

**ENVIRONMENTAL ASSESSMENT FOR
THE CONTINUED IMPLEMENTATION OF
THE RIVER MANAGEMENT PLAN FOR
THE RIO GRANDE CANALIZATION
PROJECT**

Title:

Version: **FINAL ENVIRONMENTAL ASSESSMENT**

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Prepared for:

United States Section
International Boundary and Water Commission
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COVER SHEET
ENVIRONMENTAL ASSESSMENT
AND
FINDING OF NO SIGNIFICANT IMPACT

**CONTINUED IMPLEMENTATION OF THE RIVER MANAGEMENT PLAN FOR THE RIO
GRANDE CANALIZATION PROJECT**

Lead Agency: United States Section of the International Boundary and Water Commission (USIBWC)

Preferred Alternative: Continued Implementation of the River Management Plan (RMP) and Partnership Combination

Report Designation: Environmental Assessment

ABSTRACT: The USIBWC has the authority and responsibility to evaluate river management alternatives for future operations and maintenance of the Rio Grande Canalization Project (RGCP) to enhance ecosystem restoration while accomplishing its water delivery and flood control mission. In compliance with NEPA, in 2004, the USIBWC completed the *Final Environmental Impact Statement (EIS) River Management Alternatives for the USIBWC Rio Grande Canalization Project* for long-term management alternatives of the RGCP. On June 4, 2009, the USIBWC issued a Record of Decision (ROD) for long-term management of the RGCP with a 10-year implementation timeline (June 2009 to June 2019). The RMP incorporates all implementation aspects of the ROD and was developed to provide a guide for enhancing and preserving resources of the RGCP consistent with the USIBWC mission and resource management commitments.

The purpose of the project is to continue to implement the RMP. The need for the project is to:

- Facilitate continued maintenance of the RGCP
- Address any feasible management alternatives not addressed in the RMP or the 2009 ROD
- Allow public review and input after completion of ROD activities.

This Environmental Assessment evaluates seven alternatives:

- *Alternative A: No Action Alternative – Continued Implementation of the RMP* would continue implementation of the RMP through 2030 and use adaptive management to update each section of the RMP according to agency needs and recommendations in the individual plans.
- *Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities* would continue implementation of the RMP and would provide recreation opportunities on USIBWC property, including aquatic and trail opportunities. Trail opportunities would include the designation of approximately 65 miles through the USIBWC right-of-way (ROW) as part of the “Rio Grande Trail.”
- *Alternative C: Continued Implementation of the RMP and Increased Sediment Removal* would continue the implementation of the RMP, increase sediment removal in the channel, including

removing vegetated islands, and increase engagement with stakeholders on sediment control initiatives. The excavation removal would follow recommended locations from the 2015 Channel Maintenance Alternative (CMA) Study with updated removal volumes determined by USIBWC Operations and Maintenance.

- *Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives* would continue implementation of the RMP, re-evaluate and construct additional CMAs, and increase efforts to engage stakeholders through the Sediment Control Initiative Federal Workgroup and stakeholder group. Conceptual CMAs, mostly identified in the 2015 CMA Study, such as sediment control structures, arroyo sediment traps, arroyo re-alignments, and island destabilization, would be re-evaluated and re-designed for efficiency and effectiveness which could include project construction outside of the USIBWC ROW. USIBWC would then construct the most feasible CMAs.
- *Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites* would continue implementation of the RMP and would work to provide some restoration sites with a more official long-term protection status.
- *Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction or Implementation by a Third-Party* would continue the implementation of the RMP and develop third-party agreements, such as a non-governmental organization, to implement restoration outside of USIBWC jurisdiction. Under this alternative, over the long term, the USIBWC would eventually move up to 500 acres of unsuccessful habitat areas (either No-Mow Zone managed grasslands or habitat restoration) outside of USIBWC jurisdiction, via partnerships.
- *Alternative G: Continued Implementation of the RMP and Partnership Combination* is the Preferred Alternative. Under this alternative, USIBWC would continue implementation of the RMP; designate approximately 65 miles through the USIBWC ROW for the New Mexico Rio Grande Trail and Texas trails as discussed under Alternative B; perform additional sediment removal as discussed under Alternative C; implement additional CMAs and increase efforts to engage stakeholders through the Sediment Control Initiative Federal Workgroup and stakeholder groups as discussed under Alternative D; and transfer up to 500 acres of unsuccessful habitat areas (either No-Mow Zone managed grasslands or habitat restoration) outside of USIBWC jurisdiction, via partnerships, as described in Alternative F.

Potential impacts on natural, cultural, water, and other resources were evaluated. A Finding of No Significant Impact has been prepared for the Preferred Alternative based on a review of the facts and analyses contained in the Environmental Assessment.

FINDING OF NO SIGNIFICANT IMPACT

CONTINUED IMPLEMENTATION OF THE RIVER MANAGEMENT PLAN FOR THE RIO GRANDE CANALIZATION PROJECT

I. **LEAD AGENCY:** United States Section of the International Boundary and Water Commission (USIBWC)

This Finding of No Significant Impact (FONSI) has been prepared pursuant to the National Environmental Policy Act (NEPA) of 1969, Public Law 91-190, 42 U.S. Code §4321 et seq.; the Council on Environmental Quality (CEQ) regulations for implementing NEPA, and 40 *Code of Federal Regulations* (CFR), Parts 1500–1508. The FONSI is the decision document for the attached Environmental Assessment (EA) for Continued Implementation of the River Management Plan (RMP) for the Rio Grande Canalization Project (RGCP).

II. **BACKGROUND**

In the late 1930s and early 1940s, the USIBWC constructed the RGCP to facilitate compliance with equitable allocation of water between the United States and Mexico under the U.S.-Mexico Convention of 1906. The RGCP spans a 105-mile reach of the Rio Grande from Percha Diversion Dam, Sierra County, New Mexico to American Dam in El Paso, El Paso County, Texas. The RGCP is designed to provide flood protection against a 100-year flood and ensure releases of waters to Mexico from the upstream Elephant Butte and Caballo Reservoirs.

The USIBWC operates and maintains the RGCP under the requirements of the 1906 Convention, the Act of June 4, 1936 (Public Law 648; 49 Stat. 1463), and 22 United States Code (U.S.C.) 277. The USIBWC also must follow federal laws enacted after the 1936 RGCP authorization, such as NEPA, the Endangered Species Act (ESA), and the Clean Water Act (CWA). These laws require compliance as part of USIBWC's statutorily-required duties.

In compliance with NEPA, in 2004, the USIBWC completed the *Final Environmental Impact Statement (EIS) River Management Alternatives for the USIBWC Rio Grande Canalization Project*. On June 4, 2009, the USIBWC issued a Record of Decision (ROD) for long-term management of the RGCP with a 10-year implementation timeline (June 2009 to June 2019).

The RMP incorporates all implementation aspects of the ROD and was developed to provide a guide for enhancing and preserving resources of the RGCP consistent with the USIBWC mission and resource management commitments. In November 2014, USIBWC finalized portions of the RMP. In December 2016, USIBWC updated the RMP and finalized the channel maintenance plan (Part 4 of the RMP). The USIBWC updated the RMP to include the November 2017 Biological Opinion requirements and other management activities conducted since the last revision in 2016, and a draft was distributed for stakeholder review in November 2018.

The objectives of the RMP are to outline management procedures of the RGCP in order to provide USIBWC staff with a guide to:

- Fulfill statutory duties to operate and maintain the RGCP

- Complete mission requirements of flood control and water delivery while preserving and restoring natural resources
- Implement the requirements outlined in the ROD
- Ensure compliance with the Biological Opinion
- Ensure compliance with other federal and state regulations

The RMP covers plans for floodplain management, endangered species, and channel maintenance, as well as a guide to native and non-native flora and fauna.

The USIBWC has been responsible for maintaining flood control and water delivery capabilities of the RGCP since its completion in 1943. The USIBWC recognizes the need to accomplish flood control, water delivery, and operation and maintenance activities in a manner that complies with environmental regulations and enhances or restores the riparian ecosystem. To fulfill its mission, the USIBWC undertakes the following operation and maintenance activities: sediment removal from the channel and lower end of tributary arroyos; vegetation management along channel banks, floodways, and levees; replacement of channel bank rip rap; maintenance of sedimentation/flood control dams in the tributary arroyos (since the construction of those dams in the early 1970s); maintenance of all RGCP infrastructure, including levee roads, bridges, and the American Diversion Dam; and implementation/maintenance of restoration sites. The RMP incorporates all implementation aspects of the ROD. USIBWC is currently completing ROD implementation activities and will draft a final ROD implementation report. Progress on the majority of ROD activities was substantially complete or fully in progress by the June 2019 expiration, therefore any future activities contemplated by the ROD should be documented under the RMP revision. This EA will replace and supersede the 2009 ROD.

The purpose of the action is to continue to implement the RMP. The need for the action is to:

- Facilitate continued maintenance of the RGCP
- Address any feasible management alternatives not addressed in the RMP or the 2009 ROD
- Allow public review and input after completion of ROD activities.

III. PUBLIC INVOLVEMENT

Pursuant to NEPA guidance (40 CFR 1506.6), the USIBWC made the following efforts to involve and notify the public and stakeholders. The USIBWC discussed the upcoming EA with a local watershed group in October 2018. The USIBWC held stakeholder meetings on November 14 and 15, 2018, to solicit early comments and views on the preliminary alternatives. The USIBWC announced the upcoming EA at USIBWC's Rio Grande Citizens' Forum in April 2019. The USIBWC released for public review the Draft EA on May 31, 2019. Notice of Availability was published in the *Federal Register* notifying the public of the availability of the Draft EA on the website: http://www.ibwc.gov/EMD/EIS_EA_Public_Comment.html, the public hearings, and initiating the public comment period through July 5, 2019. Notice of Availability was sent to the distribution list which includes federal, state, and local governments, organizations, local congressional representatives, and tribes. USIBWC finalized a press release on June 5, 2019 that was distributed to local newspapers and media and posted on USIBWC's website, announcing the opening of public comment on the EA. USIBWC held a public hearing on June 18, 2019 in Las Cruces, NM and another on June 19, 2019 in El Paso, TX. Notice of the public hearings

was included in the press release, the *Federal Register* notice, and emailed to stakeholders. After a written request for extension, USIBWC extended the public comment period until August 5, 2019; the press release was re-issued on July 2, 2019 with the updated comment period deadline and the extension was announced in the *Federal Register* on July 22, 2019. Comments were addressed and changes were incorporated into the Final EA, as appropriate. The Final EA was released for a 30-day public review; a Notice of Availability was published in the *Federal Register* notifying the public of the availability of the Final EA.

IV. ALTERNATIVE ACTIONS CONSIDERED

The accompanying Environmental Assessment: Continued Implementation of the River Management Plan for the Rio Grande Canalization Project, evaluated potential environmental impacts of seven alternatives, including the No Action Alternative.

Alternative A: No Action Alternative – Continued Implementation of the RMP would continue implementation of the RMP through 2030 and use adaptive management to update each section of the RMP according to agency needs and recommendations in the individual plans. USIBWC would continue implementation/maintenance of restoration sites.

Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities would continue implementation of the RMP and would provide recreation opportunities on USIBWC property, including aquatic and trail opportunities. Trail opportunities would include the designation of approximately 65 miles through the USIBWC right-of-way (ROW) as part of the “Rio Grande Trail.”

Alternative C: Continued Implementation of the RMP and Increased Sediment Removal would continue the implementation of the RMP, increase sediment removal in the channel, including removing vegetated islands, and increase engagement with stakeholders on sediment control initiatives. The excavation removal would follow recommended locations from the 2015 Channel Maintenance Alternative (CMA) Study with updated removal volumes determined by USIBWC Operations and Maintenance.

Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives, would continue implementation of the RMP, re-evaluate and construct additional CMAs, and increase efforts to engage stakeholders through the Sediment Control Initiative Federal Workgroup and stakeholder groups. Conceptual CMAs, mostly identified in the 2015 CMA study, such as sediment control structures, arroyo sediment traps, arroyo re-alignments, and island destabilization, would be re-evaluated and re-designed for efficiency and effectiveness and could include project construction outside of the USIBWC ROW. USIBWC would then construct the most feasible CMAs.

Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites would continue implementation of the RMP and would work to provide some restoration sites with a more official long-term protection status.

Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction or Implementation by a Third-Party would continue the implementation of the RMP and develop third-party agreements, such as a non-government organization, to implement restoration outside of USIBWC jurisdiction. Under this alternative, over the long term, the USIBWC would eventually move

up to 500 acres of unsuccessful habitat areas (either No-Mow Zone managed grasslands or habitat restoration) outside of USIBWC jurisdiction, via partnerships.

Alternative G: Continued Implementation of the RMP and Partnership Combination is the Preferred Alternative. Under this alternative, USIBWC would continue implementation of the RMP; designate approximately 65 miles through the USIBWC ROW for the New Mexico Rio Grande Trail and Texas trails as discussed under Alternative B; perform increased sediment removal as discussed under Alternative C; implement CMAs and increase efforts to engage stakeholders through the Sediment Control Initiative Federal Workgroup and stakeholder groups as discussed under Alternative D; and transfer up to 500 acres of unsuccessful habitat areas (either No-Mow Zone managed grasslands or habitat restoration) outside of USIBWC jurisdiction, via partnerships, as described in Alternative F.

V. NEPA REGULATORY BACKGROUND

Pursuant to NEPA guidance (40 CFR 1500-1508) and the President's CEQ issued regulations for NEPA implementation which included provisions for both the content and procedural aspects of the required NEPA documentation, the RMP EA evaluated the No Action and six alternatives that meet the purpose and need, and supports this FONSI.

VI. SUMMARY OF ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES A THROUGH F

Alternative A - No Action Alternative: Continued Implementation of the RMP – Minor beneficial impacts to biological resources are expected with implementation of restoration sites and invasive species management. Implementation of CMAs within the ROW has the potential to disturb 11.2 acres of habitat including 0.6 acre of native habitat restoration and cause temporary displacement of wildlife during construction. Some short-term adverse impacts to water quality and localized soil compaction could occur during construction and maintenance activities. CMAs would result in beneficial impacts to water delivery. Sediment removal would improve water conveyance and flood control. No other environmental impacts are anticipated.

Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities – Under this alternative, impacts of continued implementation of the RMP are the same as for the No Action Alternative. In addition, potential adverse impacts to water quality may occur from pedestrian traffic and increased erosion from recreational use, and although prohibited, the likely use of earthen ramps by all-terrain vehicles (ATVs). Construction of the parking lot has the potential to impact soils through increased erosion. A beneficial impact to recreation resources would result by providing increased recreational opportunities. No other environmental impacts are anticipated.

Alternative C: Continued Implementation of the RMP and Increased Sediment Removal – Potential short-term impacts to biological resources would occur from the use of heavy equipment for channel maintenance and the implementation of CMAs. As compared to the No Action Alternative, an increased potential for temporary displacement of wildlife during sediment removal and for heavy equipment to crush less mobile or burrowing species would occur under this alternative. Deepening the channel may impact riparian habitat along the floodplain as a result of less frequent inundation and could lower floodplain water (groundwater) levels. In addition, the removal of vegetated islands would impact riparian habitat on those islands. USIBWC would maintain compliance with Biological Opinion requirements to

limit removal of vegetation supporting threatened and endangered species within the channel. Beneficial impacts to water resources from sediment removal may be realized for flood control and water delivery. Temporary and localized soil compaction in areas where heavy equipment may enter the channel may occur under this alternative. Additional sediment would require disposal at approved sites per the U.S. Army Corps of Engineers (USACE) permit requirements and may be within the ROW or other designated federal or private lands. No other environmental impacts are anticipated.

Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives – Under this alternative, the implementation of CMAs has the potential to impact approximately 14.1 acres of managed habitat, including 0.6 acre of restored native habitat, which would cause temporary displacement of wildlife. Island destabilization would impact approximately 10 acres of known active flycatcher territories from Rincon to Bignell Arroyo. Potential adverse impacts to the flycatcher may occur with additional channel maintenance activities not already covered under the Biological Opinion and consultation with the U.S. Fish and Wildlife Service (USFWS) would be conducted. Potential minor adverse impacts to flycatcher habitat may occur at some of the channel maintenance sites. Under this alternative, implementation of additional CMAs could potentially increase flood conveyance and have a beneficial impact on flood control. Some minor short-term impacts to soils from compaction with the use of heavy vehicles or increased soil erosion may occur. Acquisition of private property or landowner permission would be required for any CMAs constructed outside the USIBWC ROW. USIBWC would implement best management practices (BMPs) to reduce impacts to both soil and water resources from CMA construction. No impact to cultural resources is expected.

Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites – Official protection of restoration sites can improve habitat, reduce soil disturbance, and benefit wildlife using the habitat. However, use of restoration areas by pedestrians may lead to impacts on species using those areas. Potential protection of undiscovered cultural resources if any occur within those areas would occur under this alternative. If property is transferred to another agency, then any surface water rights associated with the restoration sites would also be transferred. Increased visitor usage would increase potential for damage to the levees and USIBWC has the potential to lose long-term access for maintaining the levees and river.

Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction or Implementation by a Third-Party – Under this alternative and based on adaptive management, up to 500 acres of unsuccessful habitat areas (either No-Mow Zone managed grasslands or habitat restoration) would be moved outside of USIBWC jurisdiction, via partnerships. In some cases No-Mow Zone areas along the RGCP have become predominantly saltcedar which impacts the functionality of the floodplain (potentially obstructs flood flows). Converting these areas back to mowed areas and replacing the acreage outside the RMP would potentially increase native habitat and benefit wildlife using the habitat. Under this alternative, there would be a requirement to renegotiate the Biological Opinion with the USFWS as impacts to the restoration credit acreage under the Biological Opinion would occur. Potential protection of undiscovered cultural resources may occur within those areas, if they exist, that are used for restoration efforts. Water resource impacts would be similar as discussed under the No Action Alternative although changes in water right requests could cause changes to irrigation usage and remove other currently irrigated lands from the program. These restoration

activities would be on a voluntary basis only and would not force farmland out of production. No change in ownership of the properties would occur; only the function of the land through voluntary easements.

VII. SUMMARY OF ENVIRONMENTAL CONSEQUENCES OF THE PREFERRED ALTERNATIVE (ALTERNATIVE G)

Biological Resources

The Preferred Alternative could result in increased vehicular and pedestrian traffic from the construction of the Rio Grande Trail and its use which could negatively impact vegetation by trampling and soil compaction. The trail would be designated outside of the restoration areas and signs posted to reduce potential impacts to vegetation. However, if people disregard the signs, damage to the restoration areas could occur. Implementation of increased sediment removal and CMAs has the potential to impact vegetation through crushing and trampling from heavy equipment. Implementation of CMAs would disturb approximately 14.1 acres of, habitat including 0.6 acre of restored native habitat which would cause temporary displacement of wildlife. Re-designing the CMAs outside the ROW has the potential to impact additional native habitat compared to the CMAs within the ROW that would impact managed habitat. For construction activities (such as the CMAs) where habitat for the state-listed plant species occurs, a survey would be conducted to determine presence of the plant species and measures would be employed to avoid adverse impacts. Construction activities would take place outside the nesting season to reduce impacts to migratory bird species. Island destabilization would impact approximately 10 acres of known active flycatcher territories from Rincon to Bignell Arroyo. Potential adverse impacts to the flycatcher may occur with additional channel maintenance activities not already covered under the Biological Opinion. The immediate vicinity of the flycatcher territory would be avoided and as deemed reasonable the USIBWC would not remove vegetation within 0.25 mile from the territory. In areas where there are large vegetated islands with flycatchers and cuckoos, sediment would be removed around vegetated islands and USIBWC would leave the islands in place. This would prevent further growth of the vegetated islands. Alternative G would comply with the Reasonable and Prudent Measure 1.2 in the Biological Opinion as well as management guidelines for channel maintenance outlined in the RMP (Section 3.1.15). Removal of vegetated islands within the channel that are occupied would be scrutinized and deprioritized unless there is a public safety issue. Large islands (greater than 0.1 hectare or about 0.25 acre) with suitable habitat should not be excavated or destabilized unless habitat is available along the nearby riverbanks or unless flood modeling predicts impacts to human health and safety from flooding created by the islands. Reduced sediment load would provide beneficial impacts to aquatic biota. Continued habitat restoration, as well as replacing unsuccessful habitat restoration to outside the ROW, would potentially provide long-term beneficial impacts to vegetation.

Cultural Resources

The Preferred Alternative could increase the potential to impact undiscovered cultural resources if they existed in the areas where increased sediment removal and CMA activities would occur. USIBWC would consult with State Historic Preservation Office in accordance with established Programmatic Agreements. BMPs for cultural resources protection are identified in the RMP and would continue to be implemented under this alternative. Before ground-disturbing maintenance work, a conference would be held with maintenance crews to inform them of the potential for disturbing subsurface cultural resources, and the procedures involved in the event that this occurs. Precautions would be taken to ensure that

archaeological assistance is promptly available in case of a discovery. In addition, at all spoil sites, crews would be on the lookout for possible cultural resources, they would stop work immediately if any cultural resource is found and would notify the USIBWC Environmental Management Division promptly. With the implementation of BMPs, no adverse impacts to cultural resources are expected.

Water Resources

The Preferred Alternative would provide beneficial impacts to flood control through increased sediment removal, construction of CMAs, and reverting No-Mow Zone areas to mowed habitat. Increased conveyance capacity could be realized. Potential impacts to water quality from the continued implementation of the RMP, construction of trails, increased sediment removal, and CMAs would be short term. Most activities would occur during low water flow to prevent any impacts to water quality. In addition, BMPs would be implemented to avoid impacts to water quality. BMPs would reduce or eliminate erosion and downstream sedimentation. Increased sediment removal and channel maintenance that reduces sediment inflows could decrease groundwater levels as well as salinity. Although reduced salinity levels would be a beneficial impact to vegetation and agricultural lands, reduced groundwater levels could impact restoration efforts. All restoration sites with a net depletion of water would be required to have water rights for offset. For any new restoration sites outside of USIBWC jurisdiction, water rights may need to be acquired in order to successfully implement restoration efforts. Beneficial impacts to water delivery would be realized with increased sediment removal and the implementation of additional CMAs. The exact impact to water consumption from replacement restoration outside of the USIBWC ROW would depend on the site. Restoration efforts would provide a net benefit to water consumption through the removal of saltcedar. Creation of restoration sites from a mainly grassland habitat to bosque habitat would increase water consumption.

Soils

Initial construction of the trail through the RGCP would remove vegetation and expose soil; limited erosion would occur during usage of the trails due to the surrounding habitat protecting the trail and limiting exposure. Increased sediment removal and implementation of additional CMAs would cause temporary impacts to soil from erosion and compaction; however, these impacts would be localized. BMPs, such as using previously disturbed areas and conducting removal during low flows or no flows, would reduce the erosion potential outside the channel during these activities. No long-term adverse impacts to soils are expected.

Land Use

Additional sediment would require disposal at approved sites and may be within the ROW or other designated federal or private lands. Implementation of any CMAs outside the USIBWC ROW would require acquisition of private property and/or landowner permission. Sediment removal and CMA construction would follow USACE permit requirements. Options under this alternative include adding restoration acreage outside USIBWC jurisdiction or partnering with a non-governmental organization to manage the existing restoration sites. The new restoration acreage would replace some of the existing restoration and managed grassland acreage in the ROD (out of a maximum of 2,536 acres). A potential change in land use would occur from an existing use to restoration. As specific sites for replacement restoration have not been identified, it is unknown what existing land use would be lost. These restoration

activities would be on a voluntary basis only and would not force farmland out of production. Ownership of the properties would not change; only the function of the land through voluntary easements.

Cumulative Impacts

No adverse cumulative effects were identified. Potential beneficial cumulative impacts to water conveyance and habitat could be realized from the Thurman arroyos sediment project. In addition, USIBWC would decrease mechanized sediment removal in any areas of the river channel immediately downstream of the Thurman arroyos after construction of the sediment basins, although the sediment basins themselves would require maintenance. Potential beneficial cumulative impacts to flood control may be realized by the Section 205 Small Flood Risk Management Project in Hatch, NM and the implementation of a flood control plan for the Canal Road Bridge, as well as regional drought planning efforts and local restoration efforts.

VIII. BEST MANAGEMENT PRACTICES AND MITIGATION

The USIBWC would implement BMPs to minimize impacts to natural resources. BMPs would include, but are not limited to, the use of sediment barriers and soil wetting to minimize erosion and dust, the proper maintenance of construction equipment, cleaning of equipment prior to movement through the ROW and into the river to reduce the spread of invasive species, spill control procedures, timing of construction during the low or no flow season, and stopping of work if cultural resources are found. BMPs are outlined throughout the RMP and would be updated as needed. In addition, USIBWC would implement the Reasonable and Prudent Measures outlined in the 2017 Biological Opinion.

If mitigation is determined to be required for specific projects after refinement of project details, such as construction of sediment control structures, mitigation would be addressed under the appropriate regulatory channel for such projects (i.e. CWA Section 404 permit for work within Waters of the U.S., administered by the USACE).

IX. DECISION

Based on my review of the facts and analyses contained in the RMP EA, I conclude that implementation of the Preferred Alternative to continue implementation of the RMP, and conduct collaboration with third parties for river trail, increase sediment removal and CMAs, and replace restoration outside of USIBWC ROW would not have any significant direct, indirect, or cumulative impacts on the quality of the human environment under the meaning of Section 102 (2) of NEPA. Accordingly, requirements of NEPA and regulations promulgated by CEQ are fulfilled and an EIS is not required.



Jayne Harkins
Commissioner

International Boundary and Water Commission
United States Section

12/16/19
Date

FINDING OF NO SIGNIFICANT IMPACT

CONTINUED IMPLEMENTATION OF THE RIVER MANAGEMENT PLAN FOR THE RIO GRANDE CANALIZATION PROJECT

I. LEAD AGENCY: United States Section of the International Boundary and Water Commission (USIBWC)

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- Complete mission requirements of flood control and water delivery while preserving and restoring natural resources
- Implement the requirements outlined in the ROD
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III. PUBLIC INVOLVEMENT

Pursuant to NEPA guidance (40 CFR 1506.6), the USIBWC made the following efforts to involve and notify the public and stakeholders. The USIBWC discussed the upcoming EA with a local watershed group in October 2018. The USIBWC held stakeholder meetings on November 14 and 15, 2018, to solicit early comments and views on the preliminary alternatives. The USIBWC announced the upcoming EA at USIBWC's Rio Grande Citizens' Forum in April 2019. The USIBWC released for public review the Draft EA on May 31, 2019. Notice of Availability was published in the *Federal Register* notifying the public of the availability of the Draft EA on the website: http://www.ibwc.gov/EMD/EIS_EA_Public_Comment.html, the public hearings, and initiating the public comment period through July 5, 2019. Notice of Availability was sent to the distribution list which includes federal, state, and local governments, organizations, local congressional representatives, and tribes. USIBWC finalized a press release on June 5, 2019 that was distributed to local newspapers and media and posted on USIBWC's website, announcing the opening of public comment on the EA. USIBWC held a public hearing on June 18, 2019 in Las Cruces, NM and another on June 19, 2019 in El Paso, TX. Notice of the public hearings

was included in the press release, the *Federal Register* notice, and emailed to stakeholders. After a written request for extension, USIBWC extended the public comment period until August 5, 2019; the press release was re-issued on July 2, 2019 with the updated comment period deadline and the extension was announced in the *Federal Register* on July 22, 2019. Comments were addressed and changes were incorporated into the Final EA, as appropriate. The Final EA was released for a 30-day public review; a Notice of Availability was published in the *Federal Register* notifying the public of the availability of the Final EA.

IV. ALTERNATIVE ACTIONS CONSIDERED

The accompanying Environmental Assessment: Continued Implementation of the River Management Plan for the Rio Grande Canalization Project, evaluated potential environmental impacts of seven alternatives, including the No Action Alternative.

Alternative A: No Action Alternative – Continued Implementation of the RMP would continue implementation of the RMP through 2030 and use adaptive management to update each section of the RMP according to agency needs and recommendations in the individual plans. USIBWC would continue implementation/maintenance of restoration sites.

Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities would continue implementation of the RMP and would provide recreation opportunities on USIBWC property, including aquatic and trail opportunities. Trail opportunities would include the designation of approximately 65 miles through the USIBWC right-of-way (ROW) as part of the “Rio Grande Trail.”

Alternative C: Continued Implementation of the RMP and Increased Sediment Removal would continue the implementation of the RMP, increase sediment removal in the channel, including removing vegetated islands, and increase engagement with stakeholders on sediment control initiatives. The excavation removal would follow recommended locations from the 2015 Channel Maintenance Alternative (CMA) Study with updated removal volumes determined by USIBWC Operations and Maintenance.

Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives, would continue implementation of the RMP, re-evaluate and construct additional CMAs, and increase efforts to engage stakeholders through the Sediment Control Initiative Federal Workgroup and stakeholder groups. Conceptual CMAs, mostly identified in the 2015 CMA study, such as sediment control structures, arroyo sediment traps, arroyo re-alignments, and island destabilization, would be re-evaluated and re-designed for efficiency and effectiveness and could include project construction outside of the USIBWC ROW. USIBWC would then construct the most feasible CMAs.

Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites would continue implementation of the RMP and would work to provide some restoration sites with a more official long-term protection status.

Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction or Implementation by a Third-Party would continue the implementation of the RMP and develop third-party agreements, such as a non-government organization, to implement restoration outside of USIBWC jurisdiction. Under this alternative, over the long term, the USIBWC would eventually move

up to 500 acres of unsuccessful habitat areas (either No-Mow Zone managed grasslands or habitat restoration) outside of USIBWC jurisdiction, via partnerships.

Alternative G: Continued Implementation of the RMP and Partnership Combination is the Preferred Alternative. Under this alternative, USIBWC would continue implementation of the RMP; designate approximately 65 miles through the USIBWC ROW for the New Mexico Rio Grande Trail and Texas trails as discussed under Alternative B; perform increased sediment removal as discussed under Alternative C; implement CMAs and increase efforts to engage stakeholders through the Sediment Control Initiative Federal Workgroup and stakeholder groups as discussed under Alternative D; and transfer up to 500 acres of unsuccessful habitat areas (either No-Mow Zone managed grasslands or habitat restoration) outside of USIBWC jurisdiction, via partnerships, as described in Alternative F.

V. NEPA REGULATORY BACKGROUND

Pursuant to NEPA guidance (40 CFR 1500-1508) and the President's CEQ issued regulations for NEPA implementation which included provisions for both the content and procedural aspects of the required NEPA documentation, the RMP EA evaluated the No Action and six alternatives that meet the purpose and need, and supports this FONSI.

VI. SUMMARY OF ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES A THROUGH F

Alternative A - No Action Alternative: Continued Implementation of the RMP – Minor beneficial impacts to biological resources are expected with implementation of restoration sites and invasive species management. Implementation of CMAs within the ROW has the potential to disturb 11.2 acres of habitat including 0.6 acre of native habitat restoration and cause temporary displacement of wildlife during construction. Some short-term adverse impacts to water quality and localized soil compaction could occur during construction and maintenance activities. CMAs would result in beneficial impacts to water delivery. Sediment removal would improve water conveyance and flood control. No other environmental impacts are anticipated.

Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities – Under this alternative, impacts of continued implementation of the RMP are the same as for the No Action Alternative. In addition, potential adverse impacts to water quality may occur from pedestrian traffic and increased erosion from recreational use, and although prohibited, the likely use of earthen ramps by all-terrain vehicles (ATVs). Construction of the parking lot has the potential to impact soils through increased erosion. A beneficial impact to recreation resources would result by providing increased recreational opportunities. No other environmental impacts are anticipated.

Alternative C: Continued Implementation of the RMP and Increased Sediment Removal – Potential short-term impacts to biological resources would occur from the use of heavy equipment for channel maintenance and the implementation of CMAs. As compared to the No Action Alternative, an increased potential for temporary displacement of wildlife during sediment removal and for heavy equipment to crush less mobile or burrowing species would occur under this alternative. Deepening the channel may impact riparian habitat along the floodplain as a result of less frequent inundation and could lower floodplain water (groundwater) levels. In addition, the removal of vegetated islands would impact riparian habitat on those islands. USIBWC would maintain compliance with Biological Opinion requirements to

limit removal of vegetation supporting threatened and endangered species within the channel. Beneficial impacts to water resources from sediment removal may be realized for flood control and water delivery. Temporary and localized soil compaction in areas where heavy equipment may enter the channel may occur under this alternative. Additional sediment would require disposal at approved sites per the U.S. Army Corps of Engineers (USACE) permit requirements and may be within the ROW or other designated federal or private lands. No other environmental impacts are anticipated.

Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives – Under this alternative, the implementation of CMAs has the potential to impact approximately 14.1 acres of managed habitat, including 0.6 acre of restored native habitat, which would cause temporary displacement of wildlife. Island destabilization would impact approximately 10 acres of known active flycatcher territories from Rincon to Bignell Arroyo. Potential adverse impacts to the flycatcher may occur with additional channel maintenance activities not already covered under the Biological Opinion and consultation with the U.S. Fish and Wildlife Service (USFWS) would be conducted. Potential minor adverse impacts to flycatcher habitat may occur at some of the channel maintenance sites. Under this alternative, implementation of additional CMAs could potentially increase flood conveyance and have a beneficial impact on flood control. Some minor short-term impacts to soils from compaction with the use of heavy vehicles or increased soil erosion may occur. Acquisition of private property or landowner permission would be required for any CMAs constructed outside the USIBWC ROW. USIBWC would implement best management practices (BMPs) to reduce impacts to both soil and water resources from CMA construction. No impact to cultural resources is expected.

Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites – Official protection of restoration sites can improve habitat, reduce soil disturbance, and benefit wildlife using the habitat. However, use of restoration areas by pedestrians may lead to impacts on species using those areas. Potential protection of undiscovered cultural resources if any occur within those areas would occur under this alternative. If property is transferred to another agency, then any surface water rights associated with the restoration sites would also be transferred. Increased visitor usage would increase potential for damage to the levees and USIBWC has the potential to lose long-term access for maintaining the levees and river.

Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction or Implementation by a Third-Party – Under this alternative and based on adaptive management, up to 500 acres of unsuccessful habitat areas (either No-Mow Zone managed grasslands or habitat restoration) would be moved outside of USIBWC jurisdiction, via partnerships. In some cases No-Mow Zone areas along the RGCP have become predominantly saltcedar which impacts the functionality of the floodplain (potentially obstructs flood flows). Converting these areas back to mowed areas and replacing the acreage outside the RMP would potentially increase native habitat and benefit wildlife using the habitat. Under this alternative, there would be a requirement to renegotiate the Biological Opinion with the USFWS as impacts to the restoration credit acreage under the Biological Opinion would occur. Potential protection of undiscovered cultural resources may occur within those areas, if they exist, that are used for restoration efforts. Water resource impacts would be similar as discussed under the No Action Alternative although changes in water right requests could cause changes to irrigation usage and remove other currently irrigated lands from the program. These restoration

activities would be on a voluntary basis only and would not force farmland out of production. No change in ownership of the properties would occur; only the function of the land through voluntary easements.

VII. SUMMARY OF ENVIRONMENTAL CONSEQUENCES OF THE PREFERRED ALTERNATIVE (ALTERNATIVE G)

Biological Resources

The Preferred Alternative could result in increased vehicular and pedestrian traffic from the construction of the Rio Grande Trail and its use which could negatively impact vegetation by trampling and soil compaction. The trail would be designated outside of the restoration areas and signs posted to reduce potential impacts to vegetation. However, if people disregard the signs, damage to the restoration areas could occur. Implementation of increased sediment removal and CMAs has the potential to impact vegetation through crushing and trampling from heavy equipment. Implementation of CMAs would disturb approximately 14.1 acres of, habitat including 0.6 acre of restored native habitat which would cause temporary displacement of wildlife. Re-designing the CMAs outside the ROW has the potential to impact additional native habitat compared to the CMAs within the ROW that would impact managed habitat. For construction activities (such as the CMAs) where habitat for the state-listed plant species occurs, a survey would be conducted to determine presence of the plant species and measures would be employed to avoid adverse impacts. Construction activities would take place outside the nesting season to reduce impacts to migratory bird species. Island destabilization would impact approximately 10 acres of known active flycatcher territories from Rincon to Bignell Arroyo. Potential adverse impacts to the flycatcher may occur with additional channel maintenance activities not already covered under the Biological Opinion. The immediate vicinity of the flycatcher territory would be avoided and as deemed reasonable the USIBWC would not remove vegetation within 0.25 mile from the territory. In areas where there are large vegetated islands with flycatchers and cuckoos, sediment would be removed around vegetated islands and USIBWC would leave the islands in place. This would prevent further growth of the vegetated islands. Alternative G would comply with the Reasonable and Prudent Measure 1.2 in the Biological Opinion as well as management guidelines for channel maintenance outlined in the RMP (Section 3.1.15). Removal of vegetated islands within the channel that are occupied would be scrutinized and deprioritized unless there is a public safety issue. Large islands (greater than 0.1 hectare or about 0.25 acre) with suitable habitat should not be excavated or destabilized unless habitat is available along the nearby riverbanks or unless flood modeling predicts impacts to human health and safety from flooding created by the islands. Reduced sediment load would provide beneficial impacts to aquatic biota. Continued habitat restoration, as well as replacing unsuccessful habitat restoration to outside the ROW, would potentially provide long-term beneficial impacts to vegetation.

Cultural Resources

The Preferred Alternative could increase the potential to impact undiscovered cultural resources if they existed in the areas where increased sediment removal and CMA activities would occur. USIBWC would consult with State Historic Preservation Office in accordance with established Programmatic Agreements. BMPs for cultural resources protection are identified in the RMP and would continue to be implemented under this alternative. Before ground-disturbing maintenance work, a conference would be held with maintenance crews to inform them of the potential for disturbing subsurface cultural resources, and the procedures involved in the event that this occurs. Precautions would be taken to ensure that

archaeological assistance is promptly available in case of a discovery. In addition, at all spoil sites, crews would be on the lookout for possible cultural resources, they would stop work immediately if any cultural resource is found and would notify the USIBWC Environmental Management Division promptly. With the implementation of BMPs, no adverse impacts to cultural resources are expected.

Water Resources

The Preferred Alternative would provide beneficial impacts to flood control through increased sediment removal, construction of CMAs, and reverting No-Mow Zone areas to mowed habitat. Increased conveyance capacity could be realized. Potential impacts to water quality from the continued implementation of the RMP, construction of trails, increased sediment removal, and CMAs would be short term. Most activities would occur during low water flow to prevent any impacts to water quality. In addition, BMPs would be implemented to avoid impacts to water quality. BMPs would reduce or eliminate erosion and downstream sedimentation. Increased sediment removal and channel maintenance that reduces sediment inflows could decrease groundwater levels as well as salinity. Although reduced salinity levels would be a beneficial impact to vegetation and agricultural lands, reduced groundwater levels could impact restoration efforts. All restoration sites with a net depletion of water would be required to have water rights for offset. For any new restoration sites outside of USIBWC jurisdiction, water rights may need to be acquired in order to successfully implement restoration efforts. Beneficial impacts to water delivery would be realized with increased sediment removal and the implementation of additional CMAs. The exact impact to water consumption from replacement restoration outside of the USIBWC ROW would depend on the site. Restoration efforts would provide a net benefit to water consumption through the removal of saltcedar. Creation of restoration sites from a mainly grassland habitat to bosque habitat would increase water consumption.

Soils

Initial construction of the trail through the RGCP would remove vegetation and expose soil; limited erosion would occur during usage of the trails due to the surrounding habitat protecting the trail and limiting exposure. Increased sediment removal and implementation of additional CMAs would cause temporary impacts to soil from erosion and compaction; however, these impacts would be localized. BMPs, such as using previously disturbed areas and conducting removal during low flows or no flows, would reduce the erosion potential outside the channel during these activities. No long-term adverse impacts to soils are expected.

Land Use

Additional sediment would require disposal at approved sites and may be within the ROW or other designated federal or private lands. Implementation of any CMAs outside the USIBWC ROW would require acquisition of private property and/or landowner permission. Sediment removal and CMA construction would follow USACE permit requirements. Options under this alternative include adding restoration acreage outside USIBWC jurisdiction or partnering with a non-governmental organization to manage the existing restoration sites. The new restoration acreage would replace some of the existing restoration and managed grassland acreage in the ROD (out of a maximum of 2,536 acres). A potential change in land use would occur from an existing use to restoration. As specific sites for replacement restoration have not been identified, it is unknown what existing land use would be lost. These restoration

activities would be on a voluntary basis only and would not force farmland out of production. Ownership of the properties would not change; only the function of the land through voluntary easements.

Cumulative Impacts

No adverse cumulative effects were identified. Potential beneficial cumulative impacts to water conveyance and habitat could be realized from the Thurman arroyos sediment project. In addition, USIBWC would decrease mechanized sediment removal in any areas of the river channel immediately downstream of the Thurman arroyos after construction of the sediment basins, although the sediment basins themselves would require maintenance. Potential beneficial cumulative impacts to flood control may be realized by the Section 205 Small Flood Risk Management Project in Hatch, NM and the implementation of a flood control plan for the Canal Road Bridge, as well as regional drought planning efforts and local restoration efforts.

VIII. BEST MANAGEMENT PRACTICES AND MITIGATION

The USIBWC would implement BMPs to minimize impacts to natural resources. BMPs would include, but are not limited to, the use of sediment barriers and soil wetting to minimize erosion and dust, the proper maintenance of construction equipment, cleaning of equipment prior to movement through the ROW and into the river to reduce the spread of invasive species, spill control procedures, timing of construction during the low or no flow season, and stopping of work if cultural resources are found. BMPs are outlined throughout the RMP and would be updated as needed. In addition, USIBWC would implement the Reasonable and Prudent Measures outlined in the 2017 Biological Opinion.

If mitigation is determined to be required for specific projects after refinement of project details, such as construction of sediment control structures, mitigation would be addressed under the appropriate regulatory channel for such projects (i.e. CWA Section 404 permit for work within Waters of the U.S., administered by the USACE).

IX. DECISION

Based on my review of the facts and analyses contained in the RMP EA, I conclude that implementation of the Preferred Alternative to continue implementation of the RMP, and conduct collaboration with third parties for river trail, increase sediment removal and CMAs, and replace restoration outside of USIBWC ROW would not have any significant direct, indirect, or cumulative impacts on the quality of the human environment under the meaning of Section 102 (2) of NEPA. Accordingly, requirements of NEPA and regulations promulgated by CEQ are fulfilled and an EIS is not required.

Jayne Harkins
Commissioner
International Boundary and Water Commission,
United States Section

Date

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Appendix

Appendix A Agency Coordination and Public Involvement

Appendix B Draft Environmental Assessment Review Comments and Subsequent Changes Made to the Draft EA

LIST OF ABBREVIATIONS / ACRONYMS

ATV	All-terrain Vehicle
BMP	Best Management Practice
cfs	cubic feet per second
CMA	Channel Maintenance Alternative
CWA	Clean Water Act
EA	Environmental Assessment
EBID	Elephant Butte Irrigation District
EIS	Environmental Impact Statement
EMD	Environmental Management Division
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPCWID	El Paso County Water Improvement District
ESA	Endangered Species Act
ESM	Endangered Species Management
EWTP	Environmental Water Transaction Program
MBTA	Migratory Bird Treaty Act
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMCRIS	New Mexico Cultural Resources Information System
NMED	New Mexico Environment Department
NMSHPO	New Mexico State Historic Preservation Officer
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
PA	Programmatic Agreement
RGCP	Rio Grande Canalization Project
RMP	River Management Plan
ROD	Record of Decision
ROW	right-of-way
SHPO	State Historic Preservation Officer
T&E	Threatened and Endangered
TCEQ	Texas Commission on Environmental Quality
TXSHPO	Texas State Historic Preservation Officer
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife
USIBWC	United States Section of the International Boundary and Water Commission

1.0 BACKGROUND, AND PURPOSE OF/NEED FOR ACTION

1.1 Summary of Purpose and Need

The United States Section of the International Boundary and Water Commission (USIBWC) has the authority and responsibility to evaluate river management alternatives for future operations and maintenance of the Rio Grande Canalization Project (RGCP) to sustainably accomplish its water delivery and flood control mission. This environmental assessment (EA) has been prepared to comply with National Environmental Policy Act (NEPA) for management actions and the continued implementation of the River Management Plan (RMP). This section presents the project area; background information; purpose and need; and scope of the environmental review.

1.2 Project Area

The project area covered under this EA is the RGCP, located in Doña Ana and Sierra counties in New Mexico and El Paso County in Texas. The RGCP extends for 105.6 miles along the Rio Grande from Percha Diversion Dam in New Mexico to approximately 200 feet downstream from American Diversion Dam where the Rio Grande begins to form the international boundary at El Paso, Texas and Ciudad Juarez, Chihuahua. The project area is shown in Figure 1-1.

1.3 Background of the Rio Grande Canalization Project

In the late 1930s and early 1940s, the USIBWC constructed the RGCP to facilitate compliance with equitable allocation of water between the United States and Mexico under the U.S.-Mexico Convention of 1906. The RGCP spans a 105-mile reach of the Rio Grande from Percha Diversion Dam, Sierra County, New Mexico to American Dam in El Paso, El Paso County, Texas. The RGCP is designed to provide flood protection against a 100-year flood and ensure releases of waters to Mexico from the upstream Elephant Butte and Caballo Reservoirs.

The USIBWC operates and maintains the RGCP under the requirements of the 1906 Convention, the Act of June 4, 1936 (Public Law 648; 49 Stat. 1463), and 22 United States Code (U.S.C.) 277 (implementing regulations for the USIBWC). The USIBWC also must follow federal laws enacted after the 1936 RGCP authorization, such as NEPA, the Endangered Species Act (ESA), and the Clean Water Act (CWA). These laws require compliance as part of USIBWC's statutorily-required duties.

In compliance with NEPA, in 2004, the USIBWC completed the *Final Environmental Impact Statement (EIS) River Management Alternatives for the USIBWC Rio Grande Canalization Project* for long-term management alternatives of the RGCP. On June 4, 2009, the USIBWC issued a Record of Decision (ROD) for long-term management of the RGCP with a 10-year implementation timeline (June 2009 to June 2019).

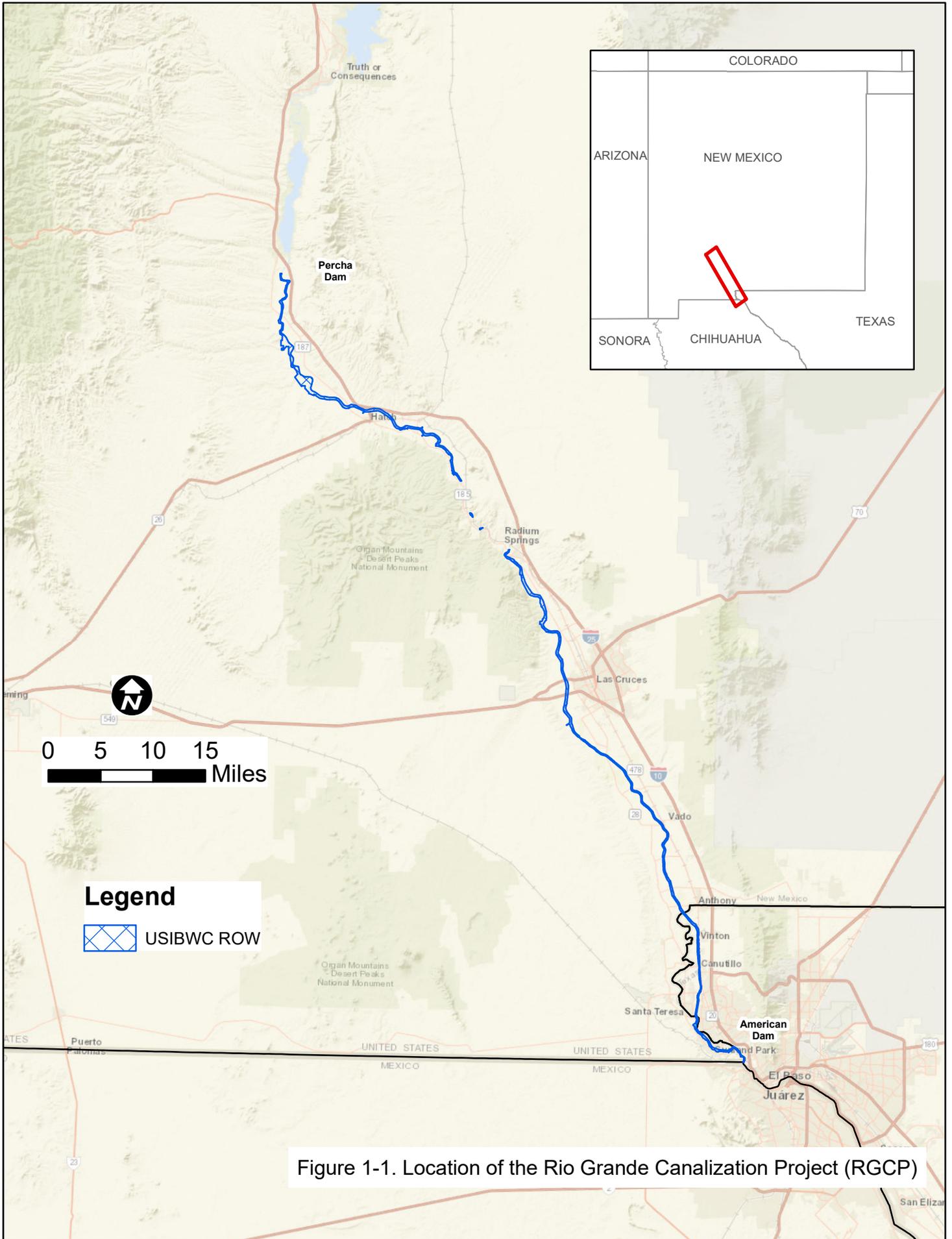


Figure 1-1. Location of the Rio Grande Canalization Project (RGCP)

The main aspects of the ROD included (USIBWC 2009):

- Continue mission requirements of flood control and water delivery.
- Restore riparian habitat of 30 sites totaling more than 550 acres. The principal objectives of the restoration were to enhance river-floodplain hydrologic connectivity; reduce exotic vegetation; restore endangered species habitat; and reestablish riparian habitat. Twelve sites would provide habitat for the endangered southwestern willow flycatcher (*Empidonax traillii extimus*). Restoration work would follow the 2009 Conceptual Restoration Plan prepared by the Albuquerque District of the U.S. Army Corps of Engineers (USACE).
- Develop and implement an Environmental Water Transaction Program (EWTP), a voluntary, cooperative, market-based program to acquire or lease water rights, in order to offset increased consumption from restoration activities, to provide supplemental irrigation, and/or to simulate overbank conditions.
- Cease mowing on 1,983 acres to implement managed grasslands.
- Phase out grazing leases.
- Implement a peak restoration flow once every 3 to 10 years during spring, if deemed feasible by irrigation districts and the U.S. Bureau of Reclamation (USBR).
- Evaluate channel maintenance through an adaptive management program; establish a channel management data collection and monitoring program; and resurvey the baseline cross sections at least every 4 to 5 years.
- Update the 2004 RMP in collaboration with the key stakeholders.
- Implement mitigation actions for construction activities.
- Adopt an adaptive management strategy for implementation.

1.4 The River Management Plan

The RMP incorporates all implementation aspects of the ROD and was developed to provide a guide for enhancing and preserving resources of the RGCP consistent with the USIBWC mission and resource management commitments. In November 2014, USIBWC finalized portions of the RMP. In December 2016, USIBWC updated the RMP and finalized the channel maintenance plan (Part 4 of the RMP). The USIBWC updated the RMP to include the November 2017 Biological Opinion requirements and other management activities conducted since the last revision in 2016, and a draft was distributed for stakeholder review in November 2018.

The objectives of the RMP are to outline management procedures of the RGCP in order to provide USIBWC staff with a guide to:

- Fulfill statutory duties to operate and maintain the RGCP
- Complete mission requirements of flood control and water delivery while preserving and restoring natural resources
- Implement the requirements outlined in the ROD

- Ensure compliance with the Biological Opinions
- Ensure compliance with other federal and state regulations

Part 1 of the RMP provides a background on the RGCP. Parts 2 through 6 cover plans for floodplain management, endangered species, and channel maintenance, as well as a guide to native and non-native flora and fauna, and No-Mow Zone maps. Key components of the RMP are discussed below.

1.4.1 Floodplain Management Plan (Part 2)

The Floodplain Management Plan (November 2014) describes levee, floodplain, and vegetation management procedures along the floodplain within the USIBWC right-of-way (ROW) in the RGCP. The levee system provides protection from the 100-year flood and extends for 57 miles along the west side of the RGCP and 74 miles on the east side for a combined total of 131 miles of levees. The levees range in height from about 3 feet to about 10 feet and are designed and maintained to provide 3 feet of freeboard during the 100-year design flood in most reaches.

USIBWC conducts levee maintenance along the entire RGCP on a routine basis. Levee maintenance equipment consists of water trucks, graders and rollers for levee surface, and slope grading and blading activities. Maintenance includes encouraging grass growth on the levee slopes for erosion control, cutting brush and tall weeds from the slopes, repairing levee slopes following flooding, and levee road grading and resurfacing with gravel as needed. Levee slopes are mowed to prevent growth of brush and trees that could obstruct flows, or cause damage to the levee as a result of penetration by roots of plants.

Vegetation management is a large portion of the Floodplain Management Plan. The USIBWC has jurisdiction of approximately 9,000 acres of land within the RGCP ROW. The floodplain vegetation within the ROW is managed by mowing, mechanical or chemical treatment, through provisions in leases, or through cooperative agreements for recreation areas. With the implementation of the ROD, areas along the ROW have been designated “no mow” zones for the development of restoration sites, to allow native vegetation to establish itself for the improvement and restoration of riparian habitats, and managed grasslands. Vegetation management under the Floodplain Management Plan also outlines management practices for over 500 acres of restoration sites, invasive species control, and prescribed burns. No-Mow Zones maps included in Part 6 of the RMP outline where USIBWC will refrain from mowing but require vegetation management in the form of saltcedar removal.

USIBWC continues to implement construction and rehabilitation projects to improve flood protection and continually evaluates flood containment capacity. Construction projects to fill levee gaps are in various stages of design and/or construction and have undergone NEPA analysis (USIBWC 2004, 2007).

1.4.2 Endangered Species Management Plan (Part 3)

The 2012 *Biological and Conference Opinion on the Effects of USIBWC Integrated Land Management Alternative for Long-Term Management for RGCP in Sierra County and Doña Ana County, New Mexico, and El Paso County, Texas* (“2012 Opinion”) dated August 30, 2012 [Consultation NO. 02ENNM00-2012-F-0016 and Previous Consultation No. 2-22-00-I-025] (USFWS 2012) provided Reasonable and Prudent Measures that the USIBWC would undertake to ensure the protection of the flycatcher. Reasonable and Prudent Measure 2 stipulated that the USIBWC will “implement a flycatcher

management plan by October 1, 2015, to minimize flycatcher disturbance and quantify and manage flycatchers and their habitat." In 2017, USIBWC re-initiated consultation with an updated biological assessment that evaluated impacts to listed species, including the now listed yellow-billed cuckoo (*Coccyzus americanus*), from channel maintenance actions (USFWS 2017). The Endangered Species Management Plan (November 2014) describes conservation management procedures to protect endangered, threatened, and candidate species of the ESA, and includes the Flycatcher Management Plan; it was subsequently updated in 2018 to incorporate the 2017 Biological Opinion.

1.4.3 Channel Maintenance Plan (Part 4)

Channel maintenance activities have occurred in the RGCP since its completion in the 1940s. Prior to the implementation of the ROD, routine activities in the RGCP included dredging or excavating along the RGCP to control sediment below dam structures; stabilizing banks; removing obstructions such as debris, sediment plugs, or gravel deposits; and maintaining arroyos that act as flood conveyance (USIBWC 2016a). USIBWC stopped almost all channel maintenance, with the exception of sediment excavation at the gates of American Dam, from 2009 to 2013 after the ROD was issued, in order to develop the channel maintenance plan and monitoring program. Temporary cessation of channel maintenance and low flows caused by drought conditions led to numerous sediment plugs and issues that required attention, so from 2014-2016, USIBWC continued some of the ROD-maintenance activities, conducted new procedures for documenting channel work, conducted a channel maintenance alternative (CMA) and sediment transportation study, and updated the Channel Maintenance Plan, finalized in December 2016. The Channel Maintenance Plan outlines management procedures for operations and maintenance of the Rio Grande channel, stream banks, irrigation water deliveries and drain water returns, siphons, diversion dams, and sediment control dams. The plan includes alternatives to channel maintenance, hydrologic and hydraulic modeling, and permit information. A description of activities for the 5-year maintenance plan areas is provided. The Channel Maintenance Plan outlines potential CMAs that could be implemented within USIBWC ROW to control sediment. The Channel Maintenance Plan is reviewed at least every 3 years, and will be updated at least every 5 years or sooner if there are substantial changes. USIBWC proposed sediment removal activities in the RMP are summarized in Table 2-1 (Section 2.3).

1.4.4 Field Guide to Common Native & Non-Native Flora & Fauna in the RGCP Riparian Zone (Part 5)

The RMP provides field and environmental staff with information on common flora and fauna found within the USIBWC lands in the RGCP to aid in management decisions.

1.4.5 No-Mow Zone Maps (Part 6)

Areas where USIBWC will refrain from vegetation management within the RGCP are contained in the maintenance zone maps in Section 6 of the RMP.

1.5 Purpose and Need

The USIBWC has been responsible for maintaining flood control and water delivery capabilities of the RGCP since its completion in 1943. The USIBWC recognizes the need to accomplish flood control, water delivery, and operation and maintenance activities in a manner that complies with environmental

regulations and enhances or restores the riparian ecosystem. To fulfill its mission, the USIBWC undertakes the following operation and maintenance activities: sediment removal from the channel and lower end of tributary arroyos; vegetation management along channel banks, floodways, and levees; replacement of channel bank rip rap; maintenance of sedimentation/flood control dams in the tributary arroyos (since the construction of those dams in the early 1970s); maintenance of all RGCP infrastructure, including levee roads, bridges, and the American Diversion Dam; and implementation/maintenance of restoration sites. The RMP incorporates all implementation aspects of the ROD. The USIBWC is currently completing ROD implementation activities and will draft a final ROD implementation report. Progress on the majority of ROD activities was substantially complete or fully in progress by the June 2019 expiration, therefore any future activities contemplated by the ROD should be documented under the RMP revision. This EA will replace and supersede the 2009 ROD.

The purpose of the project is to continue to implement the RMP. The need for the project is to:

- Facilitate continued maintenance of the RGCP
- Address any feasible management alternatives not addressed in the RMP or the 2009 ROD
- Allow public review and input after completion of ROD activities

1.6 Scope of the Environmental Review

Federal agencies are required to take into consideration the environmental consequences of proposed and alternative actions in the decision-making process under NEPA. The USIBWC regulations for implementing NEPA are specified in *Operational Procedures for Implementing Section 102 of the National Environmental Policy Act of 1969, Other Laws Pertaining to Specifics Aspects of the Environment and Applicable Executive Orders* (46 FR 44083, September 2, 1981). These federal regulations establish both the administrative process and substantive scope of the environmental impact evaluation designed to ensure that deciding authorities have a proper understanding of the potential environmental consequences of a contemplated course of action.

This EA identifies and evaluates the potential environmental consequences that may result from implementation of seven alternatives:

- Alternative A - No Action: Continued Implementation of the RMP
- Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities
- Alternative C: Continued Implementation of the RMP and Increased Sediment Removal
- Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives
- Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites
- Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction or Implementation by a Third-Party
- Alternative G - Preferred Alternative: Continued Implementation of the RMP and Partnership Combination

2.0 DESCRIPTION OF PROPOSED ALTERNATIVES

2.1 Alternative A - No Action: Continued Implementation of the RMP

Under the No Action Alternative, USIBWC would continue to implement the RMP through 2030. USIBWC would continue to use adaptive management to update each section of the RMP according to agency needs and recommendations in the individual plans. The components of the RMP, which are discussed in Section 1.4, that would be carried forward under the No Action Alternative include:

- Levee maintenance
- Maintenance of all RGCP infrastructure, including levee roads, bridges, and the American Diversion Dam
- Vegetation management
- Continued implementation and maintenance of restoration sites and No-Mow Zones
- Continued specific recreational/access opportunities as stated in the RMP
- Endangered species management
- Channel maintenance
- CMAs within the USIBWC ROW, including:
 - Problem Area 1: Tierra Blanca vortex weir modification and sediment trap construction. Sibley Arroyo re-alignment and sediment trap construction (Figure 2-1).
 - Problem Area 2: Placitas Arroyo re-alignment and construction of a sediment trap (Figure 2-2).
 - Problem Area 3: Garcia Arroyo re-alignment and construction of a sediment trap (Figure 2-2).
 - Problem Area 8: Country Club spur dikes (Figure 2-3).

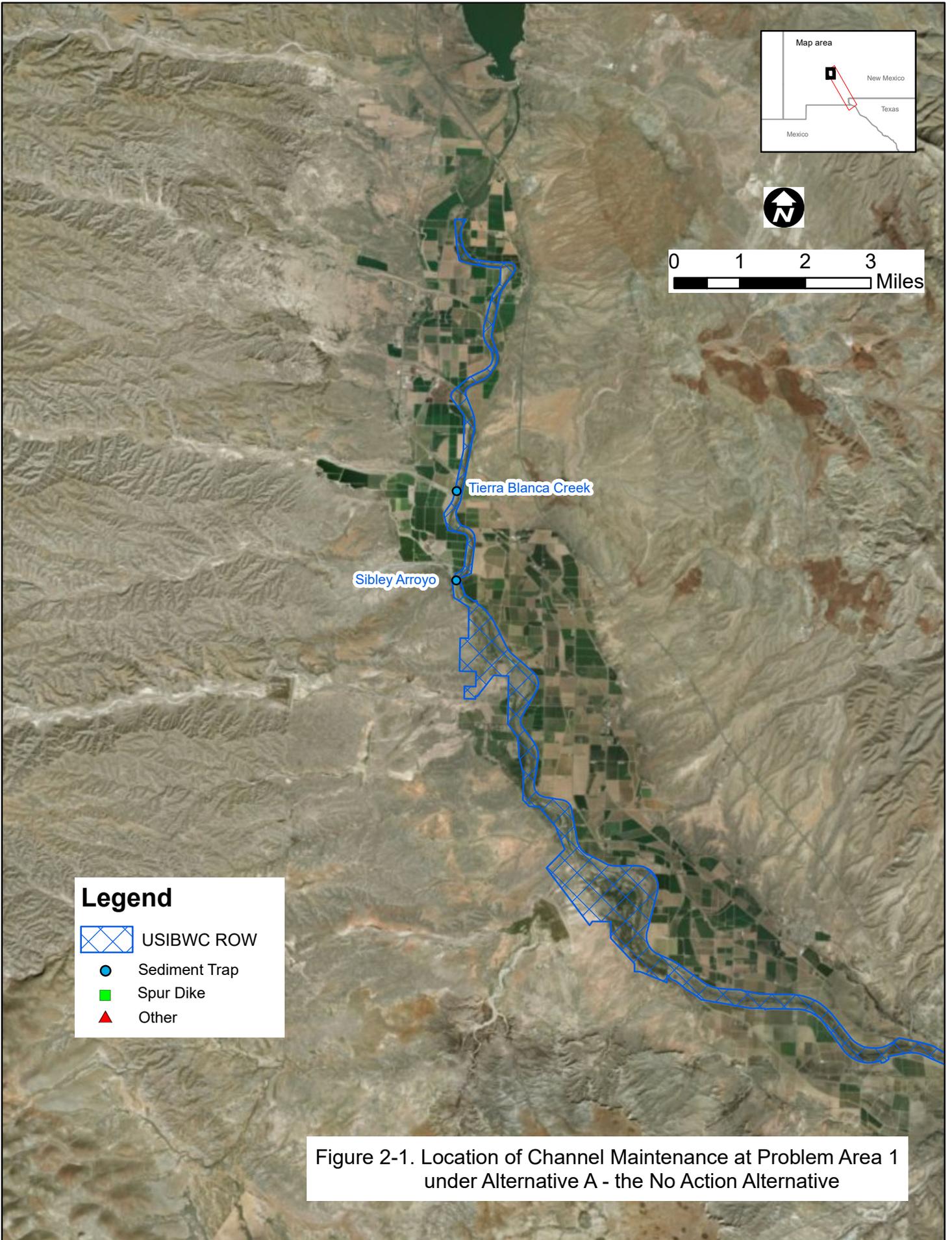


Figure 2-1. Location of Channel Maintenance at Problem Area 1 under Alternative A - the No Action Alternative





2.2 Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities

Under Alternative B, the USIBWC would continue implementation of the RMP as described under the No Action Alternative (Section 2.1) and would expand opportunities for recreation. Existing recreational/access opportunities are stated in the RMP. The USIBWC allows the public's non-intrusive use of USIBWC-controlled lands, including the floodplain, channel, and levees, for recreational activities such as walking, jogging, fishing, horseback riding, and other activities having a minimal impact on the levees and floodplain. Some entities, such as the cities of Las Cruces, El Paso, and Sunland Park and the State of New Mexico, have recreation leases with pedestrian trails. In 2014, USIBWC opened selected areas for avian hunting, which have been slightly modified over the last several years due to construction or restoration efforts. The Rio Grande channel, up to the high water mark, is open to compatible public use, and New Mexico and Texas water quality standards are for swimming (primary contact recreation); however, USIBWC does not have designated public recreational access points to the river such as boat ramps (USIBWC 2016a).

Under Alternative B, additional recreation opportunities on USIBWC property would be provided. Increased law enforcement personnel would likely be required under this alternative. Opportunities would include aquatic and hiking activities as described below, with additional details developed through a follow-up study/report.

- The USIBWC property, such as levees or areas within the floodplain, would potentially be designated as part of the “Rio Grande Trail” under New Mexico state legislation (HB 563). The New Mexico Rio Grande Trail Commission has no authority to own land or maintain the trail, so USIBWC would incorporate the designation within USIBWC’s license and lease program. USIBWC would avoid having the trail traverse any portions of the designated restoration sites. A maximum of 65 miles or 32 acres (assuming a 4-foot-wide trail for the 65 miles) through the USIBWC ROW would be designated (Figures 2-4 through 2-6). Of the 65 miles, approximately 29 miles (14 acres) would be on the levee and would not require physical trails to be built. The mileage of the designated trail may decrease after discussions and negotiations with the trail commission before finalization of the designated trail. Trail access would not be designated in non-recreation restoration areas where there is no pedestrian access, such as the Crow Canyon/Yeso area in Hatch. Additional pedestrian traffic would likely require increased maintenance of signage and maintenance of the trails (e.g., increased trash). Maintenance of the trails would be the responsibility of the licensee.
- USIBWC would collaborate with the City of El Paso, El Paso County, and other entities in Texas who have regional plans to connect local trails to the river and to connect non-contiguous segments of local trails. This would be implemented under USIBWC’s license and lease program. A short segment of trail through USIBWC property would be constructed at the Country Club Bridge to connect to other El Paso County trails.
- USIBWC would also identify areas that are suitable for non-motorized boating or rafting and designate earthen kayak/canoe ramps (for example, Shalem Colony Bridge to Picacho Bridge in Las Cruces) (Figure 2-5). This alternative would not consider motor boating because of the likelihood for motor boats to become mired in sediment and because certain bridges are too low. Maintenance of the ramps would be the responsibility of the USIBWC Operations division unless this was implemented

under USIBWC's license and lease program. USIBWC would work with the U.S. Fish and Wildlife Service (USFWS) to minimize the removal of suitable Southwestern willow flycatcher habitat for the ramps.

- USIBWC would also consider adding additional access points (for example, a parking lot at the Country Club Bridge or La Llorona Park in Las Cruces) to the river and the existing trail system (Figure 2-6). USIBWC would work with the USFWS to minimize the removal of suitable Southwestern willow flycatcher habitat for the construction of an access point.
- USIBWC would increase outreach efforts for USIBWC's Adopt-a-River Program, through updating the website, updating brochures, and disseminating information at public meetings, to have more segments adopted and work with existing community groups that have adoption agreements to comply with the requirements.
- USIBWC would continue to limit pedestrian access to all habitat restoration areas outside of recreation areas.
- USIBWC would continue to increase visible signage and approve signage so that they meet highway standards with the use of icons.
- USIBWC would continue to discourage the use of all-terrain vehicles (ATVs) within the floodplain, as discussed in the RMP. ATV access throughout the river corridor, including the restoration sites, is not permitted. USIBWC has developed agreements with the local law enforcement and law attorneys to cite and prosecute offenses on USIBWC property.

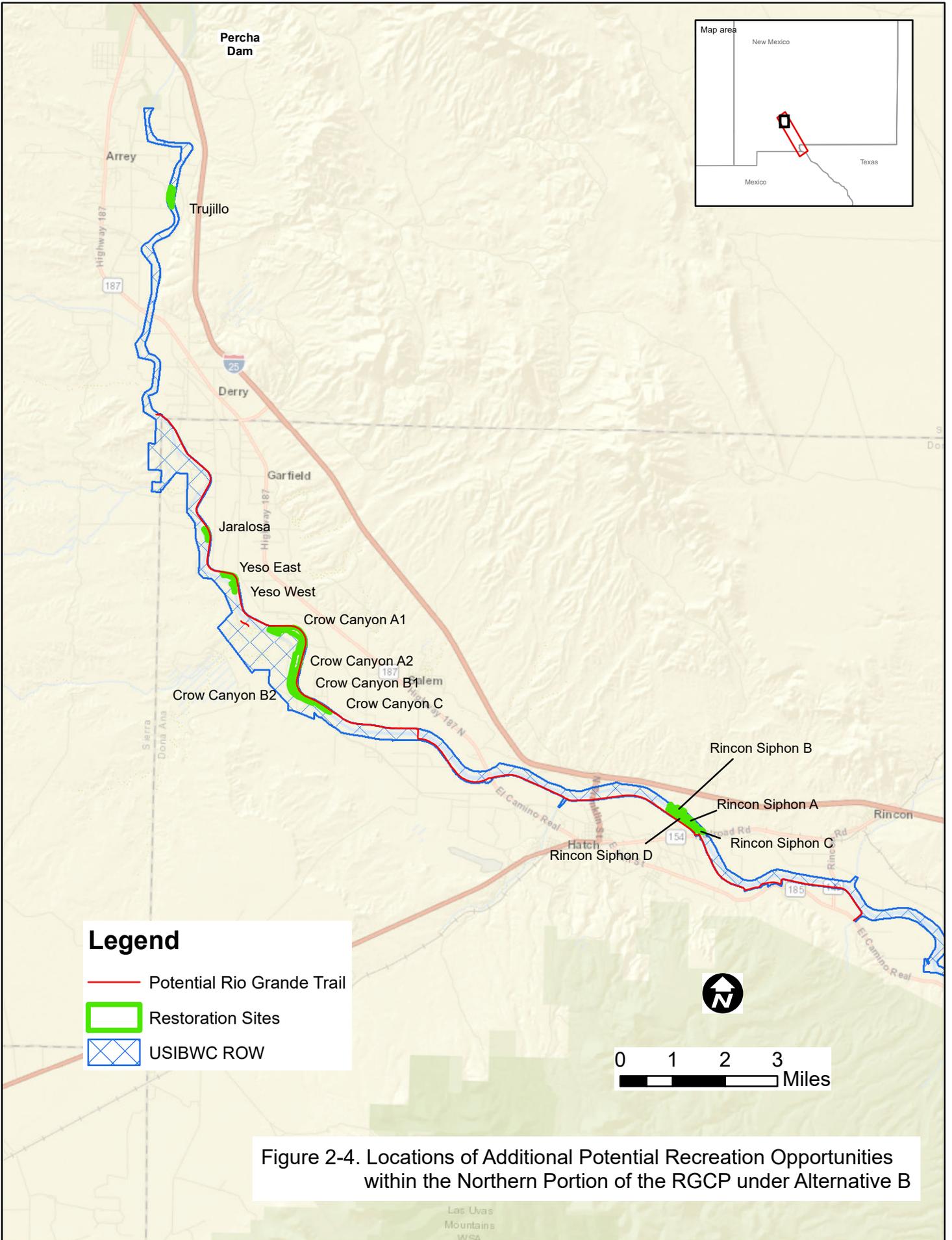


Figure 2-4. Locations of Additional Potential Recreation Opportunities within the Northern Portion of the RGCP under Alternative B





2.3 Alternative C: Continued Implementation of the RMP and Increased Sediment Removal

Under Alternative C, USIBWC would continue implementation of the RMP as described under the No Action Alternative (Section 2.1), would increase sediment removal, and would increase efforts to engage stakeholders through the Sediment Control Initiative Federal Workgroup and stakeholder groups. Sediment delivery has been a continual challenge USIBWC faces in operating the RGCP. Sediment deposition on the alluvial fans can result in sediment plugs, island formation, and aggradation that prevents draining of irrigation return flow and also could result in increased water-surface elevations and associated impacts to levee freeboard and flood conditions (Tetra Tech 2015). The sedimentation may also be affecting the delivery of water to U.S. stakeholders and Mexico due to reductions in channel and drain return efficiencies (Tetra Tech 2015).

With the implementation of the ROD, USIBWC modified its sediment removal activities in the RGCP to be more science-based, adaptive, and site-specific. To address the sediment issues, and as part of its commitments in the 2009 ROD to evaluate the overall necessity of channel dredging through monitoring and modeling for the RGCP, the USIBWC conducted a *Channel Maintenance Alternatives and Sediment Transport Study* (CMA Study), which was finalized in October 2015 (Tetra Tech 2015). The 2016 RMP Part 4 Channel Maintenance Plan incorporated the results and recommendations outlined in the CMA Study, which evaluated several sediment management options at nine locations that have chronic sediment accumulation issues within the RGCP. The draft 2018 RMP updated locations and volumes of some activities in the proposed a 5-year plan.

The sediment management at chronic sites as proposed in the RMP, in combination with non-sediment removal options being implemented (such as sediment basins at Thurman I and II Arroyos in Hatch), may not be enough to maintain the RGCP. During low water years, sediment in the RGCP tends to build up more readily and could lead to issues with sediment plugs.

Under Alternative C, USIBWC would increase the sediment removal throughout the RGCP above what is already outlined in the RMP. USIBWC under this alternative would conduct additional excavation (mechanically excavating a pilot channel within the overall main channel of the RGCP from the mouth of the arroyo or drain downstream over a relatively long distance of over 0.7 mile) activities outlined in the 2015 CMA Study (Tetra Tech 2015) and updated by the USIBWC Operations and Maintenance. The 2016 RMP, and more so the 2018 draft RMP, adopted some areas of long excavation where the areas would fill in again in 5 years or less. Under this alternative, a maximum of approximately 3,045,884 cubic yards of sediment would be removed in the first 5 years, as compared to 662,212 cubic yards under the No Action Alternative (Table 2-1). USIBWC could choose to implement increased sediment removal at one or all of the locations listed in Table 2-1. Locations proposed for additional sediment removal are shown on Figure 2-7. Additional locations not listed in Table 2-1 could also be considered through 2030 and would depend on local conditions.

Table 2-1. Comparison of Sediment Excavation under the No Action and Alternative C

Problem Area	No Action - Excavation (Cubic Yards) Proposed in 2018 RMP ¹ (5-year period)	Alternative C - Additional Excavation (Cubic Yards) Proposed in 2015 CMA Study ² (annually for 3 years)
Tipton Arroyo	5,556	13,200
Trujillo Arroyo	6,667	18,500
Montoya Arroyo	4,750	16,800
Holguin Arroyo	4,000	33,300
Tierra Blanca	21,780	94,000
Sibley Arroyo	13,300	
Hatch Siphon	3,704	21,000
Salem Bridge	75,000 ^a	94,000
Hwy 187 Bridge/Hatch Yard	65,000 ^b	
Thurman I and II Arroyos ^{a,c}	-	13,000 ^d
Placitas Arroyo		-
Hatch Bridge (Hwy 26/543)	55,000 ^a	-
Garcia I Arroyo	65,000	12,400
Rincon Siphon		
Rincon and Reed Arroyo	85,051	129,100
Bignell Arroyo		
Hersey Arroyo	6,944	10,100
Rock Canyon to 1.4 mi below Rincon/Tonuco Drain Confluence	71,240	86,500
Shalem Colony Bridge	8,000 ^b	-
0.17 Mile Upstream of Mesilla Dam to Mesilla Bridge	58,170	141,900
East Drain to below Vinton Bridge	38,050	26,700
Canutillo Area	15,000 ^b	146,500
Country Club Bridge	10,000 ^a	33,300
Sunland Park Bridge to American Diversion Dam	50,000 ^a	36,700
TOTAL	662,212	927,000^e

1 Information obtained from 2018 draft RMP. These estimates are for a 5-year period and totals included under this EA for the 11-year period would be twice the total numbers.

2 Locations for sediment removal as proposed in the 2015 CMA Study; volumes were determined by USIBWC Operations and Maintenance.

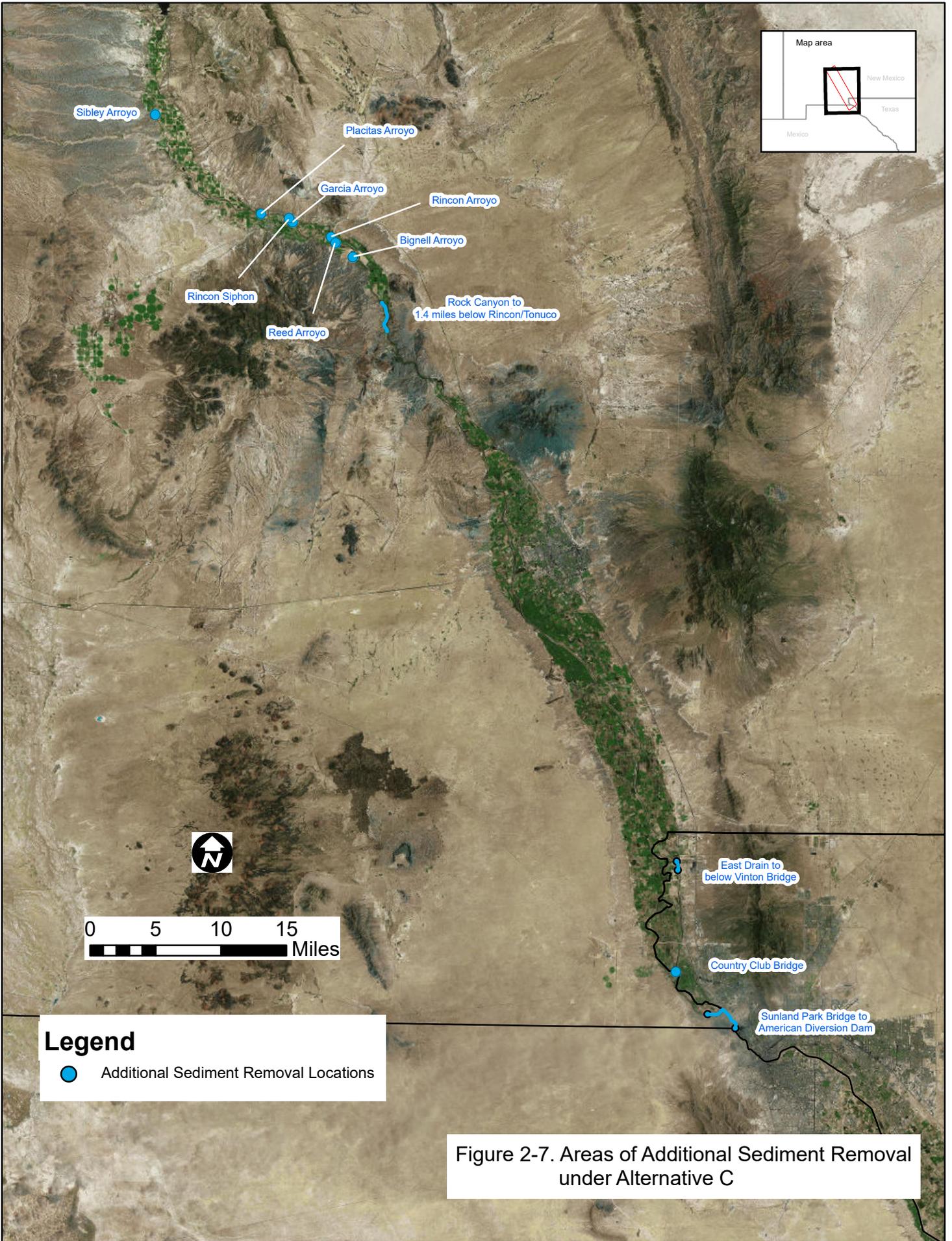
a The total amount of excavation noted in the 2018 revised RMP differs from the 2016 RMP.

b Area not considered in the 2016 RMP.

c Operation and maintenance work would excavate the Thurman sediment basins every 3 years.

d Short excavation.

e Volume measurement is annual for 3 years. The sediment removal after that time period would revert back to the RMP removal levels. Therefore, total sediment removal for first 5 years is equal to 3,045,884 cubic yards (927,000 cubic yards each year for 3 years, followed by 132,442 cubic yards, based on annual removal in accordance with the RMP, for each subsequent year).



Sediment removal would occur during the non-irrigation flow season and outside of the flycatcher nesting season (May 15 - August 15). In addition, Alternative C would comply with the Reasonable and Prudent Measure 1.2 in the Biological Opinion (to relocate willows from removed islands where flycatchers had been nesting) as well as management guidelines for channel maintenance outlined in the RMP (Section 3.1.15). Removal of vegetated islands within the channel that are occupied by flycatchers would be scrutinized and deprioritized unless there is a public safety issue. Large vegetated islands (greater than 0.1 hectare or about 0.25 acre) with suitable habitat should not be excavated or destabilized unless habitat is available along the nearby riverbanks or unless flood modeling predicts impacts to human health and safety from flooding created by the islands. The CMA Study also estimated timeframes before sediment would redeposit in each location after long excavation, and in many cases, this was 10 years; therefore, these particular locations may not need additional work before 2030, but other areas not currently identified would require maintenance. USIBWC would re-evaluate the priority locations for sediment removal based on hydraulic and hydrologic modeling efforts.

Additionally, Alternative C includes increased efforts to engage stakeholders and work with watershed partners for upland erosion control. USIBWC has made efforts to participate in local efforts such as the Southcentral New Mexico Stormwater Management Coalition and the Paso del Norte Watershed Council, and has initiated the Sediment Control Initiative Federal Workgroup. Various federal agencies with overlapping jurisdictions within the watershed have met to discuss collaboration and support of local efforts. Under this alternative, USIBWC would increase participation with other federal agencies and stakeholders on sediment control on a watershed-scale and overlapping goals in various planning documents and projects.

2.4 Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives

Under Alternative D, USIBWC would continue implementation of the RMP as described under the No Action Alternative (Section 2.1); would re-evaluate and construct CMAs, which potentially could occur outside the USIBWC ROW; and would increase efforts to engage stakeholders through the Sediment Control Initiative Federal Workgroup and stakeholder groups. One of the primary requirements of the USIBWC from the 2009 ROD involved identification of methods to improve river management through an evaluation of adaptive management strategies aimed at channel maintenance activities and levee protection. As part of the adaptive management strategy approach, the USIBWC evaluated CMAs to address the sediment-related problems along the RGCP. CMAs and control structures are already considered in the RMP. Although some of these alternatives have been incorporated into the RMP as potential options that will be considered, no NEPA review has been completed. Alternative D would re-evaluate conceptual CMAs, design them with the most efficient and effective design which could include project construction outside of the USIBWC ROW, and construct CMAs mostly identified in the 2015 CMA Study, such as sediment control structures, arroyo sediment traps, arroyo re-alignments, and island destabilization. Seven problem areas originally delineated in the 2015 CMA Study (Tetra Tech 2015) are considered for further channel maintenance activities. These include:

- From Tierra Blanca Creek to Sibley Arroyo (Problem Area 1; Figure 2-8) – A sediment trap and vortex weir would be placed at Terra Blanca Arroyo and may be re-designed outside the ROW. The Sibley Arroyo would be re-aligned and a sediment trap installed (USIBWC 2018). Original design

called to re-divert the mouth of the arroyo to occur within the narrow ROW. The arroyo would be redesigned to occur outside of the USIBWC ROW.

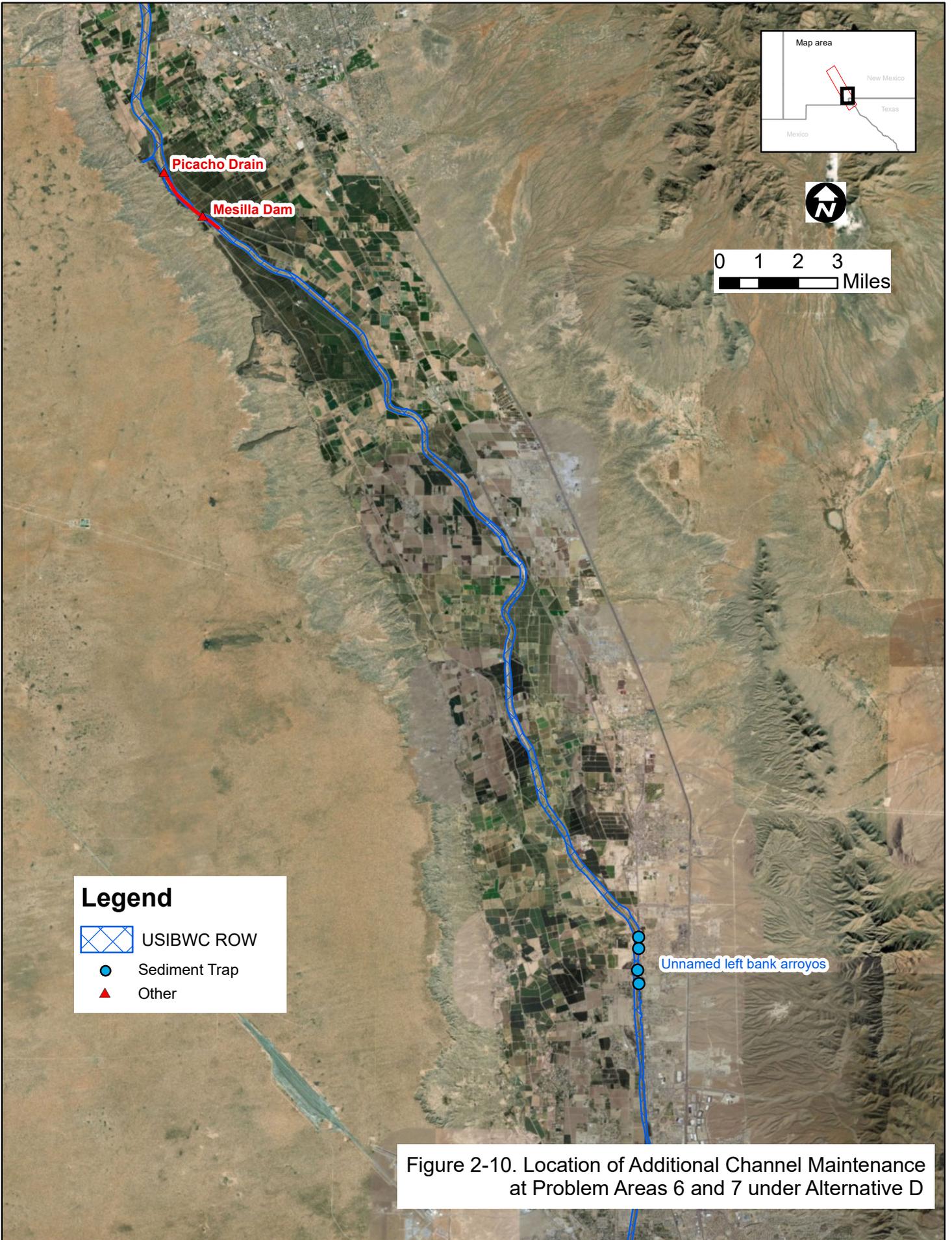
- Salem Bridge to Placitas Arroyo (Problem Area 2; Figure 2-8) – There is a potential for heavy sediment inflows to the river at the Placitas Arroyo, which necessitates maintaining the arroyo mouth clear of sediment annually to ensure proper drainage to the river (USIBWC 2018). Current designs may not be adequate and the arroyo design may be altered for outside the USIBWC ROW.
- Rincon Siphon A Restoration Site to Rincon Siphon (Problem Area 3; Figure 2-9) – Modifications to the Rincon Siphon would involve removing the sheet pile and rock grade control structure at the siphon and replacing the siphon with a flume crossing (20-foot wide) over the Rio Grande (Tetra Tech 2015). The Rincon Siphon drain belongs to Elephant Butte Irrigation District (EBID) and is outside the USIBWC ROW. At the Garcia Arroyo, sediment removal would be conducted at the mouth and the arroyo would be re-aligned (USIBWC 2018). A sediment trap would be installed and the embayment portion of the trap would pass through Rincon A and Rincon C restoration sites (Tetra Tech 2015).
- Rincon Arroyo to Bignell Arroyo (Problem Area 4; Figure 2-9) – Work would include construction of sediment control structures at the Rincon and Reed arroyos, either inside or outside of the USIBWC ROW. This CMA was not identified by the CMA Study (USIBWC 2018). Other options include island destabilization, which would involve clearing, grubbing, and disposal of herbaceous and woody vegetation from the islands (Tetra Tech 2015). Islands may decrease the carrying capacity of the channel, decrease efficiency in deliveries, and decrease flood capacity (USIBWC 2018).
- Rock Canyon to 1.4 miles below Rincon/Tonuco Drain Confluence (Problem Area 5; Figure 2-9) – Sediment traps were recommended at the mouths of Rock Canyon and Horse Canyon Creek. Both sediment traps are outside of USIBWC ROW so acquisition of private property would be necessary (Tetra Tech 2015).
- At the Picacho Drain to below Mesilla Dam (Problem Area 6; Figure 2-10) – Channel maintenance activities here would include the installation of check structures with sluiceways in the Eastside and Westside canals, and installation of automated gate operators at Mesilla Dam (Tetra Tech 2015). The Mesilla Dam belongs to USBR and the sluiceways are partially contained on EBID property. Coordination with these agencies would be required to complete this CMA.
- Canutillo area (Problem Area 7; Figure 2-10). The 2015 CMA Study recommended sediment traps on four unnamed arroyos in this stretch where USIBWC has designs for the Canutillo Phase II flood control structure. These would be re-evaluated to determine if there is a feasible way to implement sediment control and flood control simultaneously.

This alternative analyzes the impacts of implementing all the CMAs outlined above. USIBWC could choose to implement one or all of the CMAs listed. For areas where excavation is listed in Table 2-1, USIBWC would decrease mechanized sediment removal in any areas where sediment control structures were built. The construction of the CMAs would reduce the sediment load before it becomes suspended in the river. Figures 2-8 through 2-10 identify the proposed CMA locations.



Figure 2-8. Locations of Additional Channel Maintenance at Problem Areas 1 and 2 under Alternative D





Legend

-  USIBWC ROW
-  Sediment Trap
-  Other

Figure 2-10. Location of Additional Channel Maintenance at Problem Areas 6 and 7 under Alternative D

Furthermore, the USIBWC would re-evaluate priority areas within the RGCP, including all tributaries discussed in Section 4.17.2 of the RMP, with hydraulic and hydrologic modeling and/or sediment transport modeling, for potential CMAs. Monitoring of the sediment basins constructed in 2019 on the Thurman I and II arroyos would provide baseline data for effectiveness of some CMA designs. Redesigns of CMAs can incorporate habitat areas where moisture is collected such as sediment basins, as USIBWC did for mitigation at the Thurman basins. Design and construction of works outside of the jurisdiction of USIBWC would require legal approval, acquisition of property or easements, and/or appropriate agreements established. The USIBWC would coordinate with the USFWS if any of the CMA areas required removal of suitable flycatcher habitat.

Additionally, Alternative D includes increased efforts to engage stakeholders and work with watershed partners for upland erosion control, as discussed in Alternative C. USIBWC has made efforts to participate in local efforts such as the Southcentral New Mexico Stormwater Management Coalition and the Paso del Norte Watershed Council, and has initiated the Sediment Control Initiative Federal Workgroup. Under this alternative, USIBWC would increase participation with other stakeholders on sediment control and overlapping goals in various planning documents and projects.

2.5 Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites

Under Alternative E, USIBWC would continue implementation of the RMP as described under the No Action Alternative (Section 2.1) and work to provide some restoration sites with a more official long-term protection status, such as through a state or federal agency with land or habitat protection mission. Options include:

- Transferring land including the deed, while USIBWC would retain a flood easement within the floodplain and retain access to maintain the levees, levee roads, and river channel
- Establishing agreements for protection without the transfer of deed
- Congressional action for designation of protected status
- Granting conservation easements to outside agencies

Details would have to be worked out with the respective agencies or entities involved. Over the years, stakeholders have expressed interest in long-term protection and management, and there is movement in several of the options.

2.6 Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction or Implementation by a Third-Party

Under Alternative F, USIBWC would continue implementation of the RMP as described under the No Action Alternative (Section 2.1) and would:

- Replace unsuccessful restoration sites or No-Mow Zone areas with restoration sites outside of USIBWC jurisdiction; and/or
- Create new partnerships with a third party such as a non-governmental organization for implementation of restoration sites.

As of August 2018, USIBWC has 22 active restoration sites totaling over 500 acres. Nine of the current restoration sites are being implemented by the USFWS, San Andres National Wildlife Refuge under an Interagency Agreement with Region 2 of USFWS. A few of the conceptual restoration sites (USACE 2009), such as Broad Canyon Ranch Middle and South, are sites under restoration by other entities, while other sites have not been implemented because they occur on non-USIBWC property. Additionally, USIBWC is currently evaluating options for up to 50 acres of aquatic habitat restoration to meet all ROD acreage.

The 2004 EIS considered, in the Targeted Restoration Alternative, the implementation of restoration outside of USIBWC jurisdiction through conservation easements. At the time, there was a general concern that the federal government would force farmland out of production. Such restoration activities would be on a voluntary basis only. Additionally, partnering with a non-governmental organization would enable different kinds of restoration and maintenance than can be implemented by USIBWC. Based on the ROD's adaptive management strategies, USIBWC would evaluate unsuccessful No-Mow Zone areas or restoration areas and work to move them outside of the levee areas where infrastructure exists for irrigation and where other entities can have more of a role in their success. No-Mow Zone areas would be considered unsuccessful if the area was converted entirely to invasive species such as saltcedar. Restoration areas that did not develop into sustainable habitat, thrive, or could not receive supplemental water infrastructure might also be considered unsuccessful. Under this alternative, over the long term, the USIBWC would eventually move up to 500 acres of either No-Mow Zone managed grasslands or habitat restoration, via partnerships with non-governmental organizations to manage the new or existing restoration sites. The new acreage under Alternative F would require offset water rights as committed to in the ROD. Some examples of areas where this acreage could be achieved successfully within the RGCP include the Mesilla Valley Bosque State Park, with whom USIBWC already has a partnership agreement, and within El Paso Water Public Service Board land adjacent to the levees in the Texas portion of the RGCP. Any expenditure of federal funds outside of the jurisdiction of USIBWC would require legal approval and appropriate agreements established.

Examples of successful partnerships for habitat restoration include the Lower Rio Grande Valley National Wildlife Refuge where USIBWC has worked with USFWS on expansion of the refuge through its mitigation efforts for ongoing flood control project maintenance; and the Colorado River through IBWC Minutes No. 319 and No. 323, where USIBWC has partnered with the IBWC Mexican Section, other federal agencies, and non-governmental organizations for habitat restoration on the Colorado River.

2.7 Alternative G - Preferred Alternative: Continued Implementation of the RMP and Partnership Combination

Under Alternative G, USIBWC would continue implementation of the RMP as described under the No Action Alternative (Section 2.1) and would:

- Designate a maximum of 65 miles through the USIBWC ROW for the New Mexico Rio Grande Trail and Texas trails as discussed under Alternative B. (other recreation options discussed in Alternative B are not included)
- Perform increased sediment removal as discussed under Alternative C.
- Re-evaluate and implement CMAs and engage stakeholders for sediment control initiatives as discussed under Alternative D.
- Transfer up to 500 acres of unsuccessful habitat areas (either No-Mow Zone managed grasslands or habitat restoration) outside of the USIBWC jurisdiction, via partnerships, as described in Alternative F. The USIBWC would require a conservation easement, lease, or agency agreement for restoration efforts outside the ROW.

This alternative is USIBWC's Preferred Alternative.

2.8 Alternatives Considered and Not Carried Forward

In addition to the alternatives considered, an EA should identify any alternatives eliminated from analysis during the planning process. Prior to and during scoping, USIBWC received input from area residents and stakeholders that was considered for incorporation into this EA. Table 2-2 summarizes those alternatives suggested by the stakeholders but not carried forward in the EA.

Table 2-2. Summary of Alternatives Considered but not Carried Forward

Alternative	Description	Reasons for not Carrying Forward
Recreation	<ul style="list-style-type: none"> ■ Whitewater rafting areas in the river channel through the placement of rocks ■ Windsurfing area (approximately 200 feet in length) ■ Areas for ATV and dirt bikes where built up from sediment removal ■ Deeper channel areas for motorized boats ■ Leasburg and Percha Dam recreation 	<ul style="list-style-type: none"> ■ Flow obstructions could divert flows towards the levees, decrease efficiency of deliveries, cause islands to form upstream, and increase maintenance. ■ Cutting a section of the river bank to allow for additional flooded acreage in the floodplain would decrease water efficiency and delivery. ■ Allowing ATVs in the floodplain and the river channel has the potential to disturb restoration sites, damage the channel and levees, and is a safety concern. ■ The channel is not deep enough to allow motorized boating and increasing the depth of the channel would alter flows and possibly design grade of the channel. The channel also has moving sediment and a pilot channel is nearly impossible to maintain during flows. ■ Safety issues are involved with providing recreational activities at the dams. The areas are managed by the State Parks system not USIBWC.
Signage	Create more user friendly signage	Signs currently state “Enter at Your Own Risk” and are provided to protect the levees and habitat.
Concentrated/rotating Grazing	Provide grazing lease opportunities in the floodplain	<ul style="list-style-type: none"> ■ USIBWC phased out the grazing leases in the floodplain during the ROD implementation as recommended by EPA. Only one lease remains. ■ Reinstating grazing would go against the ROD and the designation of No-Mow Zones.
Mitigation Banking	Produce the mitigation credits paid for by another entity	USIBWC has been exploring potential banking with the aquatic habitat restoration sites. This requires coordination with USACE, and a separate NEPA analysis is being conducted for potential locations of aquatic habitat.
Management Model	Use management strategy model to evaluate impacts of activities	<ul style="list-style-type: none"> ■ Models are available for watershed but are not likely applicable to the RGCP. ■ Spending resources to create a decision-making model may not be the best way to make these management decisions. ■ USIBWC already has adaptive management incorporated into the RMP.
Open Gate Policy	Allow access to the levee roads that are currently gated	<ul style="list-style-type: none"> ■ USIBWC allows organizations to request a permit for recreational events. ■ An open gate policy could impact the structural integrity of the levees from over use.

Alternative	Description	Reasons for not Carrying Forward
Implementation of Peak Restoration Flows	<p>Continue to investigate feasibility and logistics for implementation, and then implement peak restoration flows.</p> <p>The ROD committed the USIBWC to evaluate the possibility of a peak restoration flow of 3,500 cfs every 3 to 10 years to enhance river-floodplain hydrologic connection at proposed restoration sites. The ROD stated that the estimated average amount of environmental water needed to augment irrigation releases to achieve a 3,500 cfs release is 9,500 acre-feet per augmentation event for a minimum of four days between April 24 and June 7. USIBWC would purchase or lease water rights under the EWTP for the additional environmental water. An alternative to provide peak restoration flow was considered in the scoping process under this EA but eliminated based on comments.</p>	<ul style="list-style-type: none"> ■ USIBWC does not have the authority to provide or dictate peak restoration flow. Water rights belong to the irrigation districts and multiple jurisdictions are involved. The irrigation district feels that the EWPT provides for the release of water from Caballo Dam and not the water delivery to restoration sites. The RGCP has three beneficiaries: EBID, EPCWID, and Mexico and obtaining peak restoration flow water from any of them would require changes to the 2008 Operating Agreement. ■ In order to meet the peak flow demand, it is estimated that both irrigation districts would have to be running at peak demand which usually occurs between late May and early June. This timing would potentially reduce the environmental benefit. In addition, there is potential that the current aggradation of the channel would obstruct flows and potentially lead to levee overtopping in areas. ■ Climate models (Mayer 2018) have indicated that water availability will continue to be a challenge in the region into the foreseeable future, limiting planning efforts for a full allocation.
Top to Bottom Maintenance	<p>This alternative would excavate sediment in the entire RGCP to match the original RGCP cross section profiles. Total volumes are unknown but are likely several million cubic yards. The irrigation districts are interested in maximizing delivery efficiency of the Rio Grande Project water to both U.S. users and Mexico. Recent hydraulic modeling studies have shown increased seepage in the ongoing drought years as compared to previous normal flow years (Tetra Tech 2015).</p>	<ul style="list-style-type: none"> ■ Historic annual excavations (1954-2007) along the RGCP range from 21,000 to 449,000 cubic yards. From 2009 through 2018, sediment removal ranged from 400 to 178,973 cubic yards¹. ■ The alternative is contradictory to the ROD commitment to conduct a science-based adaptive channel maintenance. ■ This type of maintenance would violate Endangered Species Act and the USIBWC consultation. ■ USIBWC lacks personnel, funding, and equipment to carry out the effort, and additional disposal sites for the excess soil would need to be identified and may not be available. ■ This would be prohibitively expensive. ■ Some modeling (USACE 2009) has indicated that there is no need based on sediment aggradation/degradation.

1 Table 4-4 in RMP

2.9 Comparison of Alternatives Evaluated

Table 2-3 summarizes the elements of the alternatives carried forward. Table 2-4 summarizes and compares the potential impacts of the alternatives. Chapter 3 provides detailed information for potential impacts of each alternative

Table 2-3. Summary of the Alternatives Carried Forward for Analysis

Alternative	Description
Alternative A: No Action	<p>Continue the implementation of the existing RMP through 2030 as described in Section 2.1, including:</p> <ul style="list-style-type: none"> ■ Levee maintenance ■ Maintenance of all RGCP infrastructure, including levee roads, bridges, and the American Diversion Dam ■ Vegetation management ■ Continued implementation and maintenance of restoration sites and No-Mow Zones ■ Continued specific recreational/access opportunities as stated in the RMP ■ Endangered species management ■ Channel maintenance ■ CMAs within the USIBWC ROW
Alternative B: Increased Recreation Opportunities	<ul style="list-style-type: none"> ■ Continue the implementation of the existing RMP through 2030 as described under the No Action Alternative (Section 2.1). ■ Provide recreation opportunities on USIBWC property, including aquatic and trail opportunities. ■ Designate approximately 65 miles through the USIBWC ROW as part of the “Rio Grande Trail.” ■ Identify areas for non-motorized boating or rafting and kayak/canoe ramps. ■ Add additional access points to the river and existing trail system. ■ Conduct an assessment to set forward details of the new recreational opportunities.
Alternative C: Increased Sediment Removal	<ul style="list-style-type: none"> ■ Continue the implementation of the existing RMP through 2030 as described under the No Action Alternative (Section 2.1). ■ Conduct additional sediment removal, including removing vegetated islands within the channel, outlined in the 2015 CMA Study and updated by USIBWC Operations and Maintenance and shown in Table 2-1. Under this alternative, a maximum of approximately 3,045,884 cubic yards of sediment would be removed in the first 5 years, as compared to 662,212 cubic yards under the No Action Alternative.
Alternative D: Additional Channel Maintenance Alternatives	<ul style="list-style-type: none"> ■ Continue the implementation of the existing RMP through 2030 as described under the No Action Alternative (Section 2.1). ■ Implement construction of additional CMAs, such as sediment control structures, arroyo sediment traps, arroyo re-alignments, and island destabilization, potentially outside the USIBWC ROW. ■ Increase efforts to engage stakeholders through the Sediment Control Initiative Federal Workgroup and stakeholder groups
Alternative E: Official Protection for Restoration Sites	<ul style="list-style-type: none"> ■ Continue the implementation of the existing RMP through 2030 as described under the No Action Alternative (Section 2.1). ■ Work to provide restoration sites with a more official protection status, such as transferring land to a state or federal agency with land or habitat protection mission.

Alternative	Description
Alternative F: Replacement Restoration outside of USIBWC Jurisdiction	<ul style="list-style-type: none"> ■ Continue the implementation of the existing RMP through 2030 as described under the No Action Alternative (Section 2.1). ■ Implement replacement restoration of up to 500 acres outside of USIBWC jurisdiction or create new partnerships with a third party such as a non-governmental organization to implement restoration sites.
Alternative G: Preferred Alternative - Partnership Combination	<ul style="list-style-type: none"> ■ Continue the implementation of the existing RMP through 2030 as described under the No Action Alternative (Section 2.1). ■ Designate approximately 65 miles through the USIBWC ROW as part of the “Rio Grande Trail” and to connect Texas trails as described under Alternative B (Section 2.2). ■ Implement Alternative C (Section 2.3). ■ Implement Alternative D (Section 2.4). ■ Implement Alternative F (Section 2.6).

Table 2-4. Summary of Environmental Consequences by Alternative

Resource Area	Alternative A: No Action	Alternative B: Increased Recreation Opportunities	Alternative C: Increased Sediment Removal	Alternative D: Additional Channel Maintenance Alternatives	Alternative E: Official Protection for Restoration Sites	Alternative F: Replacement Restoration outside of USIBWC Jurisdiction	Alternative G: Partnership Combination (Preferred Alternative)
Biological Resources							
Vegetation Wildlife and T&E species	<ul style="list-style-type: none"> ■ Minor beneficial impacts from continuation of restoration sites, protection of riparian vegetation. ■ Potential to disturb 11.2 acres of habitat including 0.6 acre of native habitat restoration. ■ Potential for temporary displacement of wildlife during construction of CMAs. 	<ul style="list-style-type: none"> ■ Similar to No Action, but increased potential for damage from recreation. ■ Some long-term adverse impacts from new parking area within the No-Mow Zone. ■ Possible avoidance by wildlife of areas used for recreation and during construction of parking lot 	<ul style="list-style-type: none"> ■ Similar to No Action, but increased potential for disturbance from heavy equipment and for temporary displacement of wildlife. ■ Deepening the channel could impact riparian habitat along the floodplain as a result of less frequent inundation. ■ Removal of vegetated islands could impact wildlife using the habitat. 	<ul style="list-style-type: none"> ■ Similar to No Action, but potential to disturb approximately 14.1 acres of habitat including 0.6 acre of native habitat restoration ■ Increased potential for temporary displacement of wildlife during construction. ■ Potential to increase total disturbance to native habitat outside the ROW. ■ Potential to impact flycatcher habitat. 	<ul style="list-style-type: none"> ■ Similar to No Action, but reduced potential for impacts to restoration sites with official protection ■ Improved habitat from protection and increased benefits to wildlife. ■ Increased protection of restored T&E habitat. ■ Use of restoration areas by pedestrians may lead to impacts on species using those areas. 	<ul style="list-style-type: none"> ■ Similar to No Action, but increased beneficial impacts to the overall native vegetation health along the RGCP and native species using those habitats. ■ Increased habitat connectivity for migrating species from additional sites. ■ Impacts to the acreage considered under the USIBWC BO would occur and impact the credit for restoration efforts. 	<ul style="list-style-type: none"> ■ Increased potential for damage from recreation. ■ Although increased habitat connectivity may be realized with Alternative F, there would be an increase in vegetation removal with the combined implementation of Alternatives C and D.

Resource Area	Alternative A: No Action	Alternative B: Increased Recreation Opportunities	Alternative C: Increased Sediment Removal	Alternative D: Additional Channel Maintenance Alternatives	Alternative E: Official Protection for Restoration Sites	Alternative F: Replacement Restoration outside of USIBWC Jurisdiction	Alternative G: Partnership Combination (Preferred Alternative)
Aquatic Biota	None	Minor temporary impacts to aquatic biota from increased trash and potential to increase sediment in river	Improved conditions for water flow and potentially for aquatic habitat for some species	Reduced sediment input thus providing minor beneficial impacts to aquatic biota.	Potential long-term beneficial effect from shade and some cover from improved riparian habitat along the river	Potential long-term beneficial effect from shade and some cover from improved riparian habitat along the river	<ul style="list-style-type: none"> ■ Same as Alternatives B, C, and D. ■ Potential beneficial impacts if the No-Mow Zones or unsuccessful restoration areas were replaced with restoration areas outside the ROW that provide better habitat.
Wetlands	Increased wetland vegetation by 13 acres	Same as No Action	Same as No Action	Similar to No Action, but possible wetlands project at Montoya Drain to improve wetland vegetation	Same as No Action	Same as No Action	Same as Alternative D
Cultural Resources	Negligible potential impact from ground disturbance	Same as No Action	Same as No Action	Same as No Action	Same as No Action	Same as No Action	Same as No Action

Resource Area	Alternative A: No Action	Alternative B: Increased Recreation Opportunities	Alternative C: Increased Sediment Removal	Alternative D: Additional Channel Maintenance Alternatives	Alternative E: Official Protection for Restoration Sites	Alternative F: Replacement Restoration outside of USIBWC Jurisdiction	Alternative G: Partnership Combination (Preferred Alternative)
Water Resources							
Flood Control	Beneficial impacts to flood control	Same as No Action	Similar to No Action, but potential increase in beneficial impact to flood control	Similar to No Action, but potential increase in beneficial impact to flood control	Similar to No Action, but potential for damage to levees through increased visitor usage and USIBWC has the potential to lose long-term access for maintaining the levees and river	Same as No Action	Similar to No Action, but potential increase in beneficial impact to flood control
Water Quality	Short-term adverse impacts during construction and maintenance	<ul style="list-style-type: none"> ■ Similar to No Action, but additional short-term adverse impacts during construction of recreation amenities. ■ Potential adverse impact from increased erosion and litter from pedestrian traffic and likely use of earthen ramps by ATVs. 	Similar to No Action, but potential for greater short-term adverse impacts, and potential for beneficial long-term impacts	Similar to No Action, but potential for greater short-term adverse impacts	Same as No Action	Same as No Action	Same as Alternative C

Resource Area	Alternative A: No Action	Alternative B: Increased Recreation Opportunities	Alternative C: Increased Sediment Removal	Alternative D: Additional Channel Maintenance Alternatives	Alternative E: Official Protection for Restoration Sites	Alternative F: Replacement Restoration outside of USIBWC Jurisdiction	Alternative G: Partnership Combination (Preferred Alternative)
Ground-water	No adverse impact	Same as No Action	Potential to narrow the channel and lower floodplain water (groundwater) levels	Decreased groundwater levels as well as salinity from reduced sediment inflows; however, levels may be off set with increased return flows from removal of sediment blockage	Same as No Action, but any water rights associated with the restoration sites would be transferred to the agency managing the sites	Changes in water right requests could cause changes to irrigation usage and remove other currently irrigated lands from the program.	Same as Alternatives C, D, and F
Water Delivery and Consumption	<ul style="list-style-type: none"> ■ Beneficial impacts to water delivery from implementation of CMAs. ■ USIBWC would prioritize restoration sites with targeted suitable flycatcher breeding habitat during water shortage. ■ Improved conveyance from sediment removal. 	Same as No Action	Similar to No Action, but increased beneficial impacts to water delivery	Similar to No Action, but increased beneficial impacts to water delivery	Same as No Action, but any water rights associated with the restoration sites would be transferred to the agency managing the sites	Similar to No Action, but potential long-term adverse impact to water consumption depending on the site and the specific climate for the year (drought versus no drought)	<ul style="list-style-type: none"> ■ Same as No Action, Alternatives C, D, and F ■ Cumulative beneficial impacts to water delivery with additional CMAs and increased sediment removal.

Resource Area	Alternative A: No Action	Alternative B: Increased Recreation Opportunities	Alternative C: Increased Sediment Removal	Alternative D: Additional Channel Maintenance Alternatives	Alternative E: Official Protection for Restoration Sites	Alternative F: Replacement Restoration outside of USIBWC Jurisdiction	Alternative G: Partnership Combination (Preferred Alternative)
Soils	Potential temporary and localized soil compaction in areas where heavy equipment may enter the channel	Similar to No Action, but increased potential for erosion along the RGCP and from construction of the 0.5-acre parking lot	Similar to No Action, but increased potential for temporary and localized soil compaction in areas where heavy equipment may enter the channel	Similar to No Action, but increased potential for impacts from construction activities, such as soil erosion and compaction of soils	Similar to No Action, with slight potential to reduce additional disturbance with official protection of sites	Same as No Action	Similar to No Action, but increased potential for impacts from construction activities, such as soil erosion and compaction of soils
Land Use/ Recreation	No expected changes to existing land use within or adjacent to the RGCP	Similar to No Action, but beneficial impact to recreation resources by providing increased recreational opportunities	Similar to No Action, but additional sediment would require disposal at approved sites per the USACE permit requirements and may be within the ROW or other designated federal or private lands	<ul style="list-style-type: none"> ■ Acquisition of private property or easements would be necessary if sediment traps are constructed at the mouths of Rock Canyon and Horse Canyon Creek, as both locations are outside of USIBWC ROW. ■ Potential for other CMAs to be constructed outside the USIBWC ROW. 	<ul style="list-style-type: none"> ■ Landowner and/or manager of designated areas may change; however, the land use would remain as restoration. ■ USIBWC has the potential to lose long-term access for maintaining the levees and river. 	These restoration activities would be on a voluntary basis only and would not force farmland out of production. No change in ownership of the properties would occur; only the function of the land through voluntary easements.	Same as Alternative C and potential impacts from CMAs and replacement restoration outside the USIBWC ROW would be as described for Alternatives D and F

3.0 CURRENT CONDITIONS AND ENVIRONMENTAL CONSEQUENCES

This section describes the resources in the potential area of influence of the proposed alternatives. The consequences of each alternative are discussed immediately after the description of the current conditions of each resource area.

3.1 Resource Areas Excluded from Further Analysis

Consistent with NEPA implementing regulations and guidance, USIBWC focuses the analysis in an EA on topics with the greatest potential for environmental impacts. This approach is consistent with NEPA [40 CFR 1502.2(b)], under which impacts, issues, and related regulatory requirements are investigated and addressed with a degree of effort commensurate with their importance. Table 3-1 identifies the impact topics dismissed from detailed analysis in this EA and provides the rationale for the dismissal. Generally, issues and impact topics are dismissed from detailed analysis because the resource does not exist in the analysis area, the resource would not be affected by the proposal, or impacts are not reasonably expected (i.e., no measurable effects).

Table 3-1. Environmental Resource Areas Not Carried Forward

Environmental Resource Area	Impact Consideration and Conclusions
Environmental Health	<p>Environmental health considerations include noise and air quality. Noise from the proposed alternatives would be limited to heavy equipment operation during normal working hours. Impacts would be intermittent and typical of maintenance and construction activities. Increased recreation may increase noise from humans, animals, and vehicles in the immediate vicinity of the activities but impacts are not reasonably expected.</p> <p>Potential impacts to air quality would be temporary with a slight increase in criteria air pollutants within the project corridor from disturbed soils and from construction equipment.</p> <p>USIBWC employs BMPs under construction contracts to eliminate or reduce impacts from temporary issues caused by construction such as, short-term noise and air pollution. BMPs to reduce noise during construction include working during daytime hours and proper maintenance of equipment. BMPs to protect air quality include the use of sediment barriers and soil wetting to minimize erosion and dust and the proper maintenance of equipment. Air quality protection measures included in the RMP would be implemented under all proposed alternatives.</p>
Community Resources	<p>This resource area includes the topics of socioeconomic and environmental justice. No changes to population or housing would occur under any of the proposed alternatives. The proposed alternatives would be implemented by USIBWC and would not impact employment or hiring. Under Alternatives B and G, a slight increase in law enforcement may be required due to increased recreational use within the RGCP.</p> <p>EO 12898, <i>Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations</i>, encourages federal facilities to achieve “environmental justice” by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of</p>

Environmental Resource Area	Impact Consideration and Conclusions
	its programs, policies, and activities on minority and low-income populations. Continuation of the RMP would provide levee protection and convey water for farmers in the area. None of the proposed alternatives would impact flood insurance rates or disproportionately affect minority or low-income populations.
Traffic and Transportation	Transportation of construction equipment and use of personnel vehicles would mainly occur within the levee ROW and along the levee road system within the floodway. Construction equipment would be initially driven to the site from larger metropolitan areas such as El Paso or Las Cruces. Use of the roadways would be similar to existing conditions as USIBWC currently provides construction and maintenance projects within the RGCP. The USIBWC strictly prohibits the use of motor vehicles, including full-size and all-terrain vehicles and motor bikes, in the floodway, in the channel, and on the levee. Increased recreation may increase private vehicle traffic but impacts are not reasonably expected.

3.2 Biological Resources

3.2.1 Vegetation, Wildlife, and Wetlands

The RGCP is included in the northern Trans-Pecos region of the Chihuahuan Desert and is a mosaic of grasslands and desert shrublands (USIBWC 2004). The region is dominated by desert shrub species such as creosote bush (*Larrea tridentate*), Tobosa grasslands. Historically, the Rio Grande in southern New Mexico was characterized by a wide, active floodplain with numerous marshes, backwater, oxbow pools, and a fringe forest of cottonwoods (*Populus* spp.), willows (*Salix* spp.), and shrubby phreatophytes (USFWS 2005). In response to anthropogenic changes, the prevalence of invasive vegetation such as saltcedar (*Tamarix* spp.) has caused a subsequent decline of species characteristic of historic bosques (USIBWC 2004).

Vegetation along the river corridor through the RGCP varies depending on management practices in the area.

- **Mowed Areas:** Mowing of the floodway outside the main channel but between the flood control levees is completed annually in specific areas to remove obstructions to flood flows and to maintain flood capacity (USIBWC 2018). Limited vegetation is allowed to occur in these areas and due to disturbance is poor quality habitat dominated by non-native plant species.
- **No-Mow Areas:** The USIBWC implemented No-Mow Zone areas along the RGCP as stipulated in the ROD. Cessation of mowing at restoration sites and riparian fringe, along with selective treatment of exotic vegetation, allows native vegetation to establish itself for the improvement and restoration of riparian habitats. As of June 2013, USIBWC has designated 2,079 acres of No-Mow Zones out of the 2,536 acres allowed in the ROD.
- **Restoration Sites:** As of August 2018, USIBWC has implemented restoration efforts at 22 sites totaling 508 acres. Vegetation in the un-mowed restoration sites is a mix of exotic plants such as saltcedar, Russian thistle (*Salsola tragus*), kochia (*Bassia scoparia*), and Bermuda grass (*Cynodon dactylon*), as well as native plants to include native grasses such as alkali sacaton (*Sporobolus*

airoides), and saltgrass (*Distichlis spicata*), honey and screwbean mesquite (*Prosopis glandulosa* and *P. pubescens*), and herbaceous shrubs such as baccharis (*Baccharis sp.*), wolfberry (*Lycium spp.*), arrowweed (*Pluchea sericea*), fourwinged saltbush (*Atriplex canescens*), three-leaf sumac (*Rhus trilobata*), and false indigo (*Baptisia australis*), and willows and cottonwoods (SWCA 2015; GSRC 2018; IDEALS-AGEISS 2019a and b).

- **Areas outside of Levees:** USIBWC owns or has ROW on the land adjacent to the river corridor from Percha Dam downstream to the Doña Ana County/Sierra County boundary line, where no levee exists on the east bank. In addition, no levee exists on the west bank from Percha Dam downstream to the Hatch Siphon. USIBWC does not mow these areas which do not have levees, and they have not been mowed in decades. These areas have larger trees, mixed native (cottonwoods, velvet ash trees [*Fraxinus velutina*], and willows) and non-native (Siberian elm [*Ulmus pumila*], saltcedar, and Russian olive [*Elaeagnus angustifolia*]). In addition, these areas have mixed native and non-native vegetation similar to the un-mowed restoration sites and No-Mow Areas.
- **Areas within the Channel:** USIBWC evaluates islands within the channel to determine whether they need to be removed. Vegetated islands that must be removed will be evaluated for whether they support threatened and endangered (T&E) species, and USIBWC will follow requirements in the Biological Opinion.

Wildlife fauna documented along the RGCP are typical of disturbed habitats and include: coyote (*Canis latrans*), desert cottontail (*Sylvilagus audubonii*), pocket gophers (*Geomys spp.*), cotton rat (*Sigmodon hispidus*), beaver (*Castor canadensis*), black-tailed jackrabbit (*Lepus californicus*), and skunks (*Mephitis mephitis*) (USIBWC 2007; USIBWC 2016b). The Rio Grande is a major migratory flyway for numerous bird species, particularly waterfowl, shore birds, and those associated with riparian habitats. USIBWC must comply with the Migratory Bird Treaty Act (MBTA). The MBTA protects migratory birds, their parts, nests, and eggs thereof during their nesting season, which is March 1 through August 31. Common avian species observed along the RGCP include: mourning dove (*Zenaida macroura*), Say's phoebe (*Sayornis saya*), red-winged blackbirds (*Agelaius phoeniceus*), barn swallows (*Hirundo rustica*), house finch (*Haemorrhous mexicanus*), and red-tailed hawk (*Buteo jamaicensis*).

Within the RGCP, wetlands are largely restricted to narrow margins and former oxbows within the floodway. High water tables during irrigation season have created pockets of emergent marsh and wet meadow sites within the floodway and on private lands adjacent to the ROW. Two large wetlands on private lands adjacent to the ROW occur at the entrance to Selden Canyon and south of Las Cruces (USIBWC 2007). Not coincidentally, both areas are also mapped as being within the hydrologic floodplain. Wetlands estimates within the RGCP are heavily influenced by the classification system and classification methodology employed. Acreage varies from an estimated 166 acres to 537 acres (USIBWC 2004). Analyses of representative areas suggest that much of the wetlands previously identified by the National Wetland Inventory (2000 study) are currently classed as riparian herbaceous or shrubland (in areas south of Las Cruces), and riparian shrubland/woodland in the Rincon Valley. As a result, wetlands previously mapped typically reflect the locations of “wetter” wetlands (USIBWC 2004).

Alternative A - No Action Alternative: Continued Implementation of the RMP

Under the No Action Alternative, USIBWC would continue to conduct vegetation management in accordance with the RMP. Mowing to reduce non-native vegetation in the floodway would continue with

the exception of the No-Mow Zone areas. Implementation of the restoration sites would result in minor beneficial impacts by continuing to provide additional T&E species habitat and restoring riparian vegetation in portions of the RGCP. USIBWC would continue to remove and treat the invasive saltcedar in areas along the RGCP which would in many cases further improve native habitat. No adverse impacts to wildlife are expected with the continual implementation of the RMP. The continual improvement of native habitat at the restoration sites would provide minor beneficial impacts to wildlife species. Vegetation management under the RMP is not conducted during the breeding season from March 1 through August 31 to comply with the MBTA. Habitat restoration along the RGCP may lead to an increase in the acreage of suitable habitat, greater habitat connectivity, and an increase in the number of occupied territories for both flycatchers and cuckoos (USIBWC 2017a). Per the 2017 Biological Opinion, USIBWC has transplanted native vegetation removed during island removal to restoration sites to preserve native vegetation (USFWS 2017a).

CMAs at the Tierra Blanca, Sibley, Garcia, and Placitas arroyos as currently designed within the ROW, have the potential to impact 11.2 acres of habitat. The Garcia Arroyo lies within a restoration site and a sediment trap added to this site has the potential to impact 0.6 acre of native habitat restoration. CMAs implemented outside of the restoration sites are not likely to affect native habitat as they occur in mowed areas. Other CMAs, such as the spur dikes and vortex weirs, would be conducted within the channel and would not impact habitat. Some disturbance to vegetation through crushing and trampling would occur from the movement of heavy equipment through the ROW to the channel although impacts would be reduced by using previously disturbed areas along the ROW when possible. Minimal long-term adverse impacts to native vegetation would occur under this alternative due to sediment traps constructed in the restoration areas, although re-vegetation of the areas would occur after construction. The vortex weir construction at Terra Blanca and the spur dike construction would occur in the channel during the no flow season and would not affect any habitat, or wildlife species. Construction activities under the No Action have the potential to temporarily displace wildlife from noise and increased human disturbance. The displacement would be temporary and species would likely return to using the area once construction is complete. Wetland vegetation would increase by 13 acres as a result of shavedowns under the RMP (USIBWC 2004).

Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities

Potential impacts of continued implementation of the RMP would include those discussed under the No Action Alternative. Additionally, increased recreational opportunities throughout the RGCP would result in both increased vehicular traffic and pedestrian traffic which could negatively impact vegetation. Although vehicular traffic is not authorized on most levees or in the floodplain, many times there are unauthorized vehicles within USIBWC property. The designation of 65 miles of trail through the RGCP ROW could cause trampling of vegetation and soil compaction in areas which would prevent seedling germination. Although the USIBWC restoration sites are marked with a sign that reads "Environmental Stewardship Program: Habitat Restoration Area Under Construction" or smaller orange markers that read "Habitat Restoration Area Under Construction," people disregard these signs and have caused damage to the restoration sites. Increasing the recreational opportunities near any of the restoration sites, would increase the potential for damage to these native habitat restoration sites. The trail would be designated outside of the restoration areas and signs posted to reduce potential impacts to vegetation. No significance adverse impacts are expected for the trail use or aquatic recreation. No adverse impact to

wetland areas are expected under this alternative as recreational activities would be located away from these sensitive areas.

Increased human disturbance from additional recreation would cause localized minor impacts to wildlife species using the ROW for foraging and habitat. Wildlife could avoid the areas during increased recreational use; however, this avoidance is likely to be short-term as recreational activities would only be concentrated in specific areas for short periods of time. The use of the trail system and aquatic activities would be sporadic, would not include motorized vehicles or boats, and would be unlikely to affect wildlife species. Additional recreational use along the RGCP could potentially increase the amount of trash in the RGCP and potentially attract scavengers and predators. A potential increase in these species could impact native wildlife and listed species; however, these impacts are not expected to be significant or result in population declines. USIBWC has developed agreements with the local law enforcement and law attorneys to cite and prosecute offenses on USIBWC property. Increased signage would inform the public of unauthorized activity in specific areas to minimize impacts to native species. USIBWC would work with New Mexico Game and Fish to address nuisance wildlife impacts.

Additional access points to the river and trails would require vegetation removal to create new parking. USIBWC would clear 0.5 acre for parking within the floodplain, although care could be taken to avoid areas with native vegetation and to concentrate the access points in areas that are mowed. Increased ground disturbance could increase the spread of exotic species and promote increased susceptibility to fires. Development of the parking area would cause minor impacts to wildlife, as wildlife would temporarily avoid the area during construction.

Alternative C: Continued Implementation of the RMP and Increased Sediment Removal

Potential impacts of continued implementation of the RMP would include those discussed under the No Action Alternative. Additionally, increased excavation of sediment within the channel would not impact vegetation in the ROW itself; however, some disturbance to vegetation through crushing and trampling would occur from the movement of heavy equipment through the ROW to the channel, sediment staging and stockpile areas, and creation of temporary access ramps to the river. Impacts to the native vegetation would be reduced by using already established pathways to the river channel or areas outside the No-Mow Zones that do not contain native vegetation. In addition, the movement of heavy equipment could also increase the spread of non-invasive species. Best management practices (BMPs) that provide for cleaning of the equipment prior to movement through the ROW and into the river would reduce the spread of invasive species. Disposal of the removed sediment would require a location that would prevent additional disturbance of vegetation within the ROW. Deepening the channel through additional sediment removal could potentially impact riparian habitat along the floodplain as a result of less frequent inundation. In addition, the removal of vegetated islands would impact riparian habitat on those islands. Construction activities to remove sediment have the potential to temporarily displace wildlife from increased human disturbance. The displacement would be temporary and species would likely return to using the areas once sediment removal is complete. Removal of vegetated islands would have the greatest impact on vegetation. USIBWC would maintain compliance with Biological Opinion requirements to limit removal of vegetation supporting T&E species within the channel.

Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. Excavation for the sediment traps at Tierra Blanca, Sibley, Garcia, Placitas, Rock Canyon, and Horse Canyon (as currently designed) would disturb approximately 14.1 acres of habitat. The Garcia Arroyo lies within a restoration site and sediment traps added to this site has the potential to impact 0.6 acre of native habitat restoration and wildlife using the areas. The other arroyos occur in the mowed areas along the RGCP and would not impact native vegetation nor wildlife since the habitat in those areas is poor. Redesigning the CMAs to occur outside the ROW may increase the total disturbance to native habitat and further impact wildlife species. Island destabilization of approximately 10 acres would occur near active flycatcher territories and would remove native willow vegetation. Per the 2017 Biological Opinion, USIBWC would try to transplant any native vegetation removed during island destabilization to other restoration sites to minimize loss of native habitat. Some disturbance to vegetation through crushing and trampling would occur from the movement of heavy equipment through the ROW, although impacts would be reduced by using previously disturbed areas along the ROW when possible. USIBWC is considering aquatic habitat sites to improve wetland vegetation. Habitat areas can potentially be created around areas where moisture is collected, such as at control structures developed under this alternative.

Construction activities for channel maintenance have the potential to temporarily displace wildlife from increased human disturbance. The displacement would be temporary and species would likely return to using the areas once construction is complete. Indirect impacts could include habitat degradation, disruption of foraging and prey availability, and disruption of nesting. Less mobile species may have a harder time avoiding heavy equipment but populations would not be impacted. CMA activities are generally short in duration and spatially distributed across the RGCP. Conducting construction activities outside the nesting season would reduce potential impacts to avian species. The Biological Opinion requires USIBWC to quantify habitat using on the ground habitat surveys for flycatchers. These surveys would provide an indicator of any potential impacts to habitat from the CMA activities.

Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. Beneficial impacts to the native vegetation at the restoration sites would occur if the restoration sites were provided official protection. Official protection would greatly reduce the potential for vehicular disturbance and allow the native vegetation to re-establish. However, pedestrian use would likely be allowed in the restoration areas under a refuge, which could have the potential to impact species using the area from increased disturbance.

Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. Implementing restoration activities outside the USIBWC jurisdiction or having a third party implement restoration would have beneficial impacts to the overall native vegetation health along the RGCP. Under this alternative and based on adaptive management, up to 500 acres of habitat of No-Mow Zones or unsuccessful habitat restoration sites would be moved outside the ROW. In some cases No-

Mow Zone areas along the RGCP have become predominantly saltcedar which impacts the functionality of the floodplain (potentially obstructs flood flows). Converting these areas back to mowed areas and replacing the acreage outside the RMP would potentially increase native habitat. No long-term impacts are expected to wildlife species under this alternative.

Alternative G: Continued Implementation of the RMP and Partnership Combination

Potential impacts under Alternative G would be a combination of those impacts discuss under the No Action Alternative, the inclusion of the trail system from Alternative B, Alternative C, Alternative D, and Alternative F. With the implementation of all the currently designed CMAs considered under the No Action Alternative and Alternative D, approximately 14.1 acres of habitat disturbance would occur. Approximately 0.6 acre of disturbance would potentially occur in the restoration sites which have developing native vegetation. The majority of the disturbance would occur in areas with non-native or less desirable habitat. While short-term impacts to vegetation would occur from the implementation of the CMAs, continued habitat restoration under the No Action as well as replacing unsuccessful habitat restoration to outside the ROW would potentially provide long-term beneficial impacts to vegetation and associated wildlife. Removal of the vegetated islands during sediment excavation would have an impact on vegetation. USIBWC would maintain compliance with Biological Opinion requirements to limit removal of vegetation supporting T&E species within the channel. Although increased habitat connectivity may be realized with Alternative F, there would be an increase in vegetation removal with the combined implementation of Alternatives C and D. Species composition would likely change in these areas. Increased human presences from recreation and implementation of CMAs and sediment removal would cause localized adverse impacts to wildlife species using the ROW for foraging and habitat. The displacement would be temporary and species would likely return to using the area once disturbance is complete. No long-term adverse impacts to wildlife are expected under this alternative.

3.2.2 Threatened and Endangered Species

USIBWC is required to evaluate impacts to T&E species per the ESA of 1973, as amended. The USIBWC has conducted several biological surveys along the RGCP (USIBWC 2004; USIBWC 2011a; USIBWC 2016b). Fourteen species are listed as endangered, threatened, candidate, proposed, or experimental nonessential population within the RGCP, of which four are known to occur and are listed in Table 3-2 (USIBWC 2017a). Species classified as "unlikely to occur" were not included in this EA but are described in more detail in the *Updated Biological Assessment for Long-Term River Management of the Rio Grande Canalization Project* (USIBWC 2017a). In 2017, USIBWC consulted with the USFWS on the potential impacts to T&E species as a result of channel maintenance activities documented in USIBWC's RMP for RGCP (USIBWC 2016a); USIBWC has been issued an updated Biological Opinion for the actions (USFWS 2017).

Table 3-2. Federally Listed Species Known to Occur Along the RGCP

Common Name	Scientific Name	Federal Status	County where Listing Applies	Range or Habitat Requirements	Potential Timeframe for Occurrence
Least Tern	<i>Sterna antillarum</i>	Endangered	Sierra and Doña Ana counties, NM	Migratory species occurring in North America during the breeding season, when it is associated with water (e.g. lakes, reservoirs, rivers). Documented in the RGCP including at Mesilla.	Possible breeding resident during summer
Northern Aplomado Falcon	<i>Falco femoralis septentrionalis</i>	Endangered and Experimental, Non-essential Population	Sierra and Doña Ana counties, NM El Paso County, TX	Documented at Mesilla Valley Bosque State Park in 2010. Associated with open grassland or savannah with scattered trees or shrubs. Experimental population in NM.	Nests spring to summer. Non-migratory.
Southwestern Willow Flycatcher	<i>Empidonax traillii eximius</i>	Endangered	Sierra and Doña Ana counties, NM El Paso County, TX	Associated with moist riparian areas throughout the year. Documented on some RGCP restoration sites.	Breeding resident during summer; migrates to tropics
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Threatened	Sierra and Doña Ana counties, NM El Paso County, TX	Western subspecies nests preferentially in large patches of moist cottonwood-willow woodland, where it prefers high canopy closure for nesting. Documented on some proposed RGCP restoration sites	Breeding resident during summer

Source: USIBWC 2017a

The RGCP also potentially contains habitat for state-listed species (Tables 3-3 and 3-4). One Texas Natural Diversity Database record for the state and federally endangered Sneed's pincushion (*Coryphantha sneedii* var. *sneedii*) occurs within the project area (TPWD 2019a). However, this species was reviewed in the 2017 biological assessment and habitat was not found to exist in the project area.

Table 3-3. Texas State-listed Species and Species of Greatest Conservation Need in the RGCP Area

Common Name	Scientific Name	State Status	Range or Habitat Requirements	Potential to Occur in Project Area
Longnose dance	<i>Rhinichthys cataractae</i>	SGCN	Can only be found in the Big Bend portion of the Rio Grande. Occasionally taken in lakes and clear pools of rivers but prefers clear, flowing water in gravelly riffles.	No – currently only found in Big Bend area. Also river flow is ephemeral.
Speckled chub	<i>Macrhybopsis aestivalis</i>	SGCN	Found throughout the Rio Grande and lower Pecos River but occurs most frequently between the Río Conchos confluence and the Pecos River. Flowing water over coarse sand and fine gravel substrates in streams; typically found in raceways and runs.	No – river flow is ephemeral.
Texas horned lizard	<i>Phrynosoma cornutum</i>	T	Occurs to 6,000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area. Open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rock.	Unlikely due to lack of habitat and current known distribution
Mountain short-horned lizard	<i>Phrynosoma hernandesi</i>	T	Usually in open, shrubby, or openly wooded areas with sparse vegetation at ground level; soil may vary from rocky to sandy.	Potential
Chihuahuan Desert lyre snake	<i>Trimorphodon vilkinsonii</i>	T	Rocky areas with plenty of crevices and fissures. Desert flats, succulent and scrub, and mountain canyons to about 6,000 feet. Mostly crevice-dwelling in predominantly limestone-surfaced desert northwest of the Rio Grande from Big Bend to the Franklin Mountains.	Unlikely due to lack of habitat and current known distribution
White-faced ibis	<i>Plegadis chihi</i>	T	Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies.	Migrant
Gray hawk	<i>Buteo plagiatus</i>	T	Locally and irregularly along U.S.-Mexico border; mature riparian woodlands and nearby semiarid mesquite and scrub grasslands.	Migrant
American peregrine falcon	<i>Falco peregrinus anatum</i>	T	Year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from more northern breeding areas in U.S. and Canada.	Potential but no breeding habitat
Pecos River muskrat	<i>Ondatra zibethicus ripensis</i>	SGCN	Creeks, rivers, lakes, drainage ditches, and canals; prefer shallow, fresh water with clumps of marshy vegetation, such as cattails, bulrushes, and sedges.	Unlikely since river flow is ephemeral

Common Name	Scientific Name	State Status	Range or Habitat Requirements	Potential to Occur in Project Area
Dense cory cactus	<i>Escobaria dasyacantha</i> var. <i>dasyacantha</i>	SGCN	Found in lechuguilla-sotol or creosote bush shrublands, grasslands, and oak-juniper woodlands on gravelly, rocky, and/or loamy soils over igneous or limestone substrates at moderate elevations 2,450-5,900 feet in the Chihuahuan Desert.	Potential
Plank's catchfly	<i>Silene plankii</i>	SGCN	Franklin Mountains of El Paso County, occurring in crevices on shaded igneous cliff faces above ca. 5,000 feet.	No – project area does not include the Franklin Mountains
Sand prickly-pear	<i>Opuntia arenaria</i>	SGCN	Deep, loose or semi-stabilized sands in sparsely vegetated dune or sandhill areas, or sandy floodplains in arroyos.	Potential
Sneed's pincushion	<i>Coryphantha sneedii</i> var. <i>sneedii</i>	E ¹	Found primarily in cracks of limestone formations in areas of broken terrain and on steep slopes usually in Chihuahuan desert scrub.	Unlikely to occur

Source: TPWD 2019b

1 Species is also federally listed.

E endangered; T threatened; SGCN species of greatest conservation need

Table 3-4. New Mexico State-listed Species and Species of Greatest Conservation Need in the RGCP Area (Sierra and Doña Ana Counties) with the Potential to Occur in the Project Area

Common Name	Scientific Name	Status	Range or Habitat Requirements	Potential for Occurrence in Project Area
Gila trout	<i>Oncorhynchus gilae</i>	T ¹	Distribution includes western Sierra County. Does not occur in the Rio Grande.	Unlikely to occur
Common ground-dove	<i>Columbina passerina</i>	E	Typically found in undeveloped and agricultural areas.	Unlikely to occur
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	SGCN ¹	Western subspecies nests preferentially in large patches of moist cottonwood-willow woodland, where it prefers high canopy closure for nesting. Documented on some proposed RGCP restoration sites.	Known to occur
Costa's hummingbird	<i>Calypte costae</i>	T	Inhabit microphyll shrubland and canyons at lower elevations. Open to dense vegetation dominated by shrubs, low trees and succulents.	Unlikely to occur
Broad-billed hummingbird	<i>Cynanthus latirostris</i>	T	Found primarily in riparian woodlands at low to moderate elevations.	Potential

Common Name	Scientific Name	Status	Range or Habitat Requirements	Potential for Occurrence in Project Area
Violet-crowned hummingbird	<i>Amazilia violiceps</i>	T	Found primarily in riparian woodlands at low to moderate elevations.	Potential
Least tern	<i>Sterna antillarum</i>	E ¹	Migratory species occurring in North America during the breeding season, when it is associated with water (e.g., lakes, reservoirs, rivers). Documented in the RGCP including at Mesilla.	Known to occur
Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Common in wooded habitats in Sierra County. The majority of the populations occurring in New Mexico are found near streams and lakes.	Unlikely to occur
Common black hawk	<i>Buteogallus anthracinus</i>	T	Found in desert riparian deciduous woodlands especially of cottonwoods, that occur where desert streams provide sufficient moisture for a narrow band of trees and shrubs along the margins.	Known to occur
Northern Aplomado falcon	<i>Falco femoralis septentrionalis</i>	E ¹	Documented at Mesilla Valley Bosque State Park in 2010 and sporadically within RGCP.	Known to occur
Peregrine falcon	<i>Falco peregrinus</i>	T	Year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from more northern breeding areas in U.S. and Canada.	Potential but no breeding habitat
Thick-billed kingbird	<i>Tyrannus crassirostris</i>	E	Confined to riparian habitats in the U.S.	Potential
Southwestern willow flycatcher	<i>Empidonax traillii eximius</i>	E ¹	Associated with moist riparian areas throughout the year. Documented on some RGCP restoration sites.	Known to occur
Bell's vireo	<i>Vireo bellii</i>	T	In New Mexico this species characteristically occurs in dense shrubland or woodland along lowland stream courses, with willows, mesquite, and seep willows.	Potential
Baird's sparrow	<i>Centronyx bairdii</i>	T	Desert grasslands.	Potential in areas where mowing does not occur
Varied bunting	<i>Passerina versicolor</i>	T	In New Mexico the species seems to prefer dense stands of mesquite and associated growth in canyon bottoms.	Unlikely to occur

Common Name	Scientific Name	Status	Range or Habitat Requirements	Potential for Occurrence in Project Area
Western yellow bat	<i>Dasypterus xanthinus</i>	T	Typically associated with wooded and riparian areas.	Unlikely to occur, distribution is mainly east of the RGCP.
Sneed pincushion cactus ³	<i>Coryphantha sneedii</i> var. <i>sneedii</i>	E ¹	Found primarily in cracks of limestone formations in areas of broken terrain and on steep slopes usually in Chihuahuan desert scrub.	Unlikely to occur
Wright's marsh thistle ¹	<i>Cirsium wrightii</i>	E	Wet, alkaline soils in spring seeps and marshy edges of streams and ponds.	Unlikely to occur
Duncan's pincushion cactus ²	<i>Escobaria duncanii</i>	E	Cracks in limestone and limy shale in broken terrain in Chihuahuan desert scrub.	Unlikely to occur
Wilcox pincushion cactus ²	<i>Mammillaria wrightii</i> var. <i>wilcoxii</i>	E	Found in arid environments.	Potential
Sand prickly pear ³	<i>Opuntia arenaria</i>	E	Deep, loose or semi-stabilized sands in sparsely vegetated dune or sandhill areas, or sandy floodplains in arroyos.	Potential
Night-blooming cereus ²	<i>Peniocereus greggii</i>	E	Mostly in sandy to silty gravelly soils in gently broken to level terrain in desert grassland or Chihuahuan desert scrub.	Potential

Sources: NMDGF 2019, NMRPTC 2019

1 Species is also federally listed.

2 Species listed in Sierra County only.

3 Species listed in Doña Ana County only.

E endangered; T threatened; SGCN species of greatest conservation need

Alternative A - No Action Alternative: Continued Implementation of the RMP

No adverse impacts to T&E species are anticipated with the continued implementation of the RMP. The RMP's Endangered Species Management (ESM) Plan outlines conservation measures and management of listed species in order to avoid adverse impacts to listed species and their habitat. As new species become listed or changes in listing occur, the RMP ESM Plan would be updated. The removal of exotic species according to the RMP would continue to provide minor benefits to the recovery of native vegetation and T&E species habitat and would be conducted outside the breeding period for the flycatcher – May 15 through August 15. The USIBWC establishes 0.25-mile buffer zones around many flycatcher territories to reduce impacts from construction and CMA activities would not occur in flycatcher habitat without mitigation such as transplanting vegetation. The vortex weir construction at Terra Blanca and the spur dike construction would occur in the channel during the no flow season and would not affect T&E species. The 2017 Biological Opinion allows the USIBWC to remove some vegetation within the channel that is suitable for the flycatcher as long as USIBWC continues to implement riparian habitat restoration

and follows other requirements and recommendations (USFWS 2017). USIBWC anticipates implementing all requirements and recommendations from the 2017 Opinion.

Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. Increased recreational activities within the ROW have the potential to impact T&E species temporally in those areas that species may occur. Aquatic recreation activities would be limited to specific areas along the RGCP which would be developed to minimize impacts to preferred habitat of listed species. The construction of the additional parking areas or access points would occur in areas away from and out of T&E habitat and known residential nesting areas. Restoration areas and any known flycatcher habitat areas would be avoided during the layout of the “Rio Grande Trail.”

Alternative C: Continued Implementation of the RMP and Increased Sediment Removal

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. Sediment removal activities would take place outside the breeding season for the flycatcher to reduce potential impacts. Known flycatcher territorial areas and potential habitat that may support T&E species as identified through the 2016 surveys (USIBWC 2016b) would be avoided to reduce impacts to preferred habitat. The immediate vicinity of the flycatcher territory would be avoided, and as deemed reasonable the USIBWC would not remove vegetation within 0.25 mile from the territory. In areas where there are large vegetated islands with flycatchers and cuckoos, sediment would be removed around vegetated islands and USIBWC would leave the islands in place. This would prevent further growth of the vegetated islands. Alternative C would comply with the Reasonable and Prudent Measure 1.2 in the Biological Opinion as well as management guidelines for channel maintenance outlined in the RMP (Section 3.1.15). Removal of vegetated islands within the channel that are occupied would be scrutinized and deprioritized unless there is a public safety issue. Large islands (greater than 0.1 hectare or about 0.25 acre) with suitable habitat should not be excavated or destabilized unless habitat is available along the nearby riverbanks or unless flood modeling predicts impacts to human health and safety from flooding created by the islands. Islands would be monitored. USFWS approval would be obtained prior to any excavation activity on any island with documented flycatcher territories. Adverse impacts to listed species are not expected since habitat would not be impacted.

Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. Construction activities for CMAs have the potential to temporarily displace T&E species due to noise and increased human disturbance. The displacement would be temporary and species would likely return to using the area once construction is complete. The other arroyos occur in the mowed areas along the RGCP and would not impact native vegetation nor wildlife since the habitat in the area is poor. Work at the Rincon Siphon area as currently designed would re-align the arroyo and remove sediment and may potentially impact flycatcher habitat if removal efforts contain vegetation. Island destabilization would impact approximately 10 acres of known active flycatcher territories from Rincon to Bignell Arroyo. The immediate vicinity of the flycatcher territory would be avoided, and as deemed reasonable the USIBWC would not remove vegetation within 0.25 mile from the territory. In areas where there are

large vegetated islands with flycatchers and cuckoos, sediment would be removed around vegetated islands and USIBWC would leave the islands in place. This would prevent further growth of the vegetated islands. Alternative D would comply with the Reasonable and Prudent Measure 1.2 in the Biological Opinion as well as management guidelines for channel maintenance outlined in the RMP (Section 3.1.15). Removal of vegetated islands within the channel that are occupied would be scrutinized and deprioritized unless there is a public safety issue. Large islands (greater than 0.1 hectare or about 0.25 acre) with suitable habitat should not be excavated or destabilized unless habitat is available along the nearby riverbanks or unless flood modeling predicts impacts to human health and safety from flooding created by the islands. Potential adverse impacts to the flycatcher may occur with additional channel maintenance activities not already covered under the Biological Opinion and consultation with the USFWS would be conducted. Potential minor adverse impacts to flycatcher habitat may occur at some of the channel maintenance sites.

For construction activities (such as the CMAs) where habitat for the state-listed plant species occurs, a survey would be conducted to determine presence of the plant species and measures would be employed to avoid adverse impacts. Construction activities would take place outside the nesting season to reduce impacts to migratory bird species. Fencing or flagging would be used to denote populations and staging areas would be placed away from the known populations. Impacts to the fish species and Pecos River muskrat (*Ondatra zibethicus ripensis*) are not expected to occur as all construction activities within the channel would occur during the non-irrigation season when the river is mostly dry. In addition BMPs to reduce soil erosion, such as drift fencing, would be implemented during construction to reduce any impacts to riparian and aquatic habitat for activities in the ROW during the irrigation season.

Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. Increased protection of restored T&E species habitat would occur under this alternative. Transferring land to another state or federal agency with land or habitat protection mission would further limit the types of activities that could occur in the restoration sites and further protect habitat and species that use the habitat. However, under this alternative pedestrian use would likely be allowed in the restoration areas under a refuge, which could have the potential to impact species using the area from increased disturbance.

Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction

Additional restoration efforts outside of the USIBWC ROW would provide additional habitat to listed species and beneficial impact to recovery efforts in the area. Unsuccessful restoration sites that are replaced outside the ROW would not impact T&E species as they are unlikely to have provided habitat for the species. The potential for improved T&E species habitat may be realized once the sites are replaced. Replacement sites would provide habitat connectivity for migrating species. Under this alternative there would be a requirement to renegotiate the Biological Opinion with the USFWS as impacts to the restoration credit acreage under the Biological Opinion would occur. Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative.

Alternative G: Continued Implementation of the RMP and Partnership Combination

No adverse impacts to T&E species are anticipated with the continued implementation of the RMP. CMA activities that remove willow vegetation or destabilize islands could impact known flycatcher territories. Alternative G would comply with the Reasonable and Prudent Measure 1.2 in the Biological Opinion as well as management guidelines for channel maintenance outlined in the RMP (Section 3.1.15). Removal of vegetated islands within the channel that are occupied would be scrutinized and deprioritized unless there is a public safety issue. Large islands (greater than 0.1 hectare or about 0.25 acre) with suitable habitat should not be excavated or destabilized unless habitat is available along the nearby riverbanks or unless flood modeling predicts impacts to human health and safety from flooding created by the islands. Islands would be monitored to determine if any flycatchers were nesting. USFWS approval would be obtained prior to any excavation activity on any island with documented territories. Potential adverse impacts to the flycatcher may occur with additional channel maintenance activities not already covered under the Biological Opinion. Potential minor adverse impacts to flycatcher habitat may occur at some of the channel maintenance sites. In addition, restoration sites replaced outside the USIBWC ROW may require the USIBWC to renegotiate the Biological Opinion with the USFWS as impacts to the restoration credit acreage under the Biological Opinion would occur.

3.2.3 Aquatic Biota

Aquatic biota throughout the RGCP was evaluated in support of the EIS to document physical characteristics of the habitat and its potential to support fish and invertebrate species, and to gather data on fish species composition (USIBWC 2004). Instream habitat in the RGCP was characterized by low diversity in lotic (flowing water) habitat types. The river was characterized as an undifferentiated run with little pool/riffle structure. Instream cover, which provides essential habitat for different life stages of invertebrate and vertebrate life, was very limited. The river channel has little to no sinuosity except in the upper reaches of RGCP (USIBWC 2004). Species documented during the study included: white mosquitofish (*Gambusia affinis*), channel catfish (*Ictalurus punctatus*), green sunfish (*Lepomis cyanellus*), bluegill (*Lepomis macrochirus*), longear sunfish (*Lepomis megalotis*), largemouth bass (*Micropterus salmoides*), fathead minnow (*Pimephales promelas*), bullhead minnow (*Pimephales vigilax*), flathead catfish (*Pylodictis olivaris*), red shiner (*Cyprinella lutrensis*), common carp (*Cyprinus carpio*), and river carpsucker (*Carpiodes carpio*).

Alternative A - No Action Alternative: Continued Implementation of the RMP

Under the No Action Alternative, no adverse impacts to aquatic biota are expected. Vegetation management and channel maintenance would remain consistent with current conditions. BMPs and spill control procedures for construction activities and vegetation maintenance would be employed per the RMP to prevent contamination and reduce erosion. Manual removal of invasive species would continue along the river margin and mechanical treatments would continue to occur during drier soil conditions. Work within the channel would be conducted during dry or low-flow conditions (USIBWC 2016a). Implementation of aquatic habitat restoration, as proposed in the 2018 RMP and currently being evaluated in a separate 2019 EA, would have beneficial impacts on aquatic life.

Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. Minor temporary impacts to aquatic biota may occur with increased non-motorized recreational activities within the river through increased trash or minor sediment disturbance with paddles or canoe/kayak put-ins. The addition of access points has the potential to temporarily increase sediment into the river although BMPs during construction of the ramps and parking lot (silt fencing, construction during no flow season) would be employed to reduce impacts. No adverse impacts to the aquatic biota from the use of additional trails through the RGCP are expected.

Alternative C: Continued Implementation of the RMP and Increased Sediment Removal

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. Clearing of the channel of excess sediment and debris would improve conditions for water flow and potentially aquatic habitat for some species. No adverse impacts to aquatic species would occur during construction as activities would occur during no flow periods; minor beneficial impacts may be realized.

Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. Under this alternative, channel maintenance activities could reduce the sediment load into the RGCP and increase flow capacity thus providing minor beneficial impacts to aquatic biota. Based on the 2009 Conceptual Restoration Plan (USACE 2009), USIBWC is considering targeting some restoration sites for aquatic habitat restoration which would provide beneficial impacts. No adverse impacts to aquatic species would occur during construction as activities would occur during no flow periods.

Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites

Continued improvement in habitat through increased protection of the riparian habitat along the RGCP would directly improve vegetation establishment and bank stabilization and, thus provide bank overhead protection and shading, as well as invertebrate food production for aquatic species in these areas (USIBWC 2004). Potential beneficial impacts of continued implementation of the RMP would be as discussed under the No Action Alternative.

Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. Replacing habitat outside the ROW and away from the river would not provide additional beneficial impacts to aquatic biota unless they encompassed tributaries to the river.

Alternative G: Continued Implementation of the RMP and Partnership Combination

Continued implementation of the RMP, the implementation of the trail system, increased sediment removal, and the implementation of the CMAs would have short-term impacts to the aquatic biota as

discussed above. Potential beneficial impacts may be realized if the No-Mow Zones or unsuccessful restoration areas were replaced with restoration areas outside the ROW that provide better habitat.

3.3 Cultural Resources

The USIBWC has conducted intensive and extensive archeological and architectural evaluations for cultural resources in the RGCP, including evaluations for levee construction, flood control improvements, and habitat restoration projects (USIBWC 2017b). In areas of high probability of cultural resources, intensive investigations were conducted for site-specific construction areas for flood control and restoration (USIBWC 2017b).

During the EIS development, a field reconnaissance was conducted to note historic structures within the RGCP (USIBWC 2004). No historic buildings or structures, other than bridges and facilities associated with irrigation facilities, were observed during the field reconnaissance (USIBWC 2004). The EBID was listed in the National Register of Historic Places (NRHP) as a Historic District in 1997. The period of significance for the EBID is 1906-1942. The district is listed in the NRHP under Criterion A for its association with agriculture and Criterion C for its engineering and design aspects.

The cultural resource records and literature search identified 186 sites (including both archaeological and architectural resources) recorded in the 2-mile-wide study area: 176 in New Mexico and 10 in Texas (USIBWC 2004). Of the 186 sites, only 19 have been recorded within the RGCP ROW. A field reconnaissance was conducted in support of the EIS to verify the locations of these 19 sites in reference to the RGCP ROW. The field reconnaissance determined that nine of the sites are or may be within the ROW and include seven prehistoric sites and two multicomponent sites, both prehistoric and historic period occupations. A total of 27 areas with a higher potential for undiscovered archaeological sites was identified along the RGCP (USIBWC 2004).

In December 2017, the USIBWC entered into a Programmatic Agreement (PA) with New Mexico State Historic Preservation Officer (NMSHPO) for evaluating undertakings that could impact cultural resources and establishing procedures for consultations under specific types of actions in the RGCP. The USIBWC also has a similar PA with the Texas State Historic Preservation Officer (TXSHPO) for flood control projects in Texas from 2013.

Native American participation in this EA is discussed in Section 5.2.

Alternative A - No Action Alternative: Continued Implementation of the RMP

Continued implementation of the RMP has the potential to impact undiscovered cultural resources during ground disturbing activities. BMPs for cultural resources protection are identified in the RMP and would continue to be implemented under the No Action Alternative. The USIBWC Cultural Resources Specialist would consult with NMSHPO or TXSHPO under the appropriate PA, as determined necessary for each action. The USIBWC would continue to review and consult regarding locations of proposed sediment placement. USIBWC Cultural Resources Specialist would conduct pre- and post-burn site inspections for cultural resources when prescribed burns are implemented. Before ground-disturbing maintenance work, a conference would be held with maintenance crews to inform them of the potential for disturbing subsurface cultural resources, and the procedures involved in the event that this occurs. Precautions would

be taken to ensure that archaeological assistance is promptly available in case of a discovery. In addition, at all spoil sites, crews would be on the lookout for possible cultural resources, they would stop work immediately if any cultural resource is found and would notify the USIBWC Environmental Management Division (EMD) promptly. The tribes would also be notified should any human remains or artifacts unearthed during this project be determined to fall under the Native American Graves Protection and Repatriation Act (NAGPRA) guidelines.

Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. Under Alternative B, constructing new trails, a parking lot, and kayak or canoe access points would increase the potential for impacts to undiscovered cultural resources from ground disturbance. Because USIBWC has extensively surveyed the RGCP for cultural resources as described above, construction of recreation amenities is not expected to adversely affect cultural resources. USIBWC would consult the New Mexico Cultural Resources Information System (NMCRIIS) database, the Texas Historical Commission, and previous USIBWC investigations of any project area. If necessary, the USIBWC Cultural Resources Specialist would conduct a site survey prior to construction activities. USIBWC would follow standard procedure and BMPs to stop construction work if any cultural resources were found during construction and conduct cultural resource investigations. Impacts to cultural resources are not expected.

Alternative C: Continued Implementation of the RMP and Increased Sediment Removal

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. In addition, under this alternative, increased sediment removal would occur which could increase the potential to impact undiscovered cultural resources if they existed in the areas of sediment removal. The potential to uncover cultural resources during sediment removal is minimal and the use of previously disturbed areas to access the river would reduce the potential impact to cultural resources. Because USIBWC has extensively surveyed the RGCP for cultural resources as described above, increased sediment removal is not expected to adversely affect cultural resources. The USIBWC would follow procedures and BMPs to protect cultural resources as described under the No Action Alternative. Impacts to cultural resources are not expected.

Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. In addition, under this alternative, additional CMAs, such as sediment control structures, arroyo sediment traps, and arroyo re-alignments, would be implemented. This could increase the potential to impact undiscovered cultural resources if they existed in the areas of construction. Because USIBWC has extensively surveyed the RGCP for cultural resources as described above, construction of CMAs is not expected to adversely affect cultural resources. USIBWC would have to ensure that any areas proposed for construction outside of USIBWC ROW were surveyed for cultural resources. The USIBWC would follow procedures and BMPs to protect cultural resources as described under the No Action Alternative. Projects occurring outside the ROW would require collaboration with the landowner.

Adverse impacts to cultural resources are not expected under this alternative with implementation of BMPs.

Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites

Under this alternative, USIBWC would work to provide long-term protection status for the restoration sites. Potential impacts to cultural resources from continued implementation of the RMP as described under the No Action Alternative would occur. Providing official protection for restoration sites could potentially protect undiscovered cultural resources if any occur within the restoration sites. Adverse impacts to cultural resources are not expected.

Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction

Under this alternative, USIBWC would provide replacement restoration areas outside of its jurisdiction. Potential impacts to cultural resources from continued implementation of the RMP as described under the No Action Alternative would occur. Providing replacement restoration sites could potentially protect undiscovered cultural resources if any occur within those areas.

Alternative G: Continued Implementation of the RMP and Partnership Combination

Under this alternative, activities could increase the potential to impact undiscovered cultural resources if they existed in the areas where CMA activities and sediment removal would occur. BMPs for cultural resources protection are identified in the RMP and would continue to be implemented under this alternative. The USIBWC would follow procedures and BMPs to protect cultural resources as described under the No Action Alternative. With the implementation of BMPs, no adverse impacts to cultural resources are expected under this alternative.

3.4 Water Resources

This section includes the analysis of the following topics: flood control, water quality, groundwater, and water delivery and consumption.

3.4.1 Flood Control

The RGCP flood control system was designed to provide protection from the 100-year storm event, a storm of large magnitude with a very low probability of occurrence. The flood control levees extend for 57 miles along the west side of the RGCP and 74 miles on the east side, for a combined total of 131 miles (USIBWC 2017b). Naturally elevated bluffs and canyon walls contain flood flows along portions of the RGCP that do not have levees (i.e. Selden Canyon). The levees range in height and have slopes of about 3H:1V (horizontal to vertical) on the river side and 2.5H:1V on the land side. The levees have a gravel maintenance road along the top (USIBWC 2017b). The levees are positioned on average about 750 to 800 feet apart north of Mesilla Dam and 600 feet apart south of Mesilla Dam. The floodway between the levees is generally level or uniformly sloped toward the channel. The floodway contains mostly grasses, some shrubs, and widely scattered trees. The bank of the channel at the immediate edge of the floodway is typically vegetated with a narrow strip of brush and trees. Many levees in the RGCP were raised during recent levee reconstruction as evaluated in 2007 (USIBWC 2007).

Alternative A - No Action Alternative: Continued Implementation of the RMP

Continued implementation of the RMP would provide beneficial impacts to flood control. USIBWC operation and maintenance activities in the RGCP, including sediment removal; vegetation management along channel banks, floodways, and levees; replacement of channel bank rip rap; maintenance of sedimentation/flood control dams in the tributary arroyos; and maintenance of all RGCP infrastructure, including levee roads, bridges, and the American Diversion Dam allow the USIBWC to fulfill its mission to provide flood protection against a 100-year flood.

Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities

Impacts to flood control under this alternative would be the same as described for the No Action Alternative. Increasing recreational opportunities would not impact USIBWC's ability to provide flood protection against the 100-year flood.

Alternative C: Continued Implementation of the RMP and Increased Sediment Removal

Continued implementation of the RMP would provide beneficial impacts to flood control as described above for the No Action Alternative. Sediment accumulation in the RGCP decreases flood conveyance capacity and increases flood risk to adjoining communities (USIBWC 2004; Tetra Tech 2015). In addition, sediment accumulation prevents efficient and effective operation of the flood control infrastructure. Floodplain and levee infrastructure, such as on the opposite banks from incoming arroyos, where sediment deposits at arroyo mouths cause the river's flowpath to change around sediment deposits, eroding the opposite bank and potentially threatening the integrity of the levee opposite the arroyo via underseepage and erosion (USIBWC 2016b). Due to these impacts of sediment accumulation, increased sediment removal would provide a beneficial impact to flood control by ensuring proper conveyance capacity and the integrity of floodplain and levee infrastructure.

Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives

Continued implementation of the RMP would provide beneficial impacts to flood control as described above for the No Action Alternative. Under this alternative, USIBWC would implement additional CMAs that could potentially increase flood conveyance and have a beneficial impact on flood control. USIBWC would evaluate, design, and construct CMAs recommended in the 2015 CMA Study. Constructing additional CMAs would decrease mechanized sediment removal in the channel in any areas where sediment control structures were built. While maintenance would still be required at the structures, structures outside of the river channel provide the flexibility for operations staff to conduct maintenance during the irrigation season.

Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites

Continued implementation of the RMP would provide beneficial impacts to flood control as described above for the No Action Alternative. Providing official protection for restoration sites has the potential for damage to levees through increased visitor usage. Under this alternative, USIBWC has the potential to lose long-term access for maintaining the levees and river.

Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction

Continued implementation of the RMP would provide beneficial impacts to flood control as described above for the No Action Alternative. Replacement restoration sites or No-Mow Zones outside of USIBWC jurisdiction provide beneficial impacts to flood control, particularly if No-Mow Zone areas dominated by saltcedar are reverted back to mowed habitat. No-Mow Zones increase vegetation density, thereby potentially increasing the roughness coefficients (water flow resistance and energy loss in the flow) and surface water elevations (USIBWC 2018).

Alternative G: Continued Implementation of the RMP and Partnership Combination

Implementation of Alternative G would provide beneficial impacts to flood control through additional sediment removal, construction of CMAs, and reverting No-Mow Zone areas to mowed habitat as described under Alternatives C, D, and F. Increased conveyance capacity could be realized.

3.4.2 Water Quality

Water quality along the RGCP is defined by New Mexico and Texas on the basis of individual reaches for which designated uses have been defined. On a yearly basis both states submit to the U.S. Environmental Protection Agency (EPA) a CWA Section 303b surface water quality report in the degree to which those uses are being attained, and identify potential concerns in terms of water quality.

New Mexico state designated uses for the RGCP reach include: irrigation; marginal warm water aquatic life; livestock watering; wildlife habitat; and Primary and Secondary Contact (USIBWC 2017b). In the 2016-2018 surface water quality assessment, the Rio Grande Assessment Unit NM-2101 from 1 mile below Percha Dam to the International boundary is "Not Supporting" the designated use for primary contact due to bacteria concentrations exceeding developed standards (NMED 2018).

The Texas reach of the RGCP is contained in Segment 2314 of the Rio Grande Basin. The 21-mile segment is located in El Paso County and covers from International Dam to the New Mexico State line (USIBWC 2007). Segment 2314 has had impairments for contact recreation due to bacterial values (*E. coli*) exceeding the water quality standards (TCEQ 2016). Segment 2314 has the following designated uses: high aquatic life; public water supply; primary contact recreation (TCEQ 2018).

Alternative A - No Action Alternative: Continued Implementation of the RMP

No long-term adverse impacts to water quality are expected from continued implementation of the RMP. Water quality could decrease in terms of total suspended solids during sediment removal, channel and infrastructure maintenance, and construction of CMAs within the USIBWC ROW, but should improve upon completion of the work. Dredging activities can also loosen sediment and can lead to an increased turbidity and nonpoint source pollutants entering the river. Crews would take care to have minimal incidental fallback of excavated material into the riverbed. With implementation of the BMPs discussed below, only short-term impacts to water quality during construction and maintenance activities would occur. Sediment removal and stabilization of banks with vegetation could potentially improve water quality in the long term by controlling erosion.

BMPs included in the RMP to protect water quality would be implemented. For example, during maintenance work within the river, BMPs and spill control procedures would be used to prevent contamination and increased erosion into the river. Servicing of heavy equipment would be performed out of the riparian zone. Dust control measures, such as sprinkling/irrigation, mulch, vegetative cover, and wind breaks, would be used in construction sites where there is the potential for water pollution from dust transport by high winds. Channel work would be performed during non-irrigation and non-flood periods when water levels are lowest, approximately from September 15 to March 1, and preferably during dry conditions. USIBWC would comply with all New Mexico Environment Department (NMED) and Texas Commission on Environmental Quality (TCEQ) water quality certification BMPs and USACE general conditions for work within Waters of the U.S. The USIBWC is required to obtain a CWA Section 404 permit from the USACE for work and construction activities that are within navigable waters or will result in fill or dredge of jurisdictional waters (USIBWC 2016a). USIBWC would obtain all required permits, including a Construction Storm Water General Permit for construction jobs (non-maintenance) that would disturb 1 acre or more of land with some exceptions for small construction jobs (USIBWC 2016a).

Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities

Impacts to water quality from continued implementation of the RMP would be as described under the No Action Alternative. Increasing recreation opportunities by providing trails, canoe/kayak access points, and parking lots to access the river could cause short-term adverse impacts to water quality during construction. Increased pedestrian traffic could cause bank erosion and an increase in litter that could potentially decrease water quality. The installation of earthen ramps for boats is likely to attract ATV users to the area. Unattended usage of the ramps by motorized vehicles may cause increased wear on the ramps causing increased erosion which could affect water quality. Additional maintenance would be required if the ramps were highly impacted by ATV use.

Alternative C: Continued Implementation of the RMP and Increased Sediment Removal

Impacts to water quality from continued implementation of the RMP would be as described under the No Action Alternative. Increased sediment removal could lead to greater short-term impacts to water quality in terms of total suspended solids during the removal, but water quality would likely improve in the long run. In addition, BMPs would be implemented to avoid impacts to water quality. BMPs would reduce or eliminate erosion and downstream sedimentation. Performing the sediment removal outside of the irrigation season when there is little to no water in the channel would lessen impacts to water quality.

Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives

Impacts to water quality from continued implementation of the RMP would be as described under the No Action Alternative. Implementation of additional CMAs could lead to greater short-term impacts to water quality in terms of total suspended solids during construction of sediment control structures, arroyo sediment traps, arroyo re-alignments, and island destabilization. However, BMPs would be implemented to avoid impacts to water quality. BMPs would reduce or eliminate erosion and downstream sedimentation. Construction would follow stormwater protection permits and water quality certification

requirements issued by state agencies. Performing the channel maintenance outside of the irrigation season when there is little to no water in the channel would avoid impacts to water quality.

Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites

Potential impacts to water quality from continued implementation of the RMP would be as described under the No Action Alternative. Providing official protection for restoration sites would not impact water quality.

Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction

Potential impacts to water quality from continued implementation of the RMP would be as described under the No Action Alternative. Providing replacement restoration sites outside the jurisdiction of USIBWC would not impact water quality.

Alternative G: Continued Implementation of the RMP and Partnership Combination

Potential impacts to water quality from the continued implementation of the RMP, construction of trails, additional sediment removal, and CMAs would be short term. Most activities would occur during low water flow to prevent any impacts to water quality. In addition, BMPs would be implemented to avoid impacts to water quality. BMPs would reduce or eliminate erosion and downstream sedimentation.

3.4.3 Groundwater

The Conejos-Medanos Aquifer is a transboundary aquifer between the United States and Mexico, known as the Mesilla Bolson on the U.S. side of the border (USIBWC 2011b). The depth of fresh water varies from 150 feet to as much as 1,400 feet below land surface. The aquifer receives recharge by infiltration of runoff around the basin margins, and from seepage from the Rio Grande, ephemeral streams, canals, and excess irrigation water (USIBWC 2007).

USIBWC's EWTP was established to offset increased evapotranspiration from vegetation at habitat restoration sites. USIBWC currently irrigates with surface water rights only. Although USIBWC's RMP and the Draft EA indicate that USIBWC may use or acquire primary groundwater rights to irrigate restoration sites, the USIBWC has determined that USIBWC will not utilize primary groundwater. USIBWC has installed 55 groundwater monitoring wells throughout the RGCP floodplain on USIBWC habitat restoration sites. These wells are monitored in conjunction with the restoration site efforts.

Alternative A - No Action Alternative: Continued Implementation of the RMP

As noted in the Draft EA, USIBWC's RMP drought contingency plan proposed to use currently non-used primary groundwater rights for restoration sites or as a drought contingency plan to sustain flycatcher habitat on some restoration sites. Four restoration sites have been proposed under the RMP for groundwater irrigation: Rincon Siphon A and B, Broad Canyon Arroyo, and Selden Point Bar. In 2015, New Mexico Office of the State Engineer has approved the 23.75 acres of primary groundwater rights slated for irrigation at these sites. However, USIBWC has since determined that USIBWC will not utilize primary groundwater. Continuation of the RMP would have no adverse impact to groundwater.

Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities

Potential impacts to groundwater from continued implementation of the RMP would be as described under the No Action Alternative. Providing increased recreational opportunities would not impact groundwater.

Alternative C: Continued Implementation of the RMP and Increased Sediment Removal

Potential impacts to groundwater from continued implementation of the RMP would be as described under the No Action Alternative. Sediment removal activities from dredging, which can narrow the channel, have the potential to lower floodplain water (groundwater) levels (USIBWC 2016a). However, water levels but may be offset with removal of sediment blockage to increase return flows. Lower groundwater levels, in a time of sustained drought, would have negative temporary indirect impacts to habitat and listed species.

Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives

Potential impacts to groundwater from continued implementation of the RMP would be as described under the No Action Alternative. Proposed channel maintenance activities under this alternative would provide for sediment traps that would reduce sediment inflows into the Rio Grande. Sediment inflows create sediment blockage of irrigation return flows which increases landside groundwater table elevations, resulting in increased salinity for farming operations (USIBWC 2017b). Structures that reduce sediment inflows could decrease groundwater levels as well as salinity, and could increase local groundwater variability in the areas where flow velocities are decreased. Although reduced salinity levels would be a beneficial impact to vegetation and agricultural lands, reduced groundwater levels could impact restoration efforts.

Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites

Potential impacts to groundwater from continued implementation of the RMP would be as described under the No Action Alternative and would not change with official protection of previously designated restoration sites. If property is transferred to another agency, then any surface water rights associated with the restoration sites would also be transferred.

Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction

All restoration sites with a net depletion of water would be required to have water rights for offset (USIBWC 2018). For any new restoration sites outside of USIBWC jurisdiction, water rights may need to be acquired in order to successfully implement restoration efforts. Additional water right requests could have minor local groundwater variability. Potential impacts to groundwater from continued implementation of the RMP would be as described under the No Action Alternative.

Alternative G: Continued Implementation of the RMP and Partnership Combination

Potential impacts under this alternative would be as discussed under Alternatives C, D, and F.

3.4.4 Water Delivery and Consumption

The Rio Grande Project furnishes irrigation water supply for about 178,000 acres of land in New Mexico and Texas, as well as electric power. The RGCP, which serves as a conveyance for water delivery to irrigated areas, is located entirely within the Rio Grande Project geographic coverage area (USIBWC 2004). The Rio Grande Project water supply is provided through storage and regulated release of the waters of the Rio Grande, return flows to the river, wastewater flows into the river, and stormwater runoff. The Rio Grande drainage basin above Elephant Butte contains 25,923 square miles and has an average 79-year runoff of 904,900 acre-feet. The combined maximum storage possible for the Elephant Butte Reservoir and Caballo Reservoir is 2,349,520 acre-feet (USBR 2016). The conveyance system must be reliable to deliver Mexico's 60,000 acre-feet of water annually to the headworks of the Acequia Madre in Ciudad Juarez, Mexico (USIBWC 2018).

The ROD committed the USIBWC to acquiring or leasing 677 acre-feet of water annually under a voluntary, market-based EWTP with willing sellers (USIBWC 2018). The EWTP allows USIBWC to offset 450 acre-feet of water from the allocated system resulting from the changes in vegetation communities after restoration (increased evapotranspiration and therefore depletions). In addition, the program allows USIBWC to supplement irrigation up to 227 acre-feet to establish and maintain habitat. USIBWC has acquired 47.36 water-righted acres of EBID surface water rights applicable to five habitat restoration sites in New Mexico (USIBWC 2018).

Alternative A - No Action Alternative: Continued Implementation of the RMP

The Channel Maintenance Plan within the RMP outlines specific activities to improve water conveyance throughout the RGCP. Sediment removal at specific problem locations increases the water conveyance and efficiency through those areas.

As drier atmospheric conditions persist in the area leading to less long-term water availability, the maintenance of the T&E habitat and restoration sites managed under the RMP will become more difficult. Contingency plans are outlined in the RMP to sustain flycatcher habitat on some restoration sites should drought conditions occur. Supplemental irrigation through surface water would occur within the framework of the EWTP (USIBWC 2018). The USIBWC would not use ground water without prior approval by the Department of Justice. Five restoration sites currently receive irrigation with EBID-administered surface water. Per the USFWS Reasonable and Prudent Measure 1.3 (USFWS 2017), USIBWC has discretion on the prioritization of sites receiving supplemental water. In water shortage years, USIBWC would prioritize restoration sites with targeted suitable flycatcher breeding habitat by distributing water to sites that are either 1) occupied; 2) need the least amount of water to benefit the most amount of habitat; or 3) are in greatest need for water to ensure the continued survival of vegetation. Implementation of the sediment removal would improve conveyance. Beneficial impacts to water delivery would be realized with the implementation of CMAs.

Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities

Potential impacts to water delivery and consumption from continued implementation of the RMP would be as described under the No Action Alternative. Decreased long-term water availability due to drought

conditions and late irrigation releases would limit the amount of aquatic recreational use. No adverse impacts to water delivery and consumption from recreational use are anticipated.

Alternative C: Continued Implementation of the RMP and Increased Sediment Removal

Increased sediment accumulation causes an increase in channel elevation which impacts seepage (increases) and conveyance efficiency (EBID 2019). Efficient conveyance along the RGCP is especially important during low flow and drought periods (USIBWC 2018). Under this alternative additional sediment would be removed from the main channel of the RGCP. Potential impacts to water delivery and consumption from continued implementation of the RMP would be as described under the No Action Alternative. Beneficial impacts are expected to water delivery under this alternative with the additional sediment removal.

Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives

Sediment inflows create sediment blockage of irrigation return flows which increases landside groundwater table elevations, resulting in increased salinity for farming operations; decrease flood conveyance capacity; and threaten floodplain and levee infrastructure (such as on the opposite banks from incoming arroyos, where sediment deposits at arroyo mouths cause the river's flowpath to change around sediment deposits, eroding the opposite bank and potentially threatening the integrity of the levee opposite the arroyo via under seepage and erosion) (USIBWC 2017b, 2018). Potential impacts to water delivery and consumption from continued implementation of the RMP would be as described under the No Action Alternative. Under this alternative additional channel maintenance activities would be employed to reduce sediment inflow to the Rio Grande from the arroyos and through eroding banks. Six problem areas originally delineated in the 2015 CMA Study (Tetra Tech 2015) are considered for further channel maintenance activities (Figures 2-8 through 2-10). Beneficial impacts to water delivery would be realized with the additional CMAs.

Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites

Potential impacts to water delivery and consumption from continued implementation of the RMP would be as described under the No Action Alternative and would not change with official protection of previously designated restoration sites. Any water rights associated with the restoration sites would be transferred to the agency managing the sites.

Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction

Potential impacts to water delivery and consumption from continued implementation of the RMP would be as described under the No Action Alternative. The creation of restoration sites from a mainly grassland habitat to bosque habitat would increase water consumption annually by 1.34 acre-feet per acre (USIBWC 2004). Restoration efforts would also provide a net benefit to water consumption through the removal of saltcedar. A net reduction of 1.48 acre-feet per acre annually would be realized with saltcedar extraction and replacement with native cottonwoods (USIBWC 2004). The exact impact to water consumption would be dependent upon the sites chosen for restoration. The impact would be long term

and potentially adverse to water consumption depending on the site and the specific climate for the year (drought versus no drought). USIBWC would offset the increased evapotranspiration through water rights under the EWTP, minimizing the impact. No impact to water delivery is expected under this alternative.

Alternative G: Continued Implementation of the RMP Partnership Combination

Beneficial impacts as described under the No Action Alternative, Alternative C, and Alternative D are expected to water delivery under this alternative. Cumulative beneficial impacts to water delivery would be realized with the implementation of additional CMAs and sediment removal. The exact impact to water consumption for replacement restoration outside of USIBWC jurisdiction would be dependent upon the sites chosen for restoration but would be offset. The impact would be long term and potentially adverse to water consumption depending on the site and the specific climate for the year (drought versus no drought).

3.5 Soils

Soil characterization of the RGCP area was presented and discussed in the 2004 EIS (USIBWC 2004) and the soil survey for the RGCP in support of habitat restoration efforts (TRC 2010) and is summarized here. Intermontane sediments, locally known as bolson deposits, underlie most of the RGCP. These sediments washed down from nearby mountains and filled the basin that formed during the Rocky Mountain Orogeny and faulting that occurred in the Tertiary period, continuing through the Quaternary (USIBWC 2004).

Soils on the Rio Grande floodplain formed in alluvium recently deposited by the river (USIBWC 2004). Within the floodplain of the RGCP, the Natural Resources Conservation Service (NRCS) soil map units consist of Glendale-Harkey map unit and the Glendale-Gila-Brazito map unit (USIBWC 2004). The Glendale-Harkey soils are well drained, and formed in alluvium with surface soils typically silty clay loams over stratified layers of loamy soils and fine sand. The Glendale-Gila-Brazito map unit soils are deep formed in mixed alluvium. The surface layer is a fine loamy sand or clay loam that extends up to a depth of 2 feet (USIBWC 2004).

Along the perimeter of the floodplain, soils are typically formed in alluvium, alluvium modified by wind, and eolian material. These soils are characterized in the following four map units: Nickel-Bluepoint, Bluepoint, Caliza-Bluepoint-Yturbide, and Nickel-Upton (USIBWC 2004). Salinity is related to permeability and irrigation practices, but in general is much lower than in the clayey soils along the valley (USIBWC 2004).

At a more localized scale such as the restoration sites, the most common soil type, comprising 50 percent of the soils, is the Agua variant from the Glendale-Harkey map unit. Characteristics of the Agua variant include somewhat poorly drained soil with a loamy surface and sandy subsoil, and the depth to a water table ranges from 12 to 42 inches (TRC 2010). Poor drainage, salinity, and wetness are often limitations to vegetation growth with this soil type.

Alternative A - No Action Alternative: Continued Implementation of the RMP

Potential actions under the current RMP that may affect soil include activities that increase erosion potential such as levee maintenance, mowing, and sediment removal. The RMP outlines mitigation measures and BMPs that would protect the soil during the implementation of activities. These measures include:

- Temporary materials and equipment-staging areas for construction areas will be reclaimed and revegetated with suitable native woody trees, shrubs, and native grasses and forbs.
- Access to riparian restoration areas will be limited and signage will indicate protected habitat.

Where possible, grass growth on the levee slopes would be encouraged to reduce erosion (USIBWC 2018). Channel sediment removal would remove sediment in the river channel and arroyo mouths that has been deposited from other areas along the Rio Grande and surrounding landscape. Sediment excavation would take place during dry or low flow conditions to prevent sediment from impacting the river. Excavated sediment is deposited in designated pre-approved sediment disposal areas. Channel work would follow USACE permit requirements (USIBWC 2018).

Bank erosion along the RGCP is episodic, but can pose a threat to the adjacent levees (USIBWC 2018). Bank protection using rip rap or pole plantings can reduce erosion along the banks and protect soils.

USIBWC would continually evaluate locations or problem areas and evaluate alternatives to stabilize the banks under the No Action Alternative. Adverse impacts to soils would not occur from continued implementation of the RMP.

Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities

Increased recreational activities have the potential to increase soil impacts through erosion along the RGCP. The construction of the 0.5-acre parking lot within the floodplain would permanently remove vegetation and expose the packed soil to the elements. Increased erosion of this 0.5-acre area would occur. Use of the dirt boat ramps by recreationists, including prohibited use by ATV riders, although already in disturbed areas, would potentially increase erosion in the area during high use periods. Although initial construction of the trail through the RGCP would remove vegetation and expose soil, limited erosion would occur during usage of the trails due to the surrounding habitat protecting the trail and limiting exposure. USIBWC has signs posted for information on access areas as well as for the protection of the restorations sites to reduce disturbance. BMPs would be employed during all construction activities to reduce impacts from erosion. Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative.

Alternative C: Continued Implementation of the RMP and Increased Sediment Removal

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. Under this alternative additional sediment would be removed within the channel itself. Soils within the channel are subject to constant disturbance from the flow of the river, run-off, and desiccation. With the exception of potential temporary and localized soil compaction in areas where heavy equipment may enter the channel, impacts to soils from sediment removal would not be adverse. BMPs, such as

using previously disturbed areas and conducting removal during low flows or no flows, would reduce the erosion potential outside the channel during these activities. Impacts under this alternative would be minor.

Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Construction

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. Channel maintenance activities would be expected to produce impacts to soil similar to those from construction activities, such as soil erosion and compaction. Ground-disturbing heavy equipment can expose soils, compact soils, and disturb the physical arrangement of soils. Soil compaction and erosion would be localized and short term. Vegetation removal to develop sediment traps would have the potential to impact soil resources by increasing the amount of exposure of susceptible soils to water or wind erosion at the land surface. BMPs as described previously would reduce the impact to soils from erosion potential. Although construction of the sediment traps would increase soil exposure due to removal of vegetation, the sediment traps themselves would prevent sediment from entering the river. No long-term adverse impacts to soil are expected from this alternative.

Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites

The restoration sites have been re-vegetated to reduce erosion and provide beneficial impacts to soil. Official protection of the sites would potentially reduce any additional disturbance. Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. No adverse impacts to soil are expected under this alternative.

Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction

Potential impacts of continued implementation of the RMP would be as discussed under the No Action Alternative. No additional impacts to soil along the RGCP would occur from this alternative as activities would take place outside the RGCP floodplain.

Alternative G: Continued Implementation of the RMP and Partnership Combination

Adverse impacts to soils would not occur from continued implementation of the RMP. Although initial construction of the trail through the RGCP would remove vegetation and expose soil, limited erosion would occur during usage of the trails due to the surrounding habitat protecting the trail and limiting exposure. Increased sediment removal and additional CMAs would cause temporary impacts to soil from erosion and compaction; however, these impacts would be localized. BMPs, such as using previously disturbed areas and conducting construction during low flows or no flows, would reduce the erosion potential outside the channel during these activities. No long-term adverse impacts to soils are expected under this alternative.

3.6 Land Use/ Recreation

The RGCP is located in Doña Ana and Sierra counties in New Mexico and El Paso County, Texas (Figure 1-1). The USIBWC has jurisdiction of approximately 9,000 acres of land within the RGCP ROW. The

dominant land uses within the USIBWC ROW are flood control and water delivery. In addition, USIBWC performs operation and maintenance activities to enhance or restore the river ecosystem and provides some recreational use areas and a land lease program. Recreational land use and leased areas within the ROW are discussed in more detail below. Current land use adjacent to the RGCP consists primarily of agriculture (farmlands, orchards, livestock). Some urban centers of commerce and residential areas are predominant in the El Paso and Las Cruces regions. Most levees are closed to public vehicle access by locked vehicle gates, except for levees from Hatch northward. Field offices maintain control of key access. Community groups, for example the Adopt-a-River Program, needing access to the levee roads for the cleanups may obtain keys prior to their cleanup and are required to return the keys after use. Road barriers include boulders, gates, or bollards and may also be installed on the floodplain to block unauthorized dirt roads where vehicle use is a particular concern, such as areas with frequent prohibited activities or restoration sites. These are installed and maintained on an as-needed basis.

The USIBWC allows the public's non-intrusive use of USIBWC-controlled lands, including the floodplain, channel, and levees, for recreational activities as described in Section 2.2. Some areas have restricted public access, including areas set aside for habitat restoration. These areas are posted as public access prohibited. The USIBWC strictly prohibits the use of motor vehicles, including full-size and ATVs and motor bikes, in the floodway, in the channel, and on the levee. The USIBWC also prohibits camping and littering on USIBWC-controlled lands. Consumption of alcohol is also prohibited.

Hunting has been strictly prohibited on USIBWC-controlled lands in RGCP; however, in 2014 USIBWC opened up selected areas to avian hunting (migratory and game birds) in Doña Ana County. USIBWC may change the hunting areas as appropriate if there are construction activities or contracted activities at restoration sites. USIBWC has annual coordination meetings with law enforcement entities, New Mexico Department of Game and Fish, and Border Patrol on the designated hunting areas and enforcement of hunting regulations on USIBWC property and posts annual hunting press releases with maps on the USIBWC website (USIBWC 2018).

The USIBWC administers a land lease program in the RGCP. Individual leases provide terms of maintenance by other entities and those areas are not maintained by USIBWC. Leases for grazing are no longer being renewed; one lease remains approximately 1-mile downstream of Mesilla Dam on the east side of the river and extends to the Santo Tomas Highway Bridge. However, USIBWC continues to lease 66 acres for crop leases. In addition, over 250 acres are leased through collaborative agreements for recreational use (USIBWC 2018).

Lease management is regulated according to the USIBWC Directive SD.II.3031 (Volume III, Chapter 501) "National Environmental Policy Act (NEPA) Procedures for USIBWC Real Property Actions and Management of Environmental Impact" issued on March 13, 2002 ("NEPA Directive"). Any updated version of the NEPA Directive will apply. The directive assigns to the Principal Engineer, Engineering Department the authority to issue revocable licenses and leases on USIBWC real property. Administration of the USIBWC real property program and preparation or oversight of contractual agreements for USIBWC real property activities or works are assigned to the Boundary and Realty Office, with review from internal divisions. No permanent structures may be constructed in leased areas without the written permission of USIBWC.

Various entities maintain river parks along the floodplain through USIBWC leases. These are summarized in Table 3-5.

Table 3-5. Recreational Use Areas Within the RGCP ROW

Recreational Area	Operating Organization	Acreage within ROW	Description
Sunland Park	City of Sunland Park, NM	57 acres, east floodway	Beginning at Frontera Road down to below Anapra Bridge, day use. Includes swings and picnic tables.
El Paso County River Park	City of El Paso, TX and El Paso County, TX	150 acres, west and/or east floodway	Country Club Bridge to NM state line
Anthony Country Club	Anthony Country Club, Anthony NM	33 acres, east floodway	62-acre privately operated golf club
Mesilla Valley Bosque State Park	New Mexico State Parks	100 acres, west floodway	Habitat restoration and recreational purposes. Includes roadway and levee maintenance throughout the state park.
La Llorona Park and Trail	City of Las Cruces, NM	5 acres, east floodway	11 linear miles originally planned for multi-purpose use from Shalem Colony bridge to Mesilla Dam (both floodways)

Alternative A - No Action Alternative: Continued Implementation of the RMP

The No Action Alternative would occur within the existing USIBWC ROW. No changes to existing land use within or adjacent to the project are expected. The Proposed Action would not conflict with land use plans or preclude adjacent or nearby properties from being used for existing activities. Although not a preferred option, USIBWC may consider acquiring land within and outside of the Rio Grande floodplain if there are no practicable alternatives, for such issues as to ensure the prevention of flow obstructions, prevent privately owned land from inundating, or to provide sediment disposal sites (USIBWC 2018).

Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities

Under Alternative B, USIBWC would provide more recreation opportunities on USIBWC property, including aquatic and trail opportunities, as described in Section 2.2. The newly created trails would not traverse any portions of designated restoration sites. Increased maintenance of the trails, including signage and trash cleanup, would be required. Avian hunting could create a potential conflict where it overlaps the trail. For the 2018-2019 hunting season, approximately 15 miles of the proposed trail overlaps allowed hunting areas. As stated above, these areas can change annually depending on designation by USIBWC and maps are posted on the USIBWC website in annual hunting press releases. Recreationists using the proposed trail should be aware of these multiple use areas. This alternative would potentially create a beneficial impact for recreational enthusiasts, by providing increased recreational opportunities. The primary land uses within the USIBWC ROW would remain flood control and water delivery.

Alternative C: Continued Implementation of the RMP and Increased Sediment Removal

Under this alternative, approximately 3,045,884 cubic yards of sediment would be removed in the first 5 years, as compared to 662,212 cubic yards under the No Action Alternative. The sediment would require disposal at approved sites per the USACE permit requirements (USIBWC 2016a) and may be within the ROW or other designated federal or private lands. No changes to existing land use would occur.

Alternative D: Continued Implementation of the RMP and Additional Channel Maintenance Alternatives

Under this alternative, sediment control structures, arroyo sediment traps, arroyo re-alignments, and island destabilization could be implemented as CMAs and may occur outside the ROW. Excavation for the sediment traps at Tierra Blanca, Sibley, Garcia, Placitas, Rock Canyon, and Horse Canyon would disturb habitat as described in Section 3.2.1. For Problem Area 5, Rock Canyon to 1.4 miles below Rincon/Tonuco Drain Confluence, sediment traps were recommended at the mouths of Rock Canyon and Horse Canyon Creek. Both locations are outside of USIBWC ROW so acquisition of private property would be necessary (Tetra Tech 2015). In addition, any CMAs re-designed outside the ROW would require legal approval, acquisition of property or easements, and/or appropriate agreements established.

Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites

Under this alternative, USIBWC would work to provide long-term protection status for the restoration sites. Details would have to be worked out with agencies or entities involved, for example, the other state or federal agency with land or habitat protection mission. If land was transferred by deed to another entity, USIBWC would retain a flood easement within the floodplain. Agreements for protection could also be established without a transfer of deed; Congressional action could designate protected status; or conservation easements could be granted to outside agencies. Under this alternative, the landowner and/or manager of designated areas may change; however, the land use would remain as restoration. Under this alternative, USIBWC has the potential to lose long-term access for maintaining the levees and river.

Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction

Options under this alternative include adding restoration acreage outside USIBWC jurisdiction or partnering with a non-governmental organization to manage the existing restoration sites. The new restoration acreage would replace the existing restoration acreage in the ROD (553 acres). A potential change in land use would occur from an existing use to restoration. As specific sites for replacement restoration have not been identified, it is unknown what existing land use would be lost. These restoration activities would be on a voluntary basis only and would not force farmland out of production. Ownership of the properties would not change; only the function of the land through voluntary easements.

Alternative G: Continued Implementation of the RMP and Partnership Combination

Impacts to land use from the continued implementation of the RMP, as well as the establishment of a trail system, would not occur under this alternative. Potential impacts from increased sediment removal,

CMAAs, and replacement restoration outside the USIBWC ROW would be as described for Alternatives C, D, and F.

3.7 Cumulative Impacts

The CEQ regulations (40 CFR 1508.7) require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts on environmental resources result from incremental effects of proposed actions, when combined with other past, present, and reasonably foreseeable future projects in the area. Cumulative impacts can result from individually minor, but collectively substantial, actions undertaken over a period of time by various agencies (federal, state, and local) or individuals. Informed decision making is served by consideration of cumulative impacts resulting from projects that are proposed, under construction, recently completed, or anticipated to be implemented in the foreseeable future.

3.7.1 Past, Present, and Reasonably Foreseeable Actions

USIBWC reviewed information on past, present, and reasonably foreseeable future projects and actions that could result in impacts to a particular resource over the same period and in the same location as the RGCP. Past, present, and reasonably foreseeable future actions considered in the analysis of cumulative impacts are listed below.

- Thurman I and II Arroyos in the RGCP – In 2018, USIBWC completed design and awarded construction of two pilot project sediment basins on proposed Thurman I and II arroyos within the RGCP, one of the recommended CMAAs from the 2015 CMA Study. USIBWC conducted an EA (USIBWC 2017b) for the project. Sediment basins were constructed at each arroyo with a concrete end wall. Mitigation under a USACE-approved mitigation is currently being implemented, per the 404 permit.
- Section 205 Small Flood Risk Management Project in Hatch, NM – The USACE, Albuquerque District, has completed the draft Detailed Project Report with an Integrated Environmental Assessment for this project. The purpose of this project is to reduce flood damages and life safety risk within the project area in the Village of Hatch. The USACE, in cooperation with, and at the request of the Doña Ana County Flood Commission proposes to construct an earthen embankment dam that would be located upstream of the Village of Hatch, adjacent to the Spring Canyon Arroyo. Borrow material for the dam would be obtained from the area directly behind the proposed dam. The outlet works would drain water from the retention basin in the Colorado Drain. The inlet channel, which would bring water from the Spring Canyon channel to the dam, would be excavated and lined with roller compacted cement, soil cement and riprap. The proposed project is designed to detain the 0.2 percent chance exceedance event from the Spring Canyon Watershed and release the stored water in a controlled manner over approximately 96 hours or less (USACE 2017; USIBWC 2017b).
- Village of Hatch Placitas Master Drainage Plan – Doña Ana County and the Village of Hatch prepared this document for short- and long-term flood control planning within the Placitas Watershed with emphasis on the Canal Road Bridge and the Placitas Arroyo and their effect on conveyance, access, and floodplain management. Four options are under consideration: 1) remove the Canal Road Bridge and create a low-water crossing; 2) create a new Canal Road bridge crossing; 3) abandon the

Canal Bridge Road crossing; 4) construct a sediment basin at Placitas Arroyo (Doña Ana County 2018; Smith Engineering 2018).

- New Leases for Recreational Use within the RGCP – The USIBWC RMP includes the following potential new leases:
 - The City of El Paso, Sunland Park, and other cooperating entities could obtain a lease to operate the Rio Grande River Park from Country Club to Sunland Park. This project is in the planning phases and no leases have been issued. It is unknown what acreage would be located within the ROW but it could be up to 100 acres within the east and west floodways. This project would connect bike trails from Country Club to Sunland Park (USIBWC 2018).
 - The La Llorona Park and Trail lease, which is currently 5 acres and operated by the City of Las Cruces, NM, could be expanded to 475 acres (USIBWC 2018).
 - A new lease is being contemplated for the New Mexico State Parks to operate the Percha Dam State Park that would be 13 acres within the ROW, west floodway. It would begin at the southern tip of Percha Dam State Park and extend about 0.5 mile downstream (USIBWC 2018).
- Aquatic Restoration within the RGCP – USIBWC is currently evaluating alternatives for aquatic restoration at one site along the RGCP. Sites currently proposed for potential restoration locations include Broad Canyon Arroyo, Las Cruces Effluent, Mesilla Valley Bosque, below Courchesne, and Selden Point Bar.
- Southcentral New Mexico Stormwater Coalition Rincon Watershed and Drought Resiliency projects – The Stormwater Coalition is working with Bureau of Land Management to propose watershed restoration projects in the Rincon Watershed that would slow down the velocity of storm flows, increase infiltration, and reduce sediment carried by the arroyo and deposited into the river. Additionally, the Coalition is working on grant proposals that would gather stakeholders for drought resiliency planning within the watershed.

3.7.2 Cumulative Impact Summary

The Thurman I and II arroyos sediment project would cause minor temporary impacts on noise and air pollution from construction and planting. The local groundwater levels may be impacted due to the change in hydrology of the arroyo from a fast-moving ephemeral stream to a ponded stream. USIBWC is mitigating for impacts to vegetation and changes in hydrology by creating new riparian habitat, enhancing existing habitat, and creating and protecting an embayment area (USIBWC 2017b). This project when combined with any of the proposed alternatives would not cause adverse cumulative impacts. Potential beneficial cumulative impacts to water conveyance and habitat could be realized. In addition, USIBWC will decrease mechanized sediment removal in any areas of the river channel immediately downstream of the Thurman arroyos after construction of the sediment basins, although the sediment basins themselves would require maintenance.

The effects of the recommended plan for the Section 205 Small Flood Risk Management Project in Hatch, NM were characterized as minimal. The proposed project would result in a disturbance of approximately 2.5 acres of upland vegetation. However, due to years of drought conditions, this area has minimal, low quality vegetation. There is about 1 acre of riparian habitat within the project area, along the south bank

of the Rodey Lateral. Although direct removal of riparian vegetation along Rodey Lateral is not anticipated, if construction activities were to cause damage, mature standing trees and shrubs would be replaced at a 1:1 ratio (USACE 2017). This project when combined with any of the proposed alternatives would cause beneficial impacts to flood control. No adverse cumulative effects would occur.

Impacts from the implementation of the flood control plan for the Canal Road Bridge would be minimal for all three options as the project is small and localized. Increased erosion and decreased water quality during rain events could occur if the low-water crossing is implemented as people drive through the area. Both option 1 and 2 for the project would require road construction. Implementation of Option 3 would have no adverse impacts. Minor, localized impacts would occur from the construction of a sediment basin at the Placitas Arroyo. Construction would cause loss of some habitat and temporary displacement of wildlife. However, reduced impacts to flooding would be realized as well as increased conveyance of water. No matter which project option is chosen, no adverse cumulative effects would occur.

New leases for recreational areas within the RGCP would be managed under USIBWC's existing land lease program and would not cause adverse impacts. Individual leases provide terms of maintenance by other entities and those areas are not maintained by USIBWC. No adverse impacts from the leases are expected and therefore no cumulative impacts would result. Beneficial cumulative impacts to recreation would be realized when combined with Alternative B or Alternative G.

An aquatic restoration project within the RGCP would cause beneficial impacts to aquatic habitat once the project is completed. Implementation of the aquatic restoration could potentially impact up to 43 acres within the floodplain. This work would likely remove several acres of low quality habitat. Construction would cause temporary displacement of the wildlife using the area. Once construction is completed, re-vegetation efforts in the area would provide better habitat for wildlife species. In addition, impacts to water resources would not be adverse as projects would occur during low flows and would not alter water conveyance. No adverse cumulative effects would occur.

The Stormwater Coalition's planning efforts have the potential for beneficial impacts to the water availability, water conveyance, and potentially local habitat projects within the watershed. No adverse cumulative effects are anticipated.

3.8 Unavoidable Adverse Impacts, and Irretrievable Commitments of Resources

CEQ regulations require environmental analyses to identify "...any irreversible and irretrievable commitments of resources that would be involved in the proposal should it be implemented" (40 CFR Section 1502.16). A commitment of resources is irreversible when its primary or secondary impacts limit the future options for a resource or limit those factors that are renewable only over long periods of time. Examples of nonrenewable resources are minerals, including petroleum. An irretrievable commitment of resources refers to the use or consumption of a resource that is neither renewable nor recoverable for use by future generations. While an action may result in the loss of a resource that is irretrievable, the action may be reversible. Unavoidable adverse impacts are environmental impacts that cannot be effectively mitigated.

None of the alternatives pose substantial unavoidable adverse impacts or irretrievable commitments of resources. Each resource section includes recommended BMPs to avoid or reduce adverse environmental impacts. Under the No Action Alternative and Alternatives C, D, and G, resources consumed during maintenance and construction activities, including labor, fossil fuels, and materials (e.g., rip rap), would be committed for the life of the project. Nonrenewable fossil fuels would be irretrievably lost through the use of gasoline- and diesel-powered equipment construction activities.

4.0 BEST MANAGEMENT PRACTICES AND MITIGATION MEASURES

The proposed alternatives would not cause any significant, adverse, environmental impacts. The USIBWC would implement BMPs to minimize impacts to natural resources. BMPs would include, but are not limited to, the use of sediment barriers and soil wetting to minimize erosion and dust, the proper maintenance of construction equipment, cleaning of equipment prior to movement through the ROW and into the river to reduce the spread of invasive species, spill control procedures, timing of construction during the low or no flow season, and stopping of work if cultural resources are found. BMPs are outlined throughout the RMP and would be updated as needed. In addition, USIBWC would implement the Reasonable and Prudent Measures outlined in the 2017 Biological Opinion.

If mitigation is determined to be required for specific projects after refinement of project details, such as construction of sediment control structures, mitigation would be addressed under the appropriate regulatory channel for such projects (i.e. CWA Section 404 permit for work within Waters of the U.S., administered by USACE).

5.0 PUBLIC INVOLVEMENT

5.1 Agency Coordination

USIBWC invited the USFWS, USBR (Las Cruces District Office and Albuquerque Office), and EBID to participate as cooperating agencies for this EA. The USFWS accepted the participation as a cooperating agency on November 20, 2018. Section 7 consultation for the EA is covered in the 2017 Biological Opinion. The EA was provided to the agency for comment. Per Section 106 of the National Historic Preservation Act (NHPA), the State Historic Preservation Officer (SHPO) was also consulted. The USIBWC has PAs with both the New Mexico and Texas SHPOs. Coordination letters and responses are provided in Appendix A.

5.2 Native American Participation

USIBWC is conducting formal consultation with federally recognized Native American tribes. These entities were invited by the USIBWC to participate as Sovereign Nations per Executive Order (EO) 13175 (*Consultation and Coordination with Indian Tribal Governments*) in both the EA and the NHPA Section 106 process. Letters and responses are included in Appendix A.

5.3 Public Information and Review

5.3.1 Scoping

On November 6, 2018, a notification letter was sent to stakeholders to invite governmental agencies, non-governmental organizations, and the general public to participate in the scoping process for this EA. Two scoping meetings were held on November 14 and 15, 2018. The November 14 meeting was held in Las Cruces, NM and the November 15 meeting was held in El Paso, TX. Both meetings included a presentation, discussion, and a site tour of maintenance and restoration areas in the RGCP. The purpose of the scoping meetings was early identification of concerns, potential impacts, relevant effects of past actions, and possible alternative actions. Interested parties could submit comments during the meetings or to: Ms. Elizabeth Verdecchia, 4171 N. Mesa, C-100, El Paso, TX 79902 or elizabeth.verdecchia@ibwc.gov. The scoping notification letter and comments received are provided in Appendix A. Additionally, the USIBWC discussed the upcoming EA with a local watershed group in October 2018, and the USIBWC announced the upcoming EA at USIBWC's Rio Grande Citizens' Forum in April 2019.

5.3.2 Draft EA Review

USIBWC sent a letter to recipients on the distribution list including state and regulatory agencies announcing the availability of the Draft EA for review (Appendix A). An electronic copy of the Draft EA was posted on the USIBWC website at https://www.ibwc.gov/EMD/EIS_EA_Public_Comment.html. On May 31, 2019, a Notice of Availability was published in the *Federal Register* notifying the public of the availability of the Draft EA on the website and initiating the public comment period through July 5, 2019. USIBWC finalized a press release on June 5, 2019 that was distributed to local newspapers and media and posted on USIBWC's website, announcing the opening of public comment on the EA. USIBWC held a public hearing on June 18, 2019 in Las Cruces, NM and another on June 19, 2019 in El Paso, TX. Notice

of the public hearings was included in the press release, the *Federal Register* notice, and emailed to stakeholders. After a written request for extension, USIBWC extended the public comment period until August 5, 2019; the press release was re-issued on July 2, 2019 with the updated comment period deadline and the extension was announced in the *Federal Register* on July 22, 2019.

Comments received during the comment period are provided in Appendix B, along with responses to the comments and discussion of changes made to the Draft EA. This Final EA was posted on the USIBWC website. A Notice of Availability was published in the *Federal Register* notifying the public of the availability of the Final EA.

6.0 LIST OF PREPARERS

Table 6-1. List of Preparers and Contributors

Name	Agency/Title	Degree / Years of Experience	Responsibility
Elizabeth Verdecchia	USIBWC Natural Resources Specialist	M.A.G. Applied Geography; NEPA Graduate Certificate / 19	Reviewer
Dr. Wendy Arjo	AGEISS Inc. Project Manager/Certified Wildlife Biologist®	Ph.D. Fish and Wildlife Biology / 25	Preparer
Tonya Bartels	AGEISS Inc. NEPA Specialist	M.S. Analytical Chemistry / 25	Preparer
Melissa Russ	AGEISS Inc. NEPA Specialist	M.S. Geology / 35	Preparer
Leroy Shaser	AGEISS Inc. GIS Specialist	M.S. Geology / 27	GIS

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APPENDIX A

Agency Coordination and Public Involvement

Agency Coordination and Public Involvement

Stakeholder List

Federal

- U.S. Army Corps of Engineers, Las Cruces
- U.S. Army Corps of Engineers, Albuquerque
- U.S. Bureau of Land Management, Las Cruces
- U.S. Bureau of Reclamation – Albuquerque Office
- U.S. Bureau of Reclamation - El Paso Field Office
- U.S. Environmental Protection Agency Region 6
- U.S. Fish and Wildlife Service, New Mexico Ecological Services Division
- U.S. Fish and Wildlife Service, Albuquerque Office
- U.S. Fish and Wildlife Service, San Andres National Wildlife Refuge
- U.S. Forest Service
- U.S. Department of Agriculture/NRCS
- U.S. Geological Survey

Tribes

- Comanche Indian Tribe
- Fort Sill Apache Tribe
- Isleta Pueblo
- Kiowa Tribe (east half of county)
- Mescalero Apache Tribe
- Navajo Nation
- Tesuque Pueblo
- White Mountain Apache Tribe
- Ysleta del Sur Pueblo
- The Hopi Tribe

State

- New Mexico Historic Preservation Division
- New Mexico Department of Game and Fish
- New Mexico Environment Department, Watershed Protection Section, SWQB
- New Mexico Office of State Engineer, Las Cruces District
- New Mexico State Parks
- New Mexico Department of Agriculture

County/ Municipal

- Doña Ana County Flood Commission
 - City of Las Cruces
 - City of El Paso
 - El Paso Water Utilities
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- Doña Ana Soil and Water Conservation District
- Doña Ana Mutual Domestic Water
- Sierra County Soil and Water Conservation District

Organizations/Other Entities/Individuals

- Audubon New Mexico
- Elephant Butte Irrigation District
- El Paso County Water Improvement District No. 1
- Paso del Norte Watershed Council
- Sierra Club, Rio Grande Chapter
- Southwest Environmental Center
- South Central New Mexico Stormwater Coalition
- USIBWC Upper Rio Grande Citizens Forum Board
- Samantha Barncastle
- Lee Peters
- Phil King
- James Robertson
- Joan Hirschman Woodward

Elected Officials

- U.S. Senate New Mexico Congressional District 2, Senator Tom Udall
 - U.S. Senate New Mexico Congressional District 2, Senator Martin Heinrich
-

Agency Coordination

USIBWC invited the USFWS, USBR (Las Cruces District Office and Albuquerque Office), and EBID to participate as cooperating agencies for this EA. The USFWS accepted the participation as a cooperating agency on November 20, 2018. Section 7 consultation for the EA is covered in the 2017 BO. The EA will be provided to the agency for comment. Per Section 106 of the National Historic Preservation Act (NHPA), the State Historic Preservation Officer (SHPO) was also consulted. The USIBWC has programmatic agreements with both the New Mexico and Texas SHPOs.

Native American Participation

USIBWC is conducting formal consultation with federally recognized Native American tribes. These entities were invited by the USIBWC to participate as Sovereign Nations per Executive Order (EO) 13175 (*Consultation and Coordination with Indian Tribal Governments*) in both the EA and the National Historic Preservation Act (NHPA) Section 106 process. Letters and responses are included in this appendix.

Scoping

On November 6, 2018, a notification letter was sent to stakeholders to invite governmental agencies, non-governmental organizations, and the general public to participate in the scoping process for this EA. Two scoping meetings were held on November 14 and 15, 2018. The November 14 meeting was held in Las Cruces, NM and the November 15 meeting was held in El Paso, TX. The scoping notification letter and comments received are provided in this appendix.

Draft EA Review

USIBWC sent a letter to recipients on the distribution list including state and regulatory agencies announcing the availability of the Draft EA for review. An electronic copy of the Draft EA was posted on the USIBWC website at https://www.ibwc.gov/EMD/EIS_EA_Public_Comment.html. A Notice of Availability was published in the *Federal Register* notifying the public of the availability of the Draft EA on the website and initiating the public comment period through July 5, 2019. USIBWC finalized a press release on June 5, 2019 that was distributed to local newspapers and media and posted on USIBWC's website, announcing the opening of public comment on the EA. USIBWC held a public hearing on June 18, 2019 in Las Cruces, NM and another on June 19, 2019 in El Paso, TX. Notice of the public hearings was included in the press release, the *Federal Register* notice, and emailed to stakeholders. After a written request for extension, USIBWC extended the public comment period until August 5, 2019; the press release was re-issued on July 2, 2019 with the updated comment period deadline and the extension was announced in the *Federal Register* on July 22, 2019.

AGENCY COORDINATION



INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER
UNITED STATES SECTION

November 6, 2018

Amy Lueders, Regional Director
U.S. Fish and Wildlife Service, Albuquerque Office
500 Gold Avenue SE
Albuquerque, New Mexico 87102

Subject: USIBWC Invitation to Participate as a Cooperating Agency – Environmental Assessment for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project

Dear Ms. Lueders:

The International Boundary and Water Commission, United States Section (USIBWC), invites the U.S. Fish and Wildlife Service to participate as a cooperating agency in the USIBWC's preparation of the *Environmental Assessment (EA) for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project*, pursuant to the Council on Environmental Quality (CEQ) regulations for implementing the National Environmental Policy Act (NEPA) for cooperating agencies (40 CFR 1501.6).

The purpose of the project is to:

- 1) Facilitate continued maintenance of the Rio Grande Canalization Project.
- 2) Continue to implement the USIBWC River Management Plan (RMP).
- 3) Address any feasible management alternatives not addressed in the RMP or the 2009 Record of Decision.

USIBWC preliminarily proposes to evaluate environmental impacts of the continued implementation of the RMP (No Action Alternative), and other alternatives developed during the stakeholder meetings in November 2018. Additional alternatives have not been fully developed; however, USIBWC is considering the following:

- 1) Additional recreation
- 2) Peak restoration flows
- 3) Official protection for restoration sites
- 4) Additional restoration outside of USIBWC jurisdiction

Please coordinate with Ms. Elizabeth Verdecchia at (915) 832-4701 or by email at elizabeth.verdecchia@ibwc.gov. USIBWC appreciates your consideration to collaborate on this EA.

Sincerely,

Gilbert Anaya
Division Chief
Environmental Management Division



INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER
UNITED STATES SECTION

November 6, 2018

Gary Esslinger, General Manager
Elephant Butte Irrigation District
530 South Melendres St
Las Cruces, New Mexico 88005

Subject: USIBWC Invitation to Participate as a Cooperating Agency – Environmental Assessment for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project

Dear Mr. Esslinger:

The International Boundary and Water Commission, United States Section (USIBWC), invites the Elephant Butte Irrigation District to participate as a cooperating agency in the USIBWC's preparation of the *Environmental Assessment (EA) for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project*, pursuant to the Council on Environmental Quality (CEQ) regulations for implementing the National Environmental Policy Act (NEPA) for cooperating agencies (40 CFR 1501.6).

The purpose of the project is to:

- 1) Facilitate continued maintenance of the Rio Grande Canalization Project.
- 2) Continue to implement the USIBWC River Management Plan (RMP).
- 3) Address any feasible management alternatives not addressed in the RMP or the 2009 Record of Decision.

USIBWC preliminarily proposes to evaluate environmental impacts of the continued implementation of the RMP (No Action Alternative), and other alternatives developed during the stakeholder meetings in November 2018. Additional alternatives have not been fully developed; however, USIBWC is considering the following:

- 1) Additional recreation
- 2) Peak restoration flows
- 3) Official protection for restoration sites
- 4) Additional restoration outside of USIBWC jurisdiction

Please coordinate with Ms. Elizabeth Verdecchia at (915) 832-4701 or by email at elizabeth.verdecchia@ibwc.gov. USIBWC appreciates your consideration to collaborate on this EA.

Sincerely,

Gilbert Anaya
Division Chief
Environmental Management Division



INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER
UNITED STATES SECTION

November 6, 2018

Jennifer Faler, Area Manager
U.S. Bureau of Reclamation, Albuquerque Office
555 Broadway NE, Suite 100
Albuquerque, New Mexico 87102

Subject: USIBWC Invitation to Participate as a Cooperating Agency – Environmental Assessment for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project

Dear Ms. Faler:

The International Boundary and Water Commission, United States Section (USIBWC), invites the U.S. Bureau of Reclamation to participate as a cooperating agency in the USIBWC's preparation of the *Environmental Assessment (EA) for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project*, pursuant to the Council on Environmental Quality (CEQ) regulations for implementing the National Environmental Policy Act (NEPA) for cooperating agencies (40 CFR 1501.6).

The purpose of the project is to:

- 1) Facilitate continued maintenance of the Rio Grande Canalization Project.
- 2) Continue to implement the USIBWC River Management Plan (RMP).
- 3) Address any feasible management alternatives not addressed in the RMP or the 2009 Record of Decision.

USIBWC preliminarily proposes to evaluate environmental impacts of the continued implementation of the RMP (No Action Alternative), and other alternatives developed during the stakeholder meetings in November 2018. Additional alternatives have not been fully developed; however, USIBWC is considering the following:

- 1) Additional recreation
- 2) Peak restoration flows
- 3) Official protection for restoration sites
- 4) Additional restoration outside of USIBWC jurisdiction

Please coordinate with Ms. Elizabeth Verdecchia at (915) 832-4701 or by email at elizabeth.verdecchia@ibwc.gov. USIBWC appreciates your consideration to collaborate on this EA.

Sincerely,

Gilbert Anaya
Division Chief
Environmental Management Division

NATIVE AMERICAN PARTICIPATION



OFFICE OF THE COMMISSIONER
UNITED STATES SECTION

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

May 30, 2019

Subject: Notice of Availability of the *Draft Environmental Assessment and Finding of No Significant Impact for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project* and Request for Tribal Comments Regarding Concerns of Traditional, Religious, or Cultural Importance

Dear [Distribution List]:

The International Boundary and Water Commission, United States Section (USIBWC) would like to inform you of the availability of the *Draft Environmental Assessment (EA) and Finding of No Significant Impact for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project*, in compliance with the National Environmental Policy Act (NEPA). In the 1940s, USIBWC constructed the Rio Grande Canalization Project (RGCP) to facilitate compliance with equitable allocation of water between the United States and Mexico under the U.S.-Mexico Convention of 1906 (Act of June 4, 1936, 49 Stat. 1463). The RGCP spans a 105-mile reach of the Rio Grande from Percha Diversion Dam, Sierra County, New Mexico to American Dam in El Paso, El Paso County, Texas (Figure 1-1). The USIBWC's 2009 *Record of Decision on River Management Alternatives for the RGCP* committed the USIBWC to update and implement the River Management Plan as well as other management actions such as habitat restoration through June 2019.

The purpose of the proposed project is to continue to implement the River Management Plan (RMP). The need for the project is to:

- 1) Facilitate continued maintenance of the RGCP
- 2) Address any feasible management alternatives not addressed in the RMP or the 2009 Record of Decision
- 3) Allow public review and input after completion of 2009 Record of Decision activities

The EA will assess the impacts of seven alternatives:

- Alternative A - No Action Alternative: Continued Implementation of the RMP – USIBWC would continue to implement the RMP through 2030. USIBWC would continue to use adaptive management to update each section of the RMP according to agency needs and recommendations in the individual plans. The components of the RMP that would be carried forward include: levee maintenance; vegetation management; continued implementation and maintenance of restoration sites; endangered species management; channel maintenance; and channel maintenance alternatives (CMAs) within the USIBWC right-of-way (ROW).
- Alternative B: Continued Implementation of the RMP and Increased Recreation Opportunities – USIBWC would continue implementation of the RMP and would provide recreation opportunities on USIBWC property, including aquatic and trail opportunities. Trail opportunities would include the designation of up to 65 miles through the USIBWC ROW as part of the “Rio Grande Trail.”

- Alternative C: Continued Implementation of the RMP and Increased Sediment Removal – USIBWC would continue implementation of the RMP, would increase sediment removal within the channel, and would increase efforts to engage stakeholders through the Sediment Control Initiative Federal Workgroup and stakeholder groups. The long excavation removal would follow recommendations from the 2015 CMA Study.
- Alternative D: Continued Implementation of the RMP and Channel Maintenance Alternatives – USIBWC would continue implementation of the RMP, would re-evaluate and construct CMAs, and would increase efforts to engage stakeholders through the Sediment Control Initiative Federal Workgroup and stakeholder groups. Alternative C would re-evaluate conceptual CMAs, design them with the most efficient and effective design which could include project construction outside of the USIBWC ROW, and construct CMAs mostly identified in the 2015 CMA Study, such as sediment control structures, arroyo sediment traps, island destabilization, and arroyo re-alignments.
- Alternative E: Continued Implementation of the RMP and Official Protection for Restoration Sites – USIBWC would continue implementation of the RMP and would work to provide some restoration sites with a more official long-term protection status, such as through a state or federal agency with land or habitat protection mission.
- Alternative F: Continued Implementation of the RMP and Replacement Restoration outside of USIBWC Jurisdiction – USIBWC would continue implementation of the RMP and would implement restoration outside of USIBWC jurisdiction and/or restoration sites by a third party, such as a non-governmental organization. Under this alternative, over the long term, the USIBWC would eventually move up to 500 acres of either No Mow Zone managed grasslands or unsuccessful habitat restoration areas, via partnerships.
- Alternative G - Preferred Alternative: Continued Implementation of the RMP and Partnership Combination – USIBWC would continue implementation of the RMP and would designate up to 65 miles through the USIBWC ROW for the New Mexico Rio Grande Trail and Texas trails as discussed under Alternative B; implement CMAs and engage stakeholders for sediment control initiatives as discussed under Alternative D; and transfer up to 500 acres of restoration outside of the USIBWC jurisdiction of either No Mow Zone managed grasslands or habitat restoration, via partnerships, as described in Alternative F.

In accordance with 36 C.F.R. Part 800, “Protection of Historic Properties,” regulations that implement Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470f), the USIBWC is contacting you to determine if your tribe may attach traditional, religious or cultural importance to any historic resources affected by the proposed project/activity. The goal of consultation under Section 106 is to allow your tribe the opportunity to help identify historic properties potentially affected by this proposed project; assess the effects of the project on any historic resources; and consider ways to avoid, minimize or mitigate any adverse effects. All the alternatives have the potential to impact undiscovered cultural resources during ground disturbing activities. Best management practices for cultural resources protection are identified in the RMP and would continue to be implemented under all alternatives. The USIBWC Cultural Resources Specialist would conduct pre- and post-burn site inspections for cultural resources when prescribed burns are implemented. Before ground-disturbing maintenance work, a conference would be held with maintenance crews to inform them of the potential for disturbing subsurface

cultural resources, and the procedures involved in the event that this occurs. Precautions would be taken to ensure that archaeological assistance is promptly available in case of a discovery. In addition, at all spoil sites, crews would be on the lookout for possible cultural resources, they would stop work immediately if any cultural resource is found and would notify the USIBWC Environmental Management Division promptly. USIBWC will continue to operate under the 2017 *Programmatic Agreement (PA) among the United States Section, International Boundary and Water Commission, the New Mexico State Historic Preservation Officer, U.S. Fish and Wildlife Service and the Hopi Tribe Regarding Improvements to Existing Rio Grande Canalization Projects Along the Rio Grande, New Mexico* and the similar 2013 PA for Rio Grande Flood Control Projects in Texas.

Please also note that we will require all partners to halt work and contact any potentially affected federally-recognized Tribes, the State Historic Preservation Officer, and the Advisory Council on Historic Preservation within forty-eight (48) hours of discovery (pursuant to the protocol established at 36 C.F.R. Part 800, Section 800.13(b)(3)) should human remains or any other cultural materials be discovered.

The Notice of Availability of the Draft EA is expected to be published in the Federal Register by June 4, 2019. We respectfully request any comments you may have be forwarded to by **July 5, 2019**. If you have any questions or need any additional information please contact Ms. Elizabeth Verdecchia at: 4171 N. Mesa, C-100, El Paso, TX 79902 or elizabeth.verdecchia@ibwc.gov. When the draft EA is available, it will be posted online at: https://www.ibwc.gov/EMD/EIS_EA_Public_Comment.html

USIBWC will be conducting two public hearings for the RMP Draft EA.

June 18, 2019, 10 a.m. to 12 p.m.

Las Cruces City Hall
2nd Floor, Conference Room 2007A
700 N. Main Street
Las Cruces, NM 88001

June 19, 2019, 5 to 7 p.m.

USIBWC American Dam/Carlos Marin Field Office
2616 W Paisano Drive
El Paso, TX 79922

We look forward to hearing from you. Please contact Ms. Elizabeth Verdecchia at (915) 832-4701 or the contact information provided above if you have questions or for additional information.

Sincerely,

Gilbert Anaya,
Division Chief,
Environmental Management Division

Distribution List

Tribes							
Comanche Indian Tribe	6 SW D Avenue	Lawton	OK	73502	Martina Callahan	THPO	martinac@comanchenation.com
Fort Sill Apache Tribe	43187 US Highway 281	Apache	OK	73006- 8038	Michael Darrow	Tribal Historian	michael.darrow@fortsillapache-nsn.gov POIgov@isletapueblo.com ; POI90009@isletapueblo.com
Isleta Pueblo	PO Box 1270	Isleta Pueblo	NM	87022	Max Zuni Amber	Governor	
Kiowa Tribe Mescalero Apache Tribe	PO Box 369 PO Box 227	Carnegie Mescalero	OK NM	73015 88340	Toppah Holly Hougten, THPO	Chairman Tribal Historic Preservation Officer Tribal Historic Preservation Officer	dbearshield@kiowatribe.org holly@mathpo.org
Navajo Nation Tesuque Pueblo White Mountain Apache Tribe	PO Box 4950 Route 42, Box 360-T PO Box 1032	Window Rock Fort Apache	AZ NM AZ	86515 87506 85926	Richard Begay Mark Mitchell Mark Altaha	Officer THPO Tribal Historic Preservation Officer	r.begay@navajo-nsn.gov mamitchell@pueblooftesuque.org markaltaha@wmat.us
Ysleta del Sur Pueblo The Hopi Tribe	119 S. Old Pueblo Road PO Box 123	El Paso Kykotsmovi	TX AZ	79907 86039	Javier Loera Timothy L. Nuvangyaoma	THPO Chairman	jloera@ydsp-nsn.gov TNUvangyaoma@hopi.nsn.us

COMANCHE NATION



International Boundary and Water Commission United States and Mexico
Attn: Ms. Elizabeth Verdecchia
4171 N. Mesa Street
Texas 79902-1441

October 17, 2019

Re: Notice of Availability of the *Draft Environmental Assessment and Finding of No Significant Impact for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project* and Request for Tribal Comments Regarding Concerns of Traditional, Religious, or Cultural Importance

Dear Ms. Verdecchia :

In response to your request, the above reference project has been reviewed by staff of this office to identify areas that may potentially contain prehistoric or historic archeological materials. The location of your project has been cross referenced with the Comanche Nation site files, where an indication of “**No Properties**” have been identified. (IAW 36 CFR 800.4(d)(1)).

Please contact this office at (580) 595-9960/9618) if you require additional information on this project.

This review is performed in order to identify and preserve the Comanche Nation and State cultural heritage, in conjunction with the State Historic Preservation Office.

Regards

Comanche Nation Historic Preservation Office
Theodore E. Villicana , Technician
#6 SW “D” Avenue, Suite C
Lawton, OK. 73502

From: Javier Loera [<mailto:jloera@ydsp-nsn.gov>]

Sent: Monday, July 08, 2019 5:25 PM

To: Elizabeth Verdecchia <elizabeth.verdecchia@ibwc.gov>

Subject: Notice of Availability of the Draft Environmental Assessment and Finding of No Significant Impact for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project and Request for Tribal Comments

Good afternoon Ms. Elizabeth Verdecchia,

This e-mail is in response to the correspondence received in our office in which you provide the Ysleta del Sur Pueblo the opportunity to comment on Notice of Availability of the **Draft Environmental Assessment and Finding of No Significant Impact for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project** and Request for Tribal Comments Regarding Concerns of Traditional, Religious, or Cultural Importance.

While we do not have any comments on the proposed undertakings and believe that these projects will not adversely affect traditional, religious or culturally significant sites of our Pueblo and have no opposition to it; we would like to request consultation should any human remains or artifacts unearthed during this project be determined to fall under the Native American Graves Protection and Repatriation Act (NAGPRA) guidelines. Copies of our Pueblo's **Cultural Affiliation Position Paper** and **Consultation Policy** are available upon request.

Thank you for allowing us the opportunity to comment on the proposed projects.

Sincerely,

Javier Loera

Tribal Council/Tribal Historic Office

Ysleta del Sur Pueblo

Phone Numb: (915) 497-3976

E-mail: jloera@ydsp-nsn.gov



White Mountain Apache Tribe

Office of Historic Preservation

PO Box 1032

Fort Apache, AZ 85926

Ph: (928) 338-3033 Fax: (928) 338-6055

To: Elizabeth Verdecchia, International Boundary & Water Commission

Date: June 25, 2019

Re: *Draft EA / FONSI for the continued Implementation of the River Management Plan for the Rio Grande Canalization Project*

.....

The White Mountain Apache Tribe Historic Preservation Office appreciates receiving information on the project, dated June 07, 2019. In regards to this, please attend to the following statement below.

Thank you for allowing the White Mountain Apache tribe the opportunity to review and respond to the above draft Environmental Assessment and the FONSI for the continued management of the Rio Grande Canalization Project, in southwestern New Mexico. After reviewing the document/reports we have determined the proposed project ***“will not have an impact”*** on the White Mountain Apache tribe’s historic properties and/or traditional cultural properties.

Thank you for your continued collaborations in protecting and preserving places of cultural and historical importance. No further consultation will be necessary.

Sincerely,

Mark T. Altaha

White Mountain Apache Tribe – THPO
Historic Preservation Office

SCOPING



INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER
UNITED STATES SECTION

November 8, 2018

Bill Childress
District Manager
U.S. Bureau of Land Management, Las Cruces District Office
1800 Marquess Street
Las Cruces, NM, 88005-3371

Subject: Notification of the Scoping Process and Intent to Prepare an Environmental Assessment for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project

Dear Mr. Childress,

The International Boundary and Water Commission, United States Section (USIBWC), invites you to participate in scoping meetings for the USIBWC's preparation of the *Environmental Assessment (EA) for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project (RGCP)*. In compliance with the National Environmental Policy Act, the EA will evaluate alternatives and potential impacts of management actions, mainly documented in the River Management Plan (RMP), beyond USIBWC's 2009 Record of Decision (ROD) timeframe. The EA will replace and supersede the 2009 ROD. To support the environmental review, the USIBWC is beginning the public scoping process to ensure all relevant issues are identified and analyzed for the continued management of the RGCP. The 2016 RMP (and upcoming update) incorporates the ROD commitments regarding floodplain management, channel maintenance, and endangered species management.

Scoping Meetings

Governmental agencies, non-governmental organizations, and the general public are invited to participate in the scoping process. Two scoping meetings will be held as follows:

November 14, 2018 – IDEALS Office, 848 Hadley Ave, Las Cruces, NM, 88005

Tentative agenda:

Presentation and Discussion: 10:00-12:00

Break for lunch: 12:00-13:00

Northern RGCP Site tour 13:00-16:00: The site tour will include sites in the Las Cruces/Hatch area, including channel maintenance areas, no mow zones, flycatcher habitat, arroyos, and restoration areas.

November 15, 2018 – USIBWC Office, 4171 N Mesa St. C100, El Paso, TX 79902

Tentative agenda:

Presentation and Discussion: 10:00-12:00

Break for lunch: 12:00-13:00

Southern RGCP Site tour 13:00-16:00: The site tour will include selected areas in the El Paso/Sunland Park/ Canutillo area, including habitat restoration sites, leased recreation areas, Canutillo area channel maintenance and levee projects.

The Commons, Building C, Suite 100 • 4171 N. Mesa Street • El Paso, Texas 79902-1441
(915) 832-4100 • Fax: (915) 974-2270 • <http://www.ibwc.gov>

The purpose of the scoping meetings is early identification of concerns, potential impacts, relevant effects of past actions, and possible alternative actions. At the scoping meetings, staff will: (1) discuss the proposed action and alternatives; (2) summarize the environmental issues tentatively identified for analysis in the EA; (3) present measures to be implemented to protect the environment; (4) solicit from the meeting participants all available information, especially quantifiable data, on the resources at issue; and (5) encourage statements from experts and the public on issues that should be analyzed in the EA, including viewpoints in opposition to, or in support of, the staff's preliminary views.

How to Submit Comments

Interested parties may submit comments during the scoping meetings. Written comments can also be submitted to: Ms. Elizabeth Verdecchia, 4171 N. Mesa, C-100, El Paso, TX 79902 or elizabeth.verdecchia@ibwc.gov. Please submit scoping comments by 30 November 2018. Comments can also be submitted on the draft Environmental Assessment in February 2018.

We look forward to hearing from you. Please contact Ms. Elizabeth Verdecchia at (915) 832-4701 or the contact information provided above if you have questions or for additional information regarding the proposed project.

Sincerely,



Gilbert Anaya,
Division Chief,
Environmental Management Division

From: Wendy Arjo

Sent: Tuesday, November 06, 2018 10:19 AM

Cc: Elizabeth Verdecchia; mdubbin@ideals-inc.com

Subject: Notification of the Scoping Process and Intent to Prepare an Environmental Assessment for the Continued

Dear Interested Party:

AGEISS Inc., on behalf of the International Boundary and Water Commission, United States Section (USIBWC), invites you to participate in scoping meetings for the USIBWC's preparation of the *Environmental Assessment (EA) for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project (RGCP)*. In compliance with the National Environmental Policy Act, the EA will evaluate alternatives and potential impacts of management actions, mainly documented in the River Management Plan (RMP), beyond USIBWC's 2009 Record of Decision (ROD) timeframe. The EA will replace and supersede the 2009 ROD. To support the environmental review, the USIBWC is beginning the public scoping process to ensure all relevant issues are identified and analyzed for the continued management of the RGCP. The 2016 RMP (and upcoming update) incorporates the ROD commitments regarding floodplain management, channel maintenance, and endangered species management.

Scoping Meetings

Two scoping meetings will be held as follows:

November 14, 2018 – IDEALS Office, 848 Hadley Ave, Las Cruces, NM, 88005

Tentative agenda:

Presentation and Discussion: 10:00-12:00

Break for lunch: 12:00-13:00

Northern RGCP Site tour 13:00-16:00: The site tour will include sites including channel maintenance areas, no mow zones, flycatcher habitat, arroyos, and restoration areas.

November 15, 2018 – USIBWC Office, 4171 N Mesa St. C100, El Paso, TX 79902

Tentative agenda:

Presentation and Discussion: 10:00-12:00

Break for lunch: 12:00-13:00

Southern RGCP Site tour 13:00-16:00: The site tour will include selected areas in the El Paso/Sunland Park/ Canutillo area, including habitat restoration sites, leased recreation areas, Canutillo area channel maintenance and levee projects.

We look forward to meeting everyone next week. Please contact myself or Ms. Elizabeth Verdecchia at (915) 832-4701 or elizabeth.verdecchia@ibwc.gov if you have any questions.

Thank you.

Wendy

Wendy Arjo, Ph.D.

Program Manager/Certified Wildlife Biologist®

AGEISS Inc.

Energy | Environment | Facilities | Professional Services

ISO 9001:2015 Certified

Office: (360) 742-3397 | Mobile: (360) 701-6213

wendya@ageiss-inc.com | ageiss.com

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Elephant Butte Irrigation District Of New Mexico

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Warehouse Fax (575) 526-1530
Engineering Fax (575) 541-5716

www.ebid-nm.org

Staff Members

Gary L. Esslinger, Treasurer/Manager
Leo Barrett, Maintenance Project Director
Gail Norvell, Finance Director
James Narvaez, Irrigation System Director
Delyce Maciel, HR/Safety Director
Erek Fuchs, Groundwater Resource Director
Zack Libbin, P.E., District Engineer
Patrick Lopez, SCADA Systems Director

Board of Directors

Robert Faubion, President
Michael McNamee, Vice-President
Gregory Daviet, Secretary
Jerry Franzoy
James Salopek
Robert Sloan
Bobby Kuykendall
Joe Paul Lack
Sam Salopek

January 4, 2019

Elizabeth Verdecchia
Natural Resources Specialist
International Boundary and Water Commission
4171 N. Mesa St, Suite C-100
El Paso, TX 79902-1441

Subject: Scoping for the Environmental Assessment for the Continued Implementation of the River Management Plan for the RGCP

Ms. Verdecchia,

In cooperation with the Record of Decision working group, the Elephant Butte Irrigation District (EBID) is committed and will continue to comment on the United States International Boundary and Water Commission's (USIBWC) River Management Plan for the Rio Grande Canalization Project (RGCP). We appreciate the opportunity to comment on the scoping for the Environmental Assessment (EA) for the continued implementation of the River Management Plan (RMP) for the Rio Grande Canalization Project (RGCP). The USIBWC's management of the RGCP is crucial to our role and responsibilities as an irrigation district within the project area.

EBID would like to point out five main issues that need to be considered during scoping of the EA:

First, the cessation of maintenance and sediment removal has decreased the flood flow capacity of the river channel. Impacts to the protection provided by the levees and potential flooding to surrounding homes and infrastructure due to a lack of river channel maintenance needs to be taken into consideration and analyzed as part of this process. The previous RMP and 2018 revision are almost entirely lacking in documentation of engineering analysis for the decrease to flood capacity due to no-mow zones and islands not considered in the design of the river levees. A mention that a "worst-case scenario" was evaluated, without any results or documentation, is grossly inadequate and shows a disappointing lack of sincerity to the consideration of the risk of life and property possible if the river levees were to be overwhelmed. Please ensure that this issue is studied adequately and documented appropriately before moving forward.

Second, the impacts to Rio Grande Project irrigation delivery conveyance efficiency and increased seepage due to a lack, or decrease, of historical maintenance need to be taken into consideration and analyzed as part of this process. An increase in channel elevation exacerbates the seepage of the river channel and increases the disconnect between the river channel flow and shallow groundwater. Islands within the river channel and vegetated areas encroaching within the river channel reduce channel carrying capacity and increase the flow depth, decreasing efficiency. Any farmer will tell you that efficiency is sacrificed by trying to irrigate with a dirty ditch. Delivery inefficiency, due to increased seepage and riparian losses, directly reduces the surface water allocation to EBID. Please ensure that this issue is studied adequately and documented appropriately before moving forward.

Third, the impacts to the Rio Grande Project, specifically EBID and El Paso County Water Improvement District #1 (EPCWID) need to be considered as the islands within the river channel and habitat restoration areas in Texas that have been implemented or are planned to be implemented in Texas are lacking consideration of necessary water rights. These islands and sites which are documented as having increased depletions either need to have water rights or some associated offset. Otherwise, based on the 2008 Operating Agreement between EBID, EPCWID, and the Bureau of Reclamation (BOR), EBID ends up suffering additional system losses, which losses directly leads to a lower diversion amount for EBID and its constituents.

Fourth, in preparing the original ROD, many options were considered. One obvious option that was not considered is restoring the river channel to its design grade. While this could have environmental impacts, those impacts can be mitigated with restoration sites, which is, after all, the purpose of the restoration sites. In terms of fulfilling the USIBWC's statutory obligations within the RGCP, this would probably be the best option. It would have a high initial cost due to the two decades of deferred maintenance, but after the initial investment to restore the channel, regular maintenance would keep it in its high-functioning condition. The value of improved delivery efficiency and flood capacity could be estimated, and the cost of maintenance could be estimated from historical USIBWC data. We suggest that serious consideration of the complete dredging of the Rio Grande channel within the RGCP to its original design as an alternative not be disregarded. Following that significant project, USIBWC's maintenance of the river would still be required, but USIBWC would no longer be playing "catch-up" following two decades of inadequate maintenance. The islands could be removed in phases and the habitat offset with the restoration efforts USIBWC and others already have underway.

Fifth, EBID rejects the concept of a peak restoration flow for numerous reasons. The most obvious are the large and expensive quantity of water that would be required to be wasted as well as the obvious lack of USIBWC right to water to accomplish such a waste to the detriment of the Rio Grande Project beneficiaries, and potential threats to the levees and surrounding properties where the levees are inadequate and where the islands, no-mow zones, and accumulation of sediment have significantly reduced the river channel capacity. There are very intractable institutional obstacles to such a program as well, which we discuss in another letter. We discuss this concern in more detail in a separate letter to you with this same date.

Along with the alternative we proposed above regarding completely dredging the river channel to its design, we also encourage a serious look at the draft Alternative C. We support that this alternative would increase the sediment control throughout the RGCP above what is already outlined in the RMP. We support that this alternative considers additional work for sediment removal and the construction of sediment control structures identified in the 2015 Channel Maintenance Alternatives study, such as sediment control structures and arroyo sediment traps.

We also encourage funding work outside USIBWC rights of ways with other federal land management agencies and local stakeholders to develop opportunities to keep the sediment, which is choking the river, from ever reaching the river. These are likely the most cost-effective alternatives to annual sediment removal from the river channel.

In addition to these comments, please also refer to EBID's comments specific to the 2018 revision to the RMP. Again, the 5-year plan laid out in the Channel Maintenance Plan in the River Management Plan includes prioritization of very important channel maintenance. We appreciate that the 5-year maintenance plans have been included for documentation of the USIBWC's commitments. But the fact that this plan was created for 2014-2019 and how little of this plan the USIBWC has actually accomplished is further proof that USIBWC continues to inadequately maintain the Rio Grande Channelization Project to the detriment of the Rio Grande Project beneficiaries. The adverse effects of continued inadequate maintenance cannot be disregarded.

Thank you for the opportunity to comment on the scoping for the Environmental Assessment for the continued implementation of the River Management Plan for the RGCP. We request that EBID continue to be included in all future discussions pertaining to the River Management Plan and Channel Maintenance Plan, and appreciate the opportunities to participate that we have been provided thus far. We will also be presenting the opportunity to be included as a Cooperating Agency to this EA process to our Board of Directors at their January Meeting and will let you know what they decide, although it is expected that they will approve of this opportunity and encourage further coordination between our agencies.

Sincerely,



Gary Esslinger
Treasurer/Manager
Elephant Butte Irrigation District

Cc: Jesus Reyes, Manager, El Paso County Water Improvement District #1
Tom Udall, US Senator
Martin Heinrich, US Senator
Xochitl Torres-Small, US Representative



Elephant Butte Irrigation District Of New Mexico

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Sam Salopek

January 4, 2019

Gilbert Anaya
Environmental Division Chief
International Boundary and Water Commission
4171 N. Mesa St, Suite C-100
El Paso, TX 79902-1441

Subject: Response to August 13, 2018 letter on Peak Restoration Flows

Mr. Anaya,

In response to your August 13, 2018 letter, EBID makes the following points regarding the proposed Peak Restoration Flows (PRF). First and foremost, as we have stated on multiple occasions, we consider the PRF concept to be dangerous, contrary to the primary objectives of the Canalization Project and the Rio Grande Reclamation Project, prohibitively expensive with limited benefits, and infeasible as presented in the RMP.

The PRF as proposed would consist of augmentation of irrigation releases to achieve a total release of 3,500 cfs for four days between April 24 and June 7, for a total of up to 9,500 acre-feet per event. The math to get from 3,500 cfs for four days to 9,500 acre-feet total is a bit murky. A release of 3,500 cfs for four days would be a total of nearly 28,000 acre-feet per event. We understand that the PRF is intended to be on top of normal operations, but 9,500 acre-feet would only provide 1,200 cfs for four days, suggesting that the normal irrigation release would make up the other 2,300 cfs. Peak demand flows on or about June 1 are on the order of 2,000 – 2,200 cfs, but they are considerably lower in April and May. In fact, in many years, the annual initial release has not occurred until late May. With a budget of 9,500 acre-feet to work with, the PRF of 3,500 cfs would have to occur when both districts are running at peak demand, which would dramatically reduce the feasibility window to sometime between late May and June 7. This would seriously compromise the environmental benefits of the PRF, whatever they may be claimed to be. The effort could also require significantly more than 9,500 acre-feet to make the target release.

The release of 3,500 cfs would be a very dangerous move, particularly when considering the condition of the river channel that has developed over two decades of drastically reduced maintenance. The point of the PRF is to force the flow out of the main channel into the overbank. The river channel is aggraded by sediment accumulation and choked by heavily vegetated islands that act essentially as flow obstructions. The overbanks are heavily vegetated

too, reducing the channel capacity and resulting in a real danger of levee overtopping, even without the PRF. The modeling that the USIBWC has done thus far to assess the risk of levee overtopping is inadequate, as it does not reflect the current state of the channel and overbank. The use of FLO-2D rather than the industry standard HEC-RAS makes outside review of the modeling efforts particularly difficult, and there is no reason for this choice of modeling software given the hydraulics of the river. Considering the consequences of levee failure, proceeding with a PRF is irresponsible and not protective of life and property in the area outside the levee system.

A useful thought exercise is to imagine what would happen if a PRF were made, and a levee breach occurred in the southern Mesilla Valley. The immediate response would be to reduce or entirely cut the release from Caballo Dam, but it would take a day and a half for the cut to reach the breach. Diverting flow at Mesilla or Leasburg dams to reduce the flood would not be possible because, by definition, they would be at capacity. Meanwhile, thousands of acre-feet of water would drain out of the river channel into the surrounding neighborhoods and agricultural fields, causing catastrophic damage. Repairing the breach and getting the system up and running again would take days, upending the operations of the irrigators in the Rincon, Mesilla, and El Paso-Juarez valleys, disrupt the water supply for the City of El Paso, and render USIBWC unable to make their required deliveries to Mexico. While the 1906 Convention does provide an exception for "serious accident to the irrigation system in the United States," the intentional release of 3,500 cfs would be no accident.

In the RMP, it is stated that "USIBWC would purchase or lease water rights under the EWTP [Environmental Water Transfer Program] for the additional environmental water." The EWTP would not support this activity, as it provides for the delivery of water to restoration sites, not release of water from Caballo Dam. There is no mechanism or even concept for taking Project Water and releasing it for purposes other than diversion or maintenance of flood space in Elephant Butte and Caballo reservoirs. There may well be Rio Grande Compact implications of a PRF, particularly since it will have impacts on Article VII status and credit spills. Simply put, there are three beneficiaries of the Rio Grande Project: EBID, EPCWID, and Mexico. Obtaining PRF water from one or more of these beneficiaries would require massive changes to the 2008 Operating Agreement that controls how the Project is operated and willing participation by all of the project beneficiaries. None of these are even remotely likely. Obtaining and releasing PRF water could also raise Rio Grande Compact issues unrelated to the 2008 Operating Agreement. In addition to being dangerous, the PRF concept is institutionally infeasible.

Because no viable mechanism exists by which USIBWC would acquire access to the required 9,500 acre-feet (which, as stated earlier, would likely be an inadequate volume), it is difficult to put a price tag on the PRF water. If it is acquired at \$300 per acre-foot, roughly the (current) fair market value for conversion to municipal and industrial use in El Paso, each PRF event would cost \$3 million. Even at a much lower and unlikely value of \$100 per acre-foot, each event would cost \$1 million. The notion of spending that kind of money when other priorities are neglected due to lack of funding is absurd, particularly when the same actual environmental benefits can be achieved for far less cost, in a safe manner, and in compliance with existing institutional frameworks with properly managed restoration sites.

There are many other aspects to consider, such as availability of water during prolonged drought, levee erosion, and what would happen at the diversion dams when the 3,500 cfs release hit them, with all of the accompanying debris that it would bring. The key points, however, are that the Peak Restoration Flow concept is 1) unsafe and irresponsible, 2) institutionally infeasible, and 3) ridiculously expensive. We have spent much time and resources

explaining these issues over the years, trying to maintain a collaborative spirit. However, unless and until these key points are addressed, the PRF concept should be altogether discarded. Instead, we should be spending our time and resources evaluating realistic opportunities to enhance the environment of the Rio Grande Project within its key functions of safe flood conveyance and efficient delivery of Project water.

Sincerely,

A handwritten signature in black ink, appearing to read 'Gary Esslinger', with a horizontal line extending to the right.

Gary Esslinger
Treasurer/Manager
Elephant Butte Irrigation District

Cc: Jesus Reyes, Manager, El Paso County Water Improvement District #1

GOVERNOR
Susana Martinez



DIRECTOR AND SECRETARY
TO THE COMMISSION
Michael B. Sloane

DEPUTY DIRECTOR
Vacant

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Cimarron
THOMAS "DICK" SALOPEK
Las Cruces

14 December 2018

Elizabeth Verdecchia, Natural Resources Specialist
International Boundary and Water Commission
4171 N. Mesa, C-100
El Paso, Texas 79902

**RE: Continued Implementation of the River Management Plan for the Rio Grande
Canalization Project; NMDGF No. 18808**

Dear Elizabeth Verdecchia:

Thank you for the opportunity to provide comments on the Environmental Assessment (EA) scoping process for the *Continued Implementation of the River Management Plan for the Rio Grande Canalization Project*. This EA will replace and supersede the 2009 Record of Decision (ROD) for long-term management of the Rio Grande Canalization Project. The United States International Boundary and Water Commission (IBWC) is currently wrapping up 2009 ROD implementation activities. The forthcoming EA will evaluate alternatives for Additional Recreation, Additional Sediment Control, Official Protection for Restoration Sites, Additional Restoration outside of USIBWC Jurisdiction or Implementation by a Third-Party, and Implementation of Peak Restoration Flows.

The New Mexico Department of Game and Fish (Department) has reviewed the proposed alternatives, and concurs that they should all be analyzed in the EA. Once the Draft EA is made available for comment, the Department anticipates providing more specific recommendations regarding components of these alternatives. Because the No Action Alternative is the Continued Implementation of the River Management Plan (RMP), the Department requests an opportunity to review and provide recommendations regarding the updated RMP.

Thank you for the opportunity to review and comment on the proposed EA. If you have any questions, please contact Malia Volke, Aquatic and Riparian Habitat Specialist at 505-476-8160 or malia.volke@state.nm.us.

Sincerely,

Matt Wunder, Ph.D.
Chief, Ecological and Environmental Planning Division

MW/mv

cc: USFWS NMES Field Office
Daniel Lusk, NMDGF Southwest Regional Habitat Biologist

DRAFT EA REVIEW

The authority for this action is the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

Chandra Little,

Bureau of Land Management, Regulatory Analyst.

[FR Doc. 2019-11380 Filed 5-30-19; 8:45 am]

BILLING CODE 4310-84-P

INTERNATIONAL BOUNDARY AND WATER COMMISSION UNITED STATES AND MEXICO

United States Section; Notice of Availability of a Draft Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for Aquatic Habitat Restoration in the Rio Grande Canalization Project

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

ACTION: Notice.

SUMMARY: Pursuant to Section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969; the Council on Environmental Quality Final Regulations, and the United States Section, Operational Procedures for Implementing Section 102 of NEPA, published in the **Federal Register** September 2, 1981, (the United States Section hereby gives notice that the *Draft Environmental Assessment and Finding of No Significant Impact for Aquatic Habitat Restoration in the Rio Grande Canalization Project* is available. An Environmental Impact Statement will not be prepared unless additional information which may affect this decision is brought to our attention within 30 days from the date of this Notice.

DATES: *Public Comments:* USIBWC will consider substantive comments from the public and stakeholders for 30 days after the date of publication of this NOA in the **Federal Register**.

Please note all written and email comments received during the comment period will become part of the public record, including any personal information you may provide. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to

do so. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public disclosure in their entirety.

Public Hearing: USIBWC will be conducting a public hearing on June 12, 2019, 5 to 7 p.m., Las Cruces City Hall, 2nd Floor, Conference Room 2007B, 700 N. Main Street, Las Cruces, NM 88001.

ADDRESSES: Comments should be sent to: Elizabeth Verdecchia, Natural Resources Specialist, USIBWC, 4171 N. Mesa, C-100; El Paso, Texas 79902. Telephone: (915) 832-4701, Fax: (915) 493-2428, email: Elizabeth.Verdecchia@ibwc.gov.

FOR FURTHER INFORMATION CONTACT: Elizabeth Verdecchia, Natural Resources Specialist, USIBWC, 4171 N. Mesa, C-100; El Paso, Texas 79902. Telephone: (915) 832-4701, Fax: (915) 493-2428, email: Elizabeth.Verdecchia@ibwc.gov.

SUPPLEMENTARY INFORMATION:

Background: The USIBWC is identifying aquatic habitat restoration projects within the Rio Grande Canalization Project (RGCP). On June 4, 2009, the USIBWC issued a Record of Decision (ROD) on the long-term management of the RGCP. The ROD committed the USIBWC to the restoration of aquatic and riparian habitat at up to 30 sites over 10 years (through 2019).

The purpose is to identify, design, and implement aquatic habitat restoration sites to satisfy USIBWC's commitment for aquatic habitat in the 2009 ROD. Restoration actions could include invasive vegetation removal, native vegetation planting, overbank lowering, bank cuts, natural levee breaches, secondary channels, bank destabilization, channel widening, arroyo mouth management, construction of inset floodplains, and use of supplemental water for on-site irrigation.

The EA evaluates potential impacts of eight alternatives, including the No Action Alternative and the following sites: Yeso Arroyo, Angostura Arroyo, Broad Canyon Arroyo, Selden Point Bar, Las Cruces Effluent, Mesilla Valley Bosque State Park, and Downstream of Courchesne Bridge. Under the Preferred Alternative, USIBWC would implement up to four sites (Broad Canyon Arroyo, Selden Point Bar, Las Cruces Effluent, and Downstream of Courchesne Bridge). Permits would be required from the United States Army Corps of Engineers for dredge and fill of Waters of the United States, per the Clean Water Act Sections 404 and 401. Alternatives Las

Cruces Effluent and Downstream of Courchesne Bridge would require engineering designs prior to construction, while Alternatives Broad Canyon Arroyo and Selden Point Bar, which are smaller and less complicated projects, could be constructed from conceptual designs.

Potential impacts on natural, cultural, and other resources were evaluated in the Draft EA. A FONSI has been prepared for the Preferred Alternatives, based on a review of the facts and analyses contained in the Draft EA.

Availability: The electronic version of the Draft EA is available at the USIBWC web page: https://www.ibwc.gov/EMD/EIS_EA_Public_Comment.html.

Dated: May 24, 2019.

Matt Myers,

Chief Legal Counsel, International Boundary and Water Commission, United States Section.

[FR Doc. 2019-11394 Filed 5-30-19; 8:45 am]

BILLING CODE 4710-03-P

INTERNATIONAL BOUNDARY AND WATER COMMISSION

United States and Mexico; United States Section; Notice of Availability of a Draft Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project

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

ACTION: Notice.

SUMMARY: Pursuant to Section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969; the Council on Environmental Quality Final Regulations, and the United States Section, Operational Procedures for Implementing Section 102 of NEPA, published in the **Federal Register** September 2, 1981, the United States Section hereby gives notice that the *Draft Environmental Assessment and Finding of No Significant Impact for the Continued Implementation of the River Management Plan for the Rio Grande Canalization Project* is available. An Environmental Impact Statement will not be prepared unless additional information which may affect this decision is brought to our attention within 30 days from the date of this Notice.

DATES: *Public Comments:* USIBWC will consider substantive comments from the public and stakeholders for 30 days after

the date of publication of this NOA in the **Federal Register**.

Please note all written and email comments received during the comment period will become part of the public record, including any personal information you may provide. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public disclosure in their entirety.

Public Hearings: USIBWC will be conducting two public hearings: June 18, 2019; 10 a.m. to 12 p.m., Las Cruces City Hall, 2nd Floor, Conference Room 2007A, 700 N. Main Street, Las Cruces, NM 88001; and June 19, 2019; 5–7 p.m., USIBWC American Dam/Carlos Marin Field Office, 2616 W. Paisano Drive, El Paso, TX 79922.

ADDRESSES: Comments should be sent to: Elizabeth Verdecchia, Natural Resources Specialist, USIBWC, 4171 N. Mesa, C-100; El Paso, Texas 79902. Telephone: (915) 832-4701, Fax: (915) 493-2428, email: Elizabeth.Verdecchia@ibwc.gov.

FOR FURTHER INFORMATION CONTACT: Elizabeth Verdecchia, Natural Resources Specialist, USIBWC, 4171 N. Mesa, C-100; El Paso, Texas 79902. Telephone: (915) 832-4701, Fax: (915) 493-2428, email: Elizabeth.Verdecchia@ibwc.gov.

SUPPLEMENTARY INFORMATION:

Background: On June 4, 2009, the USIBWC issued a Record of Decision (ROD) on the long-term management of the Rio Grande Canalization Project (RGCP) through 2019. The ROD committed the USIBWC to implement environmental measures, change management practices, and update the River Management Plan (RMP). The RMP covers levee maintenance; vegetation management; continued implementation and maintenance of restoration sites; endangered species management; channel maintenance; and channel maintenance alternatives (CMAs) within the USIBWC right-of-way (ROW). The EA will replace the ROD and proposes a timeline to implement the RMP through 2030. The EA evaluates potential impacts of seven

alternatives, including the No Action Alternative. Under the Preferred Alternative, USIBWC would continue implementation of the RMP; designate up to 65 miles through the USIBWC ROW for the New Mexico Rio Grande Trail and Texas trails; re-evaluate and construct additional CMAs potentially outside of the ROW; increase efforts to engage stakeholders through the Sediment Control Initiative Federal Workgroup and stakeholder groups; and transfer up to 500 acres of restoration outside of the USIBWC jurisdiction of either No-Mow Zone managed grasslands or unsuccessful habitat restoration, via partnerships.

Potential impacts on natural, cultural, and other resources were evaluated. A Finding of No Significant Impact has been prepared for the Preferred Alternative based on a review of the facts and analyses contained in the Draft EA.

Availability: The electronic version of the Draft EA is available from the USIBWC web page: https://www.ibwc.gov/EMD/EIS_EA_Public_Comment.html

Dated: May 24, 2019.

Matt Myers,

Chief Legal Counsel, International Boundary and Water Commission, United States Section.

[FR Doc. 2019-11401 Filed 5-30-19; 8:45 am]

BILLING CODE 7010-01-P

INTERNATIONAL TRADE COMMISSION

Notice of Receipt of Complaint; Solicitation of Comments Relating to the Public Interest

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has received an amended complaint entitled *Certain Touch-Controlled Mobile Devices, Computers, and Components Thereof, DN 3389*; the Commission is soliciting comments on any public interest issues raised by the complaint or complainant's filing pursuant to the Commission's Rules of Practice and Procedure.

FOR FURTHER INFORMATION CONTACT: Lisa R. Barton, Secretary to the Commission, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436, telephone (202) 205-2000. The public version of the complaint can be accessed on the Commission's Electronic Document Information

System (EDIS) at <https://edis.usitc.gov>, and will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436, telephone (202) 205-2000.

General information concerning the Commission may also be obtained by accessing its internet server at United States International Trade Commission (USITC) at <https://www.usitc.gov>. The public record for this investigation may be viewed on the Commission's Electronic Document Information System (EDIS) at <https://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission has received an amended complaint and a submission pursuant to § 210.8(b) of the Commission's Rules of Practice and Procedure filed on behalf of Neodron Ltd. on May 23, 2019. The original complaint was filed on May 22, 2019 and a notice of receipt of complaint; solicitation of comments relating to the public interest is scheduled to publish in the **Federal Register** on May 29, 2019. The amended complaint alleges violations of section 337 of the Tariff Act of 1930 (19 U.S.C. 1337) in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain touch-controlled mobile devices, computers, and components thereof. The amended complaint names as respondents: Amazon.com, Inc. of Seattle, WA; Dell Technologies Inc. of Round Rock, TX; HP Inc., of Palo Alto, CA; Lenovo Group Ltd. of China; Lenovo (United States) Inc. of Morrisville, NC; Microsoft Corporation of Redmond, WA; Motorola Mobility LLC of Chicago, IL; Samsung Electronics Co., Ltd of Korea; and Samsung Electronics America, Inc. of Ridgefield Park, NJ. The complainant requests that the Commission issue a limited exclusion order, cease and desist orders, and impose a bond upon respondents' alleged infringing articles during the 60-day Presidential review period pursuant to 19 U.S.C. 1337(j).

Proposed respondents, other interested parties, and members of the public are invited to file comments, not to exceed five (5) pages in length, inclusive of attachments, on any public interest issues raised by the complaint or § 210.8(b) filing. Comments should address whether issuance of the relief specifically requested by the

publication in the **Federal Register** as provided by federal law.

[FR Doc. 2019-15548 Filed 7-19-19; 8:45 am]

BILLING CODE 4337-15-P

INTERNATIONAL BOUNDARY AND WATER COMMISSION UNITED STATES AND MEXICO

United States Section; Notice of Extension of Time for Public Comment Period for the Draft Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for Aquatic Habitat Restoration in the Rio Grande Canalization Project and for the Draft EA and FONSI for the Continued Implementation of the River Management Plan

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

ACTION: Notice of extension of time.

SUMMARY: Pursuant to Section 102(2)(c) of the National Environmental Policy Act, the USIBWC hereby gives notice that the public comment period is being extended for two draft Environmental Assessments, per public request.

DATES: The deadline for comments for the *Draft EA and FONSI for Aquatic Habitat Restoration in the Rio Grande Canalization Project* is extended an additional 17 calendar days (for a total of 52 days) until July 22, 2019. The deadline for comments for the *Draft EA and FONSI for Continued Implementation of the River Management Plan for the Rio Grande Canalization Project* is extended an additional 31 calendar days (for a total of 66 days) until August 5, 2019.

ADDRESSES: The electronic versions of the Draft EAs are available at the USIBWC web page: https://www.ibwc.gov/EMD/EIS_EA_Public_Comment.html. Written comments should be sent to: Elizabeth Verdecchia, Natural Resources Specialist, USIBWC, 4191 N Mesa; El Paso, Texas 79902. Fax: (915) 493-2428, Email: Elizabeth.Verdecchia@ibwc.gov.

Dated: July 12, 2019.

Rebecca Rizzuti,

Attorney Advisor, International Boundary and Water Commission, United States Section.

[FR Doc. 2019-15503 Filed 7-19-19; 8:45 am]

BILLING CODE 7010-01-P

NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES

National Endowment for the Humanities

Meeting of Humanities Panel

AGENCY: National Endowment for the Humanities.

ACTION: Notice of meeting.

SUMMARY: The National Endowment for the Humanities will hold twenty-three meetings of the Humanities Panel, a federal advisory committee, during August 2019. The purpose of the meetings is for panel review, discussion, evaluation, and recommendation of applications for financial assistance under the National Foundation on the Arts and the Humanities Act of 1965.

DATES: See **SUPPLEMENTARY INFORMATION** for meeting dates. The meetings will open at 8:30 a.m. and will adjourn by 5 p.m. on the dates specified below.

ADDRESSES: The meetings will be held at Constitution Center, 400 7th Street SW, Washington, DC 20506, unless otherwise indicated.

FOR FURTHER INFORMATION CONTACT: Elizabeth Voyatzis, Committee Management Officer, 400 7th Street SW, Room 4060, Washington, DC 20506; (202) 606-8322; evoyatzis@neh.gov.

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a)(2) of the Federal Advisory Committee Act (5 U.S.C. App.), notice is hereby given of the following meetings:

1. Date: August 2, 2019

This meeting will discuss applications on the topic of Research Libraries, for the Infrastructure and Capacity Building Challenge Grants program, submitted to the Office of Challenge Grants.

2. Date: August 8, 2019

This meeting will discuss applications on the topics of African, Middle Eastern, and Asian Studies, for the Fellowships grant program, submitted to the Division of Research Programs.

3. Date: August 8, 2019

This meeting will discuss applications on the topic of Digital Preservation and Access, for the Research and Development grant program, submitted to the Division of Preservation and Access.

4. Date: August 8, 2019

This meeting will discuss applications on the topics of Latin American and Latina/o Studies, for the

Fellowships grant program, submitted to the Division of Research Programs.

5. Date: August 9, 2019

This meeting will discuss applications on the topic of Social Sciences, for the Fellowships grant program, submitted to the Division of Research Programs.

6. Date: August 12, 2019

This meeting will discuss applications on the topic of Literature, for the Fellowships grant program, submitted to the Division of Research Programs.

7. Date: August 13, 2019

This meeting will discuss applications on the topics of Ancient, Medieval, and Renaissance Studies, for the Fellowships grant program, submitted to the Division of Research Programs.

8. Date: August 13, 2019

This meeting will discuss applications on the topics of Music, Dance, Theatre, and Film Studies, for the Fellowships grant program, submitted to the Division of Research Programs.

9. Date: August 13, 2019

This meeting will discuss applications on the topic of Higher Education, for the Preservation and Access Education and Training grant program, submitted to the Division of Preservation and Access.

10. Date: August 14, 2019

This meeting will discuss applications on the topics of European History and Philosophy, for the Fellowships grant program, submitted to the Division of Research Programs.

11. Date: August 14, 2019

This meeting will discuss applications on the topics of Religious Studies and Communications Studies, for the Fellowships grant program, submitted to the the Division of Research Programs.

12. Date: August 15, 2019

This meeting will discuss applications on the topics of Art History and European Literature and Studies, for the Fellowships grant program, submitted to the Division of Research Programs.

13. Date: August 15, 2019

This meeting will discuss applications on the topics of American History and Studies, for the Fellowships grant program, submitted to the Division of Research programs.

APPENDIX B

Draft Environmental Assessment Review Comments and
Subsequent Changes Made to the Draft EA

Draft Environmental Assessment Review Comments and Subsequent Changes Made to the Draft EA

The table below contains the comments received on the Draft EA during the public comment period, as well as responses to the comments. Comments that were deemed non-substantial or unrelated were eliminated. In addition to the revisions to the Draft EA described in the responses to comments, the following changes were also incorporated into this version:

- The amount of sediment to be removed under Alternative C was increased.
- Alternative C was added to Alternative G, the Preferred Alternative.

Table B-1. Review Comments on the Draft EA and Responses to Comments

Commenting Entity	Comment	Response
Mesilla Valley Audubon Society	While the time frame for completion of all that is contemplated for Rio Grande intervention may be 10 years, is there some that may be finished earlier? What is the timing for intervention at the Las Cruces Effluent site and the timing for interactions with the Rio Grande Trail group with plans for public access to some land along the Rio Grande.	Time frame for implementation would vary depending on the activity. The time frames are documented in the River Management Plan.
Mesilla Valley Audubon Society	Is the Rio Grande Trail still a work in progress? Does USIBWC have a working relationship with them?	Yes. USIBWC does have a working relationship. NM State Parks is in charge of the Rio Grande Trail project and USIBWC has met with NMSP. Nothing formal has been drafted but USIBWC has shared data and are going through lease process. USIBWC has met with the NMSP on the trail. The following is a link to the Grande Trail Master Plan (http://www.riograndetrailnm.com/ and http://www.emnrd.state.nm.us/ADMIN/documents/RioGrandeTrail_MasterPlan_FINALwChanges.pdf)
Private citizen	I live and work in El Paso. As I travel in the region I see other communities that have many public areas that are open for all to enjoy the river and the river banks. Other have taken advantage of river front restaurants, trails, river access for kayaks and such. Attached is what Denver has to offer. They have fishing sites to kayaking to resting and play areas. It would be great if this concept of using the river (even though we do not have water year round in all of the river). I really like the idea of increased recreation including “Rio Grande Trail and connection to local trails to rivers”	Thank you for your comment.

Commenting Entity	Comment	Response
<p>Creosote Collaborative</p>	<p>Regarding the EA for Continued Implementation of the RMP for the Rio Grande Canalization Project, we are very supportive of the expansion of opportunities for recreation along the Rio Grande, as was mentioned in Alternative B and Alternative G. We are currently partnering with the Paso del Norte Health Foundation to support the implementation of the Paso del Norte (PDN) Trail, a 60-mile county-wide linear trail through El Paso County.</p> <p>In October 2018, the Paso del Norte Trail Master Plan was released and is available here: www.pasodelnortetrail.org. On page 2-5 of the draft Environmental Assessment, it is noted that the USIBWC would collaborate with entities who have regional plans to connect local trails to the river and to construct a short segment of trail at the Country Club Bridge. The maps on this page of our website show the primary and proposed alignments of the PDN Trail as well as the spurs. We're very interested in partnering to pave the trail segment along the Rio Grande from Country Club Road to Racetrack Drive and collaborating to provide parking areas to improve access to the trail (as shown on page 2-9 [Figure 2-6]).</p>	<p>Thank you for your comment.</p>
<p>Creosote Collaborative</p>	<p>On page 2-5 of the document, under Alternative B, it is stated that the USIBWC would collaborate with the City of El Paso, El Paso County, and other entities in Texas who have regional plans to connect local trails to the river and to connect non-contiguous segments of local trails. This would be an amazing opportunity to collaborate in the implementation of the Paso del Norte trail. I have attached a map of the overall trail network for your consideration.</p>	<p>Thank you for your comment.</p>
<p>Tribal Council/Tribal Historic Office Ysleta del Sur Pueblo</p>	<p>While we do not have any comments on the proposed undertakings and believe that these projects will not adversely affect traditional, religious or culturally significant sites of our Pueblo and have no opposition to it; we would like to request consultation should any human remains or artifacts unearthed during this project be determined to fall under the Native American Graves Protection and Repatriation Act (NAGPRA) guidelines.</p>	<p>The USIBWC would contact the THPO should any undiscovered artifacts or remains be found. Additional wording was added to Section 3.3.</p>

Commenting Entity	Comment	Response
<p>Paso del Norte Watershed Council.</p>	<p>I can only offer constructive comments based on my area of expertise: atmospheric modeling. I conducted some studies on the North American monsoon precipitation characteristics and several research studies to understand precipitation behavior in the complex mountainous areas of northern New Mexico (Jemez and Sangre de Cristo mountain ranges), when I was a technical staff member at Los Alamos National Lab.</p> <p>Based on the above professional background and research interests, I offer this comment specifically about revisiting the assessment of Water Resources (Section 3.4), Flood Control (Section 3.4.1), Groundwater (Section 3.4.3), and Water Delivery and Consumption (3.4.4) in NM and CO more quantitatively and in the determination on how to refine the 100-year flood events and frequencies in light of the newer atmospheric modeling technologies. Because of the importance of this type of refined understanding, all other downstream decisions such as flood control and water delivery strategies will need to be potentially refined as well.</p>	<p>USIBWC will be updating the 100-year model. Atmospheric modeling is out of the scope of the USIBWC mission. Reclamation manages the water in the Rio Grande Project. No change to the EA.</p>
<p>Open Space, Trails and Parks Coordinator Parks and Recreation</p>	<p>Provide more details on the parameters utilized to identify non-motorized boating</p>	<p>If Alternative B is selected then more data will be gathered to determine appropriate areas for non-motorized boating. Data that would be gathered include: water quality, parking, depth of channel, bank slope, and bridge height. No change to the EA.</p>
<p>Open Space, Trails and Parks Coordinator Parks and Recreation</p>	<p>Provide more specific goals for recreation</p>	<p>USIBWC has not established goals since the agency is not a land management agency. USIBWC is not authorized by Congress to make recreation areas in areas they manage. Anything completed would have to be done under agreements/leases with other entities. No change to the EA.</p>
<p>Open Space, Trails and Parks Coordinator Parks and Recreation</p>	<p>Explore improvements to micro-areas along the Rio Grande for recreation, specifically the segment near Executive Center@ Paisano, located approximately 2,000 feet north of the USIBWC's American Dam facility. For years this area has experienced informal fishing and river ecosystem / habitat appreciation. PARD encourages the USIBWC, in collaboration with local and regional partners (and abutting jurisdictions), to develop strategies to promote a more recreational friendly Rio Grande. Consider basic amenities such as signage, user friendly parking and a designated outlook area.</p>	<p>Thank you for the comment. This idea could be accomplished by a third party under a lease in coordination with Department of Homeland Security. No change to the EA.</p>

Commenting Entity	Comment	Response
Open Space, Trails and Parks Coordinator Parks and Recreation	Provide specific goals / actions for increased outreach for USIBWC's Adopt a River Program.	USIBWC would increase outreach efforts through updating the website, updating brochures, and disseminating information at public meetings. They would highlight the program at other USIBWC outreach events. Goals would be to have the entire section from American Dam up to Shalem Colony for the adoption.
Open Space, Trails and Parks Coordinator Parks and Recreation	Incorporate "granting conservation easements to outside agencies" into the Preferred Alternative. Include collaboration with local entities such as the Frontera Land Alliance as part of efforts to build new partnerships	This is already considered in the preferred alternative specifics can be discussed on a case by case bases. No change to EA.
Open Space, Trails and Parks Coordinator Parks and Recreation	Identify outreach strategies to enhance community vision for residents/visitors to enjoy safe recreational activities, the natural environment and explore opportunities for stewardship	USIBWC's mission is not to conduct outreach; however, they can work with others to accomplish this task. No change to EA.
Open Space, Trails and Parks Coordinator Parks and Recreation	On Figure 2.6 of the Draft Environmental Assessment Report PARD recommends additional details be included in the final report regarding the Potential Parking Lot as depicted in the exhibit.	No further details can be provided at this time as the design for the parking lot has not been developed. No change to EA.
Open Space, Trails and Parks Coordinator Parks and Recreation	Incorporate into the environmental consequences matrix (Public Hearing Presentation slide 22) encroachment issues by prohibited recreational activities namely the use of ATVs - consider language that emphasizes access to the Rio Grande for safe recreational activities while discouraging those recreational activities harmful to the river management study area footprint	The matrix from the public hearing is already summarized in Table 2-4. Language is included in the EA that states that USIBWC is increasing visible signage. In addition, the signs are up to highway standards with icons for easy understanding. Additional wording added to EA about the signage.
U.S. Fish and Wildlife Service (USFWS)	"Increased law enforcement personnel..." Who will pay for this?	This is one reason why USIBWC is not selecting Alternative B because they do not have law enforcement. No change to the EA.
USFWS	Suggest IBWC consider including language that no trails will be built in existing or future restoration areas. Are there repercussions for pedestrians found in non-recreation restoration areas?	That consideration is already in the EA. Yes there are repercussions for pedestrians found in non-recreation restoration areas. USIBWC has developed agreements with the local law enforcement and law attorneys to cite and prosecute offenses on IBWC property. Increased signage should inform the public of unauthorized activity in specific areas.
USFWS	Suggest IBWC work with USFWS to minimize suitable SWFL habitat removal for "earthen kayak/canoe ramps" and "additional access points... parking lot...".	USIBWC would work with the USFWS to minimize removal of suitable SWFL habitat. We have added that language into the alternative.

Commenting Entity	Comment	Response
USFWS	When will the “mechanically excavating a pilot channel...” take place? Outside of SWFL nesting season (April 15 – Aug 15)? Any plans to study effect of sediment removal on suitable SWFL riparian vegetation adjacent to the channel?	We have added a sentence to note that excavation would take place during the non-irrigation season and outside the SWFL nesting season. No further studies are planned at this time.
USFWS	Consider working with USFWS if any “problem areas” from 2015 CMA Study require removal of suitable SWFL habitat.	USIBWC will work with USFWS. The section has been updated.
USFWS	“USIBWC would continue to remove and treat the invasive saltcedar in areas along the RGCP which would further improve native habitat.” Do we have empirical evidence to prove this? Maybe take out improve native habitat. Sometimes native vegetation doesn’t come back in areas where saltcedar are removed (and some saltcedar can come back).	No empirical evidence is available. We have updated the information in the EA to state “in many cases will further improve habitat”.
USFWS	How are “unauthorized vehicles within USIBWC property” handled (or not) currently? Would this change? How is “people disregard these signs and have caused damage to the restoration sites” handled? Cause this is likely to increase with an increase in recreation. How will “potentially attract scavengers and predators” be measured (and if found to be a problem) and handed?	USIBWC has developed agreements with the local law enforcement and law attorneys to cite and prosecute offenses on USIBWC property. Increased signage should inform the public of unauthorized activity in specific areas. USIBWC would work with NMGF if there is an impact to address nuisance wildlife. Text was added to EA.
USFWS	“sediment removal could potentially impact riparian habitat...”. If this Alt is selected, will there be a study or something so that this info could be determined?	No additional study would be conducted. The BO has a requirement to quantify habitat, via an on the ground habitat survey, for SWFL. This would be an indicator of any impacts to habitat from the CMA activities. Text was added to EA.
USFWS	“Known flycatcher territorial areas and potential habitat... would be avoided...” so there’s no sediment removal with 0.25 miles of these areas?	The immediate vicinity would be avoided and as deemed reasonable the 0.25 mile distance would be implemented. In areas where there are large vegetated islands with SWFL/cuckoos, sediment would be removed around vegetated islands and USIBWC would leave the islands in place. This will prevent further growth of the vegetated islands. Text was added to the EA.

Commenting Entity	Comment	Response
USFWS	Was the current management plan taken into consideration when developing the new proposed action of removing sediment (ie flycatcher occupied areas, not being removed?).	Yes, the current management plan was taken into consideration. USIBWC does allow flexibility for sediment removal in areas of public safety concern but SWFL occupied habitat will not be removed. Alternative C would comply with the reasonable and prudent measures in the BO. Alternative C would comply with the Reasonable and Prudent Measure 1.2 in the Biological Opinion as well as management guidelines for channel maintenance outlined in the RMP (Section 3.1.15).
USFWS	Is there a word missing? "...temporarily displace T&E due to noise..." maybe "species" should go in here?	The word "species" was added.
USFWS	"Potential adverse impacts to the flycatcher may occur with additional channel maintenance activities not already covered under the Biological Opinion." Would this require consultation with USFWS?	USIBWC would consult with the USFWS if the CMA were not covered under the current BO. Text was added to the EA.
USFWS	"...beneficial impact recovery efforts in the area." Seems like something is off with this text.	Sentence was edited.
El Paso City Engineer	Incorporate restoration sites identified in the Alternative B and Alternative E to be included into preferred alternative.	The restoration sites currently being managed by USIBWC are carried out through all the alternatives as part of implementation of the RMP. No change to the EA.
El Paso City Engineer	Please clarify the locations replacement restoration as identified in Alternative F and provide a map of their location. Would they need to be located within a certain distance of the existing property or near the proposed restoration sites? Is there an associated map?	A map of the replacement restoration locations at this time cannot be provided as sites have not yet been identified. No change to the EA.
El Paso City Engineer	How will prohibitions such as no motor vehicles, no alcohol, etc. be ensured if the land were to be transferred.	Whoever took over ownership would take over enforcement. This would be transferred at land transfer stage. No change to the EA.
El Paso City Engineer	Please provide examples of where this partnership has been successful?	Through an interagency agreement, with USFWS, nine of the current restoration sites are being implemented by the USFWS. No change to the EA.
El Paso City Engineer	Does this alternative increase the overall area for restoration as shown in Alternative B?	Alternative B is not to increase restoration but for additional recreational opportunities. Alternative G does not provide for increased area of restoration. It has the potential to retransfer restoration sites outside USIBWC jurisdiction. No change to the EA.
El Paso City Engineer	Why does this Alternative mention D in other portions, but not in the description?	This alternative includes all of Alternative D. No change to the EA.

Commenting Entity	Comment	Response
El Paso City Engineer	Does this still offer the recreation benefits as Alternative B, with just additional opportunity for restoration and maintenance?	Only the recreational opportunity of the trail system is considered under this alternative. No change to the EA.
El Paso City Engineer	How are there not impacts to land use under this alternative? Wouldn't it increase recreational activities, while also increasing the opportunity for restoration sites?	The only recreational activity considered would be the trail. This alternative would not increase restoration sites. Restoration sites could be transferred but total acreage would not increase. No change to the EA.
El Paso City Engineer	Has there been any additional outreach or cooperation with the City of El Paso or El Paso Water Utilities?	Yes, USIBWC has worked with Recreation and Urban Design divisions. USIBWC has a working relationship with El Paso Water Utilities. No change to EA.
Elephant Butte Irrigation District (EBID)	The most glaring shortcoming of the EA for continued implementation of the RMP is that it does not even consider an option that would restore the RGCP to its design conditions. In fact, none of the options in the EA would even maintain the river channel in its current, impaired condition. The preferred alternative will lead to further sediment accumulation, loss offload conveyance capacity, and increased river losses that will come at the expense of EBID.	USIBWC considered a baseline option in Section 2.8 of the EA; Table 2.2 of the EA discusses the reasons why USIBWC did not carry forward the “top to bottom maintenance” alternative in the EA analysis. USIBWC’s 2009 Record of Decision (ROD) called for a science-based approach to channel maintenance. Some studies have shown areas of degradation and some aggradation; therefore, USIBWC has incorporated a data monitoring and collection program to determine on a case-by-case basis where sediment excavation is necessary and to determine the target profiles. On a case-by-case basis, USIBWC is excavating particular locations back to their design grade and has submitted permit applications to the U.S. Army Corps of Engineers indicating original profiles from the 1940s. Additionally, USIBWC has changed Alternative C to increase sediment removal volumes, and the USIBWC anticipates adding Alternative C to the Preferred Alternative.

Commenting Entity	Comment	Response
EBID	<p>The most obvious inadequacy of the alternatives evaluated in the RMP and EA for continued implementation of the RMP is the lack of a mass balance in sediment. The average sediment loading on the RGCP from tributary arroyo flows has been estimated at over 400,000 cubic yards per year. A negligible amount of that sediment load is transported downstream of International Dam, particularly in a drought period such as the one that has gripped the Rio Grande Project since 2003. Sediment entering the river channel either enters the irrigation canal system or it stays in the river. EBID has spent millions of dollars removing sediment from its canals. Aggradation has occurred in long reaches of the river, raising the bed level four to five feet in areas. Bed aggradation also pushes more sediment into the irrigation canals than would occur if the river channel were maintained at its design grade. Millions of cubic yards of sediment have accumulated in the river channel since sediment removal was significantly reduced in the late 1990s.</p>	<p>Alternative D, which has been incorporated into USIBWC’s Preferred Alternative, includes reevaluating and implementing channel maintenance alternatives that would assist in capturing sediment on some of the tributaries with larger sediment loads and reduce the overall annual sediment load in the RGCP. Alternative D also includes increased coordination efforts with federal and local stakeholders for the sediment control initiative. USIBWC believes that coordination with partner agencies to address sediment inputs on a watershed-level will lead to long-term solutions to address sediment inputs into the RGCP.</p>
EBID	<p>In order to make up for the deferred maintenance of the past two decades, large quantities of sediment must be removed to bring the RGCP back to (or closer to) its design condition. In fact, the sediment removal in the most aggressive option, Alternative C, would only be about half of the annual sediment loading. In the preferred Alternative G, only one third of the annual incoming sediment would be removed. In either case, aggradation of the river channel will inexorably continue until the RGCP becomes non-functional for flood control and efficient water delivery.</p>	<p>USIBWC has changed Alternative C and the Preferred Alternative to increase sediment removal volumes. In September 2019, USIBWC awarded contracts to remove up to nearly 1 million cubic yards from the Rio Grande in the RGCP. The contracts also have option years for contractors to continue removal in future years, pending available resources.</p>

Commenting Entity	Comment	Response
EBID	<p>The issue of removal of vegetated sand bars in the river channel has come up several times, and is discussed in multiple alternatives in the EA. The fact that Southwestern Willow Flycatchers nest on the vegetated sandbars should not be taken as prohibition on removal of those sandbars if suitable habitat exists in the area along the banks. Development of habitat along the banks can be accomplished without significantly compromising the flood conveyance and efficient delivery of irrigation water functions of the RGCP. Vegetated sandbars occurring in the main channel significantly compromise both functions. Consultation with the US Fish and Wildlife Service should be initiated to pursue this maintenance activity.</p>	<p>Suitable flycatcher habitat is found on many islands in the northern part of RGCP, particularly between Rincon and Hatch. A recent Bureau of Reclamation report (2019) documents the importance of islands to the recovery of the Southwestern Willow Flycatcher (SWFL). In the study Reclamation found a disproportionately high use of island habitat by resident SWFLs, which suggests a preference for islands over mainland habitat: approximately half of all nests were constructed on islands, despite islands only supporting one fifth of the suitable habitat in the Hatch Reach.</p> <p>USIBWC conducted Endangered Species Act consultation with the U.S. Fish and Wildlife Service (USFWS) regarding the channel maintenance in the River Management Plan, including the removal of vegetated islands. USIBWC would implement the Preferred Alternative, which will now include Alternative C, in accordance with Reasonable and Prudent Measures (RPMs) in the 2017 Biological Opinion for protection of the SWFL. RPMs note that vegetation must be relocated from islands that are occupied. USIBWC is not including island habitat in our restored acreage counts, but USIBWC must report acreage removed of suitable habitat to the USFWS. As noted in USIBWC’s River Management Plan, removal of vegetated islands within the channel that are occupied would be scrutinized and deprioritized unless there is a public safety issue. Large islands (greater than 0.1 ha or about 0.25 acre) with suitable habitat should not be excavated or destabilized unless habitat is available along the nearby riverbanks or unless flood modeling predicts impacts to human health and safety from flooding created by the islands. Islands will be monitored. Any island with documented territories would have USFWS approval prior to any excavation activity. USIBWC will be focusing on removing sediment around islands to prevent their expansion. USIBWC is also currently working with Reclamation to study the impacts on SWFL from the action of island “slimming,” which USIBWC conducted upstream of the Rincon Siphon in 2019.</p> <p>Furthermore, USIBWC has awarded a contract to collect cross section data and update the hydraulic model. The</p>
		<p>B-10 purpose of this RGCP hydraulic modeling is to gather and analyze topographic LiDAR and survey data, and to determine the sediment accumulation along the RGCP over time; to develop existing condition hydraulic models to</p>

Commenting Entity	Comment	Response
EBID	<p>The most recent version of the RMP is almost entirely lacking in documentation of engineering analysis for the decrease to flood capacity due to no-mow zones and islands not considered in the design of river levees. There is mention that a worst-case scenario was evaluated, though it is completely lacking in results or documentation. In this situation, such a reference is grossly inadequate and shows a disappointing lack of sincerity to the risk of life and property possible if the river levees were to be overwhelmed. Instead of downplaying the increased water surface elevation during a flood, the RMP should have documented the seriousness of the possible catastrophe if USIBWC levees were not able to contain the flows that they were designed and constructed for due to failure to fulfill USIBWC statutory responsibilities. The EA is wholly lacking in terms of its reliance on the continued implementation of the RMP without adequately studying and appropriately documenting such issues.</p>	<p>Analysis of No Mow Zones and vegetated islands will be included in the contract to update the hydraulic model, awarded September 2019. As noted previously, if results are significantly different than in the RMP, the RMP will be updated and the USFWS re-consulted.</p>
EBID	<p>Finally, the EA's anticipated acquisition of water rights for restoration sites through lease or purchase continues to present problems. USIBWC must recognize that use of primary groundwater that affects the Rio Grande Project surface water supply will likely require offsets. This is a developing situation being heard in the US Supreme Court in Texas v. New Mexico, a case in which the United States is also a plaintiff. In that case, the United States raises issues related to the use of primary groundwater pumping and its impacts on the Rio Grande Project water supply. Here, the USIBWC is acting contrary to the claims raised by the United States in TX v. NM, and it must recognize as much and take action consistent with the claims of the United States in the Supreme Court Case</p>	<p>USIBWC communicates with U.S. Department of Justice (DOJ) with regard to its water-related activities in this region. Specifically, it communicates with the Counsel for the US involved with TX vs NM case. Use of primary ground water is subject to the approval of DOJ. USIBWC has incorporated its commitments to acquire or lease water through its Environmental Water Transaction Program (EWTP) into the RMP. USIBWC continues to work towards securing water rights to meet ROD commitments. As discussed in the October 7, 2019 meeting, USIBWC recommends continued discussions regarding implementation of the EWTP. Additional information was added to Section 3.4.4.</p>
EBID	<p>The explanation and conversion from 4.5 acre-feet per year to 2.7 acre-feet per year is confusing, and a discussion between USIBWC and EBID would be necessary to clarify the use of water for environmental benefits under EBID's Environmental Transaction Program. In any case, USIBWC should secure water rights that are compliant with state and federal laws and EBID operations before developing restoration sites that increase depletions to the river. We are not aware of ongoing efforts to secure Project water rights, which is a major concern if restoration sites are being developed.</p>	<p>The reference was removed from the EA.</p>

Commenting Entity	Comment	Response
THPO- White Mountain Apache Tribe	After reviewing the comment/reports we have determined the proposed project "will not have an impact" on the White Mountain Apache tribe's historic properties and/or traditional cultural properties.	Thank you for your comment.
Comanche Nation	In response to your request, the above reference project has been reviewed by staff of this office to identify areas that may potentially contain prehistoric or historic archeological materials. The location of your project has been cross referenced with the Comanche Nation site files, where an indication of " <i>No Properties</i> " have been identified. (IAW 36 CFR 800.4(d)(1)).	Thank you for your comment.