should be kept to a minimum and not allowed to increase the water surface elevations upstream of the proposed bridge.

g. For parallel bridge crossings, new bents and piers will be placed adjacent to each other and in alignment with the river flows with the understanding that the number of bents and piers can be decreased in favor of longer spans. In other words, the number of bents and piers in a new bridge are to be decreased to the extent that is practical; however, the new bridge piers are to conform to location of existing bents of parallel bridge.

h. Approval must be received from the IBWC prior to commencement of bridge construction or any structure within the floodplain of the international reaches of the Rio Grande and Colorado River.

i. The integrity of the levee systems must be maintained during (and after) bridge construction. Provisions should be made to assure that construction does not impede the ability of the project to convey the project design or criterion flood.

j. The Sponsor(s) shall submit hydraulic studies to assure compliance with items above. This includes a scour analysis using Federal and Highway standards.

C. Bridges within Texas and New Mexico (Rio Grande Canalization Project)

1. General and Construction Requirements

a. Restrictions must be placed on all construction activities involving temporary water diversions or constrictions placed in the river channel. No constrictions or diversions will be allowed within the river channel during the flood season. As a general rule, flooding should be anticipated during June, July, August, and September. Additionally, there may be some risk of flooding in May and October for some years that must be evaluated on a case by case basis with due consideration of river conditions in that year. During non-risk months, river constrictions or diversions shall not exceed 50% of the river channel width at any time. Any temporary embankments or similar constructions to divert water from a portion of the river channel must be limited to an elevation of one foot lower than the overbank floodway surface. Additionally, as much construction work as possible should be performed during the

"non-irrigation" season that usually extends from mid-October to mid-January.

b. Contractor's program of work shall be such as to have the minimum impact on river flows. The program should be submitted to the USIBWC for review and approval before initiating work.

c. River flow diversions for construction of any one pier or placement of beams should be restricted to a period not to exceed 45 days.

d. The river channel, river banks, floodplains, and levees must be restored to their original condition promptly in the event of unexpected high river flows and prior to the next flood season which ever occurs first.

e. For bridges crossing over levees, a minimum vertical clearance of 14.5 feet (4.42 meters) must be provided above the levee crown to allow for the safe passage of heavy equipment.

f. The bridge's Sponsor will be responsible for coordinating construction activities with the USIBWC Project Manager.

g. The Sponsor will be required to submit a schedule of construction to the local USIBWC Field Office Project Manager for approval.

h. The Sponsor will be responsible for obtaining other permits as may be required (i.e. 404 permits, etc.) for the subject work and for complying with restrictions of the same.

2. Items to Review

a. Old bridge piers must be removed to an elevation two feet below the invert of the channel and to 12 inches below ground level in the floodplain, as a minimum.

b. The Sponsor must submit scour calculation analysis to assure the depth of the bridge foundation is adequate. This information is requested to assure the sponsor has taken scour into account in the design.

c. The bottom chord of the bridge will be no lower than the elevation at centerline of the levee(s) in the vicinity of the proposed bridge site.

d. For replacement of an existing bridge, the proposed bridge length will be no shorter than that of the existing bridge. Additionally, the USIBWC may require longer bridges than the existing bridges if hydraulic analysis show this is necessary.

e. The bridge structure will be designed to pass the project design flood at the bridge site without causing an obstruction to normal or flood flows, without significantly increasing the flood stage, and without deflecting the normal or flood flow to one bank

or the other.

f. Piers and bents are to be aligned with river flow in order to present the least obstruction area to the path of flood waters and floating debris. Piers must be sufficiently founded to preclude scour failure.

g. For parallel bridge crossings, piers and bents will be placed adjacent to each other and in alignment with the river flow, however, piers and bents shall be spaced to the maximum distance as practical (ie. the new bridge can have fewer bents and piers than the nearby existing bridge).

h. Approval must be received from the USIBWC prior to commencement of construction of any structure within the floodplain.

i. The integrity of the levee system must be maintained. Provisions should be made to assure that construction does not impede the ability of the project to convey the project design flood.

j. Stockpiling of materials within the floodway is not permitted.

k. The Sponsor must submit hydraulic studies to assure compliance with items above.

IX NATURAL GAS DRILLING WITHIN THE RIO GRANDE FLOODPLAIN

The following requirements shall be enforced for all vertical drilling within the Rio Grande floodplain:

- All drilling and completion operations shall be performed in accordance with the rules and regulations of the Texas Railroad Commission (TRC) and the Bureau of Land Management (BLM). A permit shall be required from the TRC and a lease from the BLM.

- Prior to completion, the casing and wellhead shall be pressure tested to maximum allowable operating pressure to insure complete control in case of future leaks/equipment failure.

- No separators or tanks of any type shall be permitted in the floodplain. Such facilities shall be located on the landside of the levees or outside of the 100-yr floodplain when the well is completed and in service. All facilities constructed within the floodplain shall project over the natural ground no more than three feet (3').

- The Sponsor shall install and maintain suitable markers or signs indicating the location of the well site within the USIBWC right-of-way. The markers or signs shall be a minimum height of five (5') feet above the ground. No markers are to be installed on the levee slopes or fifteen (15) feet from the toe of the levee.

- The USIBWC shall notify Mexico of the proposed operations in accordance with Section XVII.

- If the drill site is located within USIBWC Right-of-Way, a permit to perform the work and maintenance of the site will be required.

X FENCES

Fences within the floodplain of a river or floodway channel are not recommended where avoidable. During high flood stages, floating debris may pile up on a fence line and consequently raise flood stages. However, the installation of chain link fences may be allowed if they are designed to collapse during high flood stages or if they can be removed within a twenty-four hour period. In addition, four strand barbed wire fencing is authorized with posts no larger than four (4") inches in diameter, spaced no closer than twelve (12) feet apart and the wire shall be attached to the downstream side of the posts. The sponsor shall submit plans and design calculations to assure compliance with the above criteria.

No fencing shall be placed on the levee slopes or roadway that is running parallel to the levee itself. All fencing placed parallel to the levee shall be a minimum distance of fifteen (15) feet from the toe of the levee. No fencing shall be placed inside or across a pilot channel.

XI GATES

Gates on the levee roads will be allowed once reviewed and approved by the USIBWC. They are not to interfere with the construction , operation, and/or maintenance of the USIBWC flood control project work. All gates shall have a minimum clear opening of sixteen (16) feet and will be such that they can easily be opened or closed by one individual. Suitable markers and reflectors shall be placed on the gate so as to be readily visible at night. All gates shall be located a sufficient distance back from any off-ramp or roadway to permit a vehicle to park on level ground while opening and closing the gate. The exact location and type of gate shall be reviewed and approved by the USIBWC prior to installation.

XII RAMPS

Ramps on the riverside of the levee will be allowed when a new bridge is constructed across a river or channel. These ramps are used for the purpose of crossing under the bridge. Ramps for other purposes shall be avoided and will be approved only if they are essential. The actual location of the ramps shall be reviewed and approved by the USIBWC prior to any construction.

All ramps shall have a minimum width of 20 feet (20'). Some widening of the crown of the levee at its juncture with the ramp may be required to provide adequate turning radius. The grade of the ramp should be no steeper than 12 percent. Side slopes on the ramp should not be less than 1V on 3H to allow mowing equipment to operate. The fill material shall meet the requirements of Section V.G.2.b and compacted in accordance with Section V.G.2.d. The ramp shall be surfaced in accordance with Section V.G.2.e. See Attachment V, for details.

XIII ELECTRICAL AND TELEPHONE CRITERIA FOR OVERHEAD WIRE CROSSING

The overhead transmission line shall be constructed and maintained in such a manner as to provide a minimum vertical clearance (at the temperature of 60 degrees Fahrenheit) of not less than 28 feet above the levee crown and at least 12 feet (3.7 meters) above the floodway design high water surface level in the area of the floodway channel.

No structure (poles or guy wires) shall be located closer than 35 feet from the toes of any levee. No structure (poles or otherwise) shall be located closer than 15 feet from the top of any channel bank.

Guy wires may be anchored within the USIBWC right-of-way in such a manner that they do not interfere with the operation and/or maintenance of the channel, levees, or related structures. A witness post, not less than five feet (5') above the ground, shall be installed by each anchor or the cable shall be wrapped up to a point at least five feet (5') above the ground with a bright colored material to make it obviously visible.

It shall be the Sponsor's responsibility to maintain the areas clear of brush within a ten foot (10') radius of each pole, under the guy wires and around the anchors, on both sides of the levee and within the USIBWC right-of-way limits.

XIV LOW DAMS OR DIVERSIONS OF FLOWS

The Sponsor shall submit plans, hydraulic and structural computations and specifications for low dams or other obstructions for review and comments prior to the construction of any type dam structure in a floodway area. These plans will be reviewed to determine if adverse hydraulic or structural effects would occur within the floodway as a result of the proposed construction. Prior to an extensive engineering study for any type of water barrier in a floodway, the concept plan, proposed location, and purpose shall be reviewed by the USIBWC and MXIBWC (international projects).

Further, the Sponsor(s) are responsible for obtaining the proper water rights permits from the Texas National Resource Conservation Commission, Water Master before providing diversions structure plans to the USIBWC. Additional permits mentioned in Section IV must also be obtained.

Should such diversions be permissible, the Sponsor of the facilities shall install at his expense, the measuring devices that the USIBWC considers necessary to carry out treaty-required water measurements and water accounting.

XV CONSTRUCTION OF RECREATION FACILITIES

The Sponsor shall submit plans to USIBWC for review and approval on any proposed recreation type facilities to be constructed in an existing or approved floodway area. Each plan including hydraulic computations will be reviewed for individual and cumulative effects to determine if the proposed construction would produce adverse effects on an existing or approved floodway area.

XVI PLANTING OF TREES

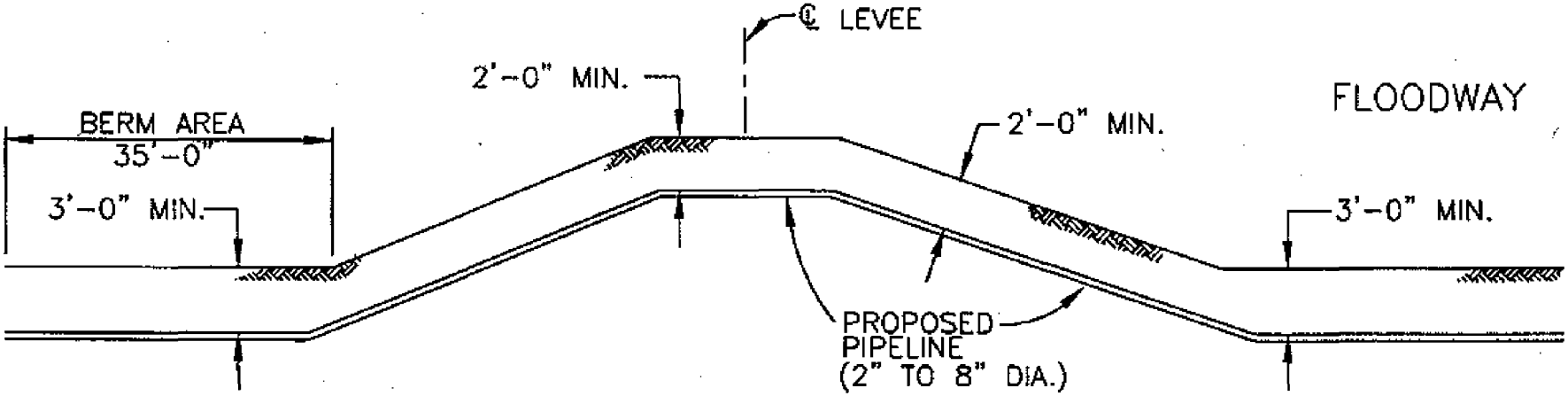
Planting of trees in existing floodways is not encouraged and shall be permitted only where levee freeboard is available to permit an increase in water surface elevation. Only trees with deep-type root systems may be planted in selected areas of existing or approved floodways. The planting shall be a minimum of 50 feet from the toe of the levee or the top of the channel bank unless otherwise directed by the IBWC. Trees shall be planted at an average spacing of 100 feet, center to center. Appropriate protection against rodents or beavers shall be provided and each tree location shall be identified to prevent damage while mowing operations are conducted. Trees shall be pruned by the Sponsor to allow mowing with tractor type mowers. No bush or vine plants will be permitted.

The Sponsor shall submit a coordinated planting plan with hydraulic computations for review and approval.

XVII COORDINATION WITH MEXICO

The USIBWC is required by the 1970 Boundary Treaty (23 UST 371) between the United States and Mexico, to join the Mexican Section of the IBWC in approving any activities within the channel of the Rio Grande and Colorado River or their design flood floodplains to assure that their construction will not cause deflection or obstruction of the normal or flood flows of these international boundary rivers. Further, the IBWC under provisions of the 1944 Water Treaty (59 Stat 1219) between the United States and Mexico, must be assured that the construction will not result in an international water quality problem and that the activities will not interfere with the operation of IBWC Flood Control Projects. Statutory authority of the USIBWC for carrying out actions in the United States is provided in 22 U.S.C. 277 a-d.

ATTACHMENT 1



TYPICAL PIPELINE LEVEE CROSSING DETAIL

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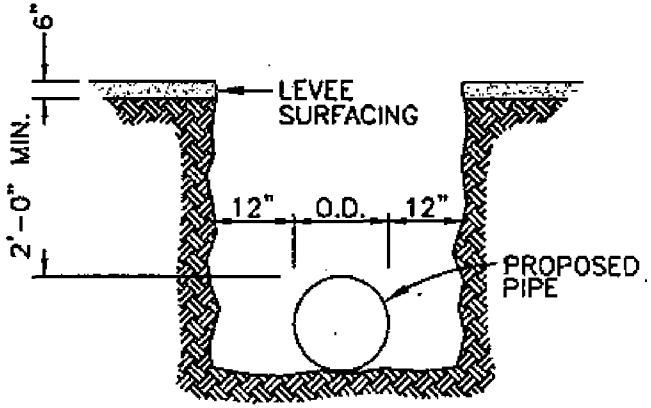


TYPICAL EXCAVATION SECTION

N.T.S.

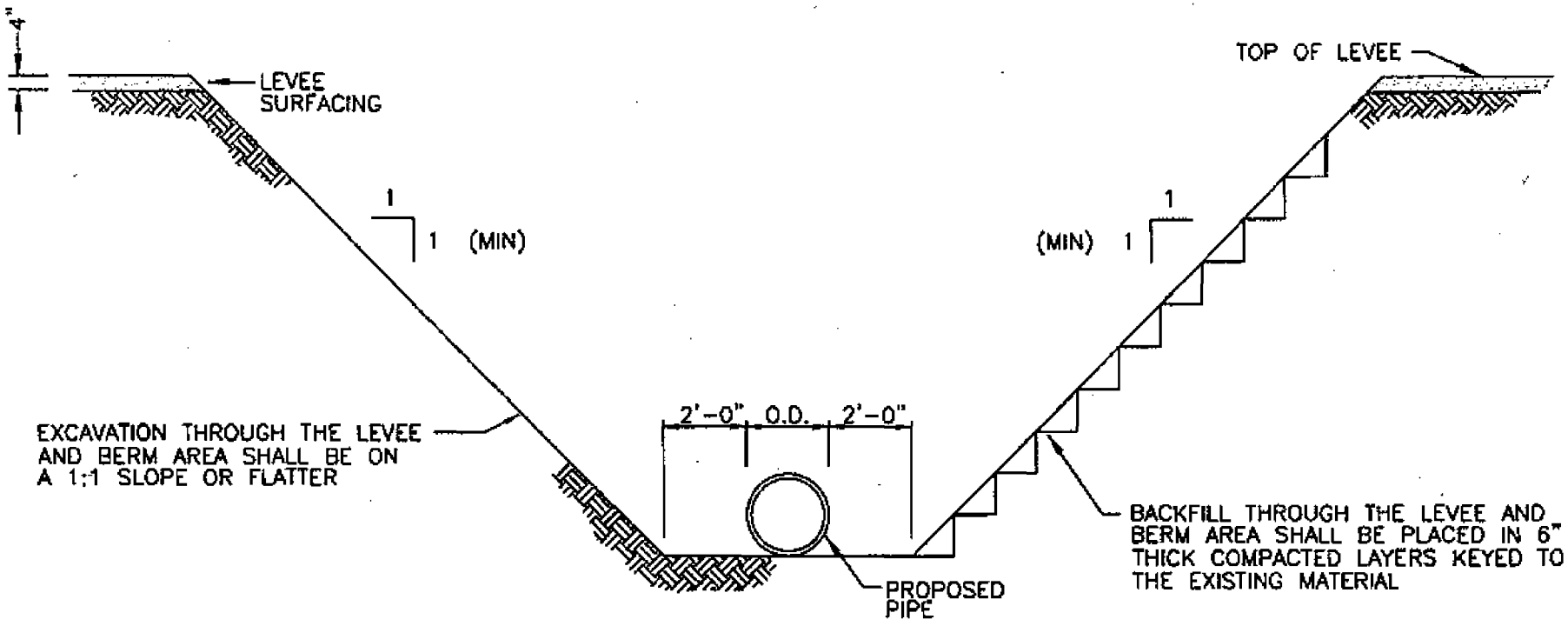
REV.	DESCRIPTION	RECOM'D. BY	DATE

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION

PIPELINES CROSSING LEVEES 2" TO 8" DIAMETER PIPES DETAILS

DRAWN C.B.		RECOMMENDED	
CHECKED R.P.		APPROVED C.M.	
1 OF 1	EL PASO, TEXAS	JANUARY 1999	24953

ATTACHMENT II



TYPICAL EXCAVATION SECTION

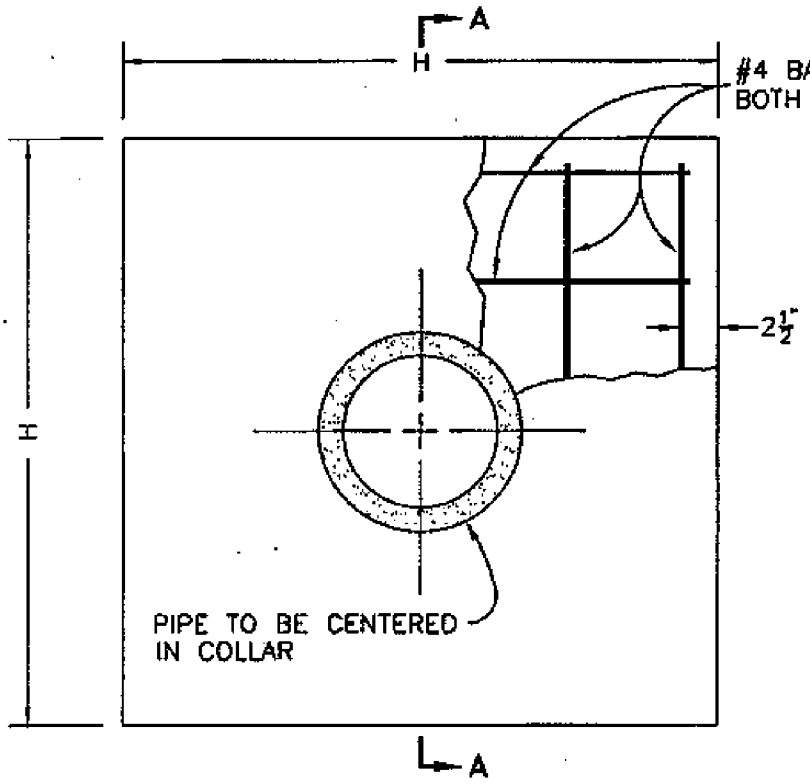
N.T.S.

REV.	DESCRIPTION	RECOM'D. BY	DATE

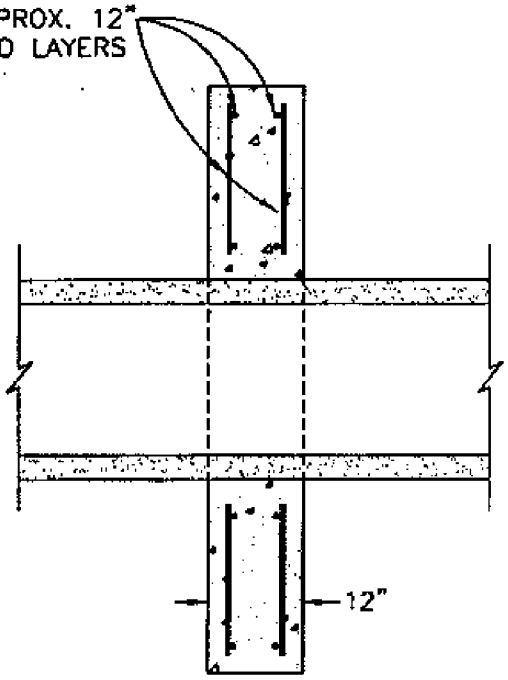
INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION

EXCAVATION THROUGH LEVEES OPEN CUT METHOD (10" DIAMETER PIPES & LARGER)

DRAWN C.B.		RECOMMENDED	
CHECKED R.P.		APPROVED C.M.	
1 OF 1	EL PASO, TEXAS	JULY 1998	25083



ELEVATION



SECTION A–A

PIPE COLLAR FOR PRECAST CONCRETE PIPE

N.T.S.

DIMENSIONS

PIPE DIA.	H
10"	4'–0"
12"	4'–3"
15"	4'–6"
18"	5'–0"
21"	5'–3"
24"	5'–6"
27"	6'–3"
30"	7'–0"
36"	8'–6"
42"	9'–3"
48"	10'–0"
54"	11'–6"
60"	12'–0"
72"	14'–0"

NOTES:

1. CONCRETE CUT–OFF COLLAR(S) SHALL BE INSTALLED ON THE LEVEE CENTERLINE. THE COLLAR SHALL HAVE A MINIMUM THICKNESS OF TWELVE (12") INCHES.
2. THE NUMBER OF COLLARS SHALL BE DETERMINED BY SPONSOR AND SUPPORTED BY CALCULATIONS.
3. FORMS FOR CUT–OFF COLLAR SHALL REMAIN IN PLACE FOR FOUR (4) DAYS.
4. COMPACTION AROUND CUT–OFF COLLAR SHALL BE PERFORMED USING MANUAL EQUIPMENT TO AVOID DAMAGING THE COLLAR.
5. CONCRETE STRENGTH SHALL NOT BE LESS THAN 3,000 psi.

REV.	DESCRIPTION	RECOM'D. BY	DATE

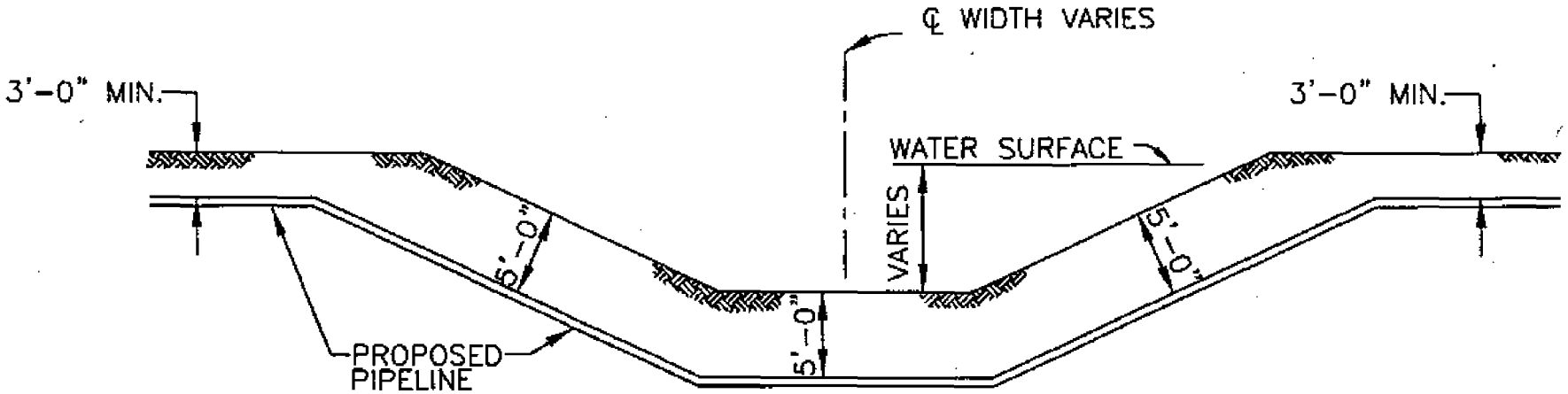
INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION

PIPE COLLAR
DETAILS

DRAWN C.B. RECOMMENDED
CHECKED R.P. APPROVED C.M.

EL PASO, TEXAS | DECEMBER 1995 | 24954

ATTACHMENT IV



TYPICAL PIPELINE CROSSING DETAIL

N.T.S.

NOTES:

1. THE SPONSOR SHALL SUBMIT SCOUR CALCULATIONS TO JUSTIFY DEPTH.

REV.	DESCRIPTION	RECOM'D. BY	DATE

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION

PILOT CHANNEL & DRAINAGE DITCH
PIPELINE CROSSING DETAILS

DRAWN C.B.		RECOMMENDED	
CHECKED R.P.		APPROVED C.M.	
1 OF 1	EL PASO, TEXAS	JULY 1998	25016

United States Section
International Boundary and Water Commission
United States and Mexico

United States Section Directive

Volume IV
Chapter 701
November 2, 1998

SUBJECT: Occupational Safety and Health Program

TO: Executive Management Staff, Division Engineers, Heads of Office, Project Managers: Director, EEO; and Presidents, AFGE Locals 3060 & 3309

CONTROL: Headquarter's Occupational Safety & Health Manager (OSHM) (915) 832-4162

701.1 Requirement/Authority:

The purpose of this Directive is to establish the United States Section's Occupational Safety and Health Program; provide implementation procedures; and assign responsibilities for program accomplishment. Authority: Executive Order 12196, February 26, 1980; Occupational Safety and Health Act of 1970, as amended (Public Law 91-596 as amended by Public Law 101-552).

701.2 Organization and Responsibilities

A. Occupational Safety and Health Manager (OSHM).

The OSHM shall be responsible for the direction and implementation of the US Section's Occupational Safety and Health program. Specifically, the OSHM shall:

1. Serve as the safety and occupational health expert for the United States Section International Boundary and Water Commission (USIBWC) and is responsible for administering the Occupational Safety and Health Program. Assures program implementation in accordance with the Executive Order, Occupational Safety and Health Act of 1970, as amended, and other regulations and requirements.

2. Develops and directs the establishment of occupational safety and health requirements manual (s), Standard Operating Procedures (SOP's) Standard Operating Rules (SOR's) and approves Organizational Operating Procedures (OOP's) and Organizational Operating Rules (OOR's).

3. Develops and directs the USIBWC safety and health inspection program to assure oversight of operations and compliance with applicable regulatory standards and other requirements; and

4. Reports to the Principal Engineer - Operations Department on the status of the USIBWC program.

5. Develops and conducts a safety education program to fulfill the employee development requirements of USIBWC employees.

6. Maintains Safety and Health information, OSHA records and files. Reviews accident reports, evaluating such reports, and directing implementation of measures designed to prevent recurrence of such accidents and/or the prevention of similar accidents in the future.

B. Occupational Safety and Health Committees

As provided for in the Executive Order, Occupational Safety and Health Committee's shall be established. Two committee shall be established at the USIBWC: an Executive committee and a field office committee.

1. The Headquarters Occupational Safety and Health committee shall consist of the Principal Engineer's, Operations Department, Engineering Department, Special Projects Department , Human Resources Director and The Occupational Safety and Health Manager (OSHM).

2. Each field office shall have at least one employee elected by his/her peers as the field office safety and health committee member (including one each for the Las Cruces, Fort Hancock, and Anzalduas Dam facilities).

701.3 Supersession:

This directive supersedes Headquarters Directive; Volume IV, Chapter 701, January 30, 1997, Subject: Occupational Safety and Health Program.

701.4 References:

(1) EXECUTIVE ORDER 12196, February 26, 1980
Occupational Safety and Health Program for Federal Employees

(2) 29 CFR 1900-1999 Occupational Safety and Health Administration

701.5 POLICY

It is the Policy of the United States Section, International Boundary and Water Commission, United States and Mexico that:

A. The USIBWC will operate an Occupational Safety and Health program in accordance with Executive Order 12196, February 26, 1980 and the Regulations promulgated by the Secretary of Labor in 29 CFR 1900-1999;

B. The USIBWC will provide places and conditions of employment that are free from recognized hazards which cause or are likely to cause death or serious physical harm;

C. The USIBWC will conduct safety and health activities based on open, honest, and responsive communications;

D. The USIBWC will promote teamwork through the involvement of all its employees;

E. The USIBWC will empower its employees through training, information and program involvement to effectively protect themselves and the public;

F. The USIBWC will establish clear ownership and accountability for all activities;

G. The USIBWC will promote and encourage the sharing of safety and health information and resources;

H. The USIBWC will manage and conduct a consistent positive approach to safety and health across all USIBWC facilities;

I. The USIBWC will allocate appropriate resources to support safety and health activities;

J. The USIBWC will integrate safety and health into all activities;

K. The USIBWC will apply a systemic approach to all activities that affect safety and health;

L. The USIBWC will continue to improve its safety and health performance;

M. The USIBWC employees will accept and demonstrate individual responsibility for their own safe behavior.

The USIBWC strongly believes that all accidents are preventable and that all tasks can be completed without injury, illness or property damage. Our commitment to a pro-active safety and health management; continuously improving process; complying with all applicable State, Federal and Local Regulations; and employee involvement will cultivate a strong safety and health culture and assist in the achievement of our goal -

"ZERO ACCIDENTS"

701.6 General:

A. Nothing in this directive shall prohibit or interfere with management's:

1. Right to hire, assign, direct, layoff, or retain employees as well as suspend, remove, reduce in grade of pay, or take other disciplinary action;

2. Right to assign work and determine personnel by whom operations shall be conducted; and

3. Right to take necessary actions in emergencies to carry out the USIBWC's mission.

B. Committee members shall be authorized official time to participate in activities provided in this Directive.

C. Specific implementation instructions in program areas shall be issued as a Safety and Health Manual/ Policy /Standard Operating Procedure (SOP's)/ Standard Operating Rule (SOR), Organizational Operating Procedures (OOP's) and/or Organizational Operating Rule (OOR's) to this Directive and shall be incorporated as part of the USIBWC's policy and requirements.

707.7 Effective Date:

This Directive is effective upon issuance.

FOR THE COMMISSIONER

Carlos Marin
PE-Operations Department

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION

FOR INFORMATION

MEMORANDUM

November 2, 1998

TO : All USIBWC Supervisors
Presidents, AFGE Locals 3060 & 3309

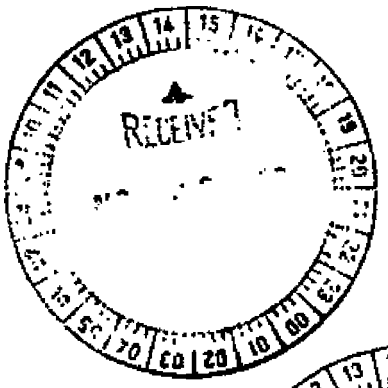
FROM : Victor J. Brandt, Safety and Health Manager

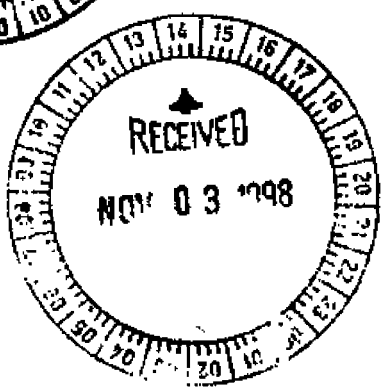
SUBJECT: Safety and Health Directive Volume IV, Chapter 701

This memorandum transmits the USIBWC's new Safety and Health Directive. It is effective immediately upon receipt. Comments and suggestions were received from the PE's and the field offices. These were appreciated, and most of the suggestions have been incorporated into the final document.

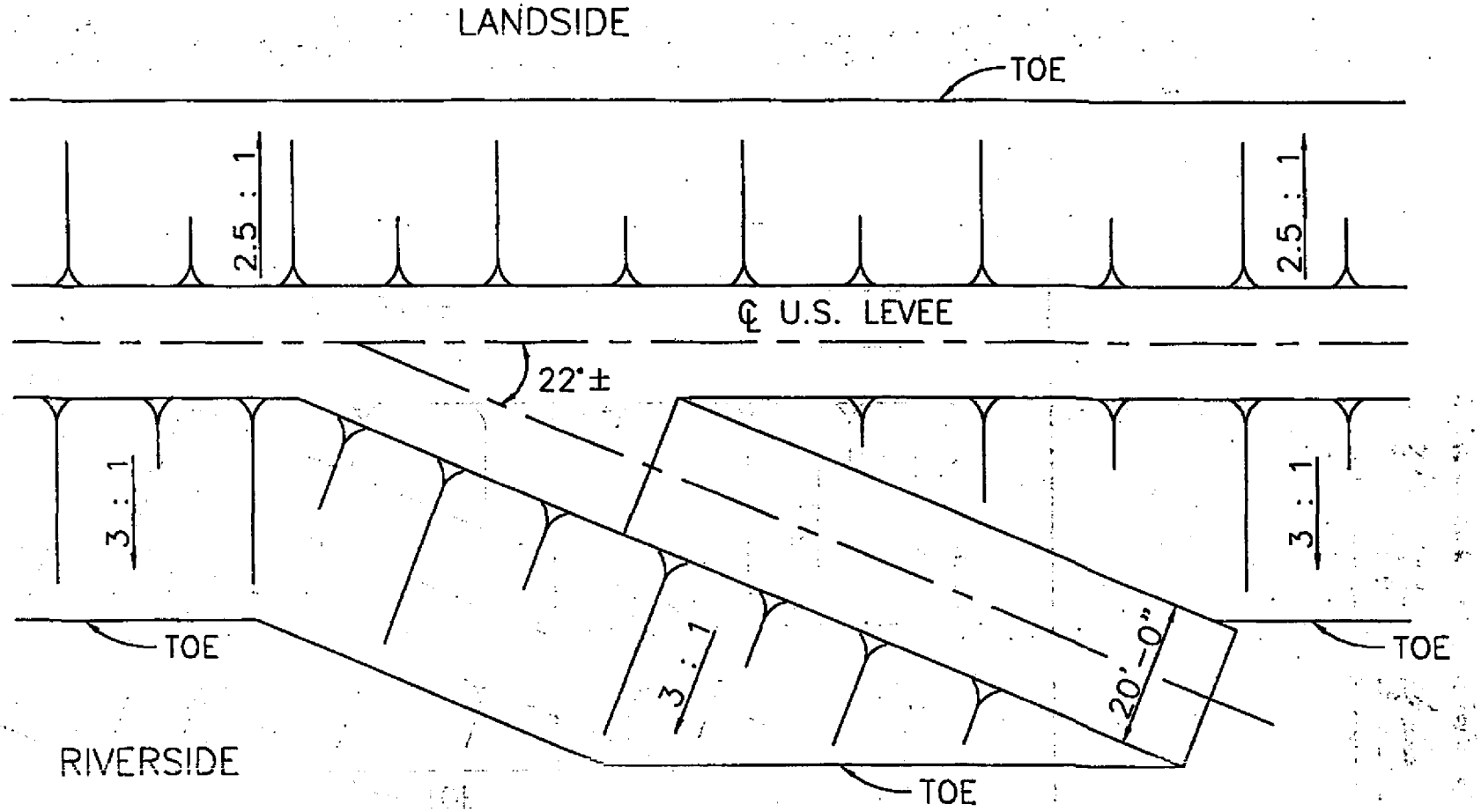
This directive is the first step in the development of the USIBWC safety and health program. Like all directives, this is a living document and is subject to change or modification from time to time. If after the document is implemented, you find an area that you feel needs to be changed or modified, please contact me by phone, fax, E-mail or ccmail.

Other directives and the safety manual will be developed and distributed as soon as possible.





ATTACHMENT V



LEVEE RAMP

N.T.S.

REV.	DESCRIPTION	RECOM'D. BY	DATE

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION

LEVEE RAMP
DETAILS

DRAWN C.B. RECOMMENDED
CHECKED R.P. APPROVED C.M.

1 OF 1	EL PASO, TEXAS	JULY 1998	25084

FLOOD EMERGENCY OPERATIONS MANUAL

TIJUANA RIVER FLOOD CONTROL PROJECT

UNITED STATES SECTION

INTERNATIONAL BOUNDARY AND WATER COMMISSION

UNITED STATES AND MEXICO

NOVEMBER 1999

VOL III, M 711

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INTRODUCTION

The Tijuana River is an international stream having its source partly in the United States and partly in Mexico (see Figure #1). It is formed by the confluence of two tributaries in Mexico, Rio de las Palmas and Rio Alamar (known in the United States as Cottonwood Creek). The Tijuana River flows northwestward 4.3 kilometers (2.7 miles) through the City of Tijuana, Baja California to the international boundary where it crosses the boundary into the United States. It continues westward through lands in the cities of San Ysidro and Imperial Beach, California, a distance of about 10 kilometers (6 miles), to discharge into the Pacific Ocean.

Three major dams and reservoirs were built in the Tijuana River Basin. Rodriguez Dam, built in 1936, is located on the Rio De las Palmas in Mexico. Morena Dam and Barrett Dam, built in 1912 and 1922, respectively, are located on Cottonwood Creek in the United States. Most flows in the Tijuana River are regulated by at least one of these dams.

The Tijuana River Flood Control Project (Project) was completed in December 1978 providing flood protection for the Standard Project Flood of 3,820 cms (135,000 cfs) or approximately the 333-year flood event. The Project is authorized by IBWC Minutes Nos. 225, 236, and 258, pursuant to the 1944 Water Treaty, and the Act of October 10, 1965 (80 Stat 884 as amended; 22USC277d-32,33). The Project consists of 4.3 kilometers (2.7 miles) of concrete lined channel in Mexico and 373 meters (1,223 feet) of concrete lined channel in the United States. The concrete lined channel has a trapezoidal cross section comprised of a 70 meter (230 feet) bottom width with a triangular low flow channel 1 meter (3.3 feet) deep at the center of the channel. The Project continues westerly for 367 meters (1,205 feet) with a grouted stone channel including a transitional cross section from a 70 meter (230 feet) bottom width to a 235 meter (830 feet) bottom width. At this point, the Project extends for 367 meters (1,205 feet) with a dirt channel and parallel levees. The lower 1,128 meters (3,700 feet) of channel functions as a flared transitional channel to reduce velocities of flood flows, known as the energy dissipator. Just downstream of the flared transitional channel, is a concrete slurry berm that follows the north levee, extending 1,611 meters (5,287 feet) to Dairy Mart Road and the south levee, extending 782 meters (2,565 feet) along the international boundary to high ground. An unlined, trapezoidal, low flow channel with a 15.2 meter (50 feet) bottom width extends 2,140 meters (7,021 feet) downstream from the energy dissipator through a sediment deposition area and under Dairy Mart Road to the natural Tijuana River channel.

The total drainage area above the Hollister Street Bridge near Nestor, California is 4,465 square kilometers (1,724 square miles). Of the total drainage area, about 3,279 square kilometers (1,266 square miles) or 73.4 percent is in Mexico.

In the United States, the U.S. Section, International Boundary and Water Commission (USIBWC) is responsible for the protection of life and property against floods from the Tijuana River. Also, the USIBWC is responsible for coordination with the Mexican Section, International Boundary and Water Commission (MxIBWC) for the exchange of hydrological data from throughout the Tijuana River Basin. This data is published in the Western Water Bulletin by both Sections of the International Boundary and Water Commission. The USIBWC also coordinates the exchange of flood data with other federal, state, and local authorities.

PURPOSES

The purposes of this Flood Emergency Operations Manual are: 1) to define the USIBWC's functions and responsibilities during flood events on the Tijuana River; 2) to assure that USIBWC personnel having responsibilities during flood events know their duties; 3) to coordinate flood activities with

the MxIBWC and other federal, state, and local authorities; and 4) to assure that flood fighting activities of the USIBWC are carried out efficiently.

OBJECTIVE

The objective of the USIBWC during floods on the Tijuana River Basin is to monitor flood flows and patrol the Project to maintain integrity of the levees and to ensure flood protection to those areas landward of USIBWC river levees. During flood events Project personnel collect and exchange data with the MxIBWC in order to provide flood warning prior to flooding in each country. The USIBWC operates the stream gage at Tijuana River at International Boundary. For this purpose, this manual defines:

Flood Mission

Flood Operations Organization

Officer in Charge of Flood Operations

Hydrologic Operations Officer

Public Affairs Officer

Flood Emergency Action Plan

Preparatory Requirements Before The Flood Season
Training
Primary Flood Center - San Ysidro Office
El Paso Flood Center

Flood Fighting Operation Activities During a Flood
Primary Flood Center - San Ysidro Office
El Paso Flood Center

Actions and Activities After a Flood
Primary Flood Center - San Ysidro Office
El Paso Flood Center

FLOOD MISSION

The Flood Mission of the USIBWC is to provide Project authorized design flood protection to property landward of USIBWC river levees by performing annual maintenance and flood monitoring.

FLOOD OPERATIONS ORGANIZATION

The organization of personnel responsible for coordinating and implementing flood activities shall consist of the San Ysidro office personnel (see Appendix C), the Yuma office personnel, designated personnel from the USIBWC Headquarters Office in El Paso, and such outside forces, equipment, and labor as the circumstances warrant. The Flood Operations Organization is depicted on Figure #2.

OFFICER IN CHARGE OF FLOOD OPERATIONS

The Principal Engineer-Operations and Maintenance Department, or the assigned deputy is designated as the Officer in Charge of Flood Operations (Officer in Charge). The Officer in Charge will:

1. Direct the initiation of flood operations activities and will ensure complete coordination of all activities before, during, and after flood operations, including the collection of hydraulic and hydrologic information.

2. Keep the U. S. Commissioner fully informed of flood conditions.

3. Ensure that the Public Affairs Officer provides pertinent information through public releases.

4. Ensure that flood operations in the Tijuana River Basin are properly coordinated with the MxIBWC.

HYDROLOGIC OPERATIONS OFFICER

The Principal Engineer- Engineering Department, or the assigned deputy is designated as the Hydrologic Operations Officer (Hydrologic Officer). The Hydrologic Officer is responsible for overseeing the collection of flood data, distribution of flood data, flood forecasting of the Tijuana River, documentation of data, and the development of all flood reports. The Hydrologic Officer and Project Manager of the San Ysidro Office will determine number of field measuring teams, number of shifts, and if around-the-clock staffing is required. The Hydrologic Officer will ensure that:

1. Flood data is acquired such as: rainfall amounts, current meter measurements, stream flows, weather forecasts from the United States National Weather Service (NWS), and pertinent flood data from the MxIBWC, which may be tabulated and plotted graphically for enhancement of analysis.

2. There is coordination of flood data exchange with the MxIBWC. The USIBWC provides the NWS with all flood data collected including spills or releases of flood waters from Rodriguez Dam.

3. All flood data and NWS forecasts are analyzed to project flood conditions such as time of the expected peak(s), and peak flows at the Tijuana River International Boundary gaging station.

4. All flood data is documented in logical sequence in bound folders and the Officer in Charge is provided a daily report during flood operations including up-to-date information on the effects of the flood and potential impacts as the flood continues.

PUBLIC AFFAIRS OFFICER

The Public Affairs Officer (PAO), or the designated alternate, will be responsible for the following:

1. Coordinating with the Officer in Charge to obtain advance warning and alert data to respond to requests from the general public, news media, and local authorities, and

2. Preparing and distributing press releases, as directed, to provide updated status information

regarding conditions, effects, and potential impacts, etc.

ACQUISITION

The Chief, Acquisition Division, or the designated alternate, will be responsible for the coordinating the purchasing of required supplies and/or services (as requested by the Officer in Charge) to support activities during flood operations.

FLOOD EMERGENCY ACTION PLAN

PREPARATORY REQUIREMENT BEFORE THE FLOOD SEASON

Actions to be taken prior to **November 1** of each year.

Training

Training of all personnel having responsibility during a flood event is essential for safe and thorough data collection. In addition, training will ensure quick and accurate flood analysis and flood projection. The Officer in Charge should insure that the staff is aware of the San Ysidro Duty Roster (Appendix C) and properly prepared for flood operations activities.

Primary Flood Center - San Ysidro Office

1. Meet during the month of **October of each year** with MxIBWC Tijuana Offices, federal, state, county, city, and other authorities to review data exchange procedures, responsibilities, and to update names of personnel and telephone numbers. Establish extent of data exchange between agencies and determine type of data needed by each agency (see Appendix A).
2. Check and service communication and electrical equipment such as emergency power supply units and mobile and base radio units.
3. Check with and obtain from local contractors or other local agencies a current list of available equipment and manpower to work shifts during flood emergency operations (see Appendix B).
4. Review and update the San Ysidro Duty Roster (Appendix C).
5. Make sure that adequate flood fighting supplies are available and safely stored (Appendix D).
6. Conduct the necessary maintenance, mowing, and any other field operations necessary to provide for the security of levees and structures.
7. Make sure that all measuring equipment is in storage and in good condition. Use check list in Appendix E.
8. Inspect and place in proper operating condition all gaging stations and measuring facilities. This includes staff gages.
9. Establish hydrographic measuring teams in accordance with available personnel. It is essential that all personnel involved in taking high water measurements are knowledgeable in setting high water marks and its proper documentation.

El Paso Flood Center - Design Division

1. Watch the weather channel for any potential flooding. Contact the NWS Office in San Diego

to obtain current weather conditions and make arrangements for future forecasts and exchange of hydrologic data.

2. Ensure that copies of all rating curves, forecast charts, procedures, and other necessary data are updated and available.

3. Review the historic high water marks.

4. Check with the San Diego NWS to get an update on new equipment and capabilities for flood forecasting and exchange the current personnel lists and telephone numbers.

FLOOD FIGHTING OPERATION ACTIVITIES DURING A FLOOD

Whenever flows in the Tijuana River are of such a magnitude that flooding of the Tijuana River flood plain between the river and the levees is occurring or imminent, the Officer in Charge will initiate flood operations activities and will continue until conditions allow the Officer in Charge to suspend flood activities. The following tasks are to be performed.

Primary Flood Center - San Ysidro Office

1. Establish a flood emergency operation center. The San Ysidro office resident engineer will be assigned as the Engineer in Charge.

2. Work shifts will be assigned providing 24-hour coverage during flood operations, if deemed necessary by the Engineer in Charge.

3. Communicate with the MxIBWC Tijuana Office on a regular basis exchanging flood data and pertinent information.

4. Hydrological measuring teams shall be dispatched to designated areas and continue as long as conditions warrant. They should report to the Engineer in Charge at the San Ysidro office all gage readings and any observed conditions such as freeboard, erosion along levees, boils or seepage on land side of levee, and erosion at bridges.

5. Place reference stakes at high water marks at the time of the peak stage, or shortly thereafter at designed points (see Figure #3), if possible. These high water marks should be field surveyed soon after the flood to identify flood stages.

6. Hydrological data shall be forwarded to the El Paso Flood Center at least twice each day during the period of flood flow. Measurements shall be reduced in the field and results shall be turned over to the Engineer in Charge at the San Ysidro office for transmittal. Data collection should be as follows:

U S DATA

Contact the proper agencies to collect the following data (see Appendix A):

Rainfall data at stations:

a) Barrett Dam
b) Morena Dam
c) Chula Vista
d) Lower Otay Dam

Reservoir data including storage and releases from:

a) Barrett Dam
b) Morena Dam

Flow data from the Tijuana River at the International Boundary gaging station.

MEXICO DATA

Contact the MxIBWC office at Rosarito (see Appendix A) to collect the following data:

Rainfall data at stations:

a) Rodriguez Dam
b) Valle de las Palmas
c) El Carrizo
d) Tecate
e) Belen
f) El Pinal
g) El Hongo
h) P.B. Rosarito

Reservoir data including storage, inflows, and releases from:

a) Rodriguez Dam
b) El Carrizo Dam

Flow data from the Tijuana River for the portion located in Mexico.

7. For data collection, use the established form (see Appendix F).

8. River stages, discharge, and rainfall data as observed and collected in the field shall be sent by fax or via voice telephone at least twice a day to the El Paso Flood Center to be distributed to the MxIBWC headquarters.

9. Distribute data to agencies as needed (see Appendix A).

10. Photographs or slides needed to illustrate phases of the flood, or special reports should be taken by USIBWC personnel when opportunities present themselves. Sufficient notes should be kept to identify pictures with location, date, and other pertinent data.

11. Assist El Paso Flood Center - Design Division, if necessary, in acquiring the aerial photo coverage.

12. Maintenance crews and equipment will be on stand-by as directed by the Engineer in Charge to make emergency repairs as needed.

13. Contract manpower and equipment as directed by the Officer in Charge (see Appendix B).

14. Determine flood fighting needs as the circumstances dictate.

15. Yuma hydrographic support will be requested as conditions dictate.

El Paso Flood Center - Design Division

1. Collect all stage and measurement data relayed from the San Ysidro office, tabulate data, check rating curves and plot discharge hydrographs and other graphs for Tijuana River at the International Boundary gaging station and other pertinent locations. This data should be used in flood forecasting and flood operations criteria..

2. Continue monitoring the weather channel for any critical changes in weather and contact the San Diego NWS for current weather information.

3. Prepare and send to the Tijuana River basin area support personnel to assist in the flood data acquisition and flood fighting operations as needed.

4. All flood data will be properly documented and daily reports will be submitted to the Officer in Charge.

5. Make recommendations for acquisition of aerial photo coverage of flooded areas to the Officer in Charge.

ACTIONS AND ACTIVITIES AFTER A FLOOD

After the flood on the Tijuana River has receded to such a magnitude that there is no flood threat and the Officer in Charge has declared the end of flood operations, the following tasks shall be performed:

Primary Flood Center - San Ysidro Office

1. A report of the flood from beginning to end with critical and constructive suggestions for future reference and guidance will be prepared by the Engineer in Charge. The report will be transmitted to the Design Division in El Paso for the preparation of the final flood report.

2. Arrange for a flood damage survey.

3. Survey levees and structures, and determine repairs needed with estimates for quantities and costs to be reported to the Officer in Charge with copies to the Design Division in El Paso.

4. Prepare a report proposing improvements and repairs, with a list of required actions including manpower, equipment, materials, and costs with special reference to problem areas.

5. Elevations and locations of high water marks will be surveyed as soon as possible before the marks are destroyed. All information should be sent to the Design Division in El Paso. The following criteria shall be considered to obtain high water marks.

    a) Obtain elevation measurements of all high water marks in the general vicinity to substantiate the validity of the high water profile.

    b) Rate quality of high water marks with respect to representing the true water surface.

    c) Indicate the nature of the high water mark used and indicate whether it is upstream or downstream from a bridge or other structure.

El Paso Flood Center - Design Division

1. Review the elevations of the high water marks and request resurvey of established cross sections that may be critical in the post flood hydraulic analysis.

2. Provide immediate review of high water profiles, so questionable elevations can be field checked before marks are destroyed.

3. Prepare a final flood report of the entire11 flood providing tables of data including rainfall amounts, flows at stream gages, storm details, plots of the discharge hydrographs, and other pertinent data as determined by the extent of the flood.

Appendix A

ROSTER OF MEXICAN, FEDERAL, STATE, COUNTY, AND OTHER AUTHORITIES

ORGANIZATION	POSITION	NAME	TELEPHONE	FAX
International Boundary and Water Commission, United States Section	Resident Engineer San Ysidro	Dion McMicheaux	(619) 662-7600 (O) 574-8210 (H) X-CONN BEEPER	(619) 662-7607
	Civil Engineering Technician	Scott Melvin	(619) 662-7600 (O) 683-1939 Pager (H)	(619) 662-7607
	Principal Engineer Operations Dept.	Carlos Marin	(915) 832-4157 (O) (915) 598-7721 (H)	(915) 832-4191
	Principal Engineer Engineering Dept.	Debra Little	(915) 832-4147 (O) (915) 584-2474 (H)	(915) 832-4191
	Division Engineer Design	James Robinson	(915) 832-4152 (O) (915) 584-2165 (H)	(915) 832-4179
	Public Affairs Officer	Sally Spener	(915) 832-4175 (O) (915) 581-1080 (H)	(915) 832-4191
Comision Internacional de Limites y Aguas	Resident Engineer Tijuana Project	Roberto Espinosa	011-526-631-3037 (O)	011-526-631-3770
	Resident Engineer Mexicali Project	(acting) Rios Moreno	011-526-554-1621(O)	011-526-554-2481

Appendix A (Continued)

ROSTER OF MEXICAN, FEDERAL, STATE, COUNTY, AND OTHER AUTHORITIES

ORGANIZATION	POSITION	NAME	TELEPHONE	FAX
Mexicali Region	Director	Ruben Roa-Quinonez	011-526-554-2428	011-526-554-0790
	Deputy Director Mexicali Region	Angel Lozano-Aragon	011-526-554-1227	011-526-554-0790
	Engineer, O&M Tijuana (Rodriguez Dam)	Juan de Dios Lopez	011-526-689-4114	011-526-689-4113
Tijuana Emergency Center	Fire Chief, Tijuana	C. Goper	706-38-4126	
Protection Civil de Tijuana	Director, Tijuana	Alfredo Escobedo	011-526-682-9732	011-526-683-5335
	Assistant Director	Edmundo Baillet	011-526-682-3996	011-526-683-9449
	Civil Defense, San Ysidro	Victor Delgadillo	(619) 428-5386	
National Weather Service	Chief Meteorologist San Diego	Ivory Small Armando Garza	(619) 675-8706	(619) 675-8712
City of San Diego	Office of Emergency Management	Chris Bach	(619) 533-4418 (619) 232-2237 pager, enter #4773	(619) 533-4378
	Water Utilities	Bob McCallister	(619) 533-5460	(619) 533-5300

Appendix A (Continued)

ROSTER OF MEXICAN, FEDERAL, STATE, COUNTY, AND OTHER AUTHORITIES

ORGANIZATION	POSITION	NAME	TELEPHONE	FAX
County of San Diego	Office of Disaster Preparedness	Susan Asturias	(619) 565-3490	(619) 694-2514
	Office of Flood Control	Rand Allen	(619) 495-5557	(619) 694-8928
	Environmental Health	Dan Avera	(619) 338-2088	(619) 338-2211
City of Imperial Beach	Director of Public Works	Hank Levien	(619) 423-8311	(619) 429-4861
Congressional Offices	Congressman Filner		Francisco Estrada	(619) 422-5963 (619) 422-7290
	Congressman Bilbray	John Woodard	(619) 291-1430	(619) 291-8956
Citizens Revolting Against Pollution		David Gomez	(619) 423-6258	(619) 662-0630
Citizens Against Recreational Eviction		Carolyn Powers	(619) 424-3684	(619) 424-7695

APPENDIX B

SOURCES OF ASSISTANCE

Organization	Phone Number

BORDER PATROL

Chief Patrol Agent, San Diego Sector 619/216-4000

CONTRACTORS

Nelson-Sloan, Chula Vista 619/476-8340
Equipment available with operators
Trucks, Trailers, Loaders, Sand Gravel, Rip-Rap

Cass Construction, Inc., El Cajon 619/449-2671
Equipment available with operators

Cabrillo Crane, San Diego 619/563-7910
Heavy duty cranes with operators

Ennis Construction, Inc., El Cajon 619/561-1322
Heavy duty cranes with operators

Cal Cranes, San Diego 619/279-7800
Heavy duty cranes with operators

Hofer and Sons, Otay 619/661-7251
Equipment available with operators
Trucks, Trailers, Loaders, Sand Gravel, Rip-Rap

Willock Contracting, Inc., El Cajon 619/579-0700
Excavating, Grading, Demolition

Hawthorne Machinery Co., San Diego 619/674-7132
Rental of Equipment

Allied Barricades, El Cajon 619/442-4401
Rental of Road Barricades, Safety Warning Lights

Hudson Safe T-Lite Rentals, San Diego 619/286-9700
Rental of Road Barricades, Safety Warning Lights

Dixieline Lumber, Inc., San Diego 619/425-6660
Lumber, Building, Supplies, Iron Rebar

Home Depot, Inc., San Diego 619/575-1900
Lumber, Building Supplies, Iron Rebar

APPENDIX D

REQUIRED FLOOD SUPPLIES CHECKLIST				
ITEM	**DESCRIPTION**	**QUANTITY**	**YES**	**NO**
1	SAND BAGS	25,000		
2	SHOVELS	10		
3	FLASHLIGHTS	30		
4	ELECTRIC LANTERNS	16		
5	LIGHT STANDS - COMPLETE UNITS (RENTAL)	AS NEEDED		
6	AXES, SINGLE BIT	4		
7	ROPE, NYLON - ½" AND 3/4"	1 ROLL EACH		
8	24-INCH WOODEN STAKES	12		
9	ADJUSTABLE WRENCH - 12" AND 8"	4		
10	SURVEY RIBBON	1 ROLL		
11	HAMMER - DOUBLE FACES - 2 ½ LB.	4		
12	PLIERS - 8"	4		
13	BOLT CUTTERS - 36" AND 24"	4 EACH		
14	CANNED SPRAY PAINT	2 CANS		
15	SCREWDRIVERS - FLAT TIP	4		
16	SCREWDRIVERS - PHILLIPS HEAD	4		
17	LOG BOOKS - 1 PER PATROL TEAM	2		
18	FUEL CANS - GASOLINE	2		
19	FUEL CANS - DIESEL	2		
20	OIL - NON-DETERGENT - 30 WT.	1 CASE		
21	OIL - MULTI-WT.	5 GAL		
22	TRANSMISSION FLUID	5 GAL		
23	ANTI-FREEZE FLUID	5 GAL		

SIGNATURE OF INSPECTOR: _____

DATE INSPECTED: _____

NAME AND TITLE OF INSPECTOR: _____

Note: This inventory should be checked every year, two (2) months prior to flood season and that venders should be contacted to get quick access in the event of flood

APPENDIX E

MEASURING EQUIPMENT CHECKLIST				
ITEM	**DESCRIPTION**	**QUANTITY**	**YES**	**NO**
1	VEHICLE, 4X4 WITH TRAILER HITCH	1		
2	CURRENT METER	2		
3	RATING AND VERTICAL CORRECTION TABLES	2		
4	SOUNDING WEIGHTS - 50C	3		
5	SOUNDING WEIGHTS - 75C	3		
6	SOUNDING WEIGHTS - 100E	3		
7	REEL, B-50	1		
8	CRANE, TYPE - A	1		
9	FLOOD LIGHT - PLUG IN	1		
10	LANTERN - FLASHING	1		
11	SPOT LIGHT	1		
12	WATER CAN - 5 GALLON	2		
13	DATA RECORDING FORMS	50		
14	PENCILS - #2	6		
15	SHARPENER, PENCIL - PORTABLE	2		

SIGNATURE OF INSPECTOR: _____

DATE INSPECTED: _____

NAME AND TITLE OF INSPECTOR: _____

Note: This inventory should be checked every year, two (2) months prior to flood season and that venders should be contacted to get quick access in the event of flood

BARRETT RESERVOIR (DAM)

DATE mm/dd/yy	TIME hh/mm/hr	GAGE SCALE (m)	VOLUME (^{M3})	SPILLWAY DISTANCE (m)	PERCENT (%)	OUTFLOW (^{M3}/sec)	INFLOW (^{M3}/sec)	REMARKS

MORENA RESERVOIR (DAM)

DATE mm/dd/yy	TIME hhmm hrs	GAGE SCALE (m)	VOLUME (M^3)	SPILLWAY DISTANCE (m)	PERCENT (%)	OUTFLOW (M^3/sec)	INFLOW (M^3/sec)	REMARKS

APPENDIX F (3)

RODRIGUEZ RESERVOIR (DAM)

DATE mm/dd/yy	TIME hhmm hrs	GAGE SCALE (m)	VOLUME (^{M3})	SPILLWAY DISTANCE (m)	PERCENT (%)	OUTFLOW (^{M3}/sec)	INFLOW (^{M3}/sec)	REMARKS

APPENDIX F (4)

EL CARRIZO RESERVOIR (DAM)

DATE mm/dd/yy	TIME hh/mm/hr	GAGE SCALE (m)	VOLUME (^{M3})	SPILLWAY DISTANCE (m)	PERCENT (%)	OUTFLOW (^{M3}/sec)	INFLOW (^{M3}/sec)	REMARKS

INTERNATIONAL BOUNDARY AND WATER COMMISSION

UNITED STATES - MEXICO

1996 FLOOD OPERATIONS CRITERIA

AMISTAD
FALCON
ANZALDUAS-RETAMAL

Table of Contents

FOREWORD

The approved flood operations criteria are to be used by Field Engineers during floods for the operation of Amistad, Falcon, Anzalduas, and Retamal Dams.

Flood operations are required when: **a)** there are inflows to the reservoirs that require reservoir releases in excess of irrigation and domestic demands, **b)** there are river flows that will require the operation of Anzalduas and Retamal Diversion Dams for the purpose of making diversions to the interior floodways of both countries, or **c)** there are meteorological conditions, either imminent or in progress, that have the potential to require releases in excess of irrigation and domestic demands or for diversions to interior floodways.

The flood operations criteria provides the Field Engineers' from each country authority to act jointly and such actions should be taken in strict adherence with the criteria unless they are advised by the Commisson (Commissioner, Principal Engineers, or specified designates) to the contrary. If communication channels are open and circumstances of storm activity, reservoir conditions, and or river flows create a doubt as to whether the criteria should be followed, Field Engineers should check with the Commission prior to their taking any specific joint action. If communication channels are not open the Field Engineers from each country should make joint decisions whether adhering to the criteria or adapting changed criteria.

Joint decisions not in accordance with the flood operations criteria may be made by the Commission at any time when, in the judgment of the Commission, river, reservoir, or storm conditions warrant. When such decisions are made by the Commission, they will be communicated to the Field Engineers; requiring confirmation and documentation by the Field Engineers.

Chronology of Revisions:

1.	12/88	Minor editorial changes.
2.	04/90	Minor editorial changes.
3.	06/94	Minor editorial changes.
4.	10/96	Minor editorial changes.

GENERAL CRITERIA FOR FLOOD OPERATIONS AT AMISTAD DAM

The flood operations criteria for Amistad Dam is designed to minimize flood damage and to ensure safety of the dam.

It is intended that these general flood control operation criteria supplement the individual operations criteria of Amistad Dam.

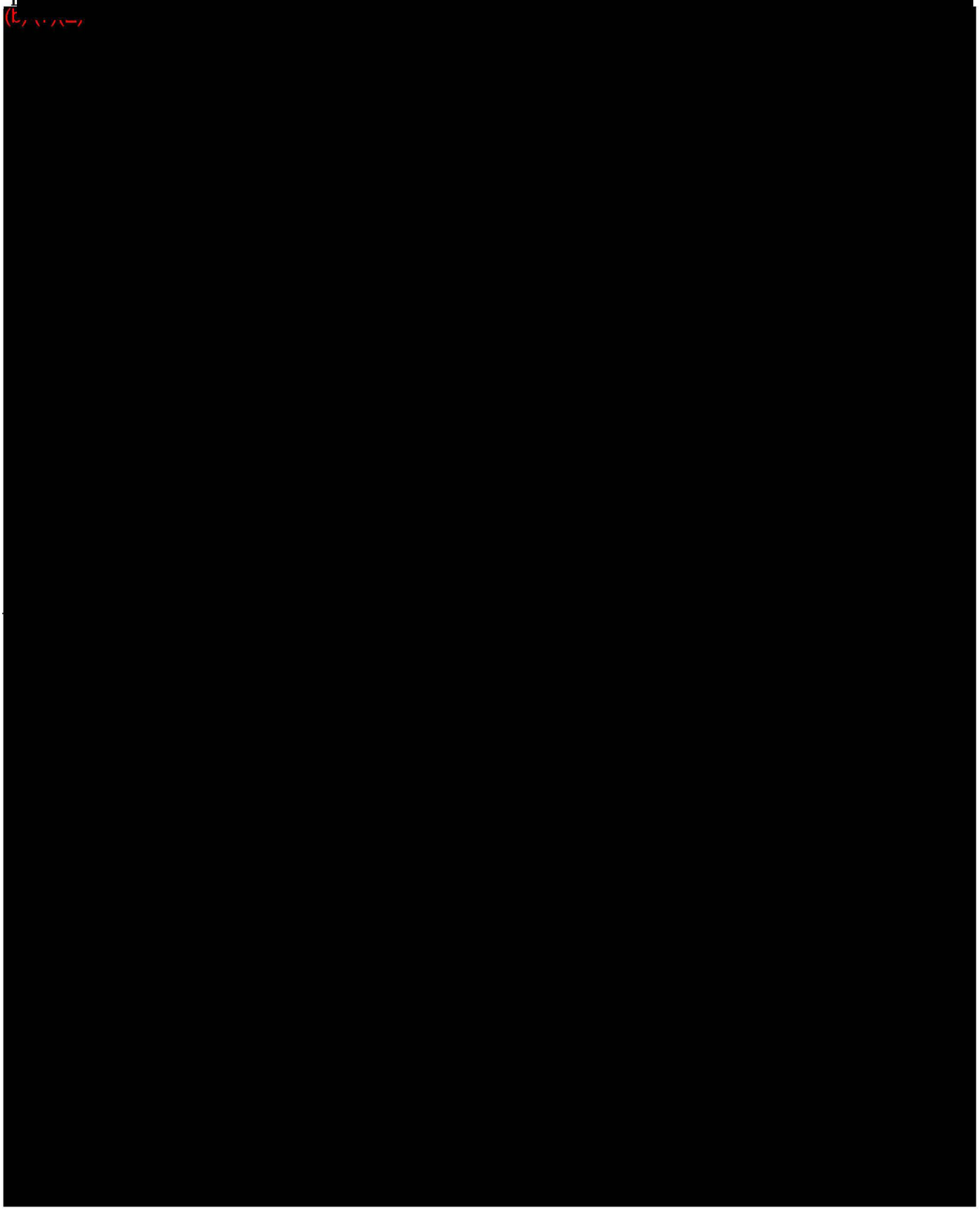
(b) (7)(E) [redacted]

Chronology of Revisions:

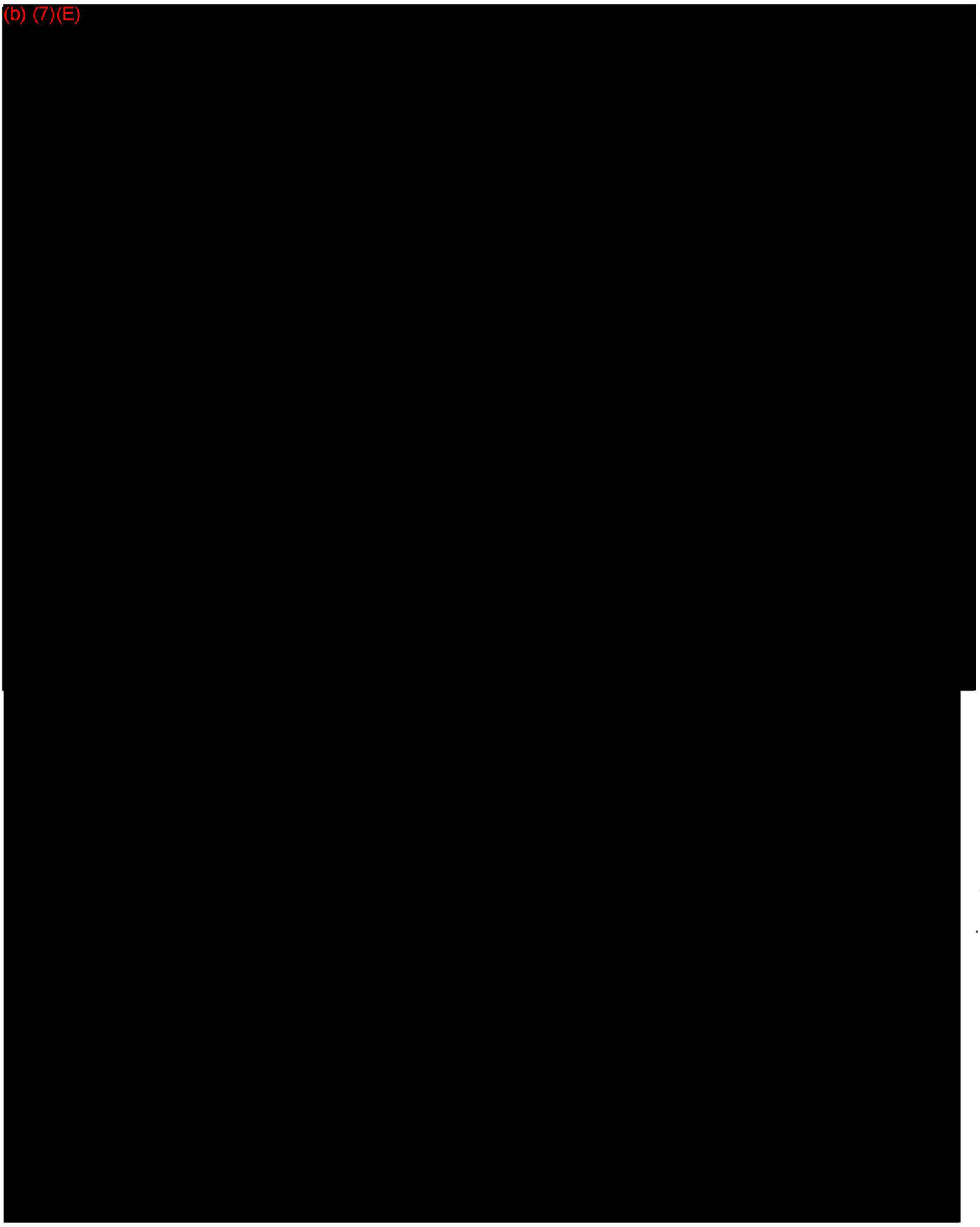
1. 06/88 Minor editorial changes.
2. 02/88 Minor editorial changes.
3. 04/90 Minor editorial changes.
4. 10/90 Minor editorial changes and reduced general criteria to that pertinent at Amistad Dam.
5. 03/91 Minor editorial changes.
6. 06/94 Minor editorial changes.
7. 10/96 Minor editorial changes.

AMISTAD FLOOD OPERATION CRITERIA

When it appears that inflows to Amistad Reservoir resulting from storm activity are on the rise and flood releases may have to be made,



(b) (7)(E)



(b) (7)(E)

[redacted]

Any questions regarding the application of these criteria that cannot be answered by the Field Engineers should be referred to the Commissioner, Principal Engineers, or specified designates.

Chronology of Revisions:

1. 03/78	Criteria developed and two release diagrams prepared.
2. 04/78	Criteria recommended by Joint Consultant Board and approved by Commission.
3. 07/80	Revisions: 1) to reflect change in maximum allowable hourly rate of increase in releases and 2) to eliminate the second Release Diagram as agreed to by Headquarters June 19, 1980
4. 06/81	Revision of Item 4b to reflect deferred change in release as agreed to by the two Principal Engineers in March 1979.
5. 06/82	Revisions: 1) storage scale modified to reflect 1980 sediment survey and 2) another line added to zero release band to indicate that flood operations can start at normal conservation capacity if temporary conservation capacity cannot be attained.
6. 05/86	Step 11 reworded.
7. 06/88	Revision: 1) changed Hydrographic Office to Field Office; 2) omitted Amistad Dam Spillway Section and Rating Curve.
8. 12/88	Minor editorial changes. 1) Included reference to Amistad Flood Release Calculation Table (AFRC Table) and to Amistad Flood Operations Chart (AFO) Chart; and 2) Deleted reference to Field Engineer's authority, which is covered in FOREWORD.
9. 04/90	Combined steps 9 and 10, added new step 10 and 11 to cover floods that do not exceed top of flood control pool, renumbered steps 11 and 12 to12 and 13, respectively.
10. 10/90	Step 5 rewritten to indicate release requirements for cases in which inflows are decreasing while the reservoir continues to rise.
11. 03/91	Minor editorial changes.
12. 06/94	Minor editorial changes and the elimination of English units. Included criteria 4c and modified criteria 4d to allow the release of a skipped release band for a minimum of one (1) hour.
13. 10/96	Steps 10 and 11 were rewritten to prevent ambiguities of the criteria.
14. 03/98	Step 8 was reworded to reflect comments and discussions during the Amistad Flood Workshop on June 24, 1997.

GENERAL CRITERIA FOR FLOOD OPERATIONS AT FALCON DAM

Flood control operations at Falcon Reservoir rely on criteria that: **a)** [redacted]

(b) (7)(E)

The objectives in the design of the Falcon Flood Control Criteria are to:

1. Provide flood control operations that safely pass the spillway design flood.

2. Control releases to prevent as much as possible flows from exceeding a discharge of 425 cubic meters per second (cms) at Rio Grande City which would require the use of the Lower Rio Grande Interior Floodways.

3. Control releases to prevent large floods from exceeding a discharge of 6,800 cms at Rio Grande City.

If major communications failure prevent obtaining required flow data the emergency criteria using the Falcon Reservoir Emergency Flood Release Chart should be used.

Chronology of Revisions:

1. 12/88 Minor editorial changes.
2. 04/90 Clarified use of emergency criteria.
3. 10/90 Minor editorial changes.
4. 03/91 Minor editorial changes.
5. 06/94 Minor editorial changes.

FALCON FLOOD OPERATION CRITERIA
(WITH FORECAST)

When it appears that inflows resulting from storm activity are on the rise and flood releases may have to be made, the following steps should be taken.

(b) (7)(E)

[redacted]

(b) (7)(E)

c.

d.

is

e.

(b) (7)(E)

CHRONOLOGY OF DEVELOPMENT AND REVISIONS TO FALCON FLOOD OPERATIONS CRITERIA

1. 08/12/77 Commissioners adopted flood operation and forecast procedures dated 8/9/77.
2. 05/08/78 Commissioners reach accord on the use of the [redacted] for flood operations. Also agreed to more study on the forecast procedure.
3. 05/12/78 Commissioners agreed to continue using the criteria of 8/9/77 until better procedures are agreed upon.
4. 07/30/80 [redacted] These procedures reflect the need to make early decision for flood releases at Falcon because of the limited flood control storage space, and to control the discharge at Rio Grande City.
5. 11/14/85 Item "e" in the basic procedure using the forecast was revised to slow the reduction in the releases during flood recession to reduce riverbank sloughing. Item "5" in the emergency procedure was revised to clarify that gate changes [redacted]
6. 05/86 Reworded notes a., b., and c.
7. 06/06/88 Reworded note 4.b.1 from "New indicated release at Rio Grande City" to "New indicated release at Falcon Dam." Revised Falcon Reservoir Flood Operations Criteria to reflect 1988 instructions and corrected date referring to coefficients.
8. 12/88 Minor editorial changes. Implementation of Falcon Flood Release Calculations Table (FFRC Table) to determine release at Falcon Dam.
9. 04/90 Revised column [redacted]
10. 10/90 Revised Step 4c to identify release requirements for cases in which increased releases are indicated, r[redacted] entering Falcon Reservoir.
11. 06/94 Minor editorial changes and the elimination of English Units.
12. 10/96 Step 4 d was rewritten to prevent ambiguities of the criteria.

HAND CALCULATION INSTRUCTIONS TO FORECAST (b) (7)(E) LOOD INFLOW VOLUME INTO FALCON RESERVOIR USING (b) (7)(E)

(b) (7)(E)

(b) (7)(E)

[redacted]

(b) (7)(E)

[redacted]

Chronology of Revisions:

1. 06/06/88 Revision of Note 7 and Note 12: Clarified the Multiplication of each preceding flow by "0.75" instead of "0.25".
2. 12/88 Deleted redundant last sentence, first paragraph which is covered in instruction 1.

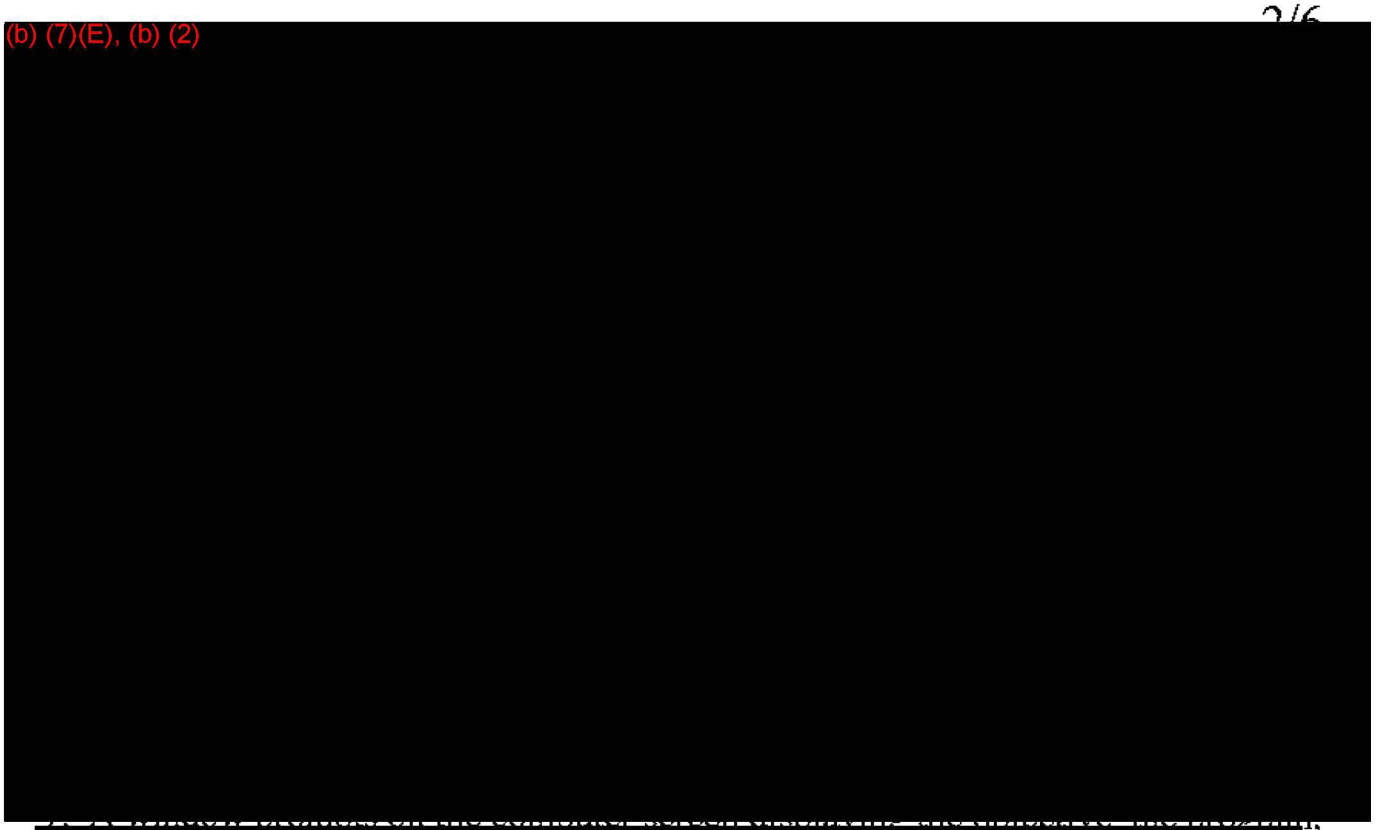
INSTRUCTIONS FOR USING THE [redacted] **PROGRAM** TO DETERMINE THE TOTAL [redacted] FORECASTED INFLOW VOLUME INTO FALCON RESERVOIR

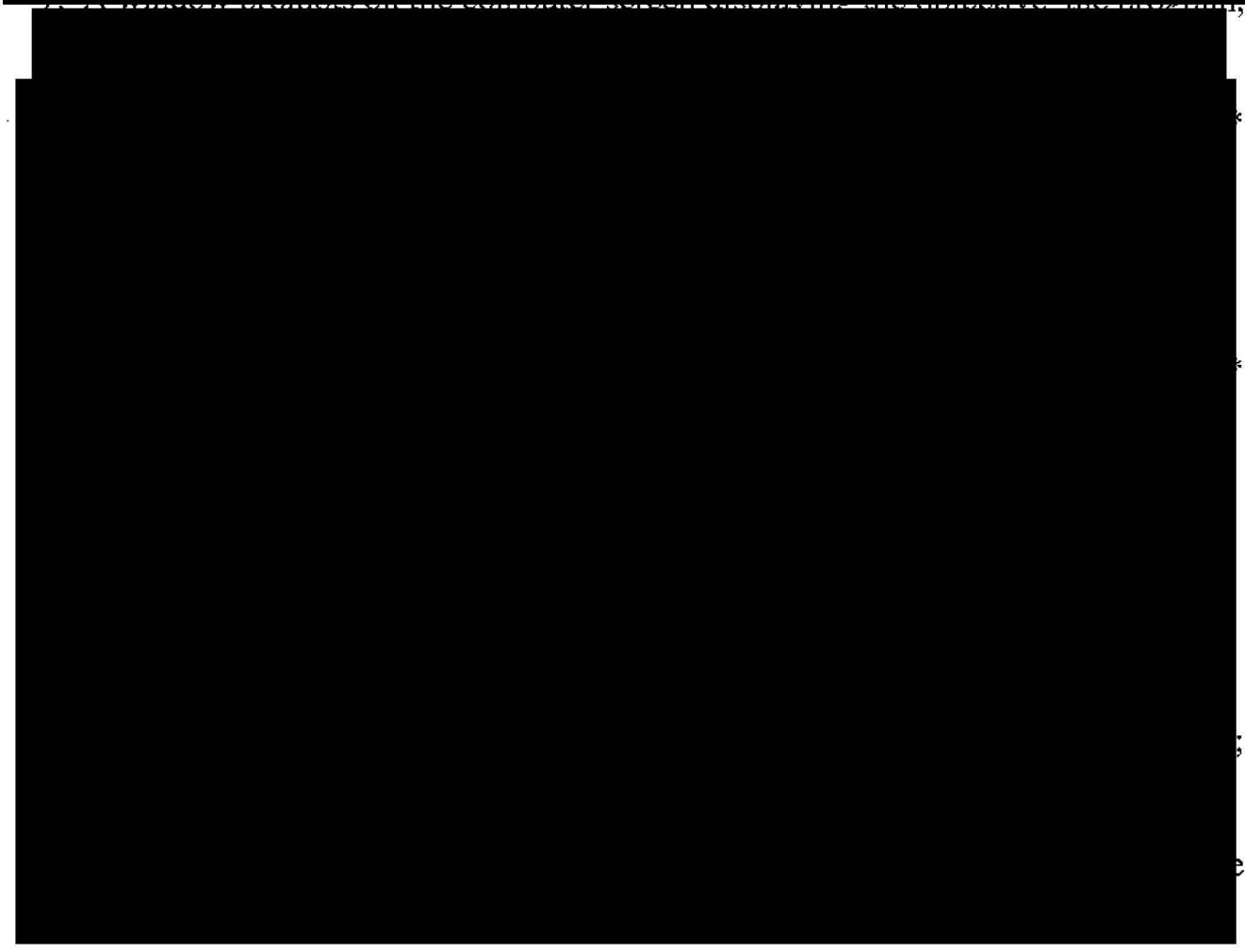
[redacted]

STEPS:

[redacted]

(b) (7)(E), (b) (2)





(b) (7)(E), (b) (2)

[redacted]

(b) (7)(E), (b) (2)

[redacted]

(b) (7)(E), (b) (2)

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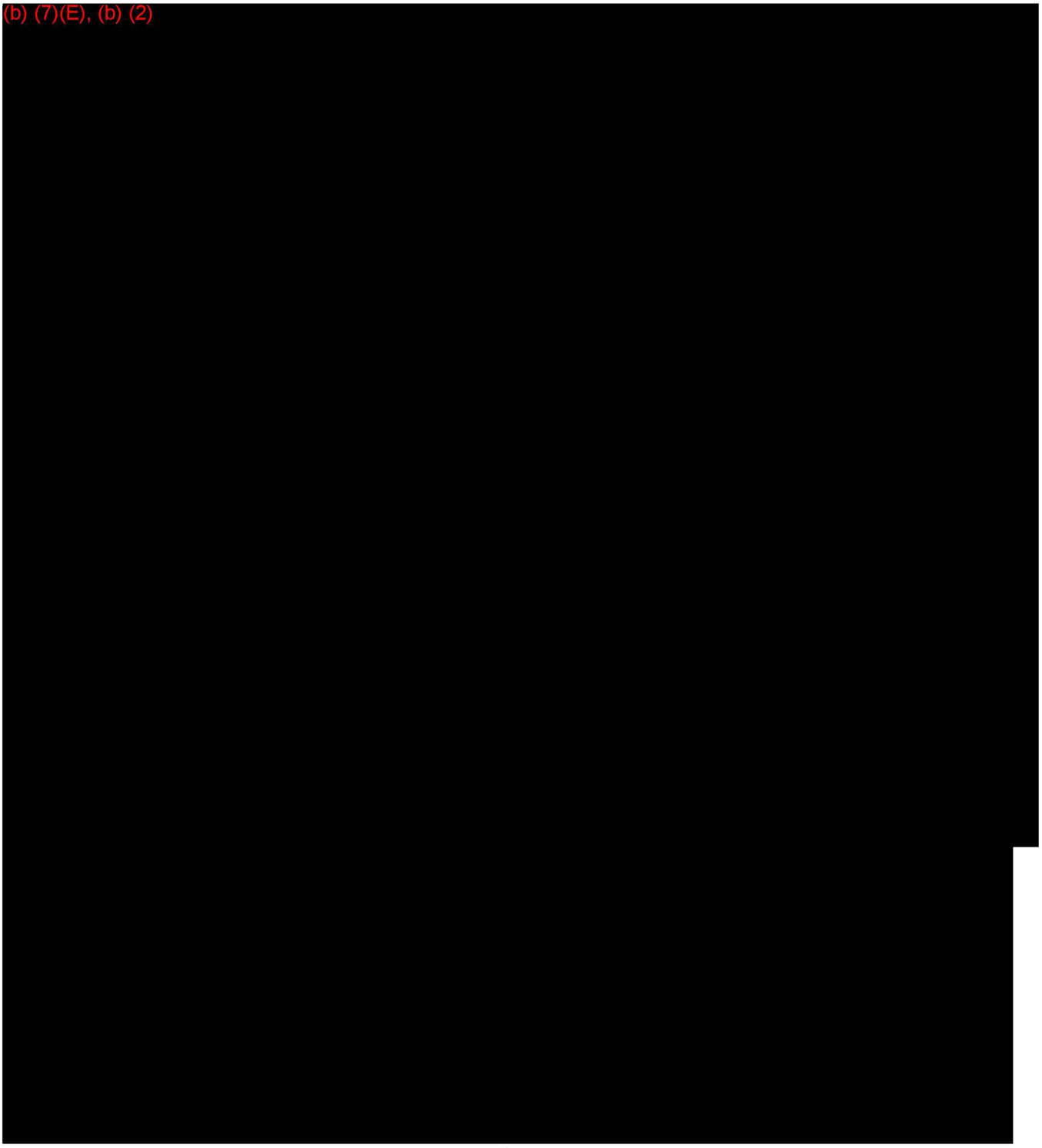
(b) (7)(E), (b) (2)



FALCON RESERVOIR
EMERGENCY FLOOD OPERATIONS PROCEDURES

(b) (7)(E)

[redacted]

(b) (7)(E)

[redacted]

Chronology of Revisions:

1. 01/14/85 Item No. 5 clarified to indicate that gate changes (b) (7)(E) [redacted]
2. 06/06/88 Omitted Falcon Dam Spillway Section and Rating Curve.
3. 12/88 Minor editorial changes.
4. 04/90 Minor editorial changes.

GENERAL CRITERIA FOR FLOOD OPERATIONS AT ANZALDUAS DAM AND RETAMAL DAM

The flood operations criteria for Anzalduas Dam and Retamal Dam are designed to control flood flows up to and including the Lower Rio Grande Valley Flood Control Project design flow of 7,080 cms at Rio Grande City. Flood Volumes in excess of those flows discharged downstream from Retamal Dam should be diverted equally on a daily basis into the United States' and Mexican Interior Floodways. The following describes general flood operations when flood flows occur in the Lower Rio Grande Valley Flood Control Project.

(b) (7)(E)

CHRONOLOGY OF DEVELOPMENT AND REVISIONS TO FLOOD OPERATION CRITERIA AT ANZALDUAS AND RETAMAL DAMS

1. 09/30/77 Commissioners agreed to flood operation procedure dated 9/30/77 for Anzalduas and Retamal Dams.
2. 12/79 Revisions: regarding build-up of debris.
3. 06/81 Revisions recommended by Field Engineers were incorporated.
4. 8/12/85 A new Step 6c was added to enable the procedure to handle discharges at Anzalduas Dam between (b) (7)(E) ms which come from floods originating below Falcon Dam.
5. 5/5/87 Replaced Step number 4c with 6c.
6. 12/88 Minor editorial changes.
7. 04/90 Revisions: 1) minor editorial changes; 2) Step l2 under Retamal Dam was changed to cover all conditions after flood peak has passed.
8. 10/90 Added General Criteria description for Anzalduas and Retamal Dam and added minor editorial changes.
9. 03/91 Minor editorial changes.
10. 04/93 Retamal Dam flood criteria completely revised to account for new manual operation.
11. 06/94 Minor editorial changes and elimination of English units.
12. 10/96 Reworded Steps 1, 2, 4a, and 5 on Anzalduas procedures to [redacted] (b) (7)(E) [redacted] On Step 5 the word recedes replaced the word "drop".

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION

TIJUANA RIVER

FLOOD CONTROL PROJECT

Edward Drusina, United States Commissioner

July 25, 2011

TABLE OF CONTENTS

List of Appendices

FOREWORD

A. Requirement and Reference

This Flood Emergency Operations Manual has been prepared to define the United States Section's roles and responsibilities in time of flood; to assure that all personnel of the United States Section know their individual duties and responsibilities; and to assure that flood-fighting activities of the United States Section are coordinated with the responsible officers of the Mexican Section, and of other Federal, State and local agencies in the United States.

B. Control

The issuing office for this manual is Operations Department, Operations and Maintenance Division, San Diego Field Office. Contact is Division Engineer, Operations and Maintenance Division.

C. Supersession

This manual cancels and supersedes previous manual dated August, 2009. All copies of the previous manual should be disposed of immediately.

D. Effective Date

This manual becomes effective July 30, 2011

INTRODUCTION

The Tijuana River is an international stream having its source partly in the United States and partly in Mexico. It is formed by the confluence of two tributaries in Mexico, Rio de Las Palmas and Rio Alamar (known in the United States as Cottonwood Creek). The Tijuana River flows northwestward 4.3 kilometers (2.7 miles) through the City of Tijuana, Baja California to the international boundary where it crosses the boundary into the United States. It continues westward through lands in the cities of San Diego and Imperial Beach, California, a distance of about 10 kilometers (6 miles), to discharge into the Pacific Ocean.

Three major dams and reservoirs were built in the Tijuana River Basin. Rodriguez Dam, built in 1936, is located on the Rio De Las Palmas in Mexico. Morena Dam and Barrett Dam, built in 1912 and 1922, respectively, are located on Cottonwood Creek in the United States. Most flows in the Tijuana River are regulated by at least one of these dams. The Tijuana River Flood Control Project (Project) was completed in December 1978 providing flood protection for the Standard Project Flood of 3,820 cms (135,000 cfs) which is greater than a 500-year flood event (studies by USACOE and USIBWC, 1994). The Project is authorized by IBWC Minutes Nos. 225, 236, and 258, pursuant to the 1944 Water Treaty, and the Act of October 10, 1965 (80 Stat 884 as amended; 22USC277d-32,33). The Project consists of 4.3 kilometers (2.7 miles) of concrete lined channel in Mexico and 373 meters (1,223 feet) of concrete lined channel in the United States. The concrete lined channel has a trapezoidal cross section comprised of a 70 meter (230 feet) bottom width with a triangular low flow channel 1.0 meter (3.3 feet) deep at the center of the channel. The Project continues westerly for 367 meters (1,205 feet) with a grouted stone channel including a transitional cross section from a 70 meter (230 feet) bottom width to a 235 meter (830 feet) bottom width. At this point, the Project extends for 367 meters (1,205 feet) with a dirt channel and parallel levees. The lower 1,128 meters (3,700 feet) of channel functions as a flared transitional channel to reduce velocities of flood flows, known as the energy dissipator. Just downstream of the flared transitional channel, is a concrete slurry berm that follows the north levee, extending 1,611 meters (5,287 feet) to Dairy Mart Road and the south levee, extending 782 meters (2,565 feet) along the international boundary to high ground. An unlined, trapezoidal, low flow channel with a 15.2 meter (50 feet) bottom width extends 2,140 meters (7,021 feet) downstream from the energy dissipator through a sediment deposition area and under Dairy Mart Road to the natural Tijuana River channel.

The total drainage area above the Hollister Street Bridge near Nestor, California is 4,465 square kilometers (1,724 square miles). Of the total drainage area, about 3,279 square kilometers (1,266 square miles) or 73.4 percent is in Mexico.

In the United States, the U.S. Section, International Boundary and Water Commission (USIBWC) is responsible for the protection of life and property against floods from the Tijuana River. Also, the USIBWC is responsible for coordination with the Mexican Section, international Boundary and Water Commission (MXIBWC) for the exchange of hydrological data from throughout the Tijuana River Basin. This data is published in the Western Water Bulletin by both Sections of the International Boundary and Water Commission. The USIBWC also coordinates the exchange of flood data with other federal, state, and local authorities.

PURPOSES

The purposes of this Flood Emergency Operations Manual are: 1) to define the USIBWC's functions and responsibilities during flood events on the Tijuana River; 2) to assure that USIBWC personnel having responsibilities during flood events know their duties; 3) to coordinate flood activities with the MXIBWC and other federal, state, and local authorities; and 4) to assure that flood fighting activities of the USIBWC are carried out efficiently.

OBJECTIVE

The objective of the USIBWC during floods on the Tijuana River Basin is to monitor flood flows and patrol the Project to maintain integrity of the levees and to ensure flood protection to those areas landward of USIBWC river levees. During flood events Project personnel collect and exchange data with the MXIBWC in order to provide flood warning prior to flooding in each country. The USIBWC operates the stream gage at Tijuana River at International Boundary. For this purpose, this manual defines:

Flood Mission

Flood Operations Organization

Officer in Charge of Flood Operations

Hydrologic Operations Officer

Public Affairs Officer

Acquisition

Flood Emergency Action Plan

Preparatory Requirements Before The Flood Season
Training
Primary Flood Center - San Diego Office
El Paso Flood Center

Flood Fighting Operation Activities During a Flood
(b) (7)(E) [redacted]

Actions and Activities After a Flood
Primary Flood Center - San Diego Office
El Paso Flood Center

FLOOD MISSION

The Flood Mission of the USIBWC is to provide Project authorized design flood protection to property landward of USIBWC river levees by performing annual maintenance and flood monitoring.

FLOOD OPERATIONS ORGANIZATION

The organization of personnel responsible for coordinating and implementing flood activities shall consist of 7)(E) [redacted]

OFFICER IN CHARGE OF FLOOD OPERATIONS

(b) (7)(E) [redacted]

HYDROLOGIC OPERATIONS OFFICER

(b) (7)(E) [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

PUBLIC AFFAIRS OFFICER

The Public Affairs Officer, or the designated alternate, will be responsible for the following:

I. Coordinating with the Officer in Charge to obtain advance warning and alert data to respond to requests from the general public, news media, and local authorities, and
2. Preparing and distributing press releases, as directed, to provide updated status information regarding conditions, effects, and potential impacts, etc.

ACQUISITION

The Chief, Acquisition Office, or the designated alternate, will be responsible for the coordinating the purchasing of required supplies and/or services (as requested by the Officer in Charge) to support activities during flood operations.

FLOOD EMERGENCY ACTION PLAN

PREPARATORY REQUIREMENTS BEFORE THE FLOOD SEASON

These actions are to be taken prior to **November 1** of each year except as noted.

Training

Training of all personnel having responsibility during a flood event is essential for safe and thorough data collection. In addition, training will ensure quick and accurate flood analysis and flood projection. The Officer in Charge should insure that the staff is aware of the San Diego Duty Roster (Appendix C) and properly prepared for flood operations activities.

Primary Flood Center - San Diego Office

0. Meet by **November 15 of each year** with MXIBWC Tijuana Office, federal, state, county, city, and other authorities to review data exchange procedures, responsibilities, and to update names of personnel and telephone numbers. Establish extent of data exchange between agencies and determine type of data needed by each agency (see Appendix A).
1. Check and service communication and electrical equipment such as (b) (7)(E) [redacted] s.
2. Check with and obtain from local contractors or other local agencies a current list of available equipment and manpower to work shifts during flood emergency operations (see Appendix B).
3. Review and update the San Diego Duty Roster (Appendix C).
4. Make sure that adequate flood fighting supplies are available and safely stored (Appendix D).
5. Conduct the necessary maintenance, mowing, and any other field operations necessary to provide for the security of levees and structures.

6. Make sure that all measuring equipment is in storage and in good condition. Use check list in Appendix E.
7. Inspect and place in proper operating condition all gaging stations and measuring facilities. This includes staff gages.
8. Establish hydrographic measuring teams in accordance with available personnel. It is essential that all personnel involved in taking high water measurements are knowledgeable in setting high water marks and its proper documentation.

El Paso Flood Center - Water Accounting Division

1. Watch the weather channel for any potential flooding. Contact the NWS Office in San Diego to obtain current weather conditions and make arrangements for future forecasts and exchange of hydrologic data.
2. Ensure that copies of all rating curves, forecast charts, procedures, and other necessary data are updated and available.
3. Review the historic high water marks.
4. Exchange the current personnel lists and telephone numbers with the San Diego NWS.

FLOOD FIGHTING OPERATION ACTIVITIES DURING A FLOOD

Whenever flows in the Tijuana River are of such a magnitude that flooding of the Tijuana River flood plain between the river and the levees is occurring or imminent, the Officer in Charge will initiate flood operations activities and will continue until conditions allow the Officer in Charge to suspend flood activities. The following tasks are to be performed.

(b) (7)(E)

6. (b) (7)(E)

U S DATA

(b) (7)(E)

MEXICO DATA

7 (b) (7)(E)

8

(b) (7)(E)

El

[redacted]

ACTIONS AND ACTIVITIES AFTER A FLOOD

After the flood on the Tijuana River has receded to such a magnitude that there is no flood threat and the Officer in Charge has declared the end of flood operations, the following tasks shall be performed:

Primary Flood Center - San Diego Office

1. A report of the flood from beginning to end with critical and constructive suggestions for future reference and guidance will be prepared by the Engineer in Charge. The report will be transmitted to the Water Accounting Division in El Paso for the preparation of the final flood report.

2. Arrange for a flood damage survey.

3. Survey levees and structures, and determine repairs needed with estimates for quantities and costs to be reported to the Officer in Charge with copies to the Water Accounting Division

4. Prepare a report proposing improvements and repairs, with a list of required actions including manpower, equipment, materials, and costs with special reference to problem areas.

5. Elevations and locations of high water marks will be surveyed as soon as possible before the marks are destroyed. All information should be sent to the Water Accounting Division. The following criteria shall be considered to obtain high water marks.

   a) Obtain elevation measurements of all high water marks in the general vicinity to substantiate the validity of the high water profile.

   b) Rate quality of high water marks with respect to representing the true water surface.

   c) Indicate the nature of the high water mark used and indicate whether it is upstream or downstream from a bridge or other structure.

El Paso Flood Center - Water Accounting Division

1. Review the elevations of the high water marks and request resurvey of established cross-sections that may be critical in the post flood hydraulic analysis.

2. Provide immediate review of high water profiles, so questionable elevations can be field checked before marks are destroyed.

3. Prepare a final flood report of the entire flood providing tables of data including rainfall amounts, flows at stream gages, storm details, plots of the discharge hydrographs, and other pertinent data as determined by the extent of the flood.

Appendix A

ROSTER OF FEDERAL, STATE, COUNTY, CITY, MEXICAN, AND OTHER AUTHORITIES

ORGANIZATION	POSITION	NAME	TELEPHONE	FAX	e-Mail
(b) (6), (b) (7)(E)					

Appendix A (Continued)

ROSTER OF FEDERAL, STATE, COUNTY, CITY, MEXICAN, AND OTHER AUTHORITIES

ORGANIZATION	**POSITION**	NAME	**TELEPHONE**	FAX	e-Mail
(b) (7)(E), (b) (6)					

ROSTER OF FEDERAL, STATE, COUNTY, CITY, MEXICAN, AND OTHER AUTHORITIES

ORGANIZATION	POSITION	NAME	**TELEPHONE**	FAX	e-Mail
(b) (6), (b) (7)(E)					

Appendix A (Continued)

ROSTER OF FEDERAL, STATE, COUNTY, CITY, MEXICAN, AND OTHER AUTHORITIES

ORGANIZATION	POSITION	NAME	TELEPHONE	FAX	e-Mail
[redacted]	(b) (7)(E), (b) (6)	[redacted]	[redacted]	[redacted]	
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
	[redacted]	[redacted]	[redacted]	[redacted]	
	[redacted]	[redacted]	[redacted]	[redacted]	
	[redacted]	[redacted]	[redacted]	[redacted]	
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
	[redacted]	[redacted]	[redacted]	[redacted]	
		[redacted]			
[redacted]	[redacted]		[redacted]	[redacted]	
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

APPENDIX B

SOURCES OF ASSISTANCE

Organization	Phone Number
(b) (7)(E) [redacted]	
[redacted]	
[redacted]	
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

APPENDIX C

SAN DIEGO DUTY ROSTER

FLOOD CONTROL OPERATIONS

APPENDIX D

REQUIRED FLOOD FIGHTING SUPPLIES CHECKLIST				
ITEM	**DESCRIPTION**	**QUANTITY**	**YES**	**NO**
1	SAND BAGS	25,000		
2	SHOVELS	10		
3	FLASHLIGHTS	30		
4	ELECTRIC LANTERNS	16		
5	LIGHT STANDS - COMPLETE UNITS (RENTAL)	AS NEEDED		
6	AXES, SINGLE BIT	4		
7	ROPE, NYLON - '/2" AND 3/4"	1 ROLL EACH		
8	24-INCH WOODEN STAKES	12		
9	ADJUSTABLE WRENCH - 12" AND 8"	4		
10	SURVEY RIBBON	1 ROLL		
11	HAMMER - DOUBLE FACES - 2 1/2 LB.	4		
12	PLIERS - 8"	4		
13	BOLT CUTTERS - 36" AND 24"	4 EACH		
14	CANNED SPRAY PAINT	2 CANS		
15	SCREWDRIVERS - FLAT TIP	4		
16	SCREWDRIVERS - PHILLIPS HEAD	4		
17	LOG BOOKS - 1 PER PATROL TEAM	2		
18	FUEL CANS - GASOLINE	2		
19	FUEL CANS - DIESEL	2		
20	OIL - NON-DETERGENT - 30 WT.	1 CASE		
21	OIL - MULTI-WT.	5 GAL		
22	TRANSMISSION FLUID	5 GAL		
23	ANTI-FREEZE FLUID	5 GAL		

SIGNATURE OF INSPECTOR: _____

DATE INSPECTED: _____

NAME AND TITLE OF INSPECTOR: _____

Note: This inventory should be checked every year, two (2) **months prior to flood season and that venders should be contacted to get quick access in the event of flood**

APPENDIX E

MEASURING EQUIPMENT CHECKLIST				
ITEM	**DESCRIPTION**	**QUANTITY**	**YES**	**NO**
1	VEHICLE, 4X4 WITH TRAILER HITCH	1		
2	CURRENT METER	2		
3	RATING AND VERTICAL CORRECTION TABLES	2		
4	SOUNDING WEIGHTS - 50C	3		
5	SOUNDING WEIGHTS - 75C	3		
6	SOUNDING WEIGHTS - 100E	3		
7	REEL, B-50	1		
8	CRANE. TYPE - A	1		
9	FLOOD LIGHT - PLUG IN	1		
10	LANTERN - FLASHING	1		
11	SPOT LIGHT	1		
12	WATER CAN - 5 GALLON	2		
13	DATA RECORDING FORMS	50		
14	PENCILS - #2	6		
15	SHARPENER, PENCIL - PORTABLE	2		

SIGNATURE OF INSPECTOR: _____

DATE INSPECTED: _____

NAME AND TITLE OF INSPECTOR: _____

Note: This inventory should be checked every year, two (2) **months prior to flood season and that venders should be contacted to get quick access in the event of flood**

APPENDIX F (1)

DATA COLLECTION FORM

BARRETT RESERVOIR (DAM)

Date mm/dd/yy	Time hh/mm	Gage Height (m)	Reservoir Storage (m3)	Spillway Depth (m)	Outflow (m3/sec)	Inflow (m3/sec)	Percent I/O (%)	REMARKS

APPENDIX F (2)

D A T A C O L L E C T I O N F O R M

MORENA RESERVOIR (DAM)

Date mm/dd/yy	Time hh/mm	Gage Height (m)	Reservoir Storage (m3)	Spillway Depth (m)	Outflow (m3/sec)	Inflow (m3/sec)	Percent I/O (%)	REMARKS

APPENDIX F (3)

DATA COLLECTION FORM

RODRIGUEZ RESERVOIR (DAM)

Date mm/dd/yy	Time hh/mm	Gage Height (m)	Reservoir Storage (m3)	Spillway Depth (m)	Outflow (m3/sec)	Inflow (m3/sec)	Percent **I/O** (%)	REMARKS

APPENDIX F (4)

DATA COLLECTION FORM

EL CARRIZO RESERVOIR (DAM)

Date mm/dd/yy	Time hh/mm	Gage Height (m)	Reservoir Storage (m3)	Spillway Depth (m)	Outflow (m3/sec)	Inflow (m3/sec)	Percent I/O (%)	REMARKS