

GENERAL REEVALUATION REPORT AND
SUPPLEMENTAL ENVIRONMENTAL
IMPACT STATEMENT II:

RIO GRANDE FLOODWAY,
SAN ACACIA TO BOSQUE DEL APACHE UNIT,
SOCORRO COUNTY, NEW MEXICO

APPENDIX G

**Public Review and
.....Comments on the
GRR/SEIS-II**

APPENDIX G

PUBLIC REVIEW AND COMMENTS ON DRAFT GRR/SEIS-II

A notice of intent to prepare a Supplemental Environmental Impact Statement (SEIS) was published in the Federal Register on March 2, 2012 (Volume 77, No. 42, pages 12818-12819). The following is the text of the notice.

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Intent To Prepare a Draft Supplemental Environmental Impact Statement for the Proposed Rio Grande Floodway, San Acacia to Bosque del Apache, Socorro County, NM, Project

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

SUMMARY: The Albuquerque District, Corps of Engineers (Corps) is preparing a draft Supplemental Environmental Impact Statement (SEIS) on the findings of an ongoing flood risk management study along the Rio Grande from San Acacia downstream to San Marcial in Socorro County, New Mexico. The purpose of the study is to reevaluate the plan of flood protection authorized by the Flood Control Act of 1948 (Pub. L. 80-858) in light of recent changes in levee design parameters and environmental resources in the study area. The tentatively proposed plan is to replace the existing embankment between the Low Flow Conveyance Channel and the Rio Grande with a structurally competent levee capable of containing high-volume, long-duration flows. This engineered levee would substantially reduce the risk of damage from floods emanating from the Rio Grande. The local cost-sharing sponsors of the proposed project are the Middle Rio Grande Conservancy District and the New Mexico Interstate Stream Commission.

FOR FURTHER INFORMATION CONTACT: Questions or comments regarding the draft SEIS can be answered by: William DeRagon, U.S. Army Corps of Engineers, 4101 Jefferson Plaza NE., Albuquerque, New Mexico 87109; telephone: (505) 342-3358; email: william.r.deragon@usace.army.mil.

SUPPLEMENTARY INFORMATION: Previously, an environmental impact statement and two supplements have been published regarding this project. A final environmental impact statement addressing a recommendation to construct flood and sediment control dams on the Rio Puerco and Rio Salado was filed with the Council on Environmental Quality in 1977. An SEIS evaluating the effects of the alternative to rehabilitate the existing spoil-bank levee system was filed with the Council on Environmental Quality in 1992. In May 1997, a draft SEIS evaluating the revised design of the proposed levee to withstand long-duration floods and evaluating effects to recently listed endangered species was filed with the U.S. Environmental Protection Agency; however, a final SEIS was not prepared. Currently, a new draft SEIS is being developed to evaluate effects of revised levee design and additional alternatives. The draft SEIS will be integrated with a draft General Reevaluation Report, and the integrated document is hereafter referred to as the draft GRR/SEIS-II.

Alternatives Considered: Alternatives developed and evaluated during the current

effort and previous studies consist of levee reconstruction; flood and sediment control dams; local levees; intermittent levee replacement; watershed land treatment; floodproofing of buildings; levee-alignment setbacks; and no action.

Public Involvement: Coordination is ongoing with both public and private entities having jurisdiction or an interest in land and resources in the middle Rio Grande valley of New Mexico. These entities include the general public, local governments, the U.S. Bureau of Reclamation, the U.S. Fish and Wildlife Service, the New Mexico Department of Game and Fish, and the New Mexico State Historic Preservation Officer. Coordination will continue throughout the development of the draft GRR/SEIS–II.

Significant Issues To Be Analyzed: Issues to be analyzed in the development of the draft GRR/SEIS–II include the effect of alternatives on flood risk, floodplain development, water quality, ecological resources, endangered species, wildlife refuge objectives, social welfare, human safety, cultural resources, and aesthetic qualities. Development and implementation of mitigation measures will be undertaken for unavoidable effects.

Public Review: It is estimated that the draft GRR/SEIS–II will be circulated for public review in April 2012. All interested parties including Federal, state, and public entities will be invited to submit comments on the draft GRR/SEIS–II when it is circulated for review. A public meeting will be held during the public review period in Socorro, New Mexico. An announcement of the exact date and location of the public meeting will be published in the **Federal Register**, and in Socorro and Albuquerque newspapers.

Jason D. Williams,
*Lieutenant Colonel, U.S. Army Corps of
Engineers, District Engineer.*
[FR Doc. 2012–5091 Filed 3–1–12; 8:45 am]

The draft General Reevaluation Report/SEIS-II (GRR/SEIS-II) was submitted to the U.S. Environmental Protection Agency (USEPA) and was made available for public review and comment from April 27 through June 11, 2012. A notice of availability of the draft document was published by the USEPA in the Federal Register on April 27, 2012 (Volume 77, No. 82, page 25165). The Albuquerque District also published notices of availability in the Federal Register and in local newspapers. The following is the text of the District’s notice in the Federal Register (Volume 77, No. 82, pages 25151-25152; April 27, 2012).

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Notice of Availability for the Draft Supplemental Environmental Impact Statement for the Proposed San Acacia to Bosque del Apache Project, Socorro County, NM

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice of availability.

SUMMARY: The Albuquerque District, U.S. Army Corps of Engineers (Corps) has prepared a draft Supplemental Environmental Impact Statement (SEIS) on the findings of

a flood risk management study along the Rio Grande from San Acacia downstream to San Marcial in Socorro County, New Mexico. The recommended plan is to replace the existing embankment between the Low Flow Conveyance Channel and the Rio Grande with a structurally competent levee capable of containing high-volume, long-duration flows. This engineered levee would substantially reduce the risk of damage from floods emanating from the Rio Grande. The local cost-sharing sponsors of the proposed project are the Middle Rio Grande Conservancy District and the New Mexico Interstate Stream Commission.

DATES: All comments must be submitted or postmarked no later June 11, 2012.

ADDRESSES: Comments, questions, requests for copies of the draft SEIS, and requests for notification of the public meeting can be addressed to: William DeRagon, email: william.r.deragon@usace.army.mil; or Mark Doles, email: mark.w.doles@usace.army.mil; U.S. Army Corps of Engineers, 4101 Jefferson Plaza NE., Albuquerque, New Mexico 87109.

FOR FURTHER INFORMATION CONTACT: Mr. William DeRagon, telephone: (505) 342-3358; or Mark Doles, telephone: (505) 342-3364.

SUPPLEMENTARY INFORMATION: Previously, an environmental impact statement (1992) and a supplement (1977) were published regarding this project. Currently, a new draft SEIS has been prepared to evaluate effects of revised levee design and additional alternatives. The draft SEIS is integrated with a draft General Reevaluation Report, and the integrated document is entitled: *Draft General Reevaluation Report and Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico* (hereafter referred to as the draft GRR/SEIS-II).

Alternatives developed and evaluated during the current and previous studies consist of levee reconstruction; flood and sediment control dams; local levees; intermittent levee replacement; watershed land treatment; floodproofing of buildings; levee-alignment setbacks; and no action. Issues analyzed in the development of the draft GRR/SEIS-II included the effect of alternatives on flood risk, developed lands and structures, water quality, ecological resources, endangered species, social welfare, cultural resources, and aesthetic qualities.

Public Review: The 45-day long review public review period for the draft SEIS begins on April 27, 2012; or on the filing date published by the U.S. Environmental Protection Agency in the **Federal Register**, if later. Copies of the draft SEIS are available at: <http://www.spa.usace.army.mil/fonsi/>. Copies also are available for review at the Socorro Public Library, 401 Park St, Socorro, NM.

A public meeting will be held during the review period in Socorro, New Mexico. An announcement of the exact date and location of the public meeting will be published in the Socorro, Albuquerque, and Santa Fe newspapers.

Julie A. Alcon,
U.S. Army Corps of Engineers Acting Chief,
Planning Branch.

[FR Doc. 2012-10168 Filed 4-26-12; 8:45 am]

Notices of availability of the draft document also were published in the *Socorro Defensor-Ej kghckp*, the *Albuquerque Journal*, and the *Santa Fe New Mexican*. Copies were made available to the general public at the Socorro Library, Socorro, NM. A digital copy of the draft document and appendices was made available to the general public on the Albuquerque District's website.

Copies of the draft GRR/SEIS-II (either paper or digital) were mailed to the following entities:

- Albuquerque Metropolitan Arroyo Flood Control Authority, Albuquerque, NM
- Audubon New Mexico, Santa Fe, NM
- Ben Ray Lujan Jr., U.S. Representative
- Bosque del Apache National Wildlife Refuge, San Antonio, NM
- City of Socorro, Socorro, NM
- Elephant Butte Irrigation District, Las Cruces, NM
- Jeff Bingaman, US Senator
- Martin Heinrich, US Representative
- Mid Region Council of Governments, Albuquerque, NM
- Middle Rio Grande Conservancy District, Albuquerque, NM
- NM Bureau of Geology and Mineral Resources, Socorro, NM
- NM Department of Game & Fish, Conservation Services Division, Santa Fe, NM
- NM Environment Department, Santa Fe, NM
- NM Dept. of Homeland Security and Emergency Management
- NM Interstate Stream Commission, Santa Fe, NM
- NM Ranch Properties, Inc., Bozeman, MT
- NM State Forestry Div., Energy, Minerals, and Natural Resources Dept., Santa Fe, NM
- NM Water Science Center, Albuquerque, M
- Pueblo of Sandia
- Rio Grande Restoration, Embudo, NM
- Sevilleta National Wildlife Refuge, Socorro, NM
- Socorro County, Socorro, NM
- Steven Pearce, U.S. Representative
- Tom Udall, U.S. Senator
- Town of Bernalillo, Bernalillo, NM
- U.S. Bureau of Land Management, Socorro Field Office, Socorro, NM
- U.S. Bureau of Reclamation, Albuquerque Area Office, Albuquerque, NM
- U.S. Dept. of Agriculture, Natural Resources Conservation Service, Albuquerque, NM
- U.S. Fish and Wildlife Service, Ecological Services Field Office, Albuquerque, NM
- Water Culture Institute, Santa Fe, NM
- WildEarth Guardians, Santa Fe, NM

A public meeting was held on May 22, 2012, from 5:00-7: PM, at the City of Socorro Council Chambers, Socorro, NM. The meeting was advertised in the same newspapers as the notice of availability of the draft document. Eight people attended the open-house meeting (exclusive of the Corps); no substantive comments were made on the draft GRR/SEIS-II.

Following are written comments on the draft document, along with annotated responses by the Corps.



SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Surface Water Quality Bureau

Harold Runnels Building, N2050
1190 South St. Francis Drive (87505)
P.O. Box 5469, Santa Fe, NM 87502-5469
Phone (505) 827-0187 Fax (505) 827-0160
www.nmenv.state.nm.us



DAVE MARTIN
Secretary

BUTCH TONGATE
Deputy Secretary

JAMES H. DAVIS, Ph.D.
Director
Resource Protection Division

May 22, 2012

William DeRagon
Mark Doles
U.S. Army Corps of Engineers
4101 Jefferson Plaza NE
Albuquerque, NM 87109

**RE: Draft General Reevaluation Report / Supplemental Environmental Impact Statement II,
Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New
Mexico.**

Dear Messrs. DeRagon and Doles:

The New Mexico Environment Department (NMED) Surface Water Quality Bureau (SWQB) has reviewed the Draft General Reevaluation Report / supplemental Environmental Impact Statement II, for the proposed flood risk management project along the Rio Grande from San Acacia downstream to San Marcial. SWQB provides the following comments regarding potential environmental impacts to surface water quality and wetlands.

The project area is adjacent to the Rio Grande, a perennial water of the state. The segment of the Rio Grande in this project area is currently listed for impairments due to Aluminum and E. Coli concentrations. Sediment from erosional processes is a serious form of nonpoint source (NPS) pollution, which can be exacerbated by vegetation removal. NPS pollution controls are typically established through implementation of Best Management Practices (BMPs). The vegetation removal described for this project will affect a 15 foot riparian corridor along the southern third of the levee project area that according to the GRR/SEIS II is planned to be replaced with some form of low vegetation (eg. Grasses and forbs). The east bank excavation of the flood plain area will also require revegetation of suitable wetland/riparian species to stabilize soil and sediment processes as well as avoid colonization by invasive species.

The project also calls for "the excavation of the east bank ... to reduce high velocity flows downstream of the San Acacia Diversion Dam (SADD) will require specialized construction methods to access and perform the required work. A temporary river crossing downstream of the SADD will be required to access the east bank from the LFCC service road on the west bank of the Rio Grande." National Pollution Discharge Elimination System (NPDES) permit coverage and Best Management Practices that comply with all State Water Quality Standards

U.S. Army Corps of Engineers

May 24, 2012

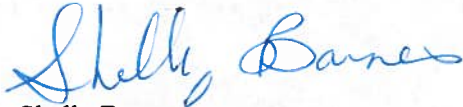
Page 2

(<http://www.nmcpr.state.nm.us/nmac/parts/title20/20.006.0004.htm>) and Antidegradation Policy Implementation Procedures (<ftp://ftp.nmenv.state.nm.us/www/swqb/CPP/2010/CPP-AppendixA.pdf>) are required.

The GRR/SEIS II states that no wetlands will be impacted by this project.

The SWQB requires that best management practices are implemented so that impacts of this project to surface waters of the State are negligible.

Thank you for this opportunity to comment.



Shelly Barnes
Environmental Scientist-Specialist
Watershed Protection Section

Cc: Julie Roybal, NMED Environmental Review Coordinator

Response: The Corps updated the BMPs to be followed during construction and applied for State Water Quality Certification, which was issued by SWQB on February 21, 2013 (see Appendix B of the final GRR/SEIS-II).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6

1445 Ross Avenue, Suite 1200 Dallas, TX 75202-2733

June 8, 2012

U.S. Army Corps of Engineers
Albuquerque District
Ms. Julie Alcon
4101 Jefferson Plaza NE
Albuquerque, NM 87109-3435

Dear Ms. Alcon:

In accordance with our responsibilities under Section 309 of the Clean Air Act (CAA), the National Environmental Policy Act (NEPA), and the Council on Environmental Quality (CEQ) regulations for implementing NEPA, the U.S. Environmental Protection Agency (EPA) Region 6 office in Dallas, Texas, has completed its review of the Draft General Reevaluation Report and Supplemental Environmental Impact Statement II (GRR/SEIS-II) prepared by the U.S. Army Corps of Engineers (USACE) for the Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico.

EPA rates the Draft GRR/SEIS-II as "EC-2" i.e., EPA has "Environmental Concerns and Requests Additional Information" in the Final GRR/SEIS-II. The EPA's Rating System Criteria can be found here: <http://www.epa.gov/oecaerthinepa/comments/ratings.htm>. Detailed comments are enclosed with this letter which more clearly identify our concerns and the informational needs requested for incorporation into the Final GRR/SEIS-II. Responses to comments should be placed in a dedicated section and should include the specific location where the revision, if any, was made. If no revision was made, a clear explanation should be included.

EPA appreciates the opportunity to review the Draft GRR/SEIS-II. Please send our office one copy of the Final GRR/SEIS-II and an internet link or CD when it is sent to the Office of Federal Activities, EPA (Mail Code 2252A), Ariel Rios Federal Building, 1200 Pennsylvania Ave, N.W., Washington, D.C. 20004. Our classification will be published on the EPA website, <http://www.epa.gov>, according to our responsibility under Section 309 of the CAA to inform the public of our views on the proposed Federal action. If you have any questions or concerns, please contact John MacFarlane of my staff at macfarlane.john@epa.gov or 214-665-7491 for assistance.

Sincerely,

Rhonda Smith
Chief, Office of Planning
and Coordination

Enclosure

**DETAILED COMMENTS ON THE U.S. ARMY CORPS OF ENGINEERS' DRAFT
GENERAL REEVALUATION REPORT AND SUPPLEMENTAL ENVIRONMENTAL
IMPACT STATEMENT II
FOR THE
RIO GRANDE FLOODWAY, SAN ACACIA TO BOSQUE DEL APACHE UNIT
SOCORRO COUNTY, NEW MEXICO**

BACKGROUND:

The General Reevaluation Report/Supplemental Environmental Impact Statement II (GRR/SEIS-II) addresses alternative plans to provide higher levels of flood risk management to floodplain communities along the Rio Grande from the San Acacia Diversion Dam downstream to Elephant Butte Lake, New Mexico. The GRR/SEIS-II determines (1) whether the Authorized Project is still implementable; (2) if any changes are necessary for implementation; and (3) if the changes are within the approval authority delegated to the Division Commander, the Corps, or if they require additional Congressional authorization. The GRR/SEIS-II is a complete Alternative Formulation Briefing document with recommendations on future actions to best meet the flood risk management needs within the study area.

CHAPTER 2 -EXISTING CONDITIONS

2.2.1 Climate (and Greenhouse Gases)¹

By statutes, Executive Orders, and agency policies, the Federal government is committed to the goals of energy conservation, reducing energy use, and eliminating or reducing greenhouse gas (GHG) emissions. EPA recommends the Final GRR/SEIS-II address GHG emissions and climate change. For guidance, please see CEQ's "Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions" dated February 18, 2010.

Response: The Mandatory Reporting of Greenhouse Gases Rule (74 FR 56260) requires reporting of greenhouse gas (GHG) data and other relevant information from suppliers of fossil fuels or entities that emit industrial GHG, manufacturers of vehicles and engines and facilities that emit 25,000 metric tons or more per year of GHG emissions. The proposed Federal action does not include activities in the Source Category/Segment Selection List for quantification of emissions from large direct emitters. Therefore, mandatory reporting of Greenhouse Gases Rule is not applicable for this project.

Section 6.2.5 discusses GHG emissions. "Construction equipment would intermittently increase the concentrations of CO, NO_x, SO₂, particulates because they are the primary exhaust products from diesel engines. Dust from excavation and vehicle movement during construction would temporarily increase the concentration of airborne particulate matter locally. These short-term CO, NO_x, SO₂, and particulate emissions have been generously calculated to total approximately 48, 118, 11, and 10 tons, respectively. Because construction would be implemented in phases over 10 to 14 years, the annual emissions of these pollutants would be equal to or less than 4.8, 11.8, 1.1, and 1.0, respectively. Because the proposed project area lies within attainment areas for criteria pollutants, the General Conformity Rule does not apply. However, it is worth noting that even if the proposed project area was located in a non-attainment or maintenance area for any criteria pollutants, according to EPA and state standards, annual

¹ EPA identified topic that should be addressed in the Final GRR/SEIS-II

estimated emissions for these contaminants as a result of proposed construction activities would be defined as *de minimus*."

The yearly GHG emissions for this proposed Federal action will not exceed the 25,000 metric ton recommendation. The Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions, dated February 18, 2010, does not propose the 25,000 metric ton value as an indicator of a threshold of significant effects, but rather as an indicator of a minimum level of GHG emissions that may warrant some description in the appropriate NEPA analysis for agency actions involving direct emissions of GHGs. Therefore, no additional documentation is required.

Global anthropogenic GHG emissions substantially have increased the risk of flood occurrence, especially in arid environments (Molnar, 2012). The proposed levee construction alternatives will provide additional buffers to prevent flooding of the low-flow conveyance channel and the city of Socorro. The GHG emissions after a catastrophic flood within the project area would increase due to emergency operations, restoration and remediation activities.

USACE will implement Best Management Practices (BMPs) to limit GHG emissions. When applicable, the use of clean, lower-emissions equipment and technologies to reduce pollution will occur. The use of lower sulfur fuels will be included in the BMPs.

2.7.1 Demography and 2.7.5 Environmental Justice

The demographic analysis is incomplete as only information about the City of Socorro was included. Although the rest of the project area is basically rural, sparsely populated, and is not developed for industrial or commercial uses, it is important to fully characterize the demographic makeup of the entire project area. Data should be provided by census tract and block group for the area surrounding levee construction, to include minority and low-income populations.

Response: The affected area of the Rio Grande Floodplain within Socorro County encompasses most of one census tract while the remaining effected area is a small part of a census tract making up the majority of rural portions of Socorro County. While Socio-economic statistics are similar for both tracts they are presented in tables for comparison with Socorro County, New Mexico and the United States. Tables displaying data regarding household income, poverty level, minority populations and ethnicity relative to the state and U.S. are included in the Final EIS. The following discussion will be included with the tables.

"The population within the study area at risk of flooding and effected by reduced flood risk though implementation of a Federal Project is disproportionately of a minority group and with income below poverty level compared with New Mexico and the United States. Census tract 9783.03 is within the Rio Grande floodplain west of the river and makes up just under half the areal extent of the study area. When compared to Socorro County, New Mexico and the United States this tract is made up of a much larger proportion of residents of Hispanic or Latino ethnicity. Median Household income for this tract is slightly higher than that of the county but lower than New Mexico and the U.S. The percent of population with income below the poverty level is 21% compared to 27% for the County and 14% and 10% for New Mexico and the U.S. respectively. The study area outside of census tract 9783.03 is included in census tract 9781 which includes all of Socorro County East of I-25. Tract 9781 has similar median income but a slightly higher number of individuals with income below poverty level (25%)."

Tiffany Basin

Section 5.1.1 0 -Fill, Borrow, and Disposal Requirements states "A spoil location within the Tiffany basin was identified as adequate for spoil subject to acquisition of the right to dispose in that area." As defined by 40 Code of Federal Regulations (CFR) §1508.25, using the Tiffany basin for a

spoil disposal site is a connected action. Thus, the Final GRR/SEIS-II should fully characterize the existing conditions of the Tiffany basin and subsequently analyze the impacts to the basin and its resources from spoil disposal. In addition, any on-or off-site staging, disposal, and borrow sites that may be part of the proposed project, must be addressed in this same manner.

Response: The text in Chapters 2 (Existing Conditions) and 5 (Foreseeable Effects) have been revised to more clearly describe the conditions and potential effects of spoil disposal at the Tiffany Basin.

Recreation Resources¹

The Final GRR/SEIS-II should address recreation resources. The clearing of undeveloped land to construct the new levee could result in the loss or degradation of fish and wildlife habitat that are utilized for nature-based recreation. People traveling to the area for bird watching, fishing, and other nature-based recreational opportunities could see a decrease or alteration in the available natural areas that play host to these opportunities. Impacts to recreational resources would most likely occur on lands within the Bosque del Apache National Wildlife Refuge, as approximately 8.7 acres of vegetation would be removed.

Response: The text has been revised to describe that the location of vegetation alteration or removal within Bosque del Apache NWR are closed to public access and would not substantively affect recreational opportunities at the refuge.

CHAPTER 5 -DESCRIPTION OF THE FINAL ARRAY OF ALTERNATIVES:

According to 40 CFR 1502.14, the Alternatives section "should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public." The Final GRR/SEIS-II should formulate the basis for comparison and include an alternatives screening analysis, including a comparison of alternatives and reasons why alternatives were eliminated or carried forward. The Final GRR/SEIS-II should include clear and concise rationale as to why the recommended plan was selected as the preferred alternative.

Response: Chapters 5 (Description of the Final Array of Alternatives), as well as Chapter 6 (Foreseeable Effects) has been revised to more clearly allow for comparison of issues and effects among the reasonable alternatives, and to clarify the bases of comparison and the rationale for selection of the proposed action.

The sometimes non-linear screening of alternatives is inherently difficult to explain. The structure of the document provides multiple iterations of alternatives screening including alternatives considered in previous EIS's (summarized in table 4.1). Remaining alternatives including non-structural measures and levees are then screened based on completeness, effectiveness and efficiency in Chapter 4. Section 4.6 focuses on optimization of levee height primarily on cost/benefit basis that is then applied to the remaining alternative levee lengths. The final array is then two levee lengths at two levee heights respectively and implementation of a levee setback as a measure applied to all four levee alternatives. Those alternatives are then compared based on several criteria as summarized in Table 4.12. Alternative A with a levee height corresponding to the Base Levee + 4 ft is the described in detail in Chapter 5 since the remaining alternatives are essentially variants or extensions of the same Alternative A levee. Additional discussion is added to the first paragraphs of Sections 4.7, 4.9, 4.10 and 5.1 to link the discussion of screening and progression of the final array of alternatives. A discussion and table is added

in Section 4.10 to summarize screening up to this point and describe alternatives carried forward for analysis of environmental effects.

5.1.14 East Bank Excavation and Access

This section discusses a temporary river crossing downstream of the San Acacia Diversion Dam. The Section 404(b)(1) Guidelines Evaluation in Appendix B states "To access the East Bank Excavation area, a temporary crossing would be placed across the channel of the Rio Grande. The crossing would be 300 feet long with a top-width of 15 feet. The crossing would entail 1,000 CY of earthen material (from a portion of the previously excavated spoil bank) and six 60-inch-diameter, 30-feet-long corrugated metal pipes. The majority of these materials would be below the OHWM." This section and the 404(b)(1) evaluation should address when and how the crossing will be removed, where and how the material will be disposed of, impacts to appropriate resources, especially water quality, and how the area will be restored to pre-project conditions.

Response: Chapter 5 and Appendix B were revised accordingly. Briefly, during low-flow conditions, material comprising the crossing will be carefully removed by excavators. As much material as practicable will be removed without excavating the pre-existing channel bottom. In such case, a relatively small amount of earthen material might be left in place; however, considering that the channel is incised in this reach and is sediment-deficient, this excess material would not be detrimental. The resumption of flow when material is removed would cause only a slight and temporary increase in suspended sediment. Excavated earthen material from the crossing would be disposed similarly to that proposed for waste spoil from the existing spoilbank (see Section 6.2.2). Also see Section 6.2.4, Water quality, for a detailed discussion regarding water quality and Clean Water Act permitting.

5.5 Levee Setback at River Mile 108

This alternative is a slight modification in the alignment of any of the four levee-construction alignments. The alignment of the new levee, Low Flow Conveyance Channel, and associated maintenance roads would be shifted to the west, thus reconnecting approximately 80 acres of the floodplain with the floodway.

The degradation of the Rio Grande and its associated bosque is well-documented among researchers and scientists who have studied the Rio Grande ecosystem. The GRR/SEIS-II states on page 2-14 "Changes to channel geometry have reduced overbank flooding and floodplain connectivity, limiting regeneration of riparian habitat. The long-term impacts of channel incision on wetland and riparian habitat are two-fold: a gradual reduction in the number of wetland and riparian plant species results in shrinking areas of these habitat types while at the same time, the lower ground water and surface water elevations relative to floodplain terraces reduce the probability of regeneration of these habitats."

As the preferred alternative would only exacerbate the degradation of the Rio Grande ecosystem, including altered river geomorphology, habitat fragmentation, habitat degradation, continued wetland loss, and adverse effects to rare plant and animal species, EPA recommends the Levee Setback at River Mile 108 alternative be implemented. This alternative would reconnect approximately 80 acres of floodplain to the floodway. EPA encourages expanding the carrying-capacity for floodwaters with levee setbacks that reconnect the historic floodplain throughout the portion of the Rio Grande watershed in the project area. The positive effects of floodplain reconnection are numerous, including but not limited to, native vegetation regeneration, downstream flood reduction, wetland formation, and positive effects to rare plant and animal

species.

Response: The text has been revised to describe that the relative habitat value of the 80 acres added to the floodway as a result of the Levee Setback at River Mile 108 would be low because the area would be inundated infrequently; that is, by flows equal to or greater than 15,400 at San Acacia cfs (10% chance exceedance). The following text is added to section 5.5 "Vegetation in this area would not change substantially since the current elevation does not experience inundation until river flows approximately 15,400 cfs (10% chance exceedance flow). The additional area in the floodway would have some benefit by increasing floodway capacity during flows that exceed this discharge." And in Section 6.4.1 e. "Vegetation composition within the 80 acre area would not be expected to change significantly since inundation would occur infrequently however some geomorphic changes from river channel meander may occur in the long term without threatening the levee in its new alignment."

Additionally, the U.S. Bureau of Land Management has determined that the Setback at River Mile 108 alternative would be inconsistent with the goals and objectives of the recreation area as stated in their Socorro Resource Management Plan. This correspondence has been included in Appendix G of the final GRR/SEIS-II.

CHAPTER 6 -FORESEEABLE EFFECTS OF THE PROPOSED ACTIONS AND ALTERNATIVES

6.2.4 Water Quality

Page 6-8 states "Considering the relatively minor net effects described above, none of the levee construction alternatives would adversely affect water quality and waters of the United States." While adverse impacts to water quality may be minor and temporary, we do not agree that there will be no adverse effects whatsoever. Any construction activity, within a waterway would affect, to some degree, the physical, chemical, and/or biological characteristics of that waterway. This section should address, in detail, any impacts, the degree of the impacts (minor, moderate, or significant), and the longevity (short or long) of the impacts. Rip rap placement below the ordinary high water mark along 2.5 miles of the river should be specifically addressed and analyzed for impacts to water quality.

Section 6.2.4 was modified to discuss the minor and temporary impacts to water quality during the construction and removal of the temporary water crossing and all other activities that may disturb water quality. USACE will monitor water quality prior to, during, and after construction activities that may alter general water quality. Water quality monitoring is discussed in previous response to comment and in BMPs of the GRR/SEIS-II (See Section 6.2.4). It is anticipated that any impacts will be short in duration, and will equilibrate back to preexisting conditions quickly after disturbance. In the Rio Grande there are extended periods of low flow, with extremes in habitat characteristics, such as depth, velocity, and cross-sectional area, and water quality parameters, such as temperature, dissolved oxygen, and suspended sediment, which require existing communities to have wide environmental tolerances (Crawford, et al., 1993). Therefore, if any minor and temporary impacts to water quality occur, it will not disturb the existing biological communities. BMPs identified in the GRR/SEIS-II and the SWPPP reduce any potential impacts to water quality. Riprap, consisting of uncontaminated, appropriately sized basalt, will not adversely impact water quality. Riprap will stabilize the toe of the levee, which will limit scouring and mobilization of sediments during periods of inundation. At all locations, the majority of the riprap volume would be buried below the substrate, limiting the interactions with surface water.

State water quality certification for the recommended plan was issued by the New Mexico Environment Department, Surface Water Quality Bureau, on February 21, 2013, and is referenced in the final

GRR/SEIS-II, and included in Appendix B.

6.2.5 Air Quality

Any demolition, construction, rehabilitation, repair, dredging or filling activities have the potential to emit air pollutants and we recommend best management practices be implemented to minimize the impact of any air pollutants. Furthermore, construction and waste disposal activities should be conducted in accordance with applicable local, state and federal statutes and regulations.

EPA encourages the use of clean, lower-emissions equipment and technologies to reduce pollution. EPA's final Highway Diesel and Nonroad Diesel Rules mandate the use of lower-sulfur fuels in non-road and marine diesel engines beginning in 2007.

Response: Section 6.2.5 was edited to reflect minimal, if any, short term impacts to air quality that may occur as a result from construction of any of the levee construction alternatives. As discussed in Section 6.2.5, during ground disturbance activities, stockpiles, haul roads, access roads, staging areas, borrow areas, and all other work within or outside the project boundaries would be required to be maintained to prevent hazardous or nuisance airborne particulate matter. Impacted areas will be periodically sprayed with water or other approved methods to minimize fugitive dust and other particulate. Construction, recycling activities and waste disposal activities will be conducted with applicable local, state and federal statutes and regulations. When feasible, the use of clean, lower-emission equipment and technologies to reduce pollution will be implemented.

6.4.1 Aquatic Habitat and Inundated Floodway

This section should identify impacts to aquatic habitat caused by the proposed construction project. Currently, this section only addresses flooding impacts (indirect) and the areal loss or gain to floodway and floodplain areas due to levee construction. The Final GRR/SEIS-II should address impacts to aquatic habitats due to construction, including impacts to the various aquatic organisms within the river.

Response: Section 6.4.1 was revised accordingly.

6.5 Special Status Species

This section should address all species on the U.S. Fish and Wildlife Service (USFWS) list of threatened and endangered species within Socorro County, including candidate species. It should also address state listed species. A table should include the species, their preferred habitat, if the project area contains the preferred habitat, and potential impacts from the proposed project. We recommend the USACE contact the New Mexico Department of Game and Fish (NMGF) as to the appropriate state listed species to include in this analysis. The NMGF may have recommendations and mitigation plans relative to state listed species that would be important to employ during and after construction of this project.

Response: Response: The Corps submitted its Biological Assessment for consultation with the U.S. Fish and Wildlife Service in December, 2011. The Service issued its final Biological Opinion on February 28, 2013. All relevant information regarding this consultation is contained in Appendix C to the GRR/SEIS-II. The Service's Biological Opinion contains stringent, non-discretionary terms and conditions designed to implement reasonable and prudent measures required for the protections for all threatened and

endangered species. The Corps also provided the draft GRR-SEIS-II for review to the New Mexico Department of Game and Fish; no comments were submitted to the Corps.

The Final GRR/SEIS-II should include results of Section 7 consultation with the USFWS and coordination with NMGF. Where possible, we recommend that mitigation measures be identified for all special status species with the potential to be adversely affected by direct and indirect impacts of the project.

Response : The Final GRR/SEIS-II includes a summary of the results of Endangered Species Act consultation and an updated mitigation plan. Appendix C of the document includes the Programmatic Biological Opinion, and Appendix.F-4 includes the updated mitigation plan.

6.8.5 Environmental Justice

Utilizing the data collected in Section 2.7.5, this section should determine if there are disproportionately high and adverse human health or environmental effects to minority and/or low-income populations within the project area.

Response: Updated numbers from the 2010 census will be added to the discussion in Section 2.7.5. The affected area of the Rio Grande Floodplain within Socorro County is included in 2 of five Census tracts for Socorro County. One tract corresponds to approximately half of the Rio Grande Flood plain in the study area while the rest of the study corresponds to the tract that includes most of the rest of Socorro County. Data regarding household income, poverty level, minority populations and ethnicity relative to the state and U.S. will be included in the Final EIS.

6.10 Cumulative Impacts

40 CFR §1508.7 states that cumulative impacts are those impacts "on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or persons undertake such actions." EPA suggests the Final GRR/SEIS-II include a thorough cumulative impacts analysis by establishing spatial and temporal boundaries for each applicable resource and including a list and description of past, present, and reasonably foreseeable future projects. These projects should be analyzed, in conjunction with the proposed project, as to their cumulative effects on the natural and human environment.

Please refer to the Council on Environmental Quality's "Considering Cumulative Effects Under the National Environmental Policy Act" and EPA's "Consideration Of Cumulative Impacts In EPA Review of NEPA Documents" for assistance with identifying appropriate boundaries and identifying appropriate past, present, and reasonably foreseeable future projects to include in the analysis.

Response: Section 6.10, Cumulative Effects, has been revised accordingly, incorporating guidance from the above references, as appropriate.

CHAPTER 7 - POST AUTHORIZATION CHANGES

7.1.13 Public Involvement

From the current language in this section, it appears that there was no public involvement efforts except for those made in 1992 and 1999. EPA believes that the information provided and the public involvement afforded is insufficient for a project of this magnitude. However, a phone discussion and subsequent email from Mark Doles of the USACE Albuquerque District revealed that the USACE did make recent efforts to involve stakeholders and local, state, and federal agencies in project development. The USACE has agreed to provide additional information regarding their public involvement process. If the following language provided by the USACE is incorporated into the Final GRR/SEIS-II, EPA feels that the public participation process was sufficient.

"Public concerns as well as those of the coordinating resource agencies helped guide the development and formulation of the array of alternative plans presented in this GRR/SEIS-II. During the study, coordination within the Middle Rio Grande community was accomplished through Middle Rio Grande Endangered Species Collaborative Program (MRGESCP), Middle Rio Grande Levee Task Force, reservoir operation and water delivery functions. The MRGESCP is a partnership involving 16 current signatories organized to protect and improve the status of endangered species along the Middle Rio Grande (MRG) of New Mexico while simultaneously protecting existing and future regional water uses. The levee task force was created to study the status of levees in the Middle Rio Grande valley. Flood risk management issues as well as environmental or ecosystem health issues were communicated through these organizations and incorporated into the project objectives.

The lack of integrity of the existing spoil bank in the study reach and other locations in the Middle Rio Grande reach dictate the upper limits of releases from upstream dams. These limitations impact water delivery, sediment movement and floodplain ecosystem function. These three issues are intertwined and the subject of discussion and implementation for coordinating in the San Acacia to Bosque del Apache Unit. The US ACE, as a member of these coordinating groups and involvement in water delivery effort for several years, is aware of the issues surrounding flood risk management levees in the study reach. Consideration of environmental impacts, endangered species requirements and river function was incorporated into the design of the current study.

In addition to many informal conversations with stakeholders, the USACE hosted an information and scoping meeting on 14 January 2011 for several stakeholder and interest groups to present the array of alternatives and tentatively selected plan. The group included members of the Save Our Bosque Taskforce, Audubon Society, Wild Earth Guardians, Rio Grande Restoration, the Water-Culture Institute, Bureau of Reclamation, and representatives from Senators Bingaman and Udall's offices. The input received from the meeting included additional forecasting of future conditions and evaluation of levee setbacks as presented in the GRR/SEISII.

A public meeting was held on 22 May 2012 at the Socorro city council chambers to coincide with the public review of the GRR/SEIS-II. There were eight attendees from interested citizens and agencies. No official comments were received during the public meeting. The attendance list and comments received during the public review period are included in Appendix G. The notice of this

meeting appeared in the Santa Fe New Mexican (3 publications), The Albuquerque Journal (4 publications) and Socorro El Defensor-Chieftain (1 publication). Notices of availability of the public document for review appeared in each of the same newspapers. Paper copies of the document were made available at the Socorro City Library and the USACE office in Albuquerque. Electronic copies on compact disk were sent to approximately 50 stakeholders and agencies as well as made available on the USACE website."

[No additional response required.]



United States Department of the Interior
OFFICE OF THE SECRETARY



Office of Environmental Policy and Compliance
1001 Indian School NW, Suite 348
Albuquerque, New Mexico 87104

ER 12/306
File 9043.1

June 11, 2012

VIA ELECTRONIC MAIL ONLY

William DeRagon
U.S. Army Corps of Engineers
4101 Jefferson Plaza NE
Albuquerque, New Mexico 87109

Dear Mr. DeRagon:

The U.S. Department of the Interior is providing comments on the U.S. Army Corps of Engineers' Draft General Reevaluation Report/Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico (GRR/SEIS-II). The GRR/SEIS-II addresses alternative plans to provide higher levels of flood risk management to floodplain communities along the Rio Grande from the San Acacia Diversion Dam downstream to Elephant Butte Lake, New Mexico. The recommended plan consists of an earthen levee extending approximately 43 miles along the west bank of the Rio Grande, from the San Acacia Diversion Dam to Tiffany Junction, ending approximately 3 miles north of the Railroad Bridge at San Marcial. The comments provided in the Enclosure are intended to provide technical assistance. We offer both general and specific comments.

We appreciate the opportunity to provide comments on the GRR/SEIS-II and we look forward to continuing to work with the Corps on this project. If you have any further questions, please contact Aaron Archibeque, Regional Chief, U.S. Fish and Wildlife Service, National Wildlife Refuge System, Albuquerque, New Mexico, at 505-248-6937.

Sincerely,

Stephen R. Spencer, PhD
Regional Environmental Officer

Enclosure

Comment Number/ Commenter	Chapter	Page Number	Comment
#1 Bosque del Apache (BdA)	General		<p>Jetty jacks are located intermittently along the entire project area. Jetty jack removal should be described in sections relative to the riprap placement and their continued service to flood risk management.</p> <p>Response: Concur. Section 5.1.4, Levee Erosion Control, was revised to include the following text: "Graded stone erosion protection revetment, known commonly as riprap, has been specified in areas judged to be susceptible to erosion and scour that could compromise the project's performance or physical integrity of the proposed levee. Existing jetty jacks located in and around the proposed project area would continue to provide erosion protection. Riprap placement (along with other forms of armament such as soil cement) has been designed to extend, rather than replace, the existing jacks in order to improve project reliability. Except for limited areas, such as where portions of existing jack tieback lines will be shortened to permit construction access, the existing jacks would remain in place to continue functioning as retards. For those limited cases where jack lines will be shortened, the ends would be re-anchored to preserve their functionality."</p> <p>In some cases, jetty jacks help to control public motorized access and could be beneficial even if not serving a flood risk purpose and in other cases they obstruct restoration or recreation efforts. The Corps should consult with local land managers and interested parties about these features.</p> <p>Response: Concur. As you have noted, the jack fields impose a substantial obstacle to motorized travel, and can also impose restrictions for pedestrians, equestrians, bicyclists, etc. Throughout the ensuing design process, the Corps will continue to coordinate with stakeholders and resource agencies in the project area. There are opportunities under this project to address specific cases where jack removal might be desirable. In such cases it will be necessary to determine if the need for stabilization that led to the original jetty jack placement remains or would be anticipated to recur over the proposed project's life, and to restore that functionality as needed through other means, including through riprap.</p>
#2 BdA	General		<p>There are a number of access ramps off the levee both to the west and east in the project area. Coordinate with local land managers and interested parties about the appropriate ramps for the Socorro Riverine Parks and other needs such as access to utilities, access to lower berm roads, and ramps for firefighting access. It may be appropriate to limit access in some areas.</p>

			<p>Response: Concur. The current intent is to replace access ramps in the same location they occur presently. As part of the detailed design coordination will be conducted with stakeholders such as Bureau of Reclamation, MRGCD, NM State Forestry, and USFWS, to determine if access ramps should be added removed or remain.</p>
#3 Sevilleta	General		<p>The document does not mention any impacts or effects to Sevilleta NWR. The Refuge was under the impression the Corps wanted to excavate the area on the east bank of the Rio Grande, south of San Acacia Diversion Dam, in order to lessen the angle of the river bend, and would need to build a temporary bridge across the Rio Grande south of San Acacia along with a road up the east side of the River. This all occurs on Sevilleta NWR land, and quite a bit of salt cedar and some native riparian vegetation would need to be cleared and subsequently revegetated with native species.</p> <p>Response: East-side Excavation is described in Section 5.1.2 and 5.1.14 and has been revised per comment 9 below. Effects of this measure are analyzed in Sections 6.2.4, 6.4.1.2, and 6.4.2.1. Mitigative plantings are described in Section 6.4.2.4. These and other pertinent sections of the final GRR/SEIS-II were revised to specify that the described features or effects occur on Sevilleta NWR.</p>
#4 Sevilleta	S	2	<p>The Executive Summary only describes two Federally-owned facilities within the area of consideration, Bosque del Apache NWR and Low Flow Conveyance Channel. This should reflect three Federally-owned facilities, to include Sevilleta NWR.</p> <p>Response: Concur. The text is changed in the executive summary as well as Section 1.4 to read: "Three major Federally owned facilities within the area of consideration are the Sevilleta National Wildlife Refuge, Bosque del Apache National Wildlife Refuge (BDANWR) and the Low Flow Conveyance Channel (LFCC) (Figure 1.1). The former does not incur damages from flooding within the study area but manages lands in the vicinity of the San Acacia Diversion Dam. The latter two facilities incur damages during flood events."</p>
#5 Sevilleta	1	4	<p>Both Rio Puerco and Rio Salado occur on Sevilleta NWR.</p> <p>Response: Concur. See response to #7 below.</p>
#6 Sevilleta	1	5	<p>The Study Area section states the area extends from the San Acacia Diversion Dam south through the Bosque del Apache NWR, but the section fails to mention the Study Area starts on the Sevilleta NWR. Figure 1-1 shows</p>

			<p>Sevilleta NWR.</p> <p>Response: Concur. Throughout the document, the SADD is used as the landmark delineating the study boundary, as it is provided in the congressional authorization. The language added per comments 4 and 7 address discussion of the location of the Sevilleta NWR relative to the SADD and the study area.</p>
#7 Sevilleta	1	10	<p>The section repeats the same language as used in the Executive Summary and needs to mention Sevilleta NWR. Suggested text: “Sevilleta NWR is one of the largest refuges in the National Wildlife Refuge System, encompassing 228,700 acres. It runs the full width of the Rio Grande Valley extending from the Sierra Ladrones on the west to Los Pinos Mountains on the east. It is approximately 30 miles in width and 18 miles in length, covering a total of 400 square miles. Elevations on the refuge range from 4,430 feet at the Rio Grande to 8,953 feet at Ladrón Peak. Four dominant vegetation communities intersect on the refuge: Colorado Plateau Shrub Steppe, Chihuahuan Desert, Great Plains Short Grassland Prairie, and Piñon Juniper Woodland. In addition, the Rio Grande flows through the center of Sevilleta NWR, providing a riparian oasis that plays a vital role in the mixed ecosystems. These plant communities support approximately 89 mammal species, 250 bird species, 58 reptile species, and 15 amphibian species.”</p> <p>Response: Concur: Text was added to Section 1.4 to read: “The Sevilleta National Wildlife Refuge (SNWR) is one of the largest refuges in the National Wildlife Refuge System, encompassing 228,700 acres. It runs the full width of the Rio Grande Valley extending from the Sierra Ladrones on the west to Los Pinos Mountains on the east. It is approximately 30 miles in width and 18 miles in length, covering a total of 400 square miles. Elevations on the refuge range from 4,430 feet at the Rio Grande to 8,953 feet at Ladrón Peak. The bulk of the SNWR occurs upstream of the study area. The confluence of both the Rio Salado and Rio Puerco occur on the refuge. The refuge and study area overlap on both sides of the Rio Grande in the vicinity of the San Acacia Diversion Dam. No damages are incurred from flooding to the Sevilleta Refuge within the study area.”</p>
#8 Migratory Birds	5	1	<p>The clearing of vegetation 15 feet out from the base of the toe to create a vegetation-free zone will require extensive tree and shrub removal. Many migratory birds nest in this vegetation, particularly near the edges where a shrub layer may be dense. There is no mention of how the Corps will avoid take of migratory birds and comply with the Migratory Bird Treaty Act for this action.</p>

			<p>Response: Section 6.4.2.3 states: "Vegetation removal and clearing-and-grubbing activities for the Vegetation-free Zone—and for all proposed construction—would only occur between August 15 and April 15 to avoid disturbance of nesting migratory birds. Vegetation removal outside of that period would only be performed after a survey by a biologist confirms that disturbance to nesting migratory bird species would be avoided."</p>
#9 Sevilleta	5	2	<p>The Levee Design section does not state the excavation will occur on Sevilleta NWR.</p> <p>Response: Concur. Text is added to Section 5.1.14 to read: "Access and excavation occurs on Sevilleta National Wildlife Refuge lands on the East bank of the Rio Grande in this area. Preliminary plans have been coordinated with the refuge to include access and construction activity as well as restoration of the floodplain following excavation. Final plans for construction activity and subsequent mitigation of riparian habitat will be coordinated with the refuge."</p>
#10 Sevilleta	5	4	<p>The legend for Figure 5-4 identifies the red line on the figure as the "highway," but this is the boundary for the Sevilleta NWR.</p> <p>Response: The map legend may have been misinterpreted. The boundary line for either refuge in the set of map figures 5.4 through 5.9 is not identified in the legend. The red/orange solid line in the legend signifies a highway category that appears in figure 5.6 as Highway 380.</p>
#11 BdA	5	14	<p>Explain current and potential use of this land with or without additional spoil. It is a part of the floodplain and as such has been discussed as a potential riparian restoration site (spoil location in Tiffany Basin).</p> <p>Response: The text was augmented to clarify current and future uses and conceptual restoration plans for the Tiffany Basin.</p>
#12 BdA	5	15	<p>The Vegetation Management section does not mention any supplemental water to assure native grass germinates and successful establishment occurs.</p> <p>Response: Concur. The text was revised to clarify that supplemental watering is proposed to assure successful establishment of grasses.</p>
#13 BdA Sevilleta	5	18	<p>Section 5.1.16.4 fails to mention Sevilleta NWR. Additionally, a compatibility determination is required for both Bosque del Apache and Sevilleta NWRs.</p> <p>Response: Concur. The text (now in Sec. 5.1.17.4) was</p>

			revised accordingly.
#14 BdA	5	18	<p>A maintenance schedule is needed for vegetation management for the operation and maintenance of the vegetation free zone at the riverside toe of the constructed levee.</p> <p>Response: Maintenance will be required to prevent the establishment and growth of woody vegetation and invasive species within the Vegetation Free Zone. The Corps will coordinate with the Refuges regarding time-specific recommendations for such maintenance and included such information in an O&M manual provided to the sponsors.</p>
#15 BdA	5	18	<p>Gate placement at Brown Arroyo is likely to impact wetlands occurring at the mouth of the arroyo. This chapter does not mention these conditions and there is no discussion of mitigation for the impacts.</p> <p>Response: The area was determined to be waters of the U.S., and the potential effects are discussed in the final GRR/SEIS-II and Appendix B, Section 404(b)(1) Guidelines Evaluation. However, the Corps will continue to coordinate with Dol to ensure impacts to habitats of significance are minimized.</p>
#16 BdA	5	19	<p>Along with spoil deposited in the Tiffany Basin, an eastside levee (Alternative K) would also limit riparian habitat restoration, sediment management, and river re-connectivity to the Tiffany Basin in the future. This is not acknowledged in Alternative K.</p> <p>Response: The text in Section 5.3 was augmented to describe these potential effects.</p>
#17 BdA	5	20	<p>The name of park adjacent to the Levee setback at RM 108 is “Socorro Nature Area.”</p> <p>Response: Concur. The correction was made.</p>

<p>#18 BdA</p>	<p>6</p>	<p>1</p>	<p>Features common to all alternatives: 1) Floodwall upstream - no discussion of this design was found. Describe if the floodwall will isolate floodplain riparian vegetation or change flooding potential in riparian habitat upstream of San Acacia Diversion Dam;</p> <p>Response: This feature is described in Sections 5.1.2; however, the description was augmented with additional detail. Specifically, the floodwall would be located in a disturbed upland on the terrace approximately 15 vertical feet above the riparian zone. The floodwall would not affect riparian vegetation nor reduce inundation of the riparian zone in upstream or downstream from the San Acacia Diversion Dam.</p> <p>2) 1.08 miles of soil cement - no mention of possible impacts to vegetation on this bankline (not removal but isolation from groundwater) and no mention of access to fishing, which is common in this location;</p> <p>Response: Groundwater discharge to the river channel would not be altered by the soil-cement embankment. Access to the channel by fisherman would be not be inhibited; they could traverse the stair-stepped embankment at any location along its entire length.</p> <p>3) Excavation of 12.4 acres on east bank terrace - if most of the area is only available to the river at approximately 15,000 cfs, riparian vegetation establishment and sustainability is limited over most of the site;</p> <p>Response: Concur. Mitigative riparian plantings are planned only along the immediate channel bank of this area. The remainder of the site would be stabilized by seeding with upland grass and shrub species.</p> <p>4) Slide-gate closure at Brown Arroyo – no evaluation of impact to wetlands at mouth of arroyo;</p> <p>The area was determined to be waters of the U.S., and the potential effects are discussed in the final GRR/SEIS-II and Appendix B, Section 404(b)(1) Guidelines Evaluation. However, the Corps will continue to coordinate with Dol to ensure impacts to habitats of significance are minimized.</p> <p>5) 5.68 miles of riprap protection - no discussion of avoiding changes in topography on riverside toe of levee that would limit Rio Grande silvery minnow entrainment during recession of high flows; ...</p> <p>Response [as for Comment #24]: Corps biologists have proposed refinements to the design of the vegetation-free zone to reduce flow along the levee to reduce erosion while</p>
--------------------	----------	----------	--

			<p>providing slackwater habitat for the silvery minnow. These slackwater areas would be sloped to drain away from the levee to facilitate silvery minnow (all age classes) movement back toward the main river channel. The principle alteration to floodplain flow patterns would be reducing the tendency for erosion adjacent to the levee that creates channels and pools that may be isolated as the river recedes. Corps staff will coordinate with Refuge staff to refine these measures to address potential impacts to silvery minnows.</p> <p>... and 6) 300-acre spoil deposition area - no protection from building in floodplain following spoil placement or isolation of these lands from future potential riparian plant establishment.</p> <p>Response: The entire Tiffany Basin is, and would continue to be, within the 10%-chance floodplain. The proposed project would not increase the likelihood of residential development of the area. The text was augmented to clarify current and future uses and conceptual restoration plans for the Tiffany Basin.</p> <p>We recommend the Corps conduct a more in-depth analysis on features common to all alternatives in this chapter.</p> <p>[See responses to individual points above.]</p>
#19 BdA	6	4	<p>The table printed at large scale is unreadable.</p> <p>Response: Table 6.1 from Page 6-4 prints legibly at the intended 8.5 X 11 inch format from the webpage document version as well as the PDF forwarded on compact disc. Recommend viewing in either of these formats.</p>
#20 BdA	6	5 - 6	<p>The section describes flood potential into Brown Arroyo but does not describe current conditions. Wetland impacts need to be addressed.</p> <p>The area was determined to be waters of the U.S., and the potential effects are discussed in the final GRR/SEIS-II and Appendix B, Section 404(b)(1) Guidelines Evaluation. However, the Corps will continue to coordinate with Dol to ensure impacts to habitats of significance are minimized.</p>
#21 BdA	6	6 - 7	<p>Floodplains – looking at the maps (pages 5-6 to 5-13).</p> <p>Response: The Corps will clarify this comment with BDANWR</p>
#22 BdA	6	9	<p>Address the adverse impacts to the Brown Arroyo wetlands under the levee alternatives design.</p>

			<p>The area was determined to be waters of the U.S., and the potential effects are discussed in the final GRR/SEIS-II and Appendix B, Section 404(b)(1) Guidelines Evaluation. The footprint of the gate closure structure would be similar for all levee alternatives. The Corps will continue to coordinate with Dol to ensure impacts to habitats of significance are minimized.</p>
#23 BdA Sevilleta	6	10	<p>Noise during sensitive times for wintering water birds on the refuge and throughout the reach should be avoided. Identification of these areas would be required to adjust implementation schedule. Request consideration during scheduling for high volume public use times (e.g., hauling) at the refuges.</p> <p>Response: The Corps will clarify and address Refuge concerns in the Determination of Compatibility.</p>
#24 BdA	6	13	<p>The additional footprint in the current floodway within the refuge (8.1 acres) due to changes in topography that would alter flow patterns on the floodplain, potentially stranding Rio Grande silvery minnows, needs be avoided or mitigated. Refuge Staff is willing to work with the Corps to determine appropriate measures to limit or address these potential impacts.</p> <p>Response: Corps biologists have proposed refinements to the design of the vegetation-free zone to reduce flow along the levee to reduce erosion while providing slackwater habitat for the silvery minnow. These slackwater areas would be sloped to drain away from the levee to facilitate silvery minnow (all age classes) movement back toward the main river channel. The principle alteration to floodplain flow patterns would be reducing the tendency for erosion adjacent to the levee that creates channels and pools that may be isolated as the river recedes. Corps staff will coordinate with Refuge staff to refine these measures to address potential impacts to silvery minnows.</p>
#25 BdA	6	15	<p>As noted above, the 300-acre spoil deposition area within the Tiffany basin is considered a potential site for restoration. Changing the connectivity to groundwater up to 6.5 feet would change the potential for site restoration. Describe any mitigation associated with the loss of possible riparian vegetation.</p> <p>Response: The entire Tiffany Basin is, and would continue to be, within the 10%-chance floodplain, inundated only due to a breach in the Tiffany East spoil bank. Vegetation throughout the affected consists of monotypic saltcedar which is capable of growing in riparian or upland areas. Groundwater elevations in the basin are only nominally affected by river. The affected area is not a functional</p>

			riparian zone. The text was augmented to clarify current and future uses and conceptual restoration plans for the Tiffany Basin.
#26 Sevilleta	6	18	<p>Measure A – Discuss “native” grass seeding along the riverside corridor.</p> <p>Response: The text was revised to indicate "native" grass would be planted. The Corps will coordinate with the Refuges regarding the preferred species mix.</p>
#27 Sevilleta	6	18	<p>Measure B - Please discuss Sevilleta NWR in this section.</p> <p>Response: SNWR was referenced in regard to these plantings, now discussed in Section 6.4.2.5, Project features with incidental benefits to fish and wildlife resources.</p>
#28 Sevilleta	6	18	<p>Measure C - Please discuss Sevilleta NWR in this section.</p> <p>Response: In the final GRR/SEIS-II this is now termed "Measure B." The text was augmented to clarify that these plantings would occur within Sevilleta NWR.</p>
#29 BdA	6	18	<p>Measure C: Partially replace? Riparian vegetation used by fish and wildlife? What vegetation is this replacing? Describe the quantity of the vegetation lost. State density of willow plantings and site conditions (i.e., depth to groundwater, soil characteristics) that would support these plantings.</p> <p>Response: The statement intended to convey that this measure would only partially replace the value of shrub habitat affected by the <u>entire project</u>. The confusing reference to "partially" was deleted.</p>
#30 BdA	6	19	<p>Measure G and all measures including vegetation free zone maintenance should include an invasive weed management plan with commitments by responsible parties. The current levee has invasive weed species that can spread by construction and maintenance actions. We recommend the Corp set aside resources to assist responsible parties in addressing these disturbance issues.</p> <p>Response: Section 6.4.3 (Invasive Plant Species and Noxious Weeds) and the mitigation plan in the final GRR/SEIS-II includes additional specifics regarding the sponsor's requirements for management.</p> <p>The Corps will be responsible for these management activities until the project (or its separable parts) are turned over to the local sponsor. As required by regulation, the local sponsors will agree to fulfill the fiscal obligations of the</p>

			OMRR&R plan.
#31 BdA	6	20	<p>It has been our experience that without supplemental watering after seeding, Measures A, B, D, and G would all have limited success. The budget for these seeding projects would need to reflect a supplemental watering component.</p> <p>Response: The text was clarified to state that supplemental watering was included in the project cost for all seeding plans.</p>
#32 BdA	6	21	<p>As stated, different habitat structure and plant species composition support different bird species. Mitigation for each type is necessary to address unavoidable effects. A clear plan on affected acres, prescribed mitigation, and bird species affected should be created utilizing Table 6-4 as a basis for plant replacement. This plan should be shared with the public to inform them of goals of mitigation and to assure that bird species abundance post project is representative of species affected.</p> <p>Response: Table 6.4 includes vegetation types that would not be replaced, namely non-native and mixed shrub communities. The final mitigation plan considers the bird abundance in major native vegetative structural types based on strata (herbaceous, shrub, tree).</p>
#33 BdA	6	21	<p>Dense plantings of willows are not prescribed if spraying and mowing are invasive species treatments prescribed. It would be more successful if invasive species treatment could be extended over a period of time to allow for thorough control prior to native plant establishment.</p> <p>Response: Treatment of herbaceous invasive species and resprouting or germinating saltcedar would be phased with subsequent planting of woody species. Periodic treatment is expected to be necessary for at least 10 years following planting, and perhaps longer in certain locations.</p>
#34 BdA	6	21	<p>Clarify what operation, maintenance, repair, replacement, and rehabilitation requirements will be expected of local sponsor(s) and how appropriate actions would be assured. Describe the amount of time the local sponsor is responsible for the maintenance.</p> <p>Response: The Section 5.1.18. Operation and Maintenance Considerations provides a general discussion of OMRR&R activities. For clarification the following text was added to Section 5.1.17: "The sponsor's responsibility for project operation and maintenance begins when the project is turned over to the sponsor following construction, and continues indefinitely. During this phase, the community will</p>

			realize the full benefits of the project, and responsibility passes from the Corps of Engineers to the sponsor. The Corps involvement after construction normally will consist of periodic routine inspections to ensure that the project is being properly maintained and is functioning as intended.”
#35 BdA	6	21	<p>Water conditions through the refuge could be altered depending on the design and construction of the riprap and vegetation free zone topography. Address potential flow alterations during high percentage return flow regimes.</p> <p>Response: Corps’ biologists have proposed refinements to the design of the vegetation-free zone to reduce flow along the levee to reduce erosion while providing slackwater habitat for the silvery minnow. These slackwater areas would be sloped to drain away from the levee to facilitate silvery minnow (all age classes) movement back toward the main river channel. The principle alteration to floodplain flow patterns would be reducing the tendency for erosion adjacent to the levee that creates channels and pools that may be isolated as the river recedes. Corps staff will coordinate with Refuge staff to refine these measures to address potential impacts to silvery minnows. The proposed topography of the vegetation free zone would function at all levels of inundation at the toe of the levee.</p>
#36 BdA	6	23	<p>Under the updated designation of critical habitat for the southwestern willow flycatcher, both Sevilleta and Bosque del Apache NWR are included in the designation.</p> <p>Response: The final GRR/SEIS-II analyzes the potential effects to flycatcher critical habitat re-designated on January 3, 2013.</p>
#37 BdA	6	25	<p>We believe 16.4 acres of woody mitigation would only grow into potentially suitable habitat for southwestern willow flycatcher if designed properly and placed in an appropriate site.</p> <p>Response: Concur. The Corps will coordinate extensively with BdA NWR on their assessment of the design and location for successful mitigation areas.</p>
#38 BdA	6; Appendix F-8	27; 3	<p>On page 6-27, there is no mention of Qualacu and San Pascual pueblo sites in terms of potential for increased flooding. This should be evaluated under the different alternatives.</p> <p>In Appendix F-8 (3), the table should reflect sites in the San Acacia to Bosque del Apache NWR unit. Both Qualacu and San Pascual pueblo sites should be addressed for potential impacts from current and future flood potential. Earlier discussions with the Corps and State Historic Preservation Officer (SHPO) about these sites included</p>

			<p>concern for increased inundation and prolonged flooding adjacent to these historic sites.</p> <p>Response: The Corps' discussions regarding the potential for flooding to archaeological sites applies to all archaeological sites within the project area including Qualacu and San Pascual. We have edited the text to specifically note the Qualacu and San Pascual pueblo sites in the 2012 GRR/SEIS-II cultural resources Sections 2.5, 3.4, 4.7.2, 6.6, and in the cultural Appendix F-8. The potential for increased flooding to all archaeological sites in the project area is addressed in cultural Sections 3.4, 4.7.2, 6.6 and in the cultural Appendix F-8. All of the 85 archaeological sites located within or immediately adjacent to the Area of Potential (flooding) Effect (APE), as shown in the 1% Exceedence Probability With- and Without Project scenarios (GRR/SEIS-II, Figures 5.3 - 5.9), may have been affected by flooding in the past, and with or without the proposed project remain vulnerable to flooding in the future. In Appendix F-8, Updated Tables 1 and 2, listing all archaeological sites within the APE, located on the east and west sides of the existing MRGCD spoil bank levee, have been updated (January 31, 2012 data); these Tables include the sites located within BDANWR. Earlier Section 106 consultation between the Corps and the SHPO regarding San Pascual is noted in Section 2.5 and copies of those consultation letters are provided in Appendix F-8. Although with or without the project there is no change to the potential for flooding, the Corps remains concerned that inundation by flood waters and the resulting saturation of archaeological sites including the San Pascual site has the potential to affect buried archaeological deposits. The Corps and USBR continue to manage river flows within their control to avoid effects to archaeological sites within or immediately adjacent to the floodplain (USACE, 2005, 1998).</p>
#39 BdA	6	30	<p>Prior to this consultation, Corps archaeologists and SHPO considered saturation of San Pascual Pueblo soils a potential impact to unexcavated historical features. Describe this concern and determine what has changed when the flood potential adjacent to this site would remain the same or increase.</p> <p>Response: Earlier Section 106 consultation between the Corps and the SHPO regarding San Pascual is noted in Section 2.5 and copies of those consultation letters are provided in Appendix F-8. The Corps has concerns that inundation by flood waters and the resulting saturation of archaeological sites including the San Pascual site has the potential to affect buried archaeological deposits. The Corps and USBR continue to manage river flows within their control to avoid effects to archaeological sites within or immediately adjacent to the floodplain (USACE, 2005, 1998). All 85 archaeological sites within or adjacent to the</p>

			APE may have been affected by flooding in the past, and with or without the proposed project remain vulnerable to flooding in the future, e.g., there is no change to the potential for flooding.
#40 BdA	6	31	<p>Flood potential on residential lands on the east side of the floodway is not addressed in the flood hazard table. There are limited structures, but in Corps' mapping products there is increased inundation in a number of residential areas around Bosquecito. Why are these lands not considered for annual damages?</p> <p>Response Tables 2.6, 3.2 and 4.8 of the report show a damageable property category "East Bank" which collects structures and contents occurring on the east bank into one line item for reporting damages and benefits within the table. Further information about the project effects on the east bank of the study area can be found in Section 2.8.1.2 and effects in 6.8.3 as well as Para. F-10 of Appendix F-10 Economics.</p>
#41 BdA	6	32	<p>If cutting Tiffany Basin under Alternative K +4 ft would require substantial mitigation because of sporadic river flows (or restoration potential), why does filling 300 acres of this basin not require substantial mitigation?</p> <p>Response: Currently, the 2,000-acre Tiffany Basin would be inundated only by flood events that overtop or breach the Tiffany East spoil bank. At that time, the area provides valuable flood transit storage and decreases the downstream peak. Except for small portions at the southern end, the dominant vegetation is consists of monotypic saltcedar, and the site has a low potential for supporting native riparian vegetation. As has been discussed among resource agencies over the past several years, the site does have the potential for improvement, and the subsequent development of valuable aquatic or riparian restoration projects. Summarizing, the area currently has relatively low value for fish and wildlife habitat, but provides important transit storage during flood events.</p>
#42 BdA	6	33	<p>Flood Risk Management: Save Our Bosque Task Force Conservation Easement and Habitat Restoration Program is another flood risk management program that started in the San Acacia study area. We recommend the Corps mention this program as an informal attempt to address flood risk management in the reach.</p> <p>Response: Concur. Text was added to Table 1.5, Studies and Reports by Others. "Save Our Bosque Task Force (SOBTF) is a grassroots 501(c)(3) organization using Federal, State and local funding to accomplish conservation easements and habitat restoration within the study area. To</p>

			<p>date, the organization has performed restoration work on five large tracks of land and created or improved many recreation access sites along the reach of the river. Easements acquired through the organization would preclude future development of the floodplain.”</p>
#43 BdA	6	34	<p>We agree the refuge would receive substantial benefits if a large magnitude flood is contained by the proposed project.</p> <p>Response: Thank you for your comment.</p>
#44 BdA	F-4	General	<p>Comments above from the GRR/SEIS-II discuss mitigation plans. One option is to develop a supplemental more detailed plan with the parties mentioned (page 3) and others that outline the procedures to lead to successful mitigation. As acknowledged, the detail in this preliminary plan does not allow a thorough evaluation.</p> <p>Response: The Corps will continue to develop the final mitigation plan in coordination with sponsors and resource agencies.</p>
#45 BdA	F-4	2	<p>Planning Objective E - include minimizing the potential for increasing the establishment of invasive species from spoil movement.</p> <p>Response: Invasive species management will also be required along with grass and shrub seeding at the Tiffany soil deposition site.</p>
#46 BdA	F-4	3	<p>A 20-year plan is appropriate to allow adaptive mitigation due to additional information, changing environmental conditions, and the need to thoroughly control invasive plants. We are concerned about the commitment of responsible parties for the long-term mitigation implementation schedule.</p> <p>As required by regulation, the local sponsors will formally agree to fulfill the fiscal obligations and environmental commitments of the proposed project, including the mitigation plan and the OMRR&R plan.</p>
#47 BdA	F-4	4	<p>Best Management Practice #5 - Construction equipment should also be inspected for invasive plant material if equipment is traveling away from the immediate worksite.</p> <p>Response: The text has been updated to reflect that contract specifications would require heavy equipment to be inspected and cleaned through power-spraying if it has been used in off-site areas that could contribute to the transport of invasive weed seeds; and will require similar cleaning just prior to leaving the construction area.</p>

#48 BdA	F-4	5	<p>Best Management Practice #11 – Refuge staff will work with the Corps and contractor to limit the potential for isolated pooling.</p> <p>Response: Concur.</p>
#49 BdA	F-4	5	<p>Best Management Practice #13 - Vegetation removal as a part of mitigation may occur at a site away from the immediate levee project area. Identify any site specific conditions that may warrant other limitations to site access and work schedule.</p> <p>Response: Concur. The Corps will coordinate with BdA NWR to determine the most suitable locations within the refuge for mitigation plantings.</p>
#50 BdA	F-4	5	<p>Measure A - Upland grasses may be more appropriate in some vegetation-free zones where overbank flows are limited. As mentioned above, supplemental watering may be necessary.</p> <p>Response: The Corps will coordinate with BdA NWR to determine suitable seeding mixes for the various mitigation locations.</p>
#51 BdA	F-4	6	<p>Measure C - Provide preliminary willow plantings density in 1.08-acre area to allow evaluation (similar to that provided in Measure H). Some cottonwood and Goodding's willow (assuming coyote willow is described at present) could be established to provide more diverse stand structure and mitigate for cottonwoods lost due to apron installation on opposite bank.</p> <p>Response: In the revised mitigation plan, Measure T would replace native shrubs along the base of the soil-cement embankment that were disturbed during its installation.</p>
#52 BdA	F-4	7	<p>Measure E - Provide riparian shrub plantings density (similar to the detail provided in Measure H) to allow evaluation of habitat provided.</p> <p>Response: The updated mitigation plan includes the recommended stem densities for all woody planting measures. The Corps will continue to coordinate with the Refuges to develop suitable planting prescriptions.</p>
#53 BdA	F-4	7	<p>Measure G - Similar to Measure B, consider other upland or riparian edge plants where appropriate. Refuge staff and other professionals can provide a thorough list of appropriate species.</p> <p>Response: The Corps will continue to coordinate with the</p>

			Refuges to develop suitable planting prescriptions and seed mixes that will be included in the mitigation plantings.
#54 BdA	F-4	7	<p>Measure H - Most mitigation areas will provide for upland grass habitat. Riparian mitigation could occur within the project area or outside with partner organizations. Consider augmenting this riparian habitat mitigation to assure successful southwestern willow flycatcher habitat replacement. Canopy cover of 30 percent is appropriate, but also describe the density of the shrubs established (i.e., x stems/acre).</p> <p>Response: The revised mitigation plan was developed with the target of providing 50.4 acres of flycatcher habitat.</p>
#55 BdA	F-4	9	<p>Table 2 will need to include supplemental watering costs. This added step in mitigation implementation will assure successful establishment. Bird abundance is not assured in poorly established areas.</p> <p>Response: The cost of supplemental watering has been included in mitigation cost estimates.</p>
#56 BdA	F-4	11	<p>Is the 2-acre “estate” obtained for additional plantings the total mitigation acreage for riparian plantings outside the project area? This 2-acre parcel is not described to allow evaluation. If so (2 acres of additional riparian shrub establishment), the refuge believes the acreage should be increased to benefit neotropical migrants, a minimum of 5 acres of dense plantings.</p> <p>Response: The 2-acre parcel is a narrow strip along the southern toe of the new levee at the Tiffany basin.</p>
#57 BdA	F-4	13	<p>A longer period of monitoring will be necessary for seeding success. We recommend 3 to 5 years with augmented seeding/watering as well as the mentioned invasive weed control included.</p> <p>Response: The revised mitigation plan describes vegetation and avian monitoring for 15 years following planting.</p>
#58 BdA	F-4	13	<p>For woody plantings, the survival percent and monitoring period is appropriate if initial plant density is sufficient, and that plant density is not stated.</p> <p>Response: Recommended stem densities and monitoring plans are included in the revised mitigation plan. The Corps will continue to coordinate with BdA NWR to develop suitable planting prescriptions.</p>

#59 BdA	F-4	13	<p>Refuge staff is available to assist in planning efforts for mitigation projects. When mitigation occurs on the refuge, the refuge is available to develop project specific plans and to assist in implementation. Exact participation will be determined during a more complete evaluation of site selection and restoration practices.</p> <p>Response: Thank you. The Corps will continue to coordinate with the Refuges to develop successful mitigation planting prescriptions..</p>



June 11, 2012

Mr. William DeRagon
Mr. Mark Doles
U.S. Army Corps of Engineers
4101 Jefferson Plaza, NE
Albuquerque, NM 87109

(via email)

Ref: Draft General Reevaluation Report / SEIS II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit

Dear Sirs:

On behalf of the Water-Culture Institute, I am pleased to submit comments on the above-mentioned report ("San Acacia Project"). These comments are supplemental to those submitted separately by WildEarth Guardians, which I have also co-signed. Thank you for providing this opportunity to comment.

The Water-Culture Institute is committed to the sustainable management of water ecosystems, a goal which I'm sure we share with the USACE. Where our perspectives may differ is not so much on the "what" but on the "how." My comments will focus on a few specific suggestions of how we feel that the San Acacia Project might more effectively contribute to the sustainable management of the Middle Rio Grande:

1. Ecological Restoration of the Rio Grande should be an over-arching goal of this project, and it should be framed as one piece of a larger, integrated flood management strategy for this stretch of the river that will contribute to the overall goal of river restoration.

While I am aware of the legal and institutional constraints of Congressional authorizations, there is overwhelming consensus within the professional community that (a) flood management of one particular reach is best approached through an integrated strategy, preferably at the basin level, and through a mix of structural and non-structural approaches, and (b) that restoring ecological health to severely altered rivers needs to be incorporated into any new intervention. "Integrated Flood Management calls for a paradigm shift from the traditional fragmented approach, and encourages the efficient use of the resources of the river basin as a whole, employing strategies to maintain or augment the productivity of floodplains, while at the same time providing protective measures against the losses due to flooding." This quotation comes from the 2009 Concept Paper on Integrated Flood Management¹ published by

¹ http://www.apfm.info/pdf/concept_paper_e.pdf

the World Meteorological Organization, in cooperation with the Global Water Partnership (GWP) which has a MOU with the Water Resources Institute (WRI) to collaborate on flood risk management, among other topics. The new paradigm of integrated flood management has been incorporated into the current European Flood Directive² which has a strong environmental focus as well: "Flood risk management can go hand in hand with nature protection and restoration, and deliver benefits for both people and nature."³

Although the San Acacia Project traces its authorization to 1948 legislation which was not so environmentally enlightened, there is no prohibition to pursue an environmental agenda if it also meets economic criteria and flood management effectiveness. It would be surprising if a creative design solution incorporating eco-friendly non-structural and innovative structural elements could not be identified that is also competitive on a cost basis with conventional (non-eco-friendly?) approaches. [The well established field of ecosystem services valuation is predicated on the fact that healthy ecosystems (e.g., floodplains with a connection to the river) provide economically beneficial services that can be quantified.] It is our sense that the design process resulting in the preferred solution for the San Acacia Project did not pursue a good faith effort to look for environmentally beneficial solutions which could also compete on conventional criteria. In this sense we feel that the recommended plan fails to do justice to the Corps' own principles of IWRM, and needs to be re-assessed.

Response: A concerted effort was also made to avoid work that would preclude future restoration of the river and riparian habitats in the study reach. The footprint of the proposed levee was minimized and the alignment set landward to the extreme to minimize net loss of floodway and riparian habitats. Removal and spoil of excess soil from the existing spoil bank as opposed to spoil in the floodway represents a significant portion of the project cost. The spoil of existing material facilitates gains in floodway in the northern two-thirds of the project and minimized encroachment of the floodway and riparian habitats in the southern third of the project.

Some flood risk measures evaluated for the San Acacia to Bosque del Apache project also provide for increases in habitat and river function. The end state of Tiffany Basin Sediment Management measure, both passive and active transport methods (Sections 4.5.9 and 4.5.10) would provide approximately 2,000 acres of restored floodplain function as well as alleviate the perched channel condition in that reach. Setbacks of the levee and low flow channel were also considered.

Levee setbacks were evaluated for three locations. Levee realignments at the northern boundary of the Bosque del Apache NWR (BDANWR), and at the Socorro Recreation area (River Mile 108), as well as the levee extension referred to as Tiffany West Levee, would provide similar opportunity and function as a setback or realignment of the levee landward. The setback at River Mile 108 was carried through to the final array of alternatives in Chapter 6. The discussion of these setbacks is presented in Sections 4.5.8 for Tiffany West Levee and 4.8 for setbacks. Subsequent correspondence from the Bureau of Reclamation stated that a setback at the River Mile 108 location is not compatible with the goals of the recreation area. The Tiffany West Levee was removed from further consideration due to its higher cost and similar benefits when compared to a levee on the east side of Tiffany Basin (Tiffany East Levee). The Tiffany East Levee measure as it is part of Alternative K was also removed from consideration due to a lower net benefits compared to alternative A. The setback at the north boundary of the BDANWR was removed from consideration due to incompatibility with refuge goals.

² http://ec.europa.eu/environment/water/flood_risk/index.htm

³ http://ec.europa.eu/environment/water/flood_risk/better_options.htm

2. The discussion of project alternatives (Chapter 4) should consider a "best mix" strategy rather than comparing purely structural with purely non-structural measures.

One of the fundamental principles of IWRM in general and integrated flood management in particular is the importance of applying a mix of strategic measures. The presentation of alternatives, however, appears to be weighted against any solution other than purely structural, by not considering the net result of various mixed approaches. Watershed treatments in the tributaries will not solve the problem of flooding within the project area, but that does not imply that no watershed treatments are justified. Similarly, the discussion of non-structural alternatives did not evaluate a mix of some structural and some non-structural elements. The alternatives need to be re-analyzed (or at least presented in a much more thorough way) to address the comparison of various mixed strategies.

Response: Non-structural measures do not provide a complete solution. Although flood proofing and floodplain evacuation are not economically feasible on a structure-by-structure basis, a flood warning system provides some economic benefit, but more importantly lowers life safety risk. Since there is a residual risk for flooding in the study area even with the proposed levee alternative, a flood warning system could act to mitigate residual flood damages as well lessening the life-safety risk. The Corps is pursuing the addition of a flood warning system to facilitate timely evacuation of people, pets and livestock from the floodplain in the event of exceedance or failure of the proposed levee.

3. The economic assumptions about the value of protecting the Low Flow Conveyance Channel (LFCC) and the Bosque del Apache Wildlife Refuge, assume unrealistic values for the estimated damages from flooding.

Given that the USBR nearly scrapped the LFCC a few years ago, and its debatable value in serving as a passive drain, the \$20m in damages from a 100 year flood seem unrealistic (page 2-31). Similarly the Bosque del Apache, which is, after all, a wildlife refuge, would presumably receive benefits from flooding, along with the \$98m in estimated damages to the fields and built infrastructure. These two cases seem to ignore the long-term future needs of flood planning. Shouldn't the Bosque transition to a more "wild" wildlife refuge? Doesn't the LFCC have to be removed eventually? Is an ever-aggrading river channel sustainable? There are hard choices to be made in planning a sustainable flood management strategy. This project as designed serves to kick the can down the road, when there is a real opportunity to begin a new chapter of river restoration and sustainable river and flood management.

Response: Benefit calculations for the BDANWR fall into 3 general categories; structures and contents (the refuge buildings and equipment), agriculture (economic losses from flooding of crops), and the interruption of recreation opportunity provided by the refuge. Structure and contents and crop losses are calculated using standard methods and values applied both on and off the refuge.

Based on the current management plan for the BDANWR and the Bureau of Reclamation's 2002 EIS for operation of LFCC, both of these facilities will continue to be operated in the foreseeable future. Further, the future condition of the San Acacia to Bosque del Apache Unit — regardless of implementation of any alternative considered in this GRR/SEIS-II — would remain essentially unchanged with regard to land use. The existing spoil banks will continue to be maintained, and in the event of a flood, the existing facilities and land uses would return to the pre-flood condition. As stated in section 3.5.2, Flood Hazards: "It is expected that Reclamation would continue to maintain the existing spoil bank to its current standards." Similarly, Section 3.5.3, Land Ownership states: "Without the implementation a Federal project, it is anticipated there would be no changes in land ownership

within the study area in the future.” Throughout Section 3.5.4, Land Use classification, and 6.8, Socioeconomic Environment, no changes in land use would be expected with or without a Federal project.

Thank you again for the opportunity to comment on this project. I look forward to continued discussion.

Sincerely,

A handwritten signature in black ink, appearing to be 'DG' or similar initials, enclosed within a faint, light gray rectangular border.

David Groenfeldt, PhD
Director



June 11, 2012

William DeRagon
Mark Doles
U.S. Army Corps of Engineers
4101 Jefferson Plaza NE
Albuquerque, NM 87109

Via E-mail: william.r.deragon@usace.army.mil , mark.w.doles@usace.army.mil

Re: Comments of WildEarth Guardians On the Draft General Reevaluation Report/Draft Supplemental Environmental Impact Statement for the Proposed Rio Grande Floodway, San Acacia to Bosque del Apache, Socorro County, NM, Project

On behalf of WildEarth Guardians, Audubon New Mexico, Rio Grande Restoration, and the Water-Culture Institute, Kara Gillon, Esq. submits these comments the Draft General Reevaluation Report and Draft Supplemental Environmental Impact Statement (“DEIS”) for the Proposed Rio Grande Floodway, San Acacia to Bosque del Apache, Socorro County, NM, Project. The Corps of Engineers (“Corps”) is proposing to construct an engineered levee between the Low Flow Conveyance Channel (“LFCC”) and the western bank of the Rio Grande for a length of approximately 43 miles. As planned, construction would be complete in 2026, armoring the west bank of the Rio Grande for at least the next century. We appreciate the opportunity to comment.

WildEarth Guardians is a regional nonprofit environmental advocacy organization dedicated to protecting and restoring the American West. With members throughout the region, WildEarth Guardians works to safeguard the climate, the clean air, the clear water, and wildlife of the West.

Structural water resource projects designed to control floods have drastically altered and manipulated river systems across the country, causing significant ecological harm. The Corps’ own planning guidelines acknowledge that the environment will be harmed by “practically all flood control projects.”¹ This is just as true in the Middle Rio Grande. Since the 1930s, “surface area covered by wet meadows, marshes, and ponds declined by 73% along the Middle Rio Grande floodplain.” DEIS 2-14.

¹ U.S. Army Corps of Engineers, ER 1105-2-100, Planning Guidance Notebook (April 22, 2000) at E-89

The Corps' recommended plan and preferred alternative is the National Economic Development ("NED") Plan, which maximizes national economic development, often at the expense of the environment. Again, as has been true across the country, the Corps has demonstrated an institutional bias – due largely to the focus on economic development – for approving large and environmentally destructive projects while also lacking environmental protections.²² Less environmentally damaging, less costly, nonstructural measures that would result in the same or better outcomes are routinely ignored or given short shrift.

WildEarth Guardians offers these comments to highlight environmental concerns with the Corps' planning process and the NED Plan and to inform improvements to both. Congressional policy for federal water resource planning and environmental policy is not reflected in the GRR/DEIS; the Corps should revise the document so that it is faithful to national policy that no longer prioritizes economic development over environmental protections and public safety.

Overarching Federal Policy for Water Resource Projects

- a. The Water Resources Development Act of 2007 promotes a new federal policy for water projects.

Congress established a new federal policy – and a new approach for planning – for federal water projects in the Water Resources Development Act ("WRDA") of 2007. 42 U.S.C. § 1962—3(a). This national policy requires that federal water projects reflect national priorities, protect the environment, and encourage economic development. All water projects, including flood risk management projects like the levee construction proposed here, are to do this by (1) seeking to maximize sustainable economic development; (2) seeking to avoid the unwise use of floodplains and flood-prone areas and minimizing adverse impacts and vulnerabilities where such areas must be used; (3) protecting and restoring the functions of natural systems; and (4) mitigating any unavoidable damage to natural systems. This new national policy makes protecting healthy rivers, floodplains, wetlands and coastal environments that protect and sustain communities the primary objective for water resources planning.

While the Corps, via the Council on Environmental Quality ("CEQ"), is revising the principles and guidelines used in the formulation, evaluation, and implementation of water projects, this national water resources planning policy continues to apply.

[Response: WRDA 2007 §2031\(7\) specifies that certain projects are not subject to the revised water resources principles and guidelines established by that portion of the Act. Following the date of the issuance of the principles and guidelines that §2031 defines, the revisions apply only to new projects, specifically those projects where a feasibility study or a reevaluation has not yet commenced. Due to the fact that both the feasibility study and reevaluation for the San Acacia Project had commenced in advance of issuance of revised principles and guidelines, these specific requirements of WRDA 2007 do not apply. In spite of this, the spirit and intent of these requirements were followed for both avoidance of impact to, and protection of, existing natural resources. A concerted effort was also made to avoid work that would preclude future restoration of the river and riparian habitats in the study reach. The footprint of the proposed levee was minimized and the alignment set landward to the extreme to minimize net loss of floodway and riparian habitats. Removal and spoil of excess soil from the existing spoil bank, as opposed](#)

²² National Research Council, *New Directions in Water Resources Planning for the U.S. Army Corps of Engineers*, 1999, at 4, 21, 61-63; US Army Inspector General, *Report of Investigation*, Case 00-019, 2000, at 7-8.

to depositing it in the floodway, represents a significant portion of the project cost. The spoil of existing material facilitates gains in floodway area in the northern two-thirds of the project and minimized encroachment of the floodway, and therefore riparian habitat, in the southern third of the project.

The flood risk measures proposed for the San Acacia to Bosque del Apache Unit follow the intent of the Act in that some measures to reduce the risk of flood damage also provide for increases in habitat and river function. The end state of Tiffany Basin Sediment Management measure, both passive and active transport methods (Sections 4.5.9 and 4.5.10), would provide approximately 2,000 acres of restored floodplain function as well as alleviate the perched channel condition in that reach. Setbacks of the levee and Low-Flow Conveyance Channel (LFCC) were also considered (see response to Comment *b* under Overarching National Environmental Policy Act Issues below).

b. Key principles to guide Corps water project planning pursuant to the Water Resources Development Act of 2007.

We advocate for an approach to water resources planning for the proposed action based on at least key principles to maintain and restore the health of our nation's rivers, streams, and wetlands as discussed in comments submitted on the revision of the Principles and Guidelines. *See* Letter from Alliance for the Great Lakes, et al. to the Council on Environmental Quality (July 31, 2009), available at http://www.waterprotectionnetwork.org/sitepages/downloads/P&G_CEO_Sign-on_Comments_July_2009.pdf. Feasibility analysis and reevaluation should afford environmental protection the highest priority consistent with sustainable economic development, pursue nonstructural approaches before structural flood control, and projects should use best science, peer review, and full transparency to deliver good results.

Response: Non structural measures do not provide an effective solution to reduce flood risk in the San Acacia to Bosque del Apache Unit. Section 4.5 details the analysis of various non-structural alternatives. Non-structural measures do not reduce flood risk to agricultural facilities and crops and unique to the San Acacia to Bosque del Apache area, and the LFCC does not lend itself to non-structural solutions. These agriculture, infrastructure and the LFCC provide almost 23% to 26% of the benefits in the project area depending on the flood event (Table 2.4).

The analysis performed demonstrates that flood-proofing and relocation measures are uneconomical on a structure-by-structure basis in the study area. For these reasons, flood-proofing and relocation measures are deemed not reasonable for further detailed analysis. Flood warning systems do not significantly reduce flood damages in the study area; however, they may decrease the life safety risk, with or without a Federal Project (Section 4.5.5.2 Flood Warning System). Since there is a residual risk for flooding in the study area even with the proposed levee alternative, a flood warning system could act to mitigate that risk as well as lower remaining life safety risks. The Corps is pursuing the addition of a flood warning system to facilitate timely evacuation of people, pets, and livestock from the floodplain in the event of exceedance or failure of the proposed levee. A discussion of a the flood warning system has been added to the GRR/SEIS-II in Section 5.1 to describe the purpose and objective of such a system. Detailed design and implementation procedures will be developed with the sponsor and local authorizes to incorporate a flood warning system into the local emergency response network.

The future condition of the San Acacia to Bosque del Apache Unit regardless of implementation of any alternative considered in this GRR/SEIS-II, would remain essentially unchanged with regard to land use. The existing spoil banks will continue to be maintained and in the event of a flood the existing facilities and land uses would return to the pre-flood condition. As stated in Section 3.5.2, Flood Hazards: "It is expected that Reclamation would continue to maintain the existing spoil bank to its current standards". Similarly, Section 3.5.3, Land Ownership, states: "Without the implementation a Federal project, it is

anticipated there would be no changes in land ownership within the study area in the future.” Additionally, Section 3.5.4, Land Use classification, and Section 6.8, Socioeconomic Environment, state that no changes in land use would be expected with or without a Federal project. The footprint of the proposed levee project was minimized to protect the existing aquatic and riparian resources. Two levee setbacks and the Tiffany Basin Sediment Management measure were evaluated to increase the area of floodplain within the floodway. One setback measure — River mile 108 — proved reasonable and was carried forward to the final array of alternatives. (See response to Comment *b* under Overarching National Environmental Policy Act Issues below).

c. The General Reevaluation Report should include additional feasibility analysis.

A General Reevaluation Report (“GRR”) is “a reanalysis of a previously completed study, using current criteria and policies, which is required due to changed conditions and/or assumptions.”³ Given the extensive nature of the study, it is essentially a new Feasibility Report, recommending a plan for implementation and accompanied by an EIS. We urge the Corps to develop a GRR in keeping with the requirements for a Feasibility Report, in particular that it include “a description of a nonstructural alternative to the recommended plan when such plan does not have significant nonstructural features,” 33 U.S.C. § 2282, and a specific plan to mitigate fish and wildlife losses resulting from the project, or a determination that the project will have negligible adverse impacts on fish and wildlife. *Id.* § 2283.

Additionally, the GRR should include more discussion of the operation, management, repair, restoration, and replacement (“OMRR&R”) requirements for the proposed project. The GRR/DEIS provides only very general description of the OMRR&R requirements, *see* DEIS 5-18, 6-18, assigning duties to the sponsor and committing the Corps to providing an OMRR&R manual to the sponsor. The GRR/DEIS should offer more detail as to the OMRR&R requirements, costs, and abilities to pay. In this situation, because there are two non-federal sponsors – the Middle Rio Grande Conservancy District and the New Mexico Interstate Stream Commission – we recommend discussion of whether and how the OMRR&R duties and costs will be allocated between the two sponsors.

Response: The evaluation of non-structural measures that included flood-proofing, zoning and relocation determined that these measures were unreasonable on the basis of being incomplete as well as uneconomical. Please see response to Comment *b* above.

The Final GRR/SEIS-II includes a mitigation plan (see Appendix F-4) that conforms to the requirements of WRDA 2007 §2036 (which modified 33 U.S.C. §2283).

d. The Corps can add project purposes to the existing authorization.

Under certain circumstances, the Corps can add one or more of the following new project purposes to a civil works projects without new Congressional authorization: endangered species conservation and fish and wildlife enhancement.⁴ We recommend that the Corps add endangered species conservation and fish and wildlife enhancement to the San Acacia to San Marcial project,

³ U.S. Army Corps of Engineers, ER 1105-2-100, Planning Guidance Notebook (April 22, 2000) at 4-2.

⁴ U.S. Army Corps of Engineers, ER 1105-2-100, Planning Guidance Notebook (April 22, 2000) at 4-10, Appendix G.

develop alternatives based on addition of these purposes, and then investigate, compare, and select alternatives.

Response: The Corps has the authority to perform ecosystem restoration throughout the Rio Grande in New Mexico provided there is interest from a cost-sharing, non-Federal Sponsor. The Rio Grande Floodway, San Acacia to Bosque del Apache Unit GRR is a cost-shared study authorized by the Flood Control Act of 1948. The Middle Rio Grande Conservancy District and, later, the New Mexico Interstate Stream Commission, approached the Corps with interest in participating in the Flood Risk Management study. While pursuing the addition of multiple purposes for the 1948 authorization would result in a multi-purpose study, the Corps currently possesses authority to perform ecosystem restoration projects through Section 206 of the Water Resources Development Act (WRDA) of 1996, and potentially Section 1135 of WRDA 1986. Under these authorities the Corps may plan, design and build projects to restore aquatic ecosystems for fish and wildlife. The authority does require a non-Federal sponsor to cost-share the study and take responsibility of a project after it is implemented. For example, the Middle Rio Grande Bosque Restoration Project, also sponsored by the MRGCD, is currently being implemented in the Albuquerque reach. This project area coincides and is compatible with the ongoing single-purpose flood risk management study for the Bernalillo to Belen reach of the Rio Grande.

e. The National Economic Development Plan no longer controls water resource planning.

As discussed above, the WRDA of 2007 set a new national policy for water resource planning that no longer prioritizes achievement of the greatest economic benefits, as captured in the NED Plan. Instead, federal water projects must maximize *sustainable* economic development *and* protect and restore the functions of natural ecosystems. National Economic Development is no longer the primary goal of water resource planning, *cf.* DEIS 4-4; sustainable economic development is a co-equal goal with environmental protection.

The recommended plan is the NED Plan, DEIS 7-1, but the GRR/DEIS does not provide the reasoning behind the selection. Is the recommended plan the NED Plan simply and only because it is the NED Plan, or for additional reasons? If the former, WildEarth Guardians posits that in light of new national policy that no longer prioritizes NED, that the Corps should offer a statement of reasons for its choice of the NED Plan as the recommended plan. Our new national policy goals per WRDA of 2007 may support the Corps' recommendation of a different alternative that does not prioritize economic development and consist solely of a structural flood control project.⁵ The Corps can select an alternative that is not the NED Plan provided that the feasibility report fully documents the reasons for selecting the different plan and the Assistant Secretary for Civil Works determines that there "are overriding reasons for selecting another plan based upon other Federal, State, local and international concerns."⁶

Response: The GRR/SEIS-II for the San Acacia to Bosque del Apache Unit project evaluated an array of alternatives including non-structural alternatives and alternative alignments to the recommended levee alternative. There were no overriding reasons or alternatives put forth by the sponsor or stakeholders, therefore additional analysis for a locally preferred plan was not necessary.

⁵ For example, the NED Plan is one of two that meets FEMA criteria for levee certification, DEIS 6-35, while the No Action would present economic development concerns because of a probable increase in flood insurance rates. DEIS 4-21. The DEIS, though, does not disclose current or future flood insurance rates and does not discuss the need for flood insurance with or without the project. As a result, flood insurance is a questionable basis for decisionmaking.

⁶ U.S. Army Corps of Engineers, ER 1105-2-100, Planning Guidance Notebook (April 22, 2000) at 2-7.

Corps of Engineers cost-benefit analysis. In determining the NED Plan and formulating its recommendation, the Corps performs a cost-benefit analysis for each alternative. WildEarth Guardians has several concerns with the Corps' cost-benefit analysis, foremost among them the lack of supporting analyses or citations for numerous claims of costs and/or benefits that are key to the overall analysis.

Examples of such claims include the value of the LFCC - \$125 million, DEIS 2-29; the estimated damage to the LFCC from a 1% chance event - \$20.7 million, DEIS 2-30. Claims regarding the LFCC are particularly puzzling because these numbers are based on current operation and the Bureau of Reclamation operates the LFCC only as a passive drain. *See, e.g.*, DEIS 2-34 ("Reclamation does not anticipate active diversions to the LFCC in the near future as extensive repairs or reconstruction would be needed to resume active diversion."); 72 Fed. Reg. 51,837 (Sept. 11, 2007) (canceling plans to publish a Final EIS on LFCC operations because the Upper Rio Grande Water Operations Record of Decision "considers the impacts of continuing the operation of the Low Flow Conveyance Channel as a passive drain with no diversion from the Rio Grande."). Similarly, the DEIS should disclose the analysis, referenced at DEIS 7-6, that "indicated that 40.7 percent of the benefits are attributed to Federal properties." *Compare* DEIS 4-27 (benefits to federal properties are 30.9 percent of the total benefits of the project).

Response: The conflicting references in the end of Section 4.6.5.2, Benefits, and Section 7.1.11, are a typographical error. The correct figure for the percent of Federal vs. non-Federal benefits is 40.7%, as stated in Section 7.11. This has been corrected in the final document. A derivation of this percentage was added to the GRR/SEIS-II in conjunction with Table 7.2, and the text of Section 7.1.11.

Lastly, Section 2.7.3 covering Land Ownership is vague, noting a federal "interest in" and federal "control" over nearly all the land associated with the existing spoil bank. Section 5.1.12 is similarly vague and confusing, noting that ongoing litigation has brought into question ownership of MRGCD assets. While title may be in dispute, it is important for purposes of implementing the project, calculating the non-federal cost-share, and applying LERRD credit that the GRR/DEIS make clear which non-federal sponsor has acquired real estate interests, the interests acquired, and the real estate parcels at issue and that the GRR/DEIS be consistent in discussing MRGCD fee interest in the real estate.

Response: All lands where title is in dispute will be available for project purposes regardless of ownership. All lands not in dispute and needed for project implementation have been accounted for in cost-share calculations. If lands in dispute resulted in MRGCD ownership, then the sponsor would likely be required to provide a waiver for LERRDS costs in excess of the sponsor cost-share.

f. The Corps must make provisions for Peer review & Safety Assurance Reviews

WRDA of 2007 instituted independent peer review for certain Corps project studies, defined to include a reevaluation study or environmental impact study for a water resources project. 33 U.S.C. § 2343(a), (l). A project study must be reviewed if it costs more than \$45 million, unless determined to be exempt from review by the Chief of Engineers. *Id.* § 2343(a). This project costs over \$100 million. In addition, WRDA of 2007 requires a safety assurance review for certain hurricane and storm damage reduction projects, and for certain flood damage reduction projects to assure public health, safety, and welfare. *Id.* § 2344.

The GRR/DEIS does not reference the need for peer review and safety assurance review, make public any findings or reasons supporting the Corps not conducting the peer review, or make any provisions for conducting peer review. *Id.* § 2343(a). When the Corps conducts these reviews, the Corps must make the reports and any Corps responses available to the public. *Id.* §§ 2343(f), 2344.

Response: The following language was added to the GRR/SEIS-II in Section 5.1.16:

"A Safety Assurance Review (SAR) shall be conducted on design and construction activities for hurricane and storm risk management and flood risk management projects, as well as other projects where potential hazards pose a significant threat to human life. The review shall be conducted for the purpose of assuring that good science, sound engineering, and public health, safety, and welfare are the most important factors that determine a project's fate. Expert panels external to the Corps will review the design and construction activities prior to initiation of physical construction and periodically thereafter until construction activities are completed."

"This GRR/SEIS II will undergo Independent External Peer Review (IEPR) which is synonymous with SAR. The IEPR is conducted in two phases referred to Type I and Type II IEPR per Corps guidance contained in Engineer Circular 1165-2-209. Type I is generally for decision documents and Type II is generally for implementation documents. A type I IEPR is being conducted for this GRR/SIES II concurrent with the public review and will include a review of public comments and Corps responses to public comments."

"A Type II IEPR shall be conducted on design and construction activities. External panels will review the design and construction activities prior to initiation of physical construction and periodically thereafter until construction activities are completed. Appendix E provides guidance for reviews conducted on design and construction activities performed after the approval of a decision document. The review shall be on a regular schedule sufficient to inform the Chief of Engineers on the adequacy, appropriateness, and acceptability of the design and construction activities for the purpose of assuring that good science, sound engineering, and public health, safety, and welfare are the most important factors that determine a project's fate."

"The panel's final report and the responses of the Corps shall accompany the publication of the Final GRR- SEIS II and will be published on the Albuquerque District webpage as well as the Corps Headquarters webpage at:
<<http://www.usace.army.mil/Missions/CivilWorks/ProjectPlanning/CompletedPeerReviewReport.s.aspx>>"

g. Additional information is needed to ensure the Mitigation Plan meets Water Resources Development Act requirements.

As noted above, the GRR recommendation should include a specific mitigation plan to mitigate fish and wildlife losses due to the proposed project. *Id.* § 2283(d)(1). In line with the new direction for water resources planning established in WRDA 2007, Congress also added detailed minimum requirements for mitigation plans from the Corps. *Id.* §2283(d)(3). There are still many mitigation and monitoring commitments left to be specified in the mitigation plan: the criteria for ecological success by which the mitigation will be evaluated and determined to be successful based on replacement of lost functions and values of the habitat, including hydrologic and vegetative characteristics; the physical action to be undertaken to achieve the mitigation objectives within the watershed in which such losses occur; the functions and values that will result from the mitigation plan; a contingency plan for taking corrective actions in cases in which

monitoring demonstrates that mitigation measures are not achieving ecological success; and a commitment to monitor until the mitigation is found to be successful. *Id.* §2283(d)(3), (5).

Response: The Final GRR/SEIS-II includes a revised mitigation plan (see Appendix F-4) that conforms to the requirements of WRDA 2007 §2036 (which modified 33 U.S.C. §2283).

Overarching National Environmental Policy Act Issues

Section 102(2)(C) of the National Environmental Policy Act (“NEPA”) establishes an “action-forcing” mechanism to ensure “that environmental concerns will be integrated into the very process of agency decisionmaking.” *Andrus v. Sierra Club*, 442 U.S. 347, 350 (1979). Pursuant to that statutory provision, “all agencies of the Federal Government shall ... include in every recommendation or report on ... major Federal actions significantly affecting the quality of the human environment, a detailed statement” known as an environmental impact statement (“EIS”) addressing “the environmental impact of the proposed action, any adverse environmental impacts which cannot be avoided ..., alternatives to the proposed action,” and other environmental issues. 42 U.S.C. § 4332. What NEPA requires is that federal agencies take a “hard look at [the] environmental consequences” of their proposed actions. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989) (internal quotation omitted).

- a. The NEPA analysis must remain faithful to the stated purpose and need.

The GRR/DEIS purpose and need is to evaluate alternative methods of flood risk management in the Middle Rio Grande. The statement of purpose and need frames the range and analysis of alternatives. Reasonable alternatives are those that are viable, feasible, meet the stated goals of the project, or are reasonably related to the purposes of the project. *Idaho Conservation League v. Mumma*, 956 F.2d 1508, 1519 (9th Cir. 1992); *City of Carmel-By-The-Sea v. U.S. Dept. of Transp.*, 123 F.3d 1142, 1155 (9th Cir. 1997); *Trout Unlimited v. Morton*, 509 F.2d 1276, 1286 (9th Cir. 1974).

While the document states objectives of reducing the risk of flood to human health and safety, to properties and infrastructure, and to the environment, DEIS 4-3—4-4, the NED goal and accompanying cost-benefit analysis are what have truly defined the purpose, need, and alternatives. As discussed above, new national water resource planning policy elevates environmental protection as a co-equal goal with sustainable economic development. The Corps should “always consider the views of Congress, expressed, to the extent that the agency can determine them, in the agency’s statutory authorization to act, as well as in other Congressional directives.” *Citizens Against Burlington v. Busey*, 938 F.2d 120, 196 (D.C. Cir. 1991). By diverging from the stated purpose and need and evaluating alternatives based on the NED, the Corps has improperly developed, eliminated, and analyzed alternatives.

Response: The need for the project is summarized in Sections 1.3, 1.4.1, and 2.7.2, which discuss the flood damage history in the study area. Section 2.2.3.2 and Appendix F2 / F-3 determined the continuing risk of flood damage based on discharge-frequency probability analysis.

Section 1.4 of the GRR/SEIS-II succinctly quotes the project purpose from the authorizing language in House Document 243: “Provide protection against inundation by flash floods.”

Section 4.2 of the Final GRR/SEIS-II states the planning objectives of the study, which further refine the project's purpose:

- Reduce the risk of flood hazard to health and human safety within the study area. Reduce the risk of loss of life and risk to health from flood related hazards.
- Reduce the risk of flood damage to existing properties and infrastructure within the floodplains of the study area by 90 percent.
- Reduce the risk of ecological damage from flooding within the floodplains of the study area.
- Increase the capacity of the floodway throughout the study area to carry floodwaters.
- Prevent damage of flood risk management infrastructure within the study area from erosion.

The Corps' analysis has not diverged from the stated purpose and need of the project. As stated in responses to other comments above. The Corps' formulation of alternatives and selection of the recommended plan conforms to currently applicable Planning and Guidance and implementation regulation (Engineer Regulation 1105-2-100, Planning Guidance Notebook).

b. The alternatives analysis should consider nonstructural alternatives in detail.

The Corps dismissed alternatives too quickly and without justification. WildEarth Guardians recommends the Corps afford meaningful treatment to alternatives that contemplate levee setbacks, flowage easements, and other non-structural, potentially environmentally friendly alternatives.

Response: Levee setbacks were evaluated for three locations. Two realignments were evaluated at the northern boundary of the Bosque del Apache NWR, and the Socorro Recreation area (referred to as the River mile 108 setback). The levee extension referred to as Tiffany West Levee would provide similar opportunity and function as a setback or realignment of the levee landward. The setback at River mile 108 was carried through to the final array of alternatives evaluated in Chapter 6. The discussion of these setbacks is presented in Sections 4.5.8 for Tiffany West Levee, and Section 4.8 for the setbacks. Clarification is provided in the GRR/SEIS II by including the phrase "This levee setback has a higher cost than Alternative A alone and does not produce additional Flood Risk Management benefits, therefore is not included in the recommended plan." In sections 5.1 and 5.5. Section 6.2 e. was also revised to provide a discussion that the elevation and infrequent overbanking in this reach would not provide for high quality riparian habitat if the setback were implemented. The Tiffany West Levee was removed from further consideration due to it's higher cost and similar benefits when compared to a levee on the east side of Tiffany Basin (Tiffany East Levee). The Tiffany East Levee segment is part of Alternatives K and K+4ft, and was also removed from consideration due to a lower net benefits compared to Alternative A. The setback at the north boundary of the BDANWR was removed from consideration due to incompatibility with refuge goals.

Various non-structural measures were also evaluated and found unreasonable due to reasons of ineffectiveness and efficiency as presented in Section 4.5. (See also the response to Comment *b* under [Overarching Federal Policy for Water Resource Projects](#) above.)

NEPA has integrated environmental protection into the mission of every federal agency, 42 U.S.C. § 4331; therefore the Corps must examine a broad range of alternatives. Development of alternatives is the heart of the EIS. See 40 C.F.R. § 1502.14. CEQ regulations call on the agency to "[r]igorously explore and objectively evaluate *all reasonable* alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated," "[d]evote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits," "[i]nclude reasonable alternatives not within the jurisdiction of the lead agency," "[i]nclude the alternative of no

action,” and “[i]nclude appropriate mitigation measures not already included in the proposed action or alternatives.” *Id.* (emphasis added). As the CEQ states, “the emphasis is on what is “reasonable” rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative.” 46 Fed. Reg. 18,026 (March 23, 1981).

Alternatives eliminated from consideration. Coupled with WRDA’s mandate to protect and restore the functions of natural systems as well as requirements to consider non-structural alternatives and specific mitigation plans, the Corps should devote meaningful consideration and discussion to non-structural and environmentally beneficial alternatives that were summarily dismissed from further consideration. *See Nat’l Parks & Conservation Ass’n v. BLM*, 606 F.3d

1058, 1072 (9th Cir. 2010) (rejecting approach where agency briefly considers but fails to consider *in detail* a range of alternatives). By eliminating non-structural alternatives, the Corps improperly limited the range of alternatives to an unreasonable range. In addition, the Corps fails to consider a combination of non-structural alternatives, rather than each in isolation. In addition, the GRR deems relocation and elevation of structures infeasible due to cost, DEIS 4-12, 4-13 but fails to provide information that would allow comparison of the overall cost of these alternatives with that of the preferred alternative.

Responses: The floodproofing and relocation measures were not reasonable to carry forward into further analysis since these measures are uneconomical as well as an ineffective solution. (Also see the response to Comment *b* under Overarching Federal Policy for Water Resource Projects above.). Since the measures were economically discounted based on a structure-by-structure basis — in other words, the benefit to cost of the measure would be less than 1 — it is not reasonable to develop a study-scale cost for comparison with the final array of alternatives.

Similarly, the DEIS briefly discussed two levee setbacks, carrying the northernmost smaller setback forward to environmental impact analysis. DEIS 4-41. The second setback is also described, DEIS 4-42, but there is no analysis or statement of reasons for why it was not also carried forward for environmental impact analysis. It is also not clear from the DEIS why an alternative was considered but not adopted. *Compare* 40 C.F.R. § 402.14 (requiring agency to briefly describe reasons for eliminating alternative). As described, the levee setback alternative would have restored some floodplain acreage and floodplain connectivity and avoided some of the negative effects of other options to reclaim floodplain. As a reasonable alternative, the DEIS should have provided some justification for eliminating this option from additional consideration.

Response: Concur The initial description of the setback as an alternative in section 4.8 Additional Considerations of Alternatives, is revised to read:

“A shorter levee setback through the northern half of the Socorro Nature Area would return to the existing spoil bank alignment north of the developed facilities so that they would remain landward of a proposed levee. The smaller levee setback alignment would be approximately 8000 feet long (1.4 mi) and be approximately 800 feet to the west at the widest cross section. Approximately 80 acres of floodplain would be restored to the floodway and active river channel. This smaller setback alternative implemented as part of Alternative A has similar but slightly higher costs than Alternative A alone. Similar to the longer setback at this location,

construction of the shorter levee setback would make use of spoil material from other proposed levee sections thereby reducing the amount of hauling and spoil of material. Given the short distance, however, the additional cost for excavating and constructing a new segment of LFCC exceeds the savings in hauling of spoil material and abandonment of a portion of the existing spoil bank. Additional uncaptured costs are anticipated in the form of reclamation of the abandoned sections of LFCC and mitigation of habitat removed for the footprint of the new levee and LFCC sections. This smaller setback alternative as part of Alternative A is not the NED plan due to the higher cost with equivalent benefits. This alternative is carried forward to environmental impact analysis to evaluate any environmental benefits from the alternative.”

c. The description of the affected environment is incomplete.

This section shall “describe the environment of the area(s) to be affected or created by the alternatives under consideration.” 40 C.F.R. § 1502.15. The DEIS’s description of the affected environment does not allow for an accurate assessment of the environmental impacts of the alternatives. “The concept of a baseline against which to compare predictions of the effects of the proposed action and reasonable alternatives is critical to the NEPA process.” Council on Environmental Quality, *Considering Cumulative Effects under the National Environmental Policy Act* 41 (May 11, 1999). *See also Half Moon Bay Fishermans’ Mktg. Ass’n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988) (“without establishing ... baseline conditions ... there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA”). The flawed description of baseline environmental conditions will lead to a flawed environmental impacts assessment.

Rio Grande silvery minnow. More recent Rio Grande silvery minnow population monitoring results post-October 2007, *see* DEIS 2-21, are now available and the Corps should update its discussion of special status species accordingly. The same comment applies to the current population status of the silvery minnow and population trends. *See, e.g.,* Rio Grande Silvery Minnow Population Estimate Program Results from October 2008 (April 10, 2009); Rio Grande Silvery Minnow Population Monitoring 1993-2011, both available at <http://middleriogrande.com>. In addition, the discussion would benefit from clearly delineating between population densities and population estimates.

Response: Section 2.4.4.1 has been updated to include information on the current status of the Rio Grande silvery minnow through 2011 that was utilized in the evaluation of potential effects. Additional status information is included in the Corps’ Biological Assessment for the project in Appendix C.

Climate change considerations. The DEIS provides a brief description of a climate change-affected environmental baseline. Uncertainties may preclude the necessary quantitative analysis of climate change in the baseline (and environmental impacts analysis), DEIS 3-1, but not a qualitative analysis. As CEQ notes, “[i]f cause-and-effect relationships cannot be quantified ... qualitative evaluation procedures can be used.” CEQ, *Considering Cumulative Effects Under the National Environmental Policy Act* at 24 (Jan. 1997). “Reasonable forecasting and speculation is...implicit in NEPA...” *Save Our Ecosystems v. Clark*, 747 F.2d 1240, 1246 n.9 (9th Cir. 1984) (citation omitted); *see also San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016, 1032 (9th Cir. 2006) (“precise quantification of a risk is not necessary to trigger NEPA’s requirements”). Without such an analysis, the Corps’ DEIS has “shunted aside [substantial

questions] with mere conclusory statements,” and “provide[d] no foundation for the inference” that the failure to model impacts prevents it from taking a qualitative hard look at potential impacts. *Found. for N. Am. Wild Sheep v. U.S. Dept. of Agric.*, 681 F.2d 1172, 1179 (9th Cir. 1982).

The Corps should include observed and projected impacts of climate change in the region – considering whether climate change has affected, is affecting, or will foreseeably affect each resource and incorporating that information into the discussion of each resource. Federal and state agencies have published reports, studies and plans that identify the observed and projected impacts of climate change on specific geographic areas or environmental resources and that are readily available to the Corps. The DEIS must consider the following impacts of climate change on the affected environment.

- i. Water Resources: Changes in precipitation patterns; increased frequency, severity, duration and extent of extreme weather events such as floods and droughts; reduction in water availability; changes in water quality (temperature, dissolved oxygen); reductions in groundwater recharge

For example, numerous federal publications expand on the DEIS’s observation that climate change may modify water supply and use by actually explaining how the surface and groundwater resources in the planning area may be affected over the next decades by changes in precipitation patterns. For the western and southwestern U.S., the IPCC has projected likely reductions in snowpack, seasonal shifts in runoff patterns, declines in groundwater recharge, and an increased frequency of intense precipitation events, such as flash floods. *See also* U.S. Global Change Research Program (“USGCRP”), Global Climate Change Impacts in the United States 42 (Thomas R. Karl et al. eds., 2009) (“the arid Southwest is projected to experience longer and more severe droughts from the combination of increased evaporation and reductions in precipitation”); *id.* at 44 (16% increase in average number of days with very heavy precipitation); *id.* at 44 (extended dry periods have become more frequent in the Southwest and “[l]onger periods between rainfalls, combined with higher air temperatures, dry out soils and vegetation ...”); *id.* at 45 (projecting substantial declines in the interior West, especially the Southwest, in runoff); *id.* at 46 (projecting advances in spring runoff by up to 60 days; earlier spring runoff leads to reduced summer flows); *id.* at 47 (changes in water cycle will affect groundwater recharge).

These same publications discuss the potential changes in water quality as a result of climate change. The IPCC predicts that increased water temperatures will put additional stress on aquatic species. *See also* USGCRP, *supra* at 46 (higher water temperatures); *id.* at 46 (increases in storm intensity and reductions in summer streamflow contribute to higher concentrations of pollutants); *id.* at 46 (heavier storms increase runoff, sedimentation and flushing of pollutants into waters).

Additional federal sources explain how the transformations driven by climate change will redistribute stream flow in the Middle Rio Grande:

Warming without precipitation change over the Rio Grande basin likely would lead to increased watershed evapotranspiration, decreased spring snowpack and snowmelt, and

ultimately reduced water supplies to manage under current system and operating conditions. Current climate projections suggest that precipitation could slightly decrease over the basin during the 21st century, which would amplify water supply reductions under warming alone.

Reclamation, SECURE Water Act Section 9503(c) – Reclamation Climate Change and Water 121 (Report to Congress, 2011).

- ii. Ecosystems: shifts to higher elevation/latitudes, reduced vegetation food sources, altered migration routes, less available water sources, reduced streamflows that provide habitat for aquatic species, effects of moisture stress on species

The IPCC has stated broadly that, “Responses of terrestrial species to warming across the Northern Hemisphere are well documented by changes in the timing of growth stages (i.e., phenological changes), especially the earlier onset of spring events, migration, and lengthening of the growing season.” IPCC, 2007: Climate Change 2007: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Parry, Martin L., Canziani, Osvaldo F., Palutikof, Jean P., van der Linden, Paul J., and Hanson, Clair E. (eds.)]. Cambridge University Press, Cambridge, United Kingdom, 1000 pp.

Arid environments like those studied here are likely to become even hotter and drier; in fact, this is already observed. USGCRP, *supra* at 83. The ranges of many species in the United States have shifted northward and upward in elevation. *Id.* at 80. Communities of species will not shift as a whole, breaking up existing ecosystems, and some migratory corridors may be blocked. *Id.* at 81. “In New Mexico’s Rio Grande basin, reduced snowpack, earlier runoff, and higher evaporative demands due to climate change will affect vegetative cover and species’ habitat (Hurd and Coonrod 2007).” Reclamation, SECURE Water Act Section 9503(c) – Reclamation Climate Change and Water 123 (Report to Congress, 2011).

The U.S. Forest Service Rocky Mountain Research Station has assessed the vulnerability of a range of reptiles, amphibians, birds, and mammals in the Middle Rio Grande Bosque. Megan M. Friggens et al., Vulnerability of Individual species to climate change: Vertebrate species of the Middle Rio Grande Bosque, New Mexico (Produced for the USGS Fish and Wildlife Service Agreement No. 201819H705, 2010), available at <http://www.fs.fed.us/rm/grassland-shrubland-desert/docs/species-vulnerability/vulnerability-climate-change.pdf>. The vulnerability assessment found numerous vertebrate species of the Middle Rio Grande are especially vulnerable to climate change. For example, the southwestern willow flycatcher scored particularly high on the vulnerability scale because its riparian habitat was expected to decline with climate change. Moreover, the brown-headed cowbird, a potential threat to the southwestern willow flycatcher, is a resilient species that may benefit from climate change. *Id.* at 17.

The Corps cannot avoid climate change consideration in the DEIS by claiming it is not possible to identify or quantify changes to the environment as a result of climate change. Failure to disclose the range of impacts of climate change on the environment would produce a faulty environmental baseline and would skew any analysis of environmental impacts, precluding the

federal agency from taking the requisite “hard look” at the proposed project and its environmental impacts.

The Corps may disclose that there is “incomplete or unavailable information” regarding environmental effects. *See* 40 C.F.R. § 1502.22. If the incomplete information is essential to choosing among alternatives and getting the information is not exorbitantly expensive, the agency shall acquire and include the information. *Id.* § 1502.22(a). On the other hand, if it is exorbitantly expensive or not possible to acquire the information, the Corps should inform the reader that the information is incomplete or unavailable, why the information is relevant, what relevant information is available, and what impacts the available information predicts. *Id.* § 1502.22(b).

[T]he basic thrust of an agency’s responsibilities under NEPA is to predict the environmental effects of a proposed action before the action is taken and those effects are fully known. Reasonable forecasting and speculation is thus implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as a “crystal ball inquiry.”

Scientists’ Inst. for Pub. Info. v. Atomic Energy Comm’n, 481 F.2d 1079, 1092 (D.C. Cir. 1973). To the extent potential environmental effects are uncertain or unknown, the agency should factor that into their consideration of their significance. *See* 40 C.F.R. § 1508.27(b)(5).

Response: As stated in Section 3.1 with additional discussion: “Although observed trends and model projections provide guidance on future climate change, great uncertainty surrounds both magnitude and rate of change estimates. These uncertainties prevent the quantitative treatment of climate change projections in model efforts at this time.” Additional information is provided here in response to this comment that further supports the overall conclusion.

Although a large number of modeling studies and observed trends address climate change in the Southwest (see refs. in (USGCRP, 2009, 2013), few of these studies provide actionable data to address projected changes in the Rio Grande Basin as required by existing Federal guidelines (CEQ, 2011). Given the large spatial disparities in current climate, and large uncertainties in climate model results, transferring projections to adjacent regions, or assuming results averaged over large geographic space apply to a specific study area are not best practices.

Within the existing floodway of the Rio Grande from SADD to Elephant Butte Reservoir, changing river hydrology is likely to be the most important effect of climate change. The most detailed hydroclimate modeling specific to the Rio Grande has been conducted by the Bureau of Reclamation under its Westwide Climate Risk Assessment program as required under the SECURE Water Act. Reclamation used data from 112 CMIP3 models that were bias corrected and spatially downscaled to 1/8° cells and then input into a VIC model, with the flows subsequently routed down the Rio Grande. The median of median changes from their modeling effort, at specific gages, are provided in the table, below (Reclamation, 2011).

Table 1. Modeling results from Reclamation (2011) showing hydrologic changes to the Rio Grande Basin.

Location	Precip. (%)	Mean temp (°F)	April 1 SWE (%)	Annual Runoff (%)	Dec.- Mar. Runoff (%)	Apr.-July Runoff (%)
2020-2029						
Rio Grande near Lobatos	-0.47	1.84	-25.63	-4.98	-7.12	-2.87
Rio Chama near Abiquiu	0.91	1.79	-87.13	-0.24	4.76	-1.27
Rio Grande near Otowi	-0.54	1.82	-42.20	-4.45	-3.07	-2.48
Rio Grande at Elephant Butte Dam	-0.53	1.79	-93.16	-4.05	-3.59	-1.64
Pecos R. at Damsite #3	-1.48	1.79	-100.00	-2.45	-0.63	-1.39
2050-2059						
Rio Grande near Lobatos	-2.29	2.98	-49.46	-18.89	-20.55	-15.37
Rio Chama near Abiquiu	-1.07	3.83	-96.37	-7.28	5.53	-13.85
Rio Grande near Otowi	-2.42	3.82	-63.92	-14.40	-10.41	-15.91
Rio Grande at Elephant Butte Dam	-2.31	3.82	-98.37	-13.48	-8.95	-15.42
Pecos R. at Damsite #3	-0.72	3.76	-100.00	-2.75	-3.76	-3.63
2070-2079						
Rio Grande near Lobatos	-2.23	5.18	-68.97	-22.41	-23.69	-20.13

Although these numbers are very precise, they provide only general guidance for future change because the range of variation around each of these numbers is very large; the range for temperature by 2070-2079 is approximately 7 to 8°F based on graphics in Reclamation (2011) while models report both gains and losses in precipitation over the basin. Proportionately similar variation exists around all of the figures presented in Table 1 (see Reclamation, 2011: Figure 46).

The Reclamation study and other extant studies suggest:

- Average annual temperatures are likely to increase. A median increase of 5°F (~3°C) is approximately equal to that now projected globally, but is conservative in light of the fact that continental interior portions of North America, such as New Mexico, are anticipated to warm faster than the global average temperature. The Draft National Climate Assessment (USGCRP 2013) states:

Regional annual average temperatures are projected to rise by 2°F to 6°F by 2041-2070 if global emissions are substantially reduced (as in the B1 emission scenario) and by 5°F to 9°F by 2070-2099 with continued growth in global emissions (A2), with the greatest increases in the summer and fall.

- Maps of projected temperature increases show the San Acacia GRR study area warming about 5°F to 8.5°F under all emissions scenarios by 2070-2099 (USGCRP 2013:Fig. 20.1). Higher temperatures are likely to contribute to longer, more severe heat waves and a reduction in winter cold snaps (USGCRP 2013:688).
- Temperature increases are likely to increase evaporation rates, resulting in a decrease in soil moisture. This will contribute to vegetation change and increased wildfire risk, particularly in mountain regions (USGCRP 2013:695). Droughts projected for the Colorado River Basin are likely to become more frequent, intense and longer-lasting (USGCRP 2013:690), Although the probability of this in the Rio

Grande Basin has not been specifically assessed, this is a likely corollary of increasing temperature and evaporation rates even if precipitation stays the same or increases.

- Precipitation is likely to decrease, although in percentage terms the numbers are small <3% and variation large (± 10 -15%) (Reclamation 2011). Changes in precipitation have low certainty (USGCRP 2009, 2013) because models do not currently effectively capture changes to El Niño-Southern Oscillation (ENSO cycle, and related sea surface temperature changes that affect winter precipitation) (Vecchi and Wittenberg 2010, Clement and Emile-Geay 2012), North American Monsoon (summer precipitation) (Gutzler et al. 2005), and Arctic sea ice (path of jet stream) (Screen and Simmonds 2010, Francis and Vavrus 2012).
- Snowpack is likely to decline. Reductions in April 1 snow water equivalence (SWE) of snow in mountain snowpacks reflect a shorter snow-accumulation season (warmer temperatures mean more fall and spring precipitation may fall as rain), and warmer temperatures mean greater snowpack melting and sublimation earlier in the water year (Christensen and Lettenmaier 2007, Cayan et al. 2010). Steep modeled declines in April 1 SWE (Reclamation, 2011; USGCRP 2013: Fig.20.2) reflect steep increases in temperature.
- Steep declines in April 1 SWE lead to steep declines in spring runoff (December-March runoff) and to advances in the timing of runoff by several weeks (Reclamation, 2011; also seen in a much more limited modeling effort in the Rio Grande Basin conducted by Hurd and Coonrod (2007, 2008)). Decreases in April-July runoff are also modeled by Reclamation (2011), reflecting the lack of persistence of snowpack and runoff into the late spring/early summer pre-monsoon months. Changes to stream hydrology have obvious affects on fish population, particularly river drying/rewetting episodes, but also the effects of changes in water quality due to reduced flows and changes to floodplain water tables affecting vegetation regeneration. These results differ dramatically from the finding of small changes in October-March, April-September and annual runoff in the Rio Grande under a 4°F warmer world in Rango and Martinec (2008).

Cayan, D. R., T. Das, D. W. Pierce, T. P. Barnett, M. Tyree, and A. Gershunov. 2010. Future dryness in the southwest US and the hydrology of the early 21st century drought. *Proceedings of the National Academy of Sciences of the United States of America* 107:21271-21276.

Christensen, N. S. and D. P. Lettenmaier. 2007. A multimodel ensemble approach to assessment of climate change impacts on the hydrology and water resources of the Colorado River Basin. *Hydrology and Earth System Sciences* 11:1417-1434.

Clement, A. and J. Emile-Geay. 2012. El Nino-Southern Oscillation: what is the outlook for ENSO? Pages 28-29 in N. R. Bondre, T. Kiefer, and L. von Gunten, editors. *PAGES News: Paired Perspectives on Global Change*.

Council on Environmental Quality (CEQ). 2011. *Federal Agency Climate Change Adaptation Planning: Support Document*. The White House Council on Environmental Quality, Washington, D.C.

Francis, J. A. and S. J. Vavrus. 2012. Evidence linking Arctic amplification to extreme weather in mid-latitudes. *Geophys. Res. Lett.* 39:L06801.

Gutzler, D. S., H. K. Kim, R. W. Higgins, H. M. H. Juang, M. Kanamitsu, K. Mitchell, K. Mo, P. Pegion, E. Ritchie, J. K. Schemm, S. Schubert, Y. Song, and R. Yang. 2005. The North American Monsoon Model Assessment Project: Integrating Numerical Modeling into a Field-based Process Study. *Bulletin of the American Meteorological Society* 86:1423-1429.

Hurd, B. H. and J. Coonrod. 2007. *Climate Change and its Implications for New Mexico's Water Resources and Economic Opportunities*. New Mexico State University, Agricultural Experiment Station Technical Report 45, Las Cruces, New Mexico.

Hurd, B. H. and J. Coonrod. 2008. Climate change risks to New Mexico's waterways: its byways and its flyways. *Water Resources Impact* 10:5-11.

Rango, A. and J. Martinec. 2008. Predictions for snow cover, glaciers and runoff in a changing climate.in *HydroPredict 2008*, Prague, Czech Republic, 15-18 September 2008.

Screen, J. A. and I. Simmonds. 2010. The central role of diminishing sea ice in recent Arctic temperature amplification. *Nature* 464:1334-1337.

U.S. Bureau of Reclamation (Reclamation). 2011. West-wide climate risk assessments: bias-corrected and spatially downscaled surface water projections. U. S. Department of the Interior, Bureau of Reclamation Technical Memorandum No. 86-68210-2011-01, Denver, Colorado.

U.S. Global Change Research Program (USGCRP). 2009. *Global Climate Change Impacts in the United States*. Cambridge University Press, Cambridge, United Kingdom.

U.S. Global Change Research Program (USGCRP). 2013. *Draft Third National Climate Assessment Report*.

Vecchi, G. A. and A. T. Wittenberg. 2010. El Nino and our future climate: where do we stand? *Wiley Interdisciplinary Reviews-Climate Change* 1:260-270.

d. The analysis of environmental consequences omits many key considerations.

1. Impacts to wildlife habitat

The Rio Grande in the San Acacia to San Marcial reach is incised immediately below San Acacia diversion dam and aggrading downstream. Aggradation is due to channel confinement – and resultant sediment deposition – achieved by channel rectification by the Bureau of Reclamation and confinement of the floodway by the spoil banks. The river channel is perched above the floodplain, in some places by 10 to 15 feet. DEIS 2-6 – 2-7. The river will continue to aggrade with or without the project, DEIS 3-4, 4-31; and aggradation and the railroad bridge will remain a constraint to larger river flows through the area.

Without the project, the riparian and aquatic ecosystems would continue to degrade, include a lack of overbank flooding, narrowing of the river channel, and increasing depths to groundwater. DEIS 3-10. Although unstated in the DEIS, it is likely that degradation will continue with the project as well, since these conditions would not change with the construction of levees. The GRR/DEIS presents the increased flood protection from engineered levees as an opportunity to reverse this ecological degradation because the infrastructure would allow for a wider range of reservoir releases and river flows to benefit riparian and aquatic habitat. If this is to be an environmental benefit of the proposed project, the DEIS should assess whether the operational changes that would allow a wider range of reservoir releases is within existing authorities or would require additional environmental analysis and compliance.

Response: Section 4.7.7.3, Contributions to Ecological Resources, stated that implementation of any of the alternatives "...increases the capacity of the channel in this area and allows for higher volume releases from upstream reservoirs." This inadvertently overstated the potential for the proposed project to alter reservoir operation. The text has been revised to read:

"Increasing the extent or frequency of riparian inundation by relatively small discharges (e.g., 10,000 cfs or less) would be beneficial to ecological resources along the Rio Grande. Implementation of any alternative that includes the rehabilitation of the spoil bank in the study area increases the non-damaging discharge capacity of the floodway in the San Acacia reach. This, in part, reduces current constraints on higher discharge releases from upstream reservoirs. The spoil bank in the study area is not the only feature in the middle Rio Grande valley currently limiting such increased releases. Most particularly, spoil banks along both sides of the floodway in the 20-mile-long Isleta-to-Belen reach (upstream from San Acacia) are a similar constraint. Increasing reservoir discharges, and the resultant benefits to ecological resources, would only be realized following the system-wide reduction of such limitations."

Corps of Engineers vegetation standards. The DEIS notes that in light of Corps' Engineer Technical Letter 1110-2-571 (April 10, 2009), there will be no woody vegetation allowed to grow on the levee or within 15 feet of the toes of the levee. DEIS 5-15. WildEarth Guardians shares the concerns expressed by numerous other parties regarding ETL 1110-2-571 and the impact of eliminating vegetation from the riparian area; we hereby incorporate by reference analyses and comments from others on the ETL. *See, e.g.*, Letter from California Department of Water Resources, to U.S. Army Corps of Engineers (April 15, 2010), available at http://www.water.ca.gov/floodsafe/leveeveg/levee_documents/2010-0415_DWRLetter_and_attachment.pdf; Letter from Center for Biological Diversity, to U.S. Army Corps of Engineers (April 26, 2010), available at http://www.water.ca.gov/floodsafe/leveeveg/levee_documents/COE-2010-0007-0043.1.pdf. We also note that the analysis does not consider the availability of a variance from the Technical Letter that would allow woody vegetation on and/or near the levees. The DEIS should disclose this possibility and analyze the alternative with a variance allowing vegetation; the DEIS should also disclose agency scientific findings that trees and woody vegetation may strengthen levees. *See* Matt Weiser, *Trees strengthen levees in some cases, study finds*, Sacramento Bee, at 1A (Aug. 27, 2011).

Response: The conditions along the Rio Grande in the study reach vary considerably from the conditions in which variances have been issued such as the example provided in the comment. In the San Acacia reach, the levee alignment is set back from the active channel of the Rio Grande by tens or hundreds of feet. The predominant vegetation bordering the alignment is dense salt cedar, or other plant communities with relatively low wildlife habitat value. Accordingly, a variance from the standard requirements of ETL 1110-2-571 is not proposed for the San Acacia to Bosque Del Apache Unit project. Available information to assure life safety in the study area does not support a variance at this time. Further erosion of the levee face is only one parameter influenced by the existence of woody vegetation in on or near the levee. The vegetation management area also facilitates annual visual levee inspection for certification, access for inspection, and repair and monitoring for performance during flood events. The Corps has produced draft conditions under which variances may be issued; however, finalization of these conditions is under additional study to include specific analysis of the southwest region.

As additional information regarding potential variances is made available, the Corps will evaluate the information to determine applicability to the proposed project. Updated information will be included in evaluation and detailed design of each segment over the twenty years of project implementation.

“In 2010, 27 of the flycatcher territories in this reach were located on the west bank of the river, adjacent to the alignment of the current spoil bank and proposed engineered levee.” DEIS 2-23. We recommend the DEIS analyze whether the inundation and likely increase in riparian vegetation and territories possibly caused by the Tiffany sediment plug would occur with the project, whether this vegetation would be removed by levee construction or Corps vegetation standards, and if so, whether a variance could allow the vegetation to remain.

Response: Following implementation of the proposed project, sediment plugs within the downstream portion of the study area would still periodically occur, along with their potential to locally improve riparian growth through increased inundation. Currently, the 50%-chance occurrence discharge of 5,500 cfs at San Acacia inundates nearly the entire riverward toe of spoil bank from Highway 380 to San Marcial. The frequency and linear extent of this inundation also would not be altered by the proposed project. The vegetation standards of ETL 1110-2-571 are recommended regardless of the discharge event that may induce woody vegetation to colonize the 15-foot-wide zone adjacent to the riverward toe of a constructed levee.

2. Impact on other projects

Habitat restoration projects, DEIS 3-12, as well as plans, are being developed for the San Acacia reach of the Middle Rio Grande. Much of this work is being done in association with the Middle Rio Grande Endangered Species Collaborative Program. *See* Restoration Analysis and Recommendations for the San Acacia Reach of the Middle Rio Grande, NM (Jan. 2008), available at <http://www.middleriogrande.com> ; *see also* Conceptual Restoration Plan for the Active Floodplain of the Rio Grande San Acacia – San Marcial, New Mexico (Feb. 2004), available at <http://www.sobtf.org> . The Corps is a member of this Program, which recently established a San Acacia work group, and would serve the Program well to consider potential conflicts and compatibilities with the habitat restoration plans formulated and adopted by the Program.

Response: The Corps has reviewed the current restoration plans in the references cited, as well as the current action plan being developed by the Middle Rio Grande Endangered Species Collaborative Program. The majority of the restoration projects envisioned would be designed to current flow conditions, which would not be altered by the Corps' proposed project. The Corps will monitor groundwater-surface water interaction and dynamics in the San Acacia reach; and will assist resource management agencies in the analysis, modeling, planning, and adaptive management of activities relating to future sediment, habitat, and flow issues. The Corps will continue its participation and technical involvement in habitat restoration efforts by the Collaborative Program.

3. Compliance with other laws

An action that may violate federal or state law or other requirements for environmental protection, *see* 40 C.F.R. § 1508.27(b), may have a significant impact. *See also id.* § 1502.16(c) (environmental effects section shall include discussions of possible conflicts between the proposed action and federal, state, local or tribal plans, policies or controls for the area); *id.* § 1506.2(d) (requiring discussion of any inconsistency with state or local plans or laws and of the extent to which the proposed action will be reconciled with the plan or laws). The Corps should supplement its environmental impacts analysis and determination of significance by considering additional environmental requirements.

(a) Clean Water Act requirements

The Environmental Protection Agency's Section 404(b)(1) guidelines state that "[n]o discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem." 40 C.F.R. § 230.10(a). Using the DEIS analysis, the recommended plan would fill 9.3 acres of open floodway and create about 15.4 acres of floodway, resulting in net gain. DEIS 6-8. Other alternatives, though, would fill only 1.4 acres of floodway and create 42.33 acres, resulting in less loss and a much larger net gain. The DEIS should include the foregoing analysis in order to demonstrate that the recommended plan is the least environmentally damaging to aquatic resources. The 404(b)(1) Guidelines Evaluation should also include such an analysis to support the conclusory assertion that the recommended plan meets environmental compliance requirements.

Response: The figures cited only focus on one aspect of the determination of impacts to the aquatic ecosystem. It is correctly stated that the recommended plan would fill approximately 9.5 acres of open floodway and ultimately result in a gain of 15.4 acres of floodway area, for a net gain of approximately 5.9 acres. Conversely, Alternatives A and K would fill only 1.4 acres of open floodway, and would result in a gain of 42.3 acres of floodway area. But those figures alone do not correctly assess the entirety of the ecosystem impacts. Because Alternatives A and K represent a levee four feet shorter than that in the recommended plan, there is a significantly greater amount of spoil that must be disposed from the existing spoil bank. From the values in Table 6.1 "Soil Quantities," the recommended plan results in a disposal total of 1,475 acre-feet of soil, while Alternatives A and K both result in 2,389 and 2,435 acre-feet, respectively, in need of disposal. This additional 914 to 960 acre-feet of soil requiring disposal not only causes a significant increase in the cost of the project, but creates additional ecosystem impacts at the site of the disposal (that is, 178 to 187 additional acres). When both the impact of disposal and the impact of fill in the floodway are taken into consideration, the recommended plan does provide the least environmentally damaging practicable alternative.

The 404(b)(1) Guidelines also prohibit discharges unless the applicant has taken all appropriate and practicable steps to minimize potential impacts on the aquatic environment. 40 C.F.R. § 230.10(d). Compensatory mitigation is required under the Guidelines for unavoidable impacts to waters after the least environmentally damaging practicable alternative has been determined. The Corps must discuss the steps that the applicant will take to avoid and minimize impacts to the maximum extent and include a mitigation plan for unavoidable impacts. The Corps must also evaluate the efficacy of that mitigation plan in reducing and mitigating adverse effects.

Response: As stated in the joint USACE/USEPA 404(b)(1) guidelines, an alternative to the proposed discharge with a less adverse impact must also be practicable. An alternative is practicable where it is "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." Further, an alternative is only practicable if it is capable of being done taking into consideration the overall project purpose. When both cost and ecosystem impacts associated with increased spoil quantities are taken into account, the recommended plan is the least environmentally damaging practicable alternative.

(b) Migratory Bird Treaty Act & Bald and Golden Eagle Protection Act

Given the construction activities and vegetation removal that would occur as a result of construction of the levee and Corps vegetation standards for levees, the DEIS should assess impacts on migratory birds and bald eagles. The Migratory Bird Treaty Act, 16 U.S.C. § 703 *et seq.*, protects hundreds of migratory birds species. Although bald eagles are no longer an endangered species, the Bald and Golden Eagle Protection Act, 16 U.S.C. § 668 *et seq.*, offers similar protections for bald and golden eagles.

Response: Text within Chapter 6 of the GRR/SEIS-II was augmented to describe that the proposed plan (and its alternatives) would not result in "take" pursuant to the Bald and Golden Eagle Protection Act or the Migratory Bird Treaty Act.

4. Additional environmental consequences

NEPA requires consideration of "the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity." 40 C.F.R. § 1502.16.

Agencies have interpreted this to include using “all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans. 42 U.S.C. § 4331. NEPA also requires discussion of “any adverse environmental effects which cannot be avoided” and “any irreversible or irretrievable commitments of resources.” 40 C.F.R. § 1502.16. The DEIS should disclose these environmental consequences.

[Response: The Final GRR/SEIS-II addresses all perceived unavoidable environmental effects. The text was augmented to include discussion of irreversible or irretrievable commitments of resources.](#)

e. Mitigation and Monitoring are important but overlooked requirements.

[Response: The draft GRR/SEIS-II included preliminary mitigation and monitoring plans. The final GRR-SEIS-II includes a revised mitigation and monitoring plan \(Appendix F-4\) that addresses the concerns listed below and the requirements of cited references.](#)

Mitigation is an important part of a NEPA analysis, as demonstrated by its use throughout CEQ’s implementing regulations. *See* 40 C.F.R. § 1502.14(f) (“include appropriate mitigation measures not already included in the proposed action or alternatives”); *id.* § 1508.25(b)(3) (defining the scope of an EIS to include mitigation measures not in the proposed action); *id.* § 1508.20 (defining mitigation). An agency must also discuss “[m]eans to mitigate adverse environmental impacts” in its analysis of environmental effects of the proposed action and alternatives. *Id.* § 1502.16(h). “Omission of a reasonably complete discussion of possible mitigation measures” undermines NEPA and the ability to assess the severity of environmental impacts. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989).

Critical to the assessment of environmental effects is an analysis of the effectiveness of proposed mitigation measures as well as assurances that mitigation measures will be implemented and monitored. CEQ recommends that any agency NEPA analyses and/or decision documents should:

- describe the expertise applied in determining appropriate mitigation commitments;
- consider when and how mitigation commitments will be implemented;
- specify measurable performance standards or expected results of mitigation commitments as well as the timeframe for the agency action and mitigation commitments;
- disclose if it is reasonably foreseeable that funding for mitigation measures may not be available and, if so, the resultant environmental effects;
- identify alternative mitigation measures if the initial commitments are not implemented or effective; and
- describe monitoring plans and programs, the agency and/or applicant responsible for developing and implementing the monitoring program and the monitoring area and appropriate monitoring system.

See Final Guidance for Federal Departments and Agencies on the Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact, 76 Fed. Reg. 3843 (Jan. 21, 2011).

Coupled with WRDA's requirements for a specific mitigation plan, mitigation monitoring, and other requirements, the GRR/DEIS's discussion of mitigation is incomplete by both WRDA and NEPA standards. The Corps should ensure that proposed mitigation measures follow CEQ guidance.

1. Failure to Analyze Effectiveness of Mitigation Measures

The DEIS must provide data and analysis that demonstrate why the proposed mitigation measures/design features will "constitute an adequate buffer against the negative impacts that may result from the [proposed alternatives]." *Nat'l Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 734 (9th Cir. 2001).

Response: The revised mitigation plan in Appendix F-4 reiterates the Corps' and sponsor's commitment to assuring successful mitigative revegetation. Section 6.4.2.6 of the final GRR/SEIS-II quantifies the compensatory value of proposed project features and mitigation measures.

(a) No supporting analysis for mitigation

With additional analysis describing how and to what level mitigation is expected to reduce impacts to environmental resources, the DEIS will be able to "present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options" 40 C.F.R. § 1502.14.

Furthermore, the types and amount of mitigation, the criteria for success, the functions and values, and any contingency plans must be evaluated in light of the projected changes due to climate change. For example, several studies project that drier and warmer climatic conditions may reduce vegetative ground cover, increase evapotranspiration, and shift species ranges. Indeed, the DEIS acknowledges predictions of more severe drought and drier soil conditions. DEIS 6-2. The DEIS should assess the likelihood of success of revegetation, the species to be used in revegetation, and the availability of water supplies to grow and maintain vegetation.

Response: The Corps acknowledges that reduced streamflow and precipitation may result in drier conditions within the riparian zone; however, the timing, extent, and degree of such changes are not clear at the present. This uncertainty will be clarified through a program of monitoring, modeling, and scientific analysis conducted by the Corps once construction has started. The Corps will monitor groundwater-surface water interaction and dynamics in the San Acacia reach; and will assist resource management agencies in the analysis, modeling, planning, and adaptive management of activities relating to future sediment, habitat, and flow issues. Based on findings, the Corps shall determine and develop commensurate mitigation for the duration of the project.

(b) Monitoring critical to mitigation effectiveness

Additional analysis that indicates the expected results of mitigation will also inform any monitoring program that the Corps and/or sponsors should commit to implementing.

“Monitoring is fundamental for ensuring the implementation and effectiveness of mitigation commitments, meeting legal and permitting requirements, and identifying trends and possible means for improvement.” 76 Fed. Reg. at 3849. CEQ regulations already require that “a monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation.” 40 C.F.R. § 1505.2(c). There are still monitoring commitments left to be specified in the mitigation plan, in particular, the parties responsible for monitoring and the contingency plan for taking corrective actions in cases in which monitoring demonstrates that mitigation measures are not achieving ecological success; and a commitment to monitor until the mitigation is found to be successful.

Response: The revised mitigation plan in Appendix F-4 clarifies the Corps' and sponsor's commitment to successful implementation of mitigation and subsequent monitoring, and includes additional details on monitoring the success of mitigative plantings through periodic analysis of vegetation characteristics and avian use during the 15 years following planting.

In addition to WRDA requirements described above, the monitoring program should track whether mitigation commitments are being performed as described in the DEIS *and* whether the mitigation is producing the expected outcomes and environmental effects. The monitoring program should also provide for public involvement. 76 Fed. Reg. at 3851. The Corps should take the additional step of releasing monitoring reports and making monitoring results available online. *Id.*

Response: Concur. The text has been updated to clarify that monitoring results would be made available to the public in addition to resource agencies.

2. Mitigation and Best Management Practices

Impacts to Rio Grande silvery minnow. The Corps has listed typical best management practices that it would comply with during construction activities. DEIS 6-9. We recommend that additional best management practices would require the Corps to avoid construction and activities related to the river crossing when a qualified biologist determines that Rio Grande silvery minnows are present in the area.

Response: The following BMP was added to Chapter 6: "Qualified fisheries biologists would evaluate measures to exclude fish from in-channel construction areas. Cofferdams and silt curtains would be deployed by Corps biologists from the shoreline into the channel to exclude fish from construction areas where possible. If appropriate, biologists would coordinate with Service personnel to seine areas prior to placement of barriers in the construction area."

Impacts to Southwestern Willow Flycatchers. To avoid impacts to flycatchers, we recommend that the best management practice during construction activities be revised to state that vegetation removal would only be performed if inspection by a qualified biologist determines that “flycatchers *or their nests*” are not present within 500 feet of the vegetation patch to be removed. DEIS 6-26.

Response: Concur. The text has been revised accordingly.

Thank you for your consideration of these comments.

Sincerely,
—SIGNED—
 Kara Gillon, Esq.

On behalf of

—SIGNED—

John Horning
 Executive Director
 WildEarth Guardians
 516 Alto Street
 Santa Fe, NM 87501

[NOT SIGNED]

Steve Harris
 Rio Grande Restoration
 HCR 69 Box 3-C
 Embudo, NM 87531

—SIGNED—

Karyn Stockdale
 Vice President and Executive Director
 Audubon New Mexico
 P.O. Box 9314
 Santa Fe, NM 87504

[NOT SIGNED]

David Groenfeldt, Ph D
 Director
 Water-Culture Institute
 Santa Fe, New Mexico

PUBLIC REVIEW AND COMMENTS ON FINAL GRR/SEIS-II

The final GRR/SEIS-II was submitted to the USEPA and was made available for public review from January 24 through February 24, 2014. A notice of availability of the final document was published by the USEPA in the Federal Register on January 24, 2014 (Volume 79, No. 16, page 4258). Following is the text of the District's notice of availability also published in the Federal Register (Volume 79, No. 17, pages 4342-4343; January 27, 2014).

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Notice of Availability for the Final Supplemental Environmental Impact Statement for the Proposed San Acacia to Bosque del Apache Project, Socorro County, New Mexico

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice of availability—Final SEIS.

SUMMARY: In accordance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*) and Council on Environmental Quality regulations (40 CFR parts 1500–1508) the Corps of Engineers, Albuquerque District, has prepared a final Supplemental Environmental Impact Statement (SEIS) for the San Acacia to Bosque del Apache Project, Socorro County, New Mexico.

DATES: The 30-day review period begins on January 24, 2014 and ends on February 24, 2014. The Record of Decision on the proposed action will be issued after February 24, 2014.

FOR FURTHER INFORMATION CONTACT: For further information, requests for copies, and/or questions about the project, please contact Mr. Jerry Nieto, Project Manager, by telephone: (505) 342–3362, by mail: U.S. Army Corps of Engineers, 4101 Jefferson Plaza NE., Albuquerque, New Mexico 87109, or by email: Jerry.D.Nieto@usace.army.mil.

SUPPLEMENTARY INFORMATION:

1. *Background Information:* Previously, an environmental impact statement (1977) and a supplement (1992) were published regarding this project. The current SEIS (II) evaluates the effects of revised levee design and additional alternatives. The final SEIS is integrated with a final General Reevaluation Report, and the integrated document is entitled: *General Reevaluation Report and Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico* (hereafter referred to as the final GRR/SEIS–II).

Alternatives developed and evaluated during the current and previous studies consist of levee reconstruction (at various heights); flood and sediment control dams; local levees; intermittent levee replacement; watershed land treatment; floodproofing of buildings; levee-alignment setbacks; and no action. Principal issues analyzed in the development of the GRR/SEIS–II included the effect of alternatives on flood risk, developed lands and structures, water quality, ecological resources, endangered species, cultural resources, and socio-economics.

The recommended plan is to replace the existing embankment between the Low Flow Conveyance Channel and the Rio Grande with a structurally competent levee capable of containing high-volume, long-duration flows. This engineered levee would substantially reduce the risk of damage from floods emanating from the Rio Grande. The proposed levee and attendant structures would extend from San Acacia downstream for approximately 43 miles, nearly to San Marcial. The local cost costsharing sponsors of the proposed project are the Middle Rio Grande Conservancy District and the New Mexico Interstate Stream Commission.

2. *Draft SEIS Review*: The draft GRR–SEIS–II comment period began on April 27, 2012 with the publication of the Notice of Availability in the **Federal Register** (77 FR 25151), and ended on June 11, 2012. A public meeting was held during the review period on May 22, 2012 in Socorro, New Mexico.

3. *Availability of the final GRR/SEIS–II*: The final document is electronically available for viewing and printing at: <http://www.spa.usace.army.mil/Missions/Environmental/EnvironmentalComplianceDocuments/EnvironmentalImpactStatementsROD.aspx>. Electronic copies may also be requested from the contact person listed above. Paper copies of the final GRR/SEIS–II are available for review at the Socorro Public Library, 401 Park St., Socorro, NM.

Julie A. Alcon,
Chief, Environmental Resources Section, U.S.
Army Corps of Engineers, Albuquerque.
 [FR Doc. 2014–01448 Filed 1–24–14; 8:45 am]

Notices of availability of the final document also were published in the *Socorro Defensor-Chieftain*, the *Albuquerque Journal*, and the *Santa Fe New Mexican*. Copies of the document were made available to the general public at the Socorro Library, Socorro, NM. A digital copy of the final document and appendices was made available to the general public on the Albuquerque District’s website. Copies of the final GRR/SEIS–II (either paper or digital) were mailed to the same entities listed previously for the draft document.

The remainder of this appendix entails written comments on the final document, along with annotated responses by the Corps.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6

**1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733**

February 18, 2014

U.S. Army Corps of Engineers
Albuquerque District
Ms. Julie Alcon
4101 Jefferson Plaza NE
Albuquerque, NM 87109-3435

Ms. Alcon,

In accordance with our responsibilities under Section 309 of the Clean Air Act (CAA), the National Environmental Policy Act (NEPA), and the Council on Environmental Quality (CEQ) regulations for implementing NEPA, the U.S. Environmental Protection Agency (EPA) Region 6 office in Dallas, Texas, has completed its review of the combined Final Supplemental Environmental Impact Statement (FSEIS) and General Reevaluation Report for the Rio Grande Floodway prepared by the U.S. Army Corps of Engineers (USACE). The project proposes to provide higher levels of flood risk management to floodplain communities along the Rio Grande from the San Acacia Diversion Dam downstream to Elephant Butte Lake, New Mexico.

EPA provided comments for the Draft EIS in a letter dated August 5, 2013. EPA rated the DEIS as "EC-2" i.e., EPA has "Environmental Concerns and Requests Additional Information. In regards to the FSEIS, we offer the following comments about the levee setback at river mile 108. The USACE response to EPA comments stated that the Bureau of Land Management (BLM) determined this alternative as inconsistent with the goals and objectives of the recreation area according to the Socorro Resource Management Plan. The USACE response indicated consultation documents between USACE and BLM should be in Appendix G of the FEIS. This correspondence is missing from the Appendix. Provide the USACE correspondence with BLM in the Record of Decision (ROD).

EPA appreciates the opportunity to review the Final EIS. Please send a copy of the ROD to my attention. If you have any questions or concerns regarding this letter, please contact me at 214-665-8006, or Keith Hayden of my staff at hayden.keith@epa.gov or 214-665-2133 for assistance.

Sincerely,

A handwritten signature in dark ink, appearing to read "Rhonda", is written over the word "Sincerely,".

Rhonda Smith
Chief, Office of Planning
and Coordination

A handwritten signature in dark ink, appearing to read "Keith", is written to the right of Rhonda Smith's signature.



DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
4101 JEFFERSON PLAZA NE
ALBUQUERQUE NM 87109-3435

March 13, 2014

Planning, Project & Program Management Division
Planning Branch
Environmental Resources Section

Ms. Rhonda Smith, Chief
Office of Planning and Coordination (6EN-XP)
U.S. Environmental Protection Agency, Region 6
Compliance Assurance and Enforcement Division
1445 Ross Avenue
Dallas, Texas 75202-2733

Dear Ms. Smith:


Thank you for your February 18, 2014 comment on the final *General Reevaluation Report and Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico* ("final GRR/SEIS-II") which the U.S. Army Corps of Engineers, Albuquerque District ("Corps") transmitted to your office on January 16, 2014.

In addressing your comment regarding the River Mile 108 levee-setback alternative, we wish to first clarify our response to your original June 8, 2012 comment on Section 5.5 of the *draft* GRR/SEIS-II. We did not intend to imply that the U.S. Bureau of Land Management ("BLM") determined that the alternative included in both the draft and final documents would be inconsistent with the goals of their management plan. Rather, early discussions with BLM indicated that a preliminary plan for a larger (130-acre) setback would be incompatible with recreational facilities, as they explained in a July 22, 2011 letter to the Corps (enclosed here). A revised, 80-acre plan that avoided already developed areas was then evaluated in the draft and final documents.

In response to your original comment on the draft document, the rationale for not selecting the River-Mile 108 setback alternative is explained in sections 5.5 (pp. 5-22 to 5-23) and 6.4.1.2e (pp. 6-15 to 6-16) of the final GRR/SEIS-II. For your convenience, text from those sections have been extracted and are enclosed here.

We hope this clarifies your comments on both the draft and final documents, as well as the content of BLM's letter. If you have any additional questions, please contact Mr. William DeRagon of my staff, (505) 342-3358, william.r.deragon@usace.army.mil, or Mr. Jerry Nieto, Project Manager, (505) 342-3362, Jerry.D.Nieto@usace.army.mil.

Sincerely,


Julie A. Alcon
Chief, Environmental Resources Section

Enclosures



United States Department of the Interior
BUREAU OF LAND MANAGEMENT

Albuquerque District
Socorro Field Office
901 South Highway 85
Socorro, New Mexico 87801
www.blm.gov/nm



July 22, 2011

Attn: Jerry Nieto
Army Corp of Engineers
4101 Jefferson Plaza NE
Albuquerque, NM 87109

RE: Setback Levees

Dear Mr. Nieto,

The Bureau of Land Management (BLM) Socorro Field Office has carefully considered the Corp of Engineers proposal for a setback levee. We determined that this action is inconsistent with the goals and objectives of our newly published Socorro Resource Management Plan and the agency.

We currently manage the Socorro Nature Area (SNA), located along the Rio Grande River, just east of Lemitar, New Mexico. The SNA is a BLM recreation area used by public land users for camping and picnics, as well as, environmental education and hiking the nature trail. The proposed levee threatens this facility because the Corp's current plans take it through the center of the facility which would allow the waters of the Rio Grande to flood the entire area and the infrastructure would be destroyed or rendered useless incurring the taxpayers considerable cost.

We examined alternative sites and, at this time, there are no other areas along the Rio Grande which will support our needs. We suggest an alternate route for your levee which we previously discussed at our last meeting with you in Socorro and that was to have your proposed levee turn back towards the river above the north end of our nature trail. At that time, you advised us that this alternative was possible.

It is our policy to work with other agencies and we look forward to working with you now. Please let me know if further discussion is necessary in this matter by contacting my Assistant Field Manager, John Brenna, at (575) 838-1273.

Sincerely,

Danita Burns
Field Manager

Excerpted text from:

General Reevaluation Report and Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico, U.S. Army Corps of Engineers, Albuquerque, dated October 2013.

CHAPTER 5 - DESCRIPTION OF THE FINAL ARRAY OF ALTERNATIVES

[pg. 5.22]

5.5 LEVEE SETBACK AT RIVER MILE 108*

The setback located approximately 5.5 miles downstream of the SADD (River Mile 108), adjacent to the Socorro Nature Area operated by the Bureau of Land Management, occurs within the reach common to both Alternative A and K. The setback consists of realignment of the LFCC, proposed levee, and associated maintenance roads to parallel the existing irrigation drain within a 300 ft corridor. The smaller levee setback alignment would be approximately 8,000 feet long (1.4 mi) and be approximately 790 feet to the west of the existing LFCC at the widest cross section. Approximately 80 acres of floodplain would be reconnected to the floodway with implementation of the setback. Vegetation in this area would not change substantially since the current elevation does not experience inundation until river flows approximately 15,400 cfs (10%-chance exceedance flow). Additional discussion of vegetation effects is included in Section 6.2 e. The additional area in the floodway would increase floodway capacity slightly during flows that exceed this discharge.

Alternatives A and K at both the Base Levee and Base Levee + 4 ft heights would be the same when implementing the levee setback in all respects including levee performance and therefore economic benefits. Since the setback is located within the reach corresponding to Alternative A and Alternative A is part of Alternative K, any change in Alternative A due to implementation of

[pg. 5-23]

the setback would also be included in Alternative K. Therefore further analysis of alternative that include the setback compares both levee alternatives at both levee heights.

Implementation of the levee setback would result in a small change in excavation and disposal of spoil. In general, the levee setback would lengthen any levee and LFCC by approximately 300 feet. The fill material for the Base Levee + 4 ft height exceeds the amount of excavated soil to relocate the LFCC therefore there is little change in the soil disposal amounts. Changes in the amount of spoil material would be commensurate with the additional soil needed for the extra levee length. The fill material for the Base Levee height, however, is exceeded by the amount of soil excavated by the relocated LFCC therefore the disposal is much greater. This levee setback has a higher cost than Alternative A alone and does not produce additional Flood Risk Management benefits, therefore is not included in the recommended plan.

CHAPTER 6 - FORESEEABLE EFFECTS OF THE PROPOSED ACTION AND ALTERNATIVES

6.4 BIOLOGICAL ENVIRONMENT*

6.4.1 Aquatic Habitat and Inundated Floodway

6.4.1.2 *Changes in Floodway Area Due to Feature Footprint*

[pg. 6-15]

(e) River Mile 108 Setback

Under this alternative, the LFCC and new levee alignment would be shifted to the west no closer than 250 feet from an existing riverside drain. This 250-foot distance was selected to avoid the removal of a band of dense, healthy cottonwoods between the proposed alignment and the riverside drain to the west. The majority of the vegetation between the existing and proposed alignments consists of sparse and aged cottonwoods with scattered salt cedar shrubs.

Inclusion of the River Mile 108 setback in any of the levee alternatives would allow for the additional inundation of approximately 80 acres within the floodway by flows greater than the 10%-chance flood event. Vegetation composition within the 80-acre area would not be expected to change significantly since inundation would occur infrequently. that is, at flows greater than 11,800 cfs at the SADD. However, some geomorphic changes from river channel meandering may occur in the long term without threatening the levee in its new alignment. The setback would support ecosystem dynamics for creating riverine and riparian habitat over a long period by allowing erosion of the west bankline and development of in-channel bars. The long-term effect would locally increase the area of dynamic aquatic and terrestrial habitats patches.

[pg 6.16]

Currently, the LFCC is the lowest point in the valley's cross-section throughout the study area from Escondida to Elephant Butte Lake. Throughout that reach, groundwater from both east and west of the river, as well as seepage from the river channel itself, drains to the LFCC. There is uncertainty about potential future changes to the shallow groundwater table following the relocation of the LFCC. There is a distinct possibility that shifting the LFCC closer to the band of healthy cottonwoods may lower the water table in the immediate vicinity, therefore adversely affecting the most valuable riparian vegetation in the setback area.



United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office

2105 Osuna NE

Albuquerque, New Mexico 87113

February 24, 2014

Mr. Jerry Nieto, Project Manager,
U.S. Army Corps of Engineers
4101 Jefferson Plaza NE
Albuquerque, New Mexico 87109
Phone: (505) 342 3362
Email: Jerry.D.Nieto@usace.army.mil

Dear Mr. Nieto:

Thank you for the public review notice of the Albuquerque District, U.S. Army Corps of Engineers (Corps), final General Reevaluation Report/Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico (San Acacia Levee Project). We offer the following comment for the Corps consideration:

On February 28, 2013, the U.S. Fish and Wildlife Service (Service) issued a final programmatic biological opinion on effects of the Corps construction, operation, and maintenance of the San Acacia Levee Project (Levee BO). Please ensure that the reasonable and prudent measures and their implementing terms and conditions, which are non-discretionary, are appropriately integrated into the Levee Project. For your convenience, we are attaching a copy of those items.

The Service looks forward to working with Corps on its development of Southwestern willow flycatcher and Rio Grande silvery minnow compensatory habitats and its flycatcher and silvery minnow habitat mitigation and adaptive management plans which will be completed by December 31, 2014.

Please contact Ms. Lori Robertson of my staff at (505) 761-4710 to arrange future coordination on these important endangered species planning efforts.

Sincerely,

[\[signed\]](#)

Wally Murphy

Field Supervisor

Attachment 1. Terms and Conditions of February 2013 Biological Opinion

Terms and Conditions

Compliance with the following terms and conditions must be achieved in order to be exempt from the prohibitions of section 9 of the ESA. These terms and conditions implement the RPMs described above. These terms and conditions are non-discretionary.

To implement RPM 1, Corps shall:

- 1.1. Conduct flycatcher protocol surveys covering the floodway west of the Rio Grande channel from 0.5 mile north of San Acacia Diversion Dam to the San Marcial railroad bridge. These surveys shall commence in the breeding season prior to anticipated construction in a given segment of the action area, and shall continue annually through the third breeding season following construction in each given segment (USACE 2012d).
- 1.2. Conduct flycatcher protocol surveys performed by biologists that possess a Section 10(a)(1)(A) permit, and report to the Service in accordance with the permit. (USACE 2012d).
- 1.3. Monitor groundwater pumping for construction activities in the floodway to determine its effect on riparian habitats. (USACE 2012d).
- 1.4. Conduct flycatcher protocol surveys within critical habitat located within 0.25-mile west of the Low Flow Conveyance Channel canal, from the San Acacia Diversion Dam to Tiffany Junction. These surveys will be conducted for a single breeding season, and should be commensurate in time to flycatcher surveys within the floodway for a given construction-segment of the action area. (USACE 2012d).
- 1.5. The Corps will monitor groundwater-surface water interaction and dynamics in the San Acacia reach per 3.5 below; and will assist resource management agencies in the analysis, modeling, planning, and adaptive management of activities relating to future sediment, habitat, and flow issues.

To implement RPM 2, Corps shall:

- 2.1 Construction may occur throughout the calendar year; however, no construction would be performed within 0.25 mile of occupied flycatcher territories during the breeding season; that is, from the date of the second protocol survey of the season through August 15. Construction traffic may continue year-round along the LFCC maintenance roads.
- 2.2 Each Corps construction contract will include requirements that ensure the contractor's compliance with all pertinent terms and conditions of the Service's Incidental Take Statement; pertinent information on the presence or locations of flycatchers; and requisite work restrictions. As needed, the Corps will formally update pertinent information and requirements throughout the duration of the contract. (USACE 2012d).
- 2.3 If traffic or other proposed action activities do occur within the 0.25-mile radius of a breeding territory, then those territories/nests will be monitored according to standard protocols, but at least every two weeks to determine continued occupancy.

To implement RPM 3, Corps shall:

- 3.1 Coordinate development of 50.4 acres of flycatcher habitat with the Service's NMESFO prior to implementation. If habitat is proposed to be developed on National Wildlife Refuge lands, the Corps will also coordinate with the Service's Refuges. If applicable, the Corps will obtain Refuges approval before proceeding.
- 3.2 Prepare and implement a flycatcher habitat mitigation and adaptive management plan for the San Acacia Reach. The plan will include Best Management Practices to minimize effects to the flycatcher, and its critical habitat. The plan will identify specific areas for habitat management with a schedule for completing development of 50.4 acres of dense riparian shrub habitat possessing primary constituent elements of critical habitat. The habitats shall be developed prior to, or immediately following, the loss of critical habitat due to specific construction activities of the proposed action. The plan will be reviewed and approved by the Service and should be completed by December 31, 2014. (USACE 2012e).
- 3.3 Assure that the water used for dust suppression will not harm nesting or migrating flycatchers. (USACE 2012d).
- 3.4 Utilize results obtained during implementation of RPM 1 to limit effects on flycatcher habitat.
- 3.5 The uncertainty surrounding the impact of the levee project-exacerbated sediment accumulation on flycatcher habitat will be clarified through a program of monitoring, modeling, and scientific analysis conducted by the Corps once construction has started. Methods for calculating the habitat area that may be at risk due to aggradation follow:
 - 3.5.1 Mitigation of habitat is described as creating or managing the number of acres to provide a functioning flycatcher habitat for the duration of the project. Creation of newly built habitat is not necessarily required.
 - 3.5.2 Calculation Methods: Corps, in coordination with the Service's New Mexico Ecological Services Field Office shall determine distance from levee that vegetation may be affected by increased depth to the water table.
 - 3.5.3 Corps shall project surface aggradation from USACE's 50 yr projections and estimate the future ground elevations.
 - 3.5.4 Corps shall compare information gained from 3.5.1 and 3.5.2 with most current suitable and moderately suitable habitat information.
 - 3.5.5 Based on a program of monitoring, modeling, and scientific analysis, the Corps shall determine and develop commensurate mitigation for the duration of the project.
- 4.1 Coordinate development of silvery minnow habitat with the Service's NMESFO prior to implementation. If habitat is proposed to be developed on National Wildlife Refuge lands, the Corps will also coordinate with the Service's Refuges. If applicable, the Corps will obtain Refuges approval before proceeding.
- 4.2 For bankline construction, the Corps, in coordination with the Service, will establish and implement a design standard applicable to deployment of erosion control screens (e.g., silt curtains or wattles, etc.) that insure protection of water quality. For in-river construction, the Corps, in coordination with the Service, will establish and implement a coffer dam design standard applicable to prevent fish access to the

- construction site and insure protection of water quality. Cofferdams and erosion protection screens will be inspected daily to maintain the connection to the substrate and will be removed following construction. (USACE 2012d).
- 4.3 Prepare and implement a silvery minnow habitat mitigation and adaptive management plan for the San Acacia Reach. The plan will include Best Management Practices for construction to minimize effects to the silvery minnow, and its critical habitat. The adaptive management section will provide recommendations for silvery minnow and habitat monitoring focused on reproduction and recruitment. The plan will identify specific areas for habitat management with a schedule for completing construction of a minimum of 13.5 acres of silvery minnow critical habitat possessing the primary constituent elements. The habitats shall be constructed prior to, or immediately following, the loss of critical habitat due to specific construction activities in the proposed action. The plan will be reviewed and approved by the Service and should be completed by December 31, 2014. (USACE 2012d,e).
 - 4.4 Fish sampling will be conducted by biologists that possess a Section 10(a)(1)(A) permit, and report to the Service in accordance with the permit. (USACE 2012d).
 - 4.5 Monitor groundwater pumping for construction activities in the floodway to determine its effect on aquatic habitats (USACE 2012d). Oxygen content in excavated groundwater will be measured to ensure no hypoxic conditions occur. The Corps will develop a groundwater pumping plan prior to riprap placement. The timing, rate, water volume, and receiving area will be formulated to aerate groundwater to eliminate impacts to aquatic life, riparian vegetation and river levels to the extent possible. The Corps would immediately confer with the Service if hypoxic conditions occur in the Rio Grande as a consequence of groundwater pumping to the river (including runoff across the floodplain). (USACE 2012d).
 - 4.6 Assure that water used for dust suppression does not reduce water availability for silvery minnow; assure the quality of water used for dust suppression; use water from sources other than those used by silvery minnow; if water must be removed from the low flow conveyance channel, assure no impact to the low flow conveyance channel pumping program. (USACE 2012d).
 - 4.7 Monitor pH as part of the soil cement construction. Samples from the river channel, within the coffer dam, and on the soil cement to detect changes due to soil cement through the curing process. Monitoring data will be reported to the Service to demonstrate complete curing of the soil cement will not alter river pH upon contact with the surfaces. (USACE 2012d).
 - 4.8 Prepare and implement a study to document water temperature daily and seasonally upstream and downstream where river is in contact with riprap. Water temperature conditions associated with the riprap blankets will be monitored upstream and downstream daily and seasonally to determine the water temperature effects associated with the riprap in silvery minnow habitats. The Corps will evaluate the thermal effects of riprap and slackwater habitat on river water temperature to ensure no detrimental effects to silvery minnow occur.
 - 4.9 Each Corps construction contract will include requirements that ensure the contractor's compliance with all pertinent terms and conditions of the Service's Incidental Take Statement; pertinent information on the presence or locations of silvery minnow; and requisite work restrictions. As needed, the Corps will formally

update pertinent information and requirements throughout the duration of the contract. (USACE 2012d).

- 4.10 Report to the Service finding of any injured, rescued, or dead silvery minnows associated with project activities (USACE 2012d).

To implement RPM 5, Corps shall:

- 5.1 Develop an Operation and Maintenance (O&M) manual, in coordination with the Service's NMESFO, prior to turning the project over to the project sponsors
- 5.2 Include in the O&M manual requirements that the project sponsor integrates endangered species monitoring and measures protective of endangered species and their habitats during its O&M activities; recommendations to coordinate with Service's NMESFO regarding any emergency repair work; and coordinates with and reports to the Service's NMESFO on its O&M activities. These requirements will include standard Corps' best management practices (BMPs), the BMPs developed specifically for this project, and avoidance periods. (USACE 2012d).

For all RPMs, Corps shall monitor the implementation of the RPMs and their associated terms and conditions, and report their status to the Service's NMESFO annually, no later than February 20 for the previous calendar year's report. Ensure that the Service receives electronic copies of all reports and plans related to implementation of these RPMs and terms and conditions, including but not limited to species monitoring/surveying, habitat and water quality monitoring, flycatcher habitat management plan, silvery minnow habitat management plan, and site specific construction and mitigation designs. These reports should reference Consultation # 02ENNM00-2012-F-0015 and should be sent to the email address nmesfo@fws.gov or by mail to the New Mexico Ecological Services Field Office, 2105 Osuna Road NE, Albuquerque, New Mexico 87113.



DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
4101 JEFFERSON PLAZA NE
ALBUQUERQUE NM 87109-3435

February 26, 2014

Planning, Project & Program Management Division
Planning Branch
Environmental Resources Section

Mr. Wally Murphy
Field Supervisor, New Mexico Ecological Services Field Office
U.S. Fish and Wildlife Service
2105 Osuna Road, NE
Albuquerque, NM 87113

Dear Mr. Murphy:

Thank you for your February 24, 2014 letter commenting on the final *General Reevaluation Report and Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico* ("final GRR/SEIS-II"). This document incorporates all the requirements of the Reasonable and Prudent Measures in the U.S. Fish and Wildlife Service's *Programmatic biological opinion on effects of the Corps of Engineers' proposed action of construction, operation and maintenance of the Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico*, dated February 28, 2013. Specifically, the U.S. Army Corps of Engineers' commitments are stated in sections 6.4.2.4 regarding mitigative vegetative plantings; 6.5.1 regarding the Rio Grande silvery minnow; 6.5.2 regarding the Southwestern Willow Flycatcher; and Chapter 8 (Conclusion and Recommendations), third paragraph. The draft Record of Decision included with the final GRR/SEIS-II also states that the Corps "will comply with the requirements in the Biological Opinion for Incidental Take of the Rio Grande silvery minnow and Southwestern willow flycatcher."

If you have any additional questions, please contact Mr. William DeRagon of my staff, (505) 342-3358, william.r.deragon@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Julie A. Alcon", is written over a horizontal line.

Julie A. Alcon
Chief, Environmental Resources Section



July 26, 2013

Via Electronic Mail

William DeRagon

Mark Doles

U.S. Army Corps of Engineers

4101 Jefferson Plaza NE

Albuquerque, NM 87109

william.r.deragon@usace.army.mil

mark.w.doles@usace.army.mil

**RE: Supplemental Comments of WildEarth Guardians on the Draft General
Reevaluation Report and Supplemental Environmental Impact Statement for
the Proposed Rio Grande Floodway, San Acacia to Bosque del Apache,
Socorro County, NM, Project**

[General note regarding U.S. Army Corps of Engineers responses: These comments were received in July 2013, after the final GRR/SEIS-II was submitted for Corps Headquarters review. The comments address the U.S. Fish and Wildlife Service's Programmatic Biological Opinion and recommended content of the final GRR/SEIS-II. As such, the Corps has addressed these along with comments generated during the public review period for the final GRR/SEIS-II (Jan.-Feb. 2014).]

Dear William and Mark:

This letter is submitted by WildEarth Guardians (“Guardians”) to provide the U.S. Army Corps of Engineers (“Corps”) with supplemental comments on the *Draft General Reevaluation Report and Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico* dated April 2012 (“DGRR/SEIS-II”).

On June 11, 2012, Guardians submitted comments on the DGRR/SEIS-II (“WEG Comments”). See **Exhibit A**. Since the date of that original comment letter two significant new pieces of information became available that the Corps did not address in the DGRR/SEIS-II: 1) on January 3, 2013, the U.S. Fish and Wildlife Service (“Service”) issued its final rule revising the critical habitat designation for the Southwestern willow flycatcher (*see* 78 Fed. Reg. 344); and 2) on February 28, 2013, the Service issued a final programmatic biological opinion on the effects of the Corps proposed action of construction, operation and maintenance of the Rio Grande Floodway, San Acacia to Bosque del Apache Unit, in Socorro County, New Mexico (Consultation No. 02ENNM00-2012-F-0015) (“Biological Opinion”). These documents provide “significant new [] information relevant to environmental concerns bearing on the proposed action or its impacts.” See 40 C.F.R. §1502.9(c)(1)(ii). Therefore, based on this additional information, Guardians is compelled to provide these supplemental comments and requests that the Corps supplement its DGRR/SEIS-II in order to adequately analyze these impacts.

[*Note by Corps:* Because all Exhibits included with WildEarth Guardians' letter are already included in appendices to the GRR/SEIS-II or referenced therein, those Exhibits have not been reproduced here.]

I. Revised Critical Habitat Designation for the Southwestern Willow Flycatcher

On January 3, 2013, the Service issued its final rule re-designating critical habitat for the Southwestern willow flycatcher. *See Exhibit B*, 78 Fed. Reg. 344 (January 3, 2013). The Service's original designation (October 2005), as described by the Corps, included approximately 104 river miles from the southern boundary of Isleta Pueblo to the headwaters of Elephant Butte, but excluding the Sevilleta and Bosque del Apache National Wildlife Refuges ("NWRs"). The revised critical habitat designation now includes the two NWRs.

In the DGRR/SEIS-II (2-22), the Corps acknowledges the Service's proposal to re-designate critical habitat for the flycatcher. However, the Corps incorrectly notes "the proposed critical habitat is the same as the currently designated critical habitat." *Id.* This statement is actually contradicted later on in the DGRR/SEIS-II (6-25) where it provides "the Service has proposed to add the NWRs to the designated critical habitat." In fact, the revised critical habitat now includes at least 8 additional river miles through the Sevilleta and Bosque del Apache NWFs (112 total miles between Isleta and Elephant Butte). Based on this new information, the Corps must, at a minimum, revise the DGRR/SEIS-II to reflect this new critical habitat designation and remove the above-mentioned inconsistencies from the final SEIS.

Corps response: The final GRR/SEIS-II fully and accurately describes the January 3, 2013 revision of critical habitat in Section 2.4.4.2, and in Figures 2.3 and 2.4.

[Furthermore, the Corps should supplement its analysis to include the extent and significance of the environmental impacts of the proposed action on the newly designated critical habitat for the flycatcher. *See* 40 C.F.R. §1502.9(c)(1)(ii).

Corps response: The Corps has analyzed the potential effects of the recommended plan and alternatives on recently designated critical habitat in Section 6.5.2 of the final GRR/SEIS-II.

II. Biological Opinion Analyzing the Impacts of the Corps Proposed Action

On February 28, 2013, the Service issued its Biological Opinion for the proposed action. *See Exhibit C*. In the Biological Opinion, the Service raises a number of issues with regard to the affects of the proposed action on the Rio Grande silvery minnow and flycatcher and their designated critical habitat. Biological Opinion at 2. The Biological Opinion provides:

The Service is unable to concur with Corps findings that the San Acacia Levee Project "may affect, is not likely to adversely affect" flycatcher, or flycatcher designated critical habitat **because effects of the proposed action are not wholly beneficial, discountable, or insignificant.** As described in this Opinion, **direct and indirect effects of the proposed action to flycatchers and flycatcher habitat are likely to adversely affect flycatchers, and their designated critical habitat.** Additionally, Corps found that the proposed action, "may affect, likely adversely affect" silvery minnow and silvery minnow designated critical habitat. Therefore, this Opinion describes adverse effects to silvery minnows, flycatchers, and their designated critical habitats.

Id. (Emphasis added).

The Service raises a number of concerns throughout the Biological Opinion that were entirely ignored in the DGRR/SEIS-II. One of the major concerns in the Biological Opinion that is absent from the DGRR/SEIS-II is stated as follows:

The combination of high sediment loading coupled with confinement of the floodway by spoil banks (and soon engineered levees) exacerbate the already-perched channel, whereby the active channel and adjacent overbanks are elevated above the historical floodplain lying outside the floodway. **Potential effects on silvery minnow habitat by spoil bank confinement of the active floodplain into the floodway have not been evaluated.**

Id. at 63 (emphasis added).

Furthermore, the “process of vertical sediment accumulation within the floodway will continue at a rate of approximately 0.5 ft per year and is predicted to accumulate over 10 to 15 feet into the future for as long as the spoil bank lasts.” *Id.* (citation omitted). The Biological Opinion goes on to link the sediment accumulation to loss of flycatcher habitat as follows:

Sediment accumulation due to the lateral confinement of the floodplain may increase the depth to groundwater that plays an important part in the health and distribution of riparian vegetation and consequently, flycatcher habitat. The greater the depth to groundwater below the land surface, the less abundant the riparian vegetation. Vertical accumulation of sediment in a floodplain, exacerbated by the lateral confinement of the floodplain, results in a physical separation of riparian vegetation from groundwater necessary for flycatcher habitat. Accumulation of sediment within a floodway which increases the depth to water results in productive pioneer species such as willows or poplars being replaced by either non-native (e.g., tamarisk) or upland plant species.

Id. at 86 (internal citations omitted).

The Service dedicates several pages of its Biological Opinion to explaining how the proposed action exacerbates sediment accumulation and impacts riparian vegetation causing impacts to the silvery minnow and the flycatcher. *Id.* at 115-117. That extensive discussion is summarized as follows:

In summary, sediment accumulation in the floodway, particularly in the southern reaches below Highway 380, is exacerbated by levees’ constriction of the floodable area, and will raise the floodway elevations above the water table that is necessary to sustain and establish robust riparian vegetation throughout the floodway that is used by flycatchers. Over the San Acacia Levee Project duration, the floodway elevation will increase up to 12 feet in some locations but the range of sediment accumulation and subsequent estimates of impacts to flycatcher habitat in the future were uncertain. Additionally, sediment accumulation and groundwater levels will likely be influenced by regional droughts, groundwater withdrawals, and by land use, water operations and flood control activities in the upstream watershed. Nonetheless, the potential loss of up to 200 acres of suitable flycatcher habitat, identified as

critical to its long term survival and recovery within the floodway could adversely affect flycatcher survivorship and recovery in the San Acacia Reach.

Id. at 117 (internal citations omitted). A similar analysis does not exist in the DGRR/SEIS-II. The Corps simply discounts aggradation as part of the existing condition and therefore no analysis is deemed necessary with regard to the proposed action.

Finally, the Biological Opinion contains a summary of the proposed levee projects impacts on the silvery minnow and flycatcher and their designated critical habitat:

Construction, operation and maintenance of the levee project are expected to result in adverse effects to silvery minnow and 13.5 acres of its designated critical habitat. Adverse effects to individual silvery minnow (436 individuals estimated to be affected) in the form of harassment are anticipated. [...]

Construction, operation and maintenance of the levee project are expected to result in adverse effects to 11 flycatcher territories and between 60 to 200 acres of its suitable and designated critical habitat. The Corps has proposed to create 50.4 acres of flycatcher breeding habitat which will assist in minimizing adverse effects of the levee project. [...] Construction of the levee and the vegetation-free zone will result in the temporary loss of 58.9 of critical habitat and permanent loss of 8.41 acres. The Service's analysis predicted the potential of the levee to alter flycatcher critical habitat PCEs of up to 460 acres as a result of the sediment accumulation in the floodway and riparian vegetation separation from groundwater. However, the uncertainty associated with this analysis in attempting to predict effects of the proposed levee that are decades into the future calls for a monitoring, modeling and continued scientific analysis. The effect of the levee-induced sediment accumulation on flycatcher critical habitat to the year 2029 is more certain and is within an estimated range of 50 to 200 acres.

Id. at 122.

There is no doubt that the impacts of the proposed levee project are significant and the Corps is required to take a "hard look" at the environmental consequences of those actions. *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989). It is difficult to understand how the Corps can claim to have taken a hard look when it did not address in any detail the aggradation issue as it impacts the listed endangered species and their critical habitat. Based on this new information, the Corps should supplement its DGRR/SEIS-II to include a more relevant baseline condition in order to evaluate the impacts of its action and that supplemental analysis should be made available for public review and comment.

Corps response to Comment II: In both the draft and final GRR/SEIS-II, the Corps has analyzed past, current, and projected future aggradation in the San Acacia reach in detail (see Section 5 of Appendix F2-F3). Existing conditions are summarized in the main report of both the draft and final in Sections 2.2.3.1 (River Geomorphology and Sedimentation) and 2.7.5 (Transportation Facilities). The expected future-without-project condition is summarized in sections 3.1.3.1 (Geomorphology and sedimentation) and 3.1.3.3 (Sedimentation) in both the draft and final documents.

Regarding the analysis of future impacts, the Corps succinctly summarized its findings in Section 4.7.7.4 of the draft and final GRR/SEIS-II: "The alternatives without the Tiffany Basin feature would not significantly affect overall flow characteristics and sediment transport in the Rio Grande. The floodway would essentially function in the same manner with- or without-project during normal flow conditions, which occurs the vast

majority of time.” Additionally, Section 6.2.3.1 (River Geomorphology and Sedimentation) of the draft and final reports summarizes: “The construction of a new levee would not significantly affect overall flow characteristics and sediment transport in the Rio Grande.”

In the regulations implementing the National Environmental Policy Act (NEPA), section 1502.14 requires that analysis “include the alternative of no action,” and that “it should present the environmental impacts in comparative form.” The Council on Environmental Quality’s *Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act* (46 FR 18026, 1981) provides explanatory guidance that the environmental effects from taking no action should be compared with the effects of implementing the proposed activity (46 FR 18026, Question 3). Because the effects of continuing sedimentation in the San Acacia reach were determined to be the same both with and without implementation of rehabilitating the existing spoilbank, there is no differential effect to compare.

An expanded explanation of the Corps’ determination of potential effects to listed species and critical habitat was provided to the Service during ESA consultation, and also was included in the final GRR/SEIS-II provided for public review (see “Additional Information provided to the USFWS” [November 2012] in Appendix B.) This analysis specifically addressed the dynamics of sedimentation, geomorphology, groundwater, riparian vegetation, and flycatcher habitat relative to environmental baseline conditions. The analysis supports the conclusion stated in the Corps’ Biological Assessment and the draft and final GRR/SEIS-II: the expected future aggradation within the floodway of the San Acacia reach would be similar both with and without the Corps’ proposed action.

The ESA and its supporting regulation (50 CFR §402) state that the effects of the agency’s proposed action form the basis for determining incidental take, not the effects of the environmental baseline or non-related ongoing Federal actions. This is described most clearly in the *Endangered Species Act Consultation Handbook* (USFWS and NMFS 1998, page 4-47) when discussing the amount or extent of take anticipated:

“In determining whether the proposed action is reasonably likely to be the direct or indirect cause of incidental take, the Services use the simple causation principle; i.e., ‘but for’ the implementation of the proposed action and its direct or indirect degradation of habitat, would actual injury or mortality to individuals of a listed wildlife species be reasonably likely to occur? If the take would not occur but for the proposed action, then the Services must describe the amount or extent of such anticipated incidental take.”

This “but for” test is critical in the case of the San Acacia project. There is now, and has been for over fifty years, a spoilbank structure in place. Even if the No Action Alternative is pursued, the spoilbank will continue be maintained, and will continue to function in the same manner. Therefore, the only impact of the project is the incremental effect between the existing spoil bank and the increased functionality due to the rehabilitated, engineered levee.

All of the cited passages in the comments above are excerpted directly from the Services’ Biological Opinion, and therefore it is evident that agency took those conditions into account when assessing the impacts of the Corps’ proposed action. Further, the Service provided Reasonable and Prudent Measures based on its agency assessment of those conditions. Lastly, the Service acknowledged that there was uncertainty in their determination of effects to flycatcher habitat relative to sedimentation on page 122 of the Biological Opinion (and quoted in WildEarth Guardians’ comment above). Accordingly, the Service’s ultimate determination of Reasonable and Prudent Measures reflects full consideration of impacts of the proposed action, and should be accorded deference. The Corps and the Service concluded consultation on February 28, 2013. The Corps has agreed to implement all terms and conditions of Reasonable and Prudent Measures in the Service’s Biological Opinion, and has incorporated those measures into the published final GRR/SEIS-II.

III. Biological Opinion Exposes Deficiencies in the Corps Environmental Analysis

The evidence and analysis contained in the Biological Opinion provide a strong argument that the Corps has thwarted its responsibility to take a “hard look” at the environmental effects of the proposed action. The Corps analysis in the DGRR/SEIS-II not only fails to include a proper baseline from which the impacts of the alternatives can be evaluated, but completely fails to address impacts directly created by the proposed action on the silvery minnow and flycatcher.

These supplemental comments serve to explain how the baseline condition serves only to temper the impacts of the Corps proposed action and show the types of impacts that can be completely overlooked based on such a flawed analysis. As stated in our original comment letter, Guardians question the ability of the Corps to adequately analyze the environmental impacts of the proposed actions based on the “flawed description of baseline conditions.” *See* WEG Comments at 7. It was not apparent until review of the Biological Opinion, however, that the definition of the baseline condition clearly impacted the scope of the review by the Corps.

A. Existing Condition (Baseline)

The baseline or existing condition established by the Corps takes into account the spoil bank levees that exist throughout the entire project area; thus, any comparison of the impacts of the existing condition and proposed action are based on the improvement of the levee structures (reinforcement of the structure and a 4-foot addition in height). The Corps analysis does not consider the “without levee” condition and disregards any historic impacts exacerbated by the levees—such as aggradation of the channel.

Under the “existing condition,” the channel of the Rio Grande has become perched above the floodplain as a result of the high sediment load being confined within the floodway by the spoil bank levees. DGRR/SEIS-II at 2-6. The Corps explains that “[s]ince spoil banks confine the river to a narrow channel, aggradation is occurring within the channel, raising it as much as 10-12 feet above the adjacent, sediment-starved floodplain.” *Id.* at 2-6. In order for the analysis of the proposed action to be meaningful, the impact of aggradation within the channel should be evaluated against a baseline of the “without levee” condition or unobstructed floodplain condition; otherwise, the comparison is essentially a distinction without difference.

In addition, if the aggradation of the channel is part of the “existing condition” and is impacting the flycatcher, the Corps analysis does not even mention the aggradation as related to the flycatcher. As set forth in the Biological Opinion, aggradation of the river channel has a significant impact on the riparian environment and the flycatchers. The Corps complete disregard for this issue cannot be considered a “hard look” at the environmental impacts.

Corps response to Comment III-A: Clarifying terminology to differentiate the existing spoilbank structure and an engineered levee, the Corps assumes that this comment refers to the “without spoilbank” condition. As stated in Section 2.7.4.1.(d) of the draft and final GRR/SEIS-II, the expected future condition without the Corps’ proposed action is that the Bureau of Reclamation would continue to maintain the existing spoilbank, including repair and/or maintenance of portions damaged by flood flows. The removal of the spoilbank without a replacement structure was never contemplated, is not a practical or responsible course of action, and therefore, would not be considered a “reasonable” project alternative relative to implementing NEPA regulations at 40 CFR §152.14. Similarly, the ESA only requires the consideration of effects that are “reasonably certain to occur” (50 CFR §402.02). Removal of the spoil bank structure is not now, nor was it ever, reasonably certain to occur; therefore, the with-spoilbank condition properly establishes the environmental baseline.

B. *Future Without-Project Condition (No Action Alternative)*

The Corps also fails to put forth a proper no action alternative. At a minimum, the “no action alternative” should have assumed that the spoil bank levee would fail at some point in the future and the unobstructed floodplain condition would again exist. *Id.* at 3-4 (as the height of the channel increases so does the risk the spoil bank levees will fail); 6-5 (“during large floods with existing conditions it is probable that the existing spoil bank would break”). Instead, the Corps assumes that “no changes to the existing environment in and around the existing levees are expected unless catastrophic levee failure occurs.” *Id.* at 4-21. The Corps states, however, that even if a spoil bank breach occurs “the existing spoil bank is projected to be maintained by Reclamation into the future, as it has done for decades.” *See Id.* at 3-4. This maintenance of the “existing conditions” is not representative of a true no action alternative. The purpose of the future without-project condition or no action alternative is to consider the conditions that will occur if “no Federal project is implemented.” *Id.* at 3-1. Thus, the Corps is assuming some federal action would be required to maintain the levees into the future, but has passed that responsibility onto Reclamation. As a result of this assumption, the Corps states “[i]n total, there is very little opportunity for any lateral movement of the floodway in the future, and flooding potentials in the study area would be expected to remain very similar to current conditions.” *Id.* at 3-4.

Corps response to Comment III-B: The proposed Federal project entails the rehabilitation of the existing spoilbank to the status of an engineered levee, which will in turn increase functionality and reliability. There is no evidence to suggest that the No Action Alternative would result in a failed spoilbank that would not be replaced. Without implementation of that proposed action, Reclamation would continue to maintain and repair the existing spoilbank (see the response to Comment III-A above). CEQ guidance (46 FR 18026, Question 3) specifically states: “Where a choice of ‘no action’ by the agency would result in predictable actions by others, this consequence of the ‘no action’ alternative should be included in the analysis.” The No Action Alternative assessed by the Corps accomplishes exactly that: it assesses the predictable continued effects of existing spoilbank. Therefore, the Corps has precisely followed the implementing NEPA regulations and CEQ guidance in the with- and without-project alternatives.

C. *Effects of the Proposed Action Alternative*

In its analysis of the river geomorphology and sedimentation in section 6.2.3.1, the Corps concludes in one paragraph that “[t]he construction of a new levee would not significantly affect overall flow characteristics and sediment transport in the Rio Grande.” *Id.* at 6-6. The paragraph goes on to state “[t]he floodway would essentially function in the same manner with or without the project during normal flow conditions typical most of the year. Therefore, the perceived impacts would be small.” *Id.* This is the section of the DGRR/SEIS-II that should have included an analysis similar to the one included in the Biological Opinion. The Corps—in structuring the baseline and no action conditions—have effectively eliminated the need for any analysis regarding the impacts of the proposed levee project.

The Corps fails to analyze one of the key issues associated with the proposed action—aggradation of the river channel—by choosing to narrowly define the baseline condition. As stated in our original comment letter, Guardians questions the ability of the Corps to adequately analyze the environmental impacts of the proposed actions based on the “flawed description of baseline conditions.” *See* WEG Comments at 7. As noted in our comments, “[t]he concept of a baseline against which to compare predictions of the effects of the proposed action and reasonable alternatives is critical to the NEPA process.” *Id.* Despite the importance of the

baseline in the environmental review process, the Corps has managed to marginalize the direct, indirect and cumulative impacts of the proposed action by conservatively defining the baseline.

Corps response to Comment III-C: As stated in the responses above, the Corps has defined environmental baseline in a manner consistent with law and regulation. Environmental baseline is the condition which now exists, and has continuously existed, for over 50 years, that being the with spoilbank condition. Therefore, the effects of the proposed action are accurately defined. Further, the impacts described in the comment above were assessed by the Service in their Biological Opinion. The Service has provided Reasonable and Prudent Measures to be undertaken, and the Corps has agreed to implement those measures fully.

IV. Other Deficiencies of the DGRR/SEIS-II

The Corps DGRR/SEIS-II does not include the following updated reports or analysis that need to be included as a part of its environmental impact analysis:

A. *Supplemental Fish and Wildlife Coordination Report*

Appendix E to the DGRR/SEIS-II contains the *Supplemental Fish and Wildlife Coordination Act Report* date 1997. See **Exhibit D**. This report is out of date and must be updated in order to satisfy the consultation requirement under the Fish and Wildlife Coordination. For example, when the Final SEIS for this project was issued in 1992, it was based on a 1989 report under the Fish and Wildlife Coordination Act. The report was released three years before the final environmental impact analysis was released. The 1997 report is already more than 15 years old. Since the time of its completion, both the silvery minnow and the flycatcher were listed as endangered species and critical habitat was designated. Based on the significant new information that exists since that report was finalized, this report needs to be updated to be at all relevant to the existing environmental impact analysis.

Corps response: The current, recommended plan for the San Acacia to Bosque del Apache Unit Project entails an earthen levee on the same alignment and with the same extent (~43 miles) as the 1997 tentatively selected plan addressed in the Fish and Wildlife Coordination Act (FWCA) Report. The current plan has been designed to updated hydrology that estimates the 1%-chance event to be approximately 29,900 cfs at San Acacia, significantly less than the 1997 hydrological estimate of 51,000 cfs. Therefore, the current design entails a significantly smaller footprint and less adverse impacts than the 1997 design.

Since 1997, the Corps and the Service have continued to fulfill the purpose and requirements of the FWCA relative to the San Acacia to Bosque del Apache Unit Project. In September 2002, the Corps provided a FWCA scope to the Service to update existing wildlife resource conditions throughout the project reach. The following year, the FWCA task was expanded to include fish and wildlife resources and needs relative to a basin-wide, multi-agency investigation — the Upper Rio Grande Water Operations Review. In August 2006, the Corps and Reclamation received a final FWCA Report based on extensive coordination by the Service with both Federal and non-Federal water and resource managers involved in that study, which included the entire reach of the San Acacia to Bosque del Apache Unit Project. The 2006 report included updated resource conditions and also provided reach-wide guidance on mitigation recommendations.

Section 402.06 of the Endangered Species Act (ESA) states that consultation under the act may be consolidated with the cooperation procedures of the FWCA and other laws. In the February 2013 Biological Opinion for the San Acacia to Bosque del Apache Unit Project, the USFWS included extensive analysis and mitigation requirements regarding potential adverse impacts to the aquatic habitat in the Rio Grande (relative to the endangered Rio Grande silvery minnow) and the adjacent riparian forest-and-shrub habitat (relative to the endangered Southwestern Willow Flycatcher). The subject river channel and riparian zone include all of the affected wildlife resources within the project area. The majority of the unavoidable impacts occurs on National Wildlife Refuge lands administered by the USFWS, and SPA has coordinated with refuge staff regarding project conduct and mitigation. The development of the mitigation plan included in the GRR-SEIS-II was based on an index of overall wildlife habitat value, the USFWS's FWCA resource

value categorization, and the needs of listed species, therefore, fulfilling the obligations of both the FWCA and the ESA for the proposed project.

B. *Updated Determination of Compatibility by the Service*

Section 5.1.16.4, provides that “[a]n updated Determination of Compatibility will be obtained for the proposed project prior to submittal of the GRR/SEIS-II for approval.” *Id.* at 5-18. Based on the new information—including the listing of endangered species and designation of critical habitat, as well as the analysis set forth in the Biological Opinion—the compatibility determination may have significantly changed since the last determination was completed in 1992.

Corps response to Comment IV-B: The Corps agrees. As stated in Section 5.1.16.4 of the final GRR/SEIS-II: “New or updated Determinations of Compatibility will be obtained for the proposed project from Sevilleta and Bosque del Apache NWRs prior to the initiation of construction.”

We appreciate you considering our supplemental comments. Since this new information has been released, it is clear to Guardians that a number of very important environmental impacts were ignored in the original DRGG/SEIS-II. We strongly encourage the Corps to take a “hard look” at its existing analysis and the new information detailed in the letter and issue a supplemental DGRR/SEIS-II in order to provide an adequate analysis of the significant impacts on the environment caused by the proposed Rio Grande Floodway project.

Sincerely,

[The original letter was signed electronically on 07/26/2013.]

Jen Pelz
Wild Rivers Program Director
WildEarth Guardians
516 Alto Street
Santa Fe, NM 87501
jpelz@wildearthguardians.org
(303) 884-2702

PUBLIC REVIEW AND COMMENTS ON FINAL GRR/SEIS-II

The final GRR/SEIS-II was submitted to the USEPA and was made available for public review from January 24 through February 24, 2014. A notice of availability of the final document was published by the USEPA in the Federal Register on January 24, 2014 (Volume 79, No. 16, page 4258). Following is the text of the District's notice of availability also published in the Federal Register (Volume 79, No. 17, pages 4342-4343; January 27, 2014).

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Notice of Availability for the Final Supplemental Environmental Impact Statement for the Proposed San Acacia to Bosque del Apache Project, Socorro County, New Mexico

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice of availability—Final SEIS.

SUMMARY: In accordance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*) and Council on Environmental Quality regulations (40 CFR parts 1500–1508) the Corps of Engineers, Albuquerque District, has prepared a final Supplemental Environmental Impact Statement (SEIS) for the San Acacia to Bosque del Apache Project, Socorro County, New Mexico.

DATES: The 30-day review period begins on January 24, 2014 and ends on February 24, 2014. The Record of Decision on the proposed action will be issued after February 24, 2014.

FOR FURTHER INFORMATION CONTACT: For further information, requests for copies, and/or questions about the project, please contact Mr. Jerry Nieto, Project Manager, by telephone: (505) 342–3362, by mail: U.S. Army Corps of Engineers, 4101 Jefferson Plaza NE., Albuquerque, New Mexico 87109, or by email: Jerry.D.Nieto@usace.army.mil.

SUPPLEMENTARY INFORMATION:

1. *Background Information:* Previously, an environmental impact statement (1977) and a supplement (1992) were published regarding this project. The current SEIS (II) evaluates the effects of revised levee design and additional alternatives. The final SEIS is integrated with a final General Reevaluation Report, and the integrated document is entitled: *General Reevaluation Report and Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico* (hereafter referred to as the final GRR/SEIS–II).

Alternatives developed and evaluated during the current and previous studies consist of levee reconstruction (at various heights); flood and sediment control dams; local levees; intermittent levee replacement; watershed land treatment; floodproofing of buildings; levee-alignment setbacks; and no action. Principal issues analyzed in the development of the GRR/SEIS–II included the effect of alternatives on flood risk, developed lands and structures, water quality, ecological resources, endangered species, cultural resources, and socio-economics.

The recommended plan is to replace the existing embankment between the Low Flow Conveyance Channel and the Rio Grande with a structurally competent levee capable of containing high-volume, long-duration flows. This engineered levee would substantially reduce the risk of damage from floods emanating from the Rio Grande. The proposed levee and attendant structures would extend from San Acacia downstream for approximately 43 miles, nearly to San Marcial. The local cost costsharing sponsors of the proposed project are the Middle Rio Grande Conservancy District and the New Mexico Interstate Stream Commission.

2. *Draft SEIS Review*: The draft GRR–SEIS–II comment period began on April 27, 2012 with the publication of the Notice of Availability in the **Federal Register** (77 FR 25151), and ended on June 11, 2012. A public meeting was held during the review period on May 22, 2012 in Socorro, New Mexico.

3. *Availability of the final GRR/SEIS–II*: The final document is electronically available for viewing and printing at: <http://www.spa.usace.army.mil/Missions/Environmental/EnvironmentalComplianceDocuments/EnvironmentalImpactStatementsROD.aspx>. Electronic copies may also be requested from the contact person listed above. Paper copies of the final GRR/SEIS–II are available for review at the Socorro Public Library, 401 Park St., Socorro, NM.

Julie A. Alcon,
Chief, Environmental Resources Section, U.S.
Army Corps of Engineers, Albuquerque.
 [FR Doc. 2014–01448 Filed 1–24–14; 8:45 am]

Notices of availability of the final document also were published in the *Socorro Defensor-Chieftain*, the *Albuquerque Journal*, and the *Santa Fe New Mexican*. Copies of the document were made available to the general public at the Socorro Library, Socorro, NM. A digital copy of the final document and appendices was made available to the general public on the Albuquerque District’s website. Copies of the final GRR/SEIS–II (either paper or digital) were mailed to the same entities listed previously for the draft document.

The remainder of this appendix entails written comments on the final document, along with annotated responses by the Corps.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6

**1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733**

February 18, 2014

U.S. Army Corps of Engineers
Albuquerque District
Ms. Julie Alcon
4101 Jefferson Plaza NE
Albuquerque, NM 87109-3435

Ms. Alcon,

In accordance with our responsibilities under Section 309 of the Clean Air Act (CAA), the National Environmental Policy Act (NEPA), and the Council on Environmental Quality (CEQ) regulations for implementing NEPA, the U.S. Environmental Protection Agency (EPA) Region 6 office in Dallas, Texas, has completed its review of the combined Final Supplemental Environmental Impact Statement (FSEIS) and General Reevaluation Report for the Rio Grande Floodway prepared by the U.S. Army Corps of Engineers (USACE). The project proposes to provide higher levels of flood risk management to floodplain communities along the Rio Grande from the San Acacia Diversion Dam downstream to Elephant Butte Lake, New Mexico.

EPA provided comments for the Draft EIS in a letter dated August 5, 2013. EPA rated the DEIS as "EC-2" i.e., EPA has "Environmental Concerns and Requests Additional Information. In regards to the FSEIS, we offer the following comments about the levee setback at river mile 108. The USACE response to EPA comments stated that the Bureau of Land Management (BLM) determined this alternative as inconsistent with the goals and objectives of the recreation area according to the Socorro Resource Management Plan. The USACE response indicated consultation documents between USACE and BLM should be in Appendix G of the FEIS. This correspondence is missing from the Appendix. Provide the USACE correspondence with BLM in the Record of Decision (ROD).

EPA appreciates the opportunity to review the Final EIS. Please send a copy of the ROD to my attention. If you have any questions or concerns regarding this letter, please contact me at 214-665-8006, or Keith Hayden of my staff at hayden.keith@epa.gov or 214-665-2133 for assistance.

Sincerely,

A handwritten signature in dark ink, appearing to read "Rhonda", is written over the word "Sincerely,".

Rhonda Smith
Chief, Office of Planning
and Coordination

A handwritten signature in dark ink, appearing to read "Keith", is written to the right of Rhonda Smith's signature.



DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
4101 JEFFERSON PLAZA NE
ALBUQUERQUE NM 87109-3435

March 13, 2014

Planning, Project & Program Management Division
Planning Branch
Environmental Resources Section

Ms. Rhonda Smith, Chief
Office of Planning and Coordination (6EN-XP)
U.S. Environmental Protection Agency, Region 6
Compliance Assurance and Enforcement Division
1445 Ross Avenue
Dallas, Texas 75202-2733

Dear Ms. Smith:


Thank you for your February 18, 2014 comment on the final *General Reevaluation Report and Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico* ("final GRR/SEIS-II") which the U.S. Army Corps of Engineers, Albuquerque District ("Corps") transmitted to your office on January 16, 2014.

In addressing your comment regarding the River Mile 108 levee-setback alternative, we wish to first clarify our response to your original June 8, 2012 comment on Section 5.5 of the *draft* GRR/SEIS-II. We did not intend to imply that the U.S. Bureau of Land Management ("BLM") determined that the alternative included in both the draft and final documents would be inconsistent with the goals of their management plan. Rather, early discussions with BLM indicated that a preliminary plan for a larger (130-acre) setback would be incompatible with recreational facilities, as they explained in a July 22, 2011 letter to the Corps (enclosed here). A revised, 80-acre plan that avoided already developed areas was then evaluated in the draft and final documents.

In response to your original comment on the draft document, the rationale for not selecting the River-Mile 108 setback alternative is explained in sections 5.5 (pp. 5-22 to 5-23) and 6.4.1.2e (pp. 6-15 to 6-16) of the final GRR/SEIS-II. For your convenience, text from those sections have been extracted and are enclosed here.

We hope this clarifies your comments on both the draft and final documents, as well as the content of BLM's letter. If you have any additional questions, please contact Mr. William DeRagon of my staff, (505) 342-3358, william.r.deragon@usace.army.mil, or Mr. Jerry Nieto, Project Manager, (505) 342-3362, Jerry.D.Nieto@usace.army.mil.

Sincerely,


Julie A. Alcon
Chief, Environmental Resources Section

Enclosures



United States Department of the Interior
BUREAU OF LAND MANAGEMENT

Albuquerque District
Socorro Field Office
901 South Highway 85
Socorro, New Mexico 87801
www.blm.gov/nm



July 22, 2011

Attn: Jerry Nieto
Army Corp of Engineers
4101 Jefferson Plaza NE
Albuquerque, NM 87109

RE: Setback Levees

Dear Mr. Nieto,

The Bureau of Land Management (BLM) Socorro Field Office has carefully considered the Corp of Engineers proposal for a setback levee. We determined that this action is inconsistent with the goals and objectives of our newly published Socorro Resource Management Plan and the agency.

We currently manage the Socorro Nature Area (SNA), located along the Rio Grande River, just east of Lemitar, New Mexico. The SNA is a BLM recreation area used by public land users for camping and picnics, as well as, environmental education and hiking the nature trail. The proposed levee threatens this facility because the Corp's current plans take it through the center of the facility which would allow the waters of the Rio Grande to flood the entire area and the infrastructure would be destroyed or rendered useless incurring the taxpayers considerable cost.

We examined alternative sites and, at this time, there are no other areas along the Rio Grande which will support our needs. We suggest an alternate route for your levee which we previously discussed at our last meeting with you in Socorro and that was to have your proposed levee turn back towards the river above the north end of our nature trail. At that time, you advised us that this alternative was possible.

It is our policy to work with other agencies and we look forward to working with you now. Please let me know if further discussion is necessary in this matter by contacting my Assistant Field Manager, John Brenna, at (575) 838-1273.

Sincerely,

Danita Burns
Field Manager

Excerpted text from:

General Reevaluation Report and Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico, U.S. Army Corps of Engineers, Albuquerque, dated October 2013.

CHAPTER 5 - DESCRIPTION OF THE FINAL ARRAY OF ALTERNATIVES

[pg. 5.22]

5.5 LEVEE SETBACK AT RIVER MILE 108*

The setback located approximately 5.5 miles downstream of the SADD (River Mile 108), adjacent to the Socorro Nature Area operated by the Bureau of Land Management, occurs within the reach common to both Alternative A and K. The setback consists of realignment of the LFCC, proposed levee, and associated maintenance roads to parallel the existing irrigation drain within a 300 ft corridor. The smaller levee setback alignment would be approximately 8,000 feet long (1.4 mi) and be approximately 790 feet to the west of the existing LFCC at the widest cross section. Approximately 80 acres of floodplain would be reconnected to the floodway with implementation of the setback. Vegetation in this area would not change substantially since the current elevation does not experience inundation until river flows approximately 15,400 cfs (10%-chance exceedance flow). Additional discussion of vegetation effects is included in Section 6.2 e. The additional area in the floodway would increase floodway capacity slightly during flows that exceed this discharge.

Alternatives A and K at both the Base Levee and Base Levee + 4 ft heights would be the same when implementing the levee setback in all respects including levee performance and therefore economic benefits. Since the setback is located within the reach corresponding to Alternative A and Alternative A is part of Alternative K, any change in Alternative A due to implementation of

[pg. 5-23]

the setback would also be included in Alternative K. Therefore further analysis of alternative that include the setback compares both levee alternatives at both levee heights.

Implementation of the levee setback would result in a small change in excavation and disposal of spoil. In general, the levee setback would lengthen any levee and LFCC by approximately 300 feet. The fill material for the Base Levee + 4 ft height exceeds the amount of excavated soil to relocate the LFCC therefore there is little change in the soil disposal amounts. Changes in the amount of spoil material would be commensurate with the additional soil needed for the extra levee length. The fill material for the Base Levee height, however, is exceeded by the amount of soil excavated by the relocated LFCC therefore the disposal is much greater. This levee setback has a higher cost than Alternative A alone and does not produce additional Flood Risk Management benefits, therefore is not included in the recommended plan.

CHAPTER 6 - FORESEEABLE EFFECTS OF THE PROPOSED ACTION AND ALTERNATIVES

6.4 BIOLOGICAL ENVIRONMENT*

6.4.1 Aquatic Habitat and Inundated Floodway

6.4.1.2 *Changes in Floodway Area Due to Feature Footprint*

[pg. 6-15]

(e) River Mile 108 Setback

Under this alternative, the LFCC and new levee alignment would be shifted to the west no closer than 250 feet from an existing riverside drain. This 250-foot distance was selected to avoid the removal of a band of dense, healthy cottonwoods between the proposed alignment and the riverside drain to the west. The majority of the vegetation between the existing and proposed alignments consists of sparse and aged cottonwoods with scattered salt cedar shrubs.

Inclusion of the River Mile 108 setback in any of the levee alternatives would allow for the additional inundation of approximately 80 acres within the floodway by flows greater than the 10%-chance flood event. Vegetation composition within the 80-acre area would not be expected to change significantly since inundation would occur infrequently. that is, at flows greater than 11,800 cfs at the SADD. However, some geomorphic changes from river channel meandering may occur in the long term without threatening the levee in its new alignment. The setback would support ecosystem dynamics for creating riverine and riparian habitat over a long period by allowing erosion of the west bankline and development of in-channel bars. The long-term effect would locally increase the area of dynamic aquatic and terrestrial habitats patches.

[pg 6.16]

Currently, the LFCC is the lowest point in the valley's cross-section throughout the study area from Escondida to Elephant Butte Lake. Throughout that reach, groundwater from both east and west of the river, as well as seepage from the river channel itself, drains to the LFCC. There is uncertainty about potential future changes to the shallow groundwater table following the relocation of the LFCC. There is a distinct possibility that shifting the LFCC closer to the band of healthy cottonwoods may lower the water table in the immediate vicinity, therefore adversely affecting the most valuable riparian vegetation in the setback area.



United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office

2105 Osuna NE

Albuquerque, New Mexico 87113

February 24, 2014

Mr. Jerry Nieto, Project Manager,
U.S. Army Corps of Engineers
4101 Jefferson Plaza NE
Albuquerque, New Mexico 87109
Phone: (505) 342 3362
Email: Jerry.D.Nieto@usace.army.mil

Dear Mr. Nieto:

Thank you for the public review notice of the Albuquerque District, U.S. Army Corps of Engineers (Corps), final General Reevaluation Report/Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico (San Acacia Levee Project). We offer the following comment for the Corps consideration:

On February 28, 2013, the U.S. Fish and Wildlife Service (Service) issued a final programmatic biological opinion on effects of the Corps construction, operation, and maintenance of the San Acacia Levee Project (Levee BO). Please ensure that the reasonable and prudent measures and their implementing terms and conditions, which are non-discretionary, are appropriately integrated into the Levee Project. For your convenience, we are attaching a copy of those items.

The Service looks forward to working with Corps on its development of Southwestern willow flycatcher and Rio Grande silvery minnow compensatory habitats and its flycatcher and silvery minnow habitat mitigation and adaptive management plans which will be completed by December 31, 2014.

Please contact Ms. Lori Robertson of my staff at (505) 761-4710 to arrange future coordination on these important endangered species planning efforts.

Sincerely,

[\[signed\]](#)

Wally Murphy

Field Supervisor

Attachment 1. Terms and Conditions of February 2013 Biological Opinion

Terms and Conditions

Compliance with the following terms and conditions must be achieved in order to be exempt from the prohibitions of section 9 of the ESA. These terms and conditions implement the RPMs described above. These terms and conditions are non-discretionary.

To implement RPM 1, Corps shall:

- 1.1. Conduct flycatcher protocol surveys covering the floodway west of the Rio Grande channel from 0.5 mile north of San Acacia Diversion Dam to the San Marcial railroad bridge. These surveys shall commence in the breeding season prior to anticipated construction in a given segment of the action area, and shall continue annually through the third breeding season following construction in each given segment (USACE 2012d).
- 1.2. Conduct flycatcher protocol surveys performed by biologists that possess a Section 10(a)(1)(A) permit, and report to the Service in accordance with the permit. (USACE 2012d).
- 1.3. Monitor groundwater pumping for construction activities in the floodway to determine its effect on riparian habitats. (USACE 2012d).
- 1.4. Conduct flycatcher protocol surveys within critical habitat located within 0.25-mile west of the Low Flow Conveyance Channel canal, from the San Acacia Diversion Dam to Tiffany Junction. These surveys will be conducted for a single breeding season, and should be commensurate in time to flycatcher surveys within the floodway for a given construction-segment of the action area. (USACE 2012d).
- 1.5. The Corps will monitor groundwater-surface water interaction and dynamics in the San Acacia reach per 3.5 below; and will assist resource management agencies in the analysis, modeling, planning, and adaptive management of activities relating to future sediment, habitat, and flow issues.

To implement RPM 2, Corps shall:

- 2.1 Construction may occur throughout the calendar year; however, no construction would be performed within 0.25 mile of occupied flycatcher territories during the breeding season; that is, from the date of the second protocol survey of the season through August 15. Construction traffic may continue year-round along the LFCC maintenance roads.
- 2.2 Each Corps construction contract will include requirements that ensure the contractor's compliance with all pertinent terms and conditions of the Service's Incidental Take Statement; pertinent information on the presence or locations of flycatchers; and requisite work restrictions. As needed, the Corps will formally update pertinent information and requirements throughout the duration of the contract. (USACE 2012d).
- 2.3 If traffic or other proposed action activities do occur within the 0.25-mile radius of a breeding territory, then those territories/nests will be monitored according to standard protocols, but at least every two weeks to determine continued occupancy.

To implement RPM 3, Corps shall:

- 3.1 Coordinate development of 50.4 acres of flycatcher habitat with the Service's NMESFO prior to implementation. If habitat is proposed to be developed on National Wildlife Refuge lands, the Corps will also coordinate with the Service's Refuges. If applicable, the Corps will obtain Refuges approval before proceeding.
- 3.2 Prepare and implement a flycatcher habitat mitigation and adaptive management plan for the San Acacia Reach. The plan will include Best Management Practices to minimize effects to the flycatcher, and its critical habitat. The plan will identify specific areas for habitat management with a schedule for completing development of 50.4 acres of dense riparian shrub habitat possessing primary constituent elements of critical habitat. The habitats shall be developed prior to, or immediately following, the loss of critical habitat due to specific construction activities of the proposed action. The plan will be reviewed and approved by the Service and should be completed by December 31, 2014. (USACE 2012e).
- 3.3 Assure that the water used for dust suppression will not harm nesting or migrating flycatchers. (USACE 2012d).
- 3.4 Utilize results obtained during implementation of RPM 1 to limit effects on flycatcher habitat.
- 3.5 The uncertainty surrounding the impact of the levee project-exacerbated sediment accumulation on flycatcher habitat will be clarified through a program of monitoring, modeling, and scientific analysis conducted by the Corps once construction has started. Methods for calculating the habitat area that may be at risk due to aggradation follow:
 - 3.5.1 Mitigation of habitat is described as creating or managing the number of acres to provide a functioning flycatcher habitat for the duration of the project. Creation of newly built habitat is not necessarily required.
 - 3.5.2 Calculation Methods: Corps, in coordination with the Service's New Mexico Ecological Services Field Office shall determine distance from levee that vegetation may be affected by increased depth to the water table.
 - 3.5.3 Corps shall project surface aggradation from USACE's 50 yr projections and estimate the future ground elevations.
 - 3.5.4 Corps shall compare information gained from 3.5.1 and 3.5.2 with most current suitable and moderately suitable habitat information.
 - 3.5.5 Based on a program of monitoring, modeling, and scientific analysis, the Corps shall determine and develop commensurate mitigation for the duration of the project.
- 4.1 Coordinate development of silvery minnow habitat with the Service's NMESFO prior to implementation. If habitat is proposed to be developed on National Wildlife Refuge lands, the Corps will also coordinate with the Service's Refuges. If applicable, the Corps will obtain Refuges approval before proceeding.
- 4.2 For bankline construction, the Corps, in coordination with the Service, will establish and implement a design standard applicable to deployment of erosion control screens (e.g., silt curtains or wattles, etc.) that insure protection of water quality. For in-river construction, the Corps, in coordination with the Service, will establish and implement a coffer dam design standard applicable to prevent fish access to the

- construction site and insure protection of water quality. Cofferdams and erosion protection screens will be inspected daily to maintain the connection to the substrate and will be removed following construction. (USACE 2012d).
- 4.3 Prepare and implement a silvery minnow habitat mitigation and adaptive management plan for the San Acacia Reach. The plan will include Best Management Practices for construction to minimize effects to the silvery minnow, and its critical habitat. The adaptive management section will provide recommendations for silvery minnow and habitat monitoring focused on reproduction and recruitment. The plan will identify specific areas for habitat management with a schedule for completing construction of a minimum of 13.5 acres of silvery minnow critical habitat possessing the primary constituent elements. The habitats shall be constructed prior to, or immediately following, the loss of critical habitat due to specific construction activities in the proposed action. The plan will be reviewed and approved by the Service and should be completed by December 31, 2014. (USACE 2012d,e).
 - 4.4 Fish sampling will be conducted by biologists that possess a Section 10(a)(1)(A) permit, and report to the Service in accordance with the permit. (USACE 2012d).
 - 4.5 Monitor groundwater pumping for construction activities in the floodway to determine its effect on aquatic habitats (USACE 2012d). Oxygen content in excavated groundwater will be measured to ensure no hypoxic conditions occur. The Corps will develop a groundwater pumping plan prior to riprap placement. The timing, rate, water volume, and receiving area will be formulated to aerate groundwater to eliminate impacts to aquatic life, riparian vegetation and river levels to the extent possible. The Corps would immediately confer with the Service if hypoxic conditions occur in the Rio Grande as a consequence of groundwater pumping to the river (including runoff across the floodplain). (USACE 2012d).
 - 4.6 Assure that water used for dust suppression does not reduce water availability for silvery minnow; assure the quality of water used for dust suppression; use water from sources other than those used by silvery minnow; if water must be removed from the low flow conveyance channel, assure no impact to the low flow conveyance channel pumping program. (USACE 2012d).
 - 4.7 Monitor pH as part of the soil cement construction. Samples from the river channel, within the coffer dam, and on the soil cement to detect changes due to soil cement through the curing process. Monitoring data will be reported to the Service to demonstrate complete curing of the soil cement will not alter river pH upon contact with the surfaces. (USACE 2012d).
 - 4.8 Prepare and implement a study to document water temperature daily and seasonally upstream and downstream where river is in contact with riprap. Water temperature conditions associated with the riprap blankets will be monitored upstream and downstream daily and seasonally to determine the water temperature effects associated with the riprap in silvery minnow habitats. The Corps will evaluate the thermal effects of riprap and slackwater habitat on river water temperature to ensure no detrimental effects to silvery minnow occur.
 - 4.9 Each Corps construction contract will include requirements that ensure the contractor's compliance with all pertinent terms and conditions of the Service's Incidental Take Statement; pertinent information on the presence or locations of silvery minnow; and requisite work restrictions. As needed, the Corps will formally

update pertinent information and requirements throughout the duration of the contract. (USACE 2012d).

- 4.10 Report to the Service finding of any injured, rescued, or dead silvery minnows associated with project activities (USACE 2012d).

To implement RPM 5, Corps shall:

- 5.1 Develop an Operation and Maintenance (O&M) manual, in coordination with the Service's NMESFO, prior to turning the project over to the project sponsors
- 5.2 Include in the O&M manual requirements that the project sponsor integrates endangered species monitoring and measures protective of endangered species and their habitats during its O&M activities; recommendations to coordinate with Service's NMESFO regarding any emergency repair work; and coordinates with and reports to the Service's NMESFO on its O&M activities. These requirements will include standard Corps' best management practices (BMPs), the BMPs developed specifically for this project, and avoidance periods. (USACE 2012d).

For all RPMs, Corps shall monitor the implementation of the RPMs and their associated terms and conditions, and report their status to the Service's NMESFO annually, no later than February 20 for the previous calendar year's report. Ensure that the Service receives electronic copies of all reports and plans related to implementation of these RPMs and terms and conditions, including but not limited to species monitoring/surveying, habitat and water quality monitoring, flycatcher habitat management plan, silvery minnow habitat management plan, and site specific construction and mitigation designs. These reports should reference Consultation # 02ENNM00-2012-F-0015 and should be sent to the email address nmesfo@fws.gov or by mail to the New Mexico Ecological Services Field Office, 2105 Osuna Road NE, Albuquerque, New Mexico 87113.



DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
4101 JEFFERSON PLAZA NE
ALBUQUERQUE NM 87109-3435

February 26, 2014

Planning, Project & Program Management Division
Planning Branch
Environmental Resources Section

Mr. Wally Murphy
Field Supervisor, New Mexico Ecological Services Field Office
U.S. Fish and Wildlife Service
2105 Osuna Road, NE
Albuquerque, NM 87113

Dear Mr. Murphy:

Thank you for your February 24, 2014 letter commenting on the final *General Reevaluation Report and Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico* ("final GRR/SEIS-II"). This document incorporates all the requirements of the Reasonable and Prudent Measures in the U.S. Fish and Wildlife Service's *Programmatic biological opinion on effects of the Corps of Engineers' proposed action of construction, operation and maintenance of the Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico*, dated February 28, 2013. Specifically, the U.S. Army Corps of Engineers' commitments are stated in sections 6.4.2.4 regarding mitigative vegetative plantings; 6.5.1 regarding the Rio Grande silvery minnow; 6.5.2 regarding the Southwestern Willow Flycatcher; and Chapter 8 (Conclusion and Recommendations), third paragraph. The draft Record of Decision included with the final GRR/SEIS-II also states that the Corps "will comply with the requirements in the Biological Opinion for Incidental Take of the Rio Grande silvery minnow and Southwestern willow flycatcher."

If you have any additional questions, please contact Mr. William DeRagon of my staff, (505) 342-3358, william.r.deragon@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Julie A. Alcon", is written over a horizontal line.

Julie A. Alcon
Chief, Environmental Resources Section



July 26, 2013

Via Electronic Mail

William DeRagon

Mark Doles

U.S. Army Corps of Engineers

4101 Jefferson Plaza NE

Albuquerque, NM 87109

william.r.deragon@usace.army.mil

mark.w.doles@usace.army.mil

**RE: Supplemental Comments of WildEarth Guardians on the Draft General
Reevaluation Report and Supplemental Environmental Impact Statement for
the Proposed Rio Grande Floodway, San Acacia to Bosque del Apache,
Socorro County, NM, Project**

[General note regarding U.S. Army Corps of Engineers responses: These comments were received in July 2013, after the final GRR/SEIS-II was submitted for Corps Headquarters review. The comments address the U.S. Fish and Wildlife Service's *Programmatic Biological Opinion* and recommended content of the final GRR/SEIS-II. As such, the Corps has addressed these along with comments generated during the public review period for the final GRR/SEIS-II (Jan.-Feb. 2014).]

Dear William and Mark:

This letter is submitted by WildEarth Guardians ("Guardians") to provide the U.S. Army Corps of Engineers ("Corps") with supplemental comments on the *Draft General Reevaluation Report and Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico* dated April 2012 ("DGRR/SEIS-II").

On June 11, 2012, Guardians submitted comments on the DGRR/SEIS-II ("WEG Comments"). See **Exhibit A**. Since the date of that original comment letter two significant new pieces of information became available that the Corps did not address in the DGRR/SEIS-II: 1) on January 3, 2013, the U.S. Fish and Wildlife Service ("Service") issued its final rule revising the critical habitat designation for the Southwestern willow flycatcher (*see* 78 Fed. Reg. 344); and 2) on February 28, 2013, the Service issued a final programmatic biological opinion on the effects of the Corps proposed action of construction, operation and maintenance of the Rio Grande Floodway, San Acacia to Bosque del Apache Unit, in Socorro County, New Mexico (Consultation No. 02ENNM00-2012-F-0015) ("Biological Opinion"). These documents provide "significant new [] information relevant to environmental concerns bearing on the proposed action or its impacts." See 40 C.F.R. §1502.9(c)(1)(ii). Therefore, based on this additional information, Guardians is compelled to provide these supplemental comments and requests that the Corps supplement its DGRR/SEIS-II in order to adequately analyze these impacts.

[*Note by Corps:* Because all Exhibits included with WildEarth Guardians' letter are already included in appendices to the GRR/SEIS-II or referenced therein, those Exhibits have not been reproduced here.]

I. Revised Critical Habitat Designation for the Southwestern Willow Flycatcher

On January 3, 2013, the Service issued its final rule re-designating critical habitat for the Southwestern willow flycatcher. *See Exhibit B*, 78 Fed. Reg. 344 (January 3, 2013). The Service's original designation (October 2005), as described by the Corps, included approximately 104 river miles from the southern boundary of Isleta Pueblo to the headwaters of Elephant Butte, but excluding the Sevilleta and Bosque del Apache National Wildlife Refuges ("NWRs"). The revised critical habitat designation now includes the two NWRs.

In the DGRR/SEIS-II (2-22), the Corps acknowledges the Service's proposal to re-designate critical habitat for the flycatcher. However, the Corps incorrectly notes "the proposed critical habitat is the same as the currently designated critical habitat." *Id.* This statement is actually contradicted later on in the DGRR/SEIS-II (6-25) where it provides "the Service has proposed to add the NWRs to the designated critical habitat." In fact, the revised critical habitat now includes at least 8 additional river miles through the Sevilleta and Bosque del Apache NWFs (112 total miles between Isleta and Elephant Butte). Based on this new information, the Corps must, at a minimum, revise the DGRR/SEIS-II to reflect this new critical habitat designation and remove the above-mentioned inconsistencies from the final SEIS.

Corps response: The final GRR/SEIS-II fully and accurately describes the January 3, 2013 revision of critical habitat in Section 2.4.4.2, and in Figures 2.3 and 2.4.

[Furthermore, the Corps should supplement its analysis to include the extent and significance of the environmental impacts of the proposed action on the newly designated critical habitat for the flycatcher. *See* 40 C.F.R. §1502.9(c)(1)(ii).

Corps response: The Corps has analyzed the potential effects of the recommended plan and alternatives on recently designated critical habitat in Section 6.5.2 of the final GRR/SEIS-II.

II. Biological Opinion Analyzing the Impacts of the Corps Proposed Action

On February 28, 2013, the Service issued its Biological Opinion for the proposed action. *See Exhibit C*. In the Biological Opinion, the Service raises a number of issues with regard to the affects of the proposed action on the Rio Grande silvery minnow and flycatcher and their designated critical habitat. Biological Opinion at 2. The Biological Opinion provides:

The Service is unable to concur with Corps findings that the San Acacia Levee Project "may affect, is not likely to adversely affect" flycatcher, or flycatcher designated critical habitat **because effects of the proposed action are not wholly beneficial, discountable, or insignificant**. As described in this Opinion, **direct and indirect effects of the proposed action to flycatchers and flycatcher habitat are likely to adversely affect flycatchers, and their designated critical habitat**. Additionally, Corps found that the proposed action, "may affect, likely adversely affect" silvery minnow and silvery minnow designated critical habitat. Therefore, this Opinion describes adverse effects to silvery minnows, flycatchers, and their designated critical habitats.

Id. (Emphasis added).

The Service raises a number of concerns throughout the Biological Opinion that were entirely ignored in the DGRR/SEIS-II. One of the major concerns in the Biological Opinion that is absent from the DGRR/SEIS-II is stated as follows:

The combination of high sediment loading coupled with confinement of the floodway by spoil banks (and soon engineered levees) exacerbate the already-perched channel, whereby the active channel and adjacent overbanks are elevated above the historical floodplain lying outside the floodway. **Potential effects on silvery minnow habitat by spoil bank confinement of the active floodplain into the floodway have not been evaluated.**

Id. at 63 (emphasis added).

Furthermore, the “process of vertical sediment accumulation within the floodway will continue at a rate of approximately 0.5 ft per year and is predicted to accumulate over 10 to 15 feet into the future for as long as the spoil bank lasts.” *Id.* (citation omitted). The Biological Opinion goes on to link the sediment accumulation to loss of flycatcher habitat as follows:

Sediment accumulation due to the lateral confinement of the floodplain may increase the depth to groundwater that plays an important part in the health and distribution of riparian vegetation and consequently, flycatcher habitat. The greater the depth to groundwater below the land surface, the less abundant the riparian vegetation. Vertical accumulation of sediment in a floodplain, exacerbated by the lateral confinement of the floodplain, results in a physical separation of riparian vegetation from groundwater necessary for flycatcher habitat. Accumulation of sediment within a floodway which increases the depth to water results in productive pioneer species such as willows or poplars being replaced by either non-native (e.g., tamarisk) or upland plant species.

Id. at 86 (internal citations omitted).

The Service dedicates several pages of its Biological Opinion to explaining how the proposed action exacerbates sediment accumulation and impacts riparian vegetation causing impacts to the silvery minnow and the flycatcher. *Id.* at 115-117. That extensive discussion is summarized as follows:

In summary, sediment accumulation in the floodway, particularly in the southern reaches below Highway 380, is exacerbated by levees’ constriction of the floodable area, and will raise the floodway elevations above the water table that is necessary to sustain and establish robust riparian vegetation throughout the floodway that is used by flycatchers. Over the San Acacia Levee Project duration, the floodway elevation will increase up to 12 feet in some locations but the range of sediment accumulation and subsequent estimates of impacts to flycatcher habitat in the future were uncertain. Additionally, sediment accumulation and groundwater levels will likely be influenced by regional droughts, groundwater withdrawals, and by land use, water operations and flood control activities in the upstream watershed. Nonetheless, the potential loss of up to 200 acres of suitable flycatcher habitat, identified as

critical to its long term survival and recovery within the floodway could adversely affect flycatcher survivorship and recovery in the San Acacia Reach.

Id. at 117 (internal citations omitted). A similar analysis does not exist in the DGRR/SEIS-II. The Corps simply discounts aggradation as part of the existing condition and therefore no analysis is deemed necessary with regard to the proposed action.

Finally, the Biological Opinion contains a summary of the proposed levee projects impacts on the silvery minnow and flycatcher and their designated critical habitat:

Construction, operation and maintenance of the levee project are expected to result in adverse effects to silvery minnow and 13.5 acres of its designated critical habitat. Adverse effects to individual silvery minnow (436 individuals estimated to be affected) in the form of harassment are anticipated. [...]

Construction, operation and maintenance of the levee project are expected to result in adverse effects to 11 flycatcher territories and between 60 to 200 acres of its suitable and designated critical habitat. The Corps has proposed to create 50.4 acres of flycatcher breeding habitat which will assist in minimizing adverse effects of the levee project. [...] Construction of the levee and the vegetation-free zone will result in the temporary loss of 58.9 of critical habitat and permanent loss of 8.41 acres. The Service's analysis predicted the potential of the levee to alter flycatcher critical habitat PCEs of up to 460 acres as a result of the sediment accumulation in the floodway and riparian vegetation separation from groundwater. However, the uncertainty associated with this analysis in attempting to predict effects of the proposed levee that are decades into the future calls for a monitoring, modeling and continued scientific analysis. The effect of the levee-induced sediment accumulation on flycatcher critical habitat to the year 2029 is more certain and is within an estimated range of 50 to 200 acres.

Id. at 122.

There is no doubt that the impacts of the proposed levee project are significant and the Corps is required to take a "hard look" at the environmental consequences of those actions. *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989). It is difficult to understand how the Corps can claim to have taken a hard look when it did not address in any detail the aggradation issue as it impacts the listed endangered species and their critical habitat. Based on this new information, the Corps should supplement its DGRR/SEIS-II to include a more relevant baseline condition in order to evaluate the impacts of its action and that supplemental analysis should be made available for public review and comment.

Corps response to Comment II: In both the draft and final GRR/SEIS-II, the Corps has analyzed past, current, and projected future aggradation in the San Acacia reach in detail (see Section 5 of Appendix F2-F3). Existing conditions are summarized in the main report of both the draft and final in Sections 2.2.3.1 (River Geomorphology and Sedimentation) and 2.7.5 (Transportation Facilities). The expected future-without-project condition is summarized in sections 3.1.3.1 (Geomorphology and sedimentation) and 3.1.3.3 (Sedimentation) in both the draft and final documents.

Regarding the analysis of future impacts, the Corps succinctly summarized its findings in Section 4.7.7.4 of the draft and final GRR/SEIS-II: "The alternatives without the Tiffany Basin feature would not significantly affect overall flow characteristics and sediment transport in the Rio Grande. The floodway would essentially function in the same manner with- or without-project during normal flow conditions, which occurs the vast

majority of time.” Additionally, Section 6.2.3.1 (River Geomorphology and Sedimentation) of the draft and final reports summarizes: “The construction of a new levee would not significantly affect overall flow characteristics and sediment transport in the Rio Grande.”

In the regulations implementing the National Environmental Policy Act (NEPA), section 1502.14 requires that analysis “include the alternative of no action,” and that “it should present the environmental impacts in comparative form.” The Council on Environmental Quality’s *Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act* (46 FR 18026, 1981) provides explanatory guidance that the environmental effects from taking no action should be compared with the effects of implementing the proposed activity (46 FR 18026, Question 3). Because the effects of continuing sedimentation in the San Acacia reach were determined to be the same both with and without implementation of rehabilitating the existing spoilbank, there is no differential effect to compare.

An expanded explanation of the Corps’ determination of potential effects to listed species and critical habitat was provided to the Service during ESA consultation, and also was included in the final GRR/SEIS-II provided for public review (see “Additional Information provided to the USFWS” [November 2012] in Appendix B.) This analysis specifically addressed the dynamics of sedimentation, geomorphology, groundwater, riparian vegetation, and flycatcher habitat relative to environmental baseline conditions. The analysis supports the conclusion stated in the Corps’ Biological Assessment and the draft and final GRR/SEIS-II: the expected future aggradation within the floodway of the San Acacia reach would be similar both with and without the Corps’ proposed action.

The ESA and its supporting regulation (50 CFR §402) state that the effects of the agency’s proposed action form the basis for determining incidental take, not the effects of the environmental baseline or non-related ongoing Federal actions. This is described most clearly in the *Endangered Species Act Consultation Handbook* (USFWS and NMFS 1998, page 4-47) when discussing the amount or extent of take anticipated:

“In determining whether the proposed action is reasonably likely to be the direct or indirect cause of incidental take, the Services use the simple causation principle; i.e., ‘but for’ the implementation of the proposed action and its direct or indirect degradation of habitat, would actual injury or mortality to individuals of a listed wildlife species be reasonably likely to occur? If the take would not occur but for the proposed action, then the Services must describe the amount or extent of such anticipated incidental take.”

This “but for” test is critical in the case of the San Acacia project. There is now, and has been for over fifty years, a spoilbank structure in place. Even if the No Action Alternative is pursued, the spoilbank will continue be maintained, and will continue to function in the same manner. Therefore, the only impact of the project is the incremental effect between the existing spoil bank and the increased functionality due to the rehabilitated, engineered levee.

All of the cited passages in the comments above are excerpted directly from the Services’ Biological Opinion, and therefore it is evident that agency took those conditions into account when assessing the impacts of the Corps’ proposed action. Further, the Service provided Reasonable and Prudent Measures based on its agency assessment of those conditions. Lastly, the Service acknowledged that there was uncertainty in their determination of effects to flycatcher habitat relative to sedimentation on page 122 of the Biological Opinion (and quoted in WildEarth Guardians’ comment above). Accordingly, the Service’s ultimate determination of Reasonable and Prudent Measures reflects full consideration of impacts of the proposed action, and should be accorded deference. The Corps and the Service concluded consultation on February 28, 2013. The Corps has agreed to implement all terms and conditions of Reasonable and Prudent Measures in the Service’s Biological Opinion, and has incorporated those measures into the published final GRR/SEIS-II.

III. Biological Opinion Exposes Deficiencies in the Corps Environmental Analysis

The evidence and analysis contained in the Biological Opinion provide a strong argument that the Corps has thwarted its responsibility to take a “hard look” at the environmental effects of the proposed action. The Corps analysis in the DGRR/SEIS-II not only fails to include a proper baseline from which the impacts of the alternatives can be evaluated, but completely fails to address impacts directly created by the proposed action on the silvery minnow and flycatcher.

These supplemental comments serve to explain how the baseline condition serves only to temper the impacts of the Corps proposed action and show the types of impacts that can be completely overlooked based on such a flawed analysis. As stated in our original comment letter, Guardians question the ability of the Corps to adequately analyze the environmental impacts of the proposed actions based on the “flawed description of baseline conditions.” *See* WEG Comments at 7. It was not apparent until review of the Biological Opinion, however, that the definition of the baseline condition clearly impacted the scope of the review by the Corps.

A. Existing Condition (Baseline)

The baseline or existing condition established by the Corps takes into account the spoil bank levees that exist throughout the entire project area; thus, any comparison of the impacts of the existing condition and proposed action are based on the improvement of the levee structures (reinforcement of the structure and a 4-foot addition in height). The Corps analysis does not consider the “without levee” condition and disregards any historic impacts exacerbated by the levees—such as aggradation of the channel.

Under the “existing condition,” the channel of the Rio Grande has become perched above the floodplain as a result of the high sediment load being confined within the floodway by the spoil bank levees. DGRR/SEIS-II at 2-6. The Corps explains that “[s]ince spoil banks confine the river to a narrow channel, aggradation is occurring within the channel, raising it as much as 10-12 feet above the adjacent, sediment-starved floodplain.” *Id.* at 2-6. In order for the analysis of the proposed action to be meaningful, the impact of aggradation within the channel should be evaluated against a baseline of the “without levee” condition or unobstructed floodplain condition; otherwise, the comparison is essentially a distinction without difference.

In addition, if the aggradation of the channel is part of the “existing condition” and is impacting the flycatcher, the Corps analysis does not even mention the aggradation as related to the flycatcher. As set forth in the Biological Opinion, aggradation of the river channel has a significant impact on the riparian environment and the flycatchers. The Corps complete disregard for this issue cannot be considered a “hard look” at the environmental impacts.

Corps response to Comment III-A: Clarifying terminology to differentiate the existing spoilbank structure and an engineered levee, the Corps assumes that this comment refers to the “without spoilbank” condition. As stated in Section 2.7.4.1.(d) of the draft and final GRR/SEIS-II, the expected future condition without the Corps’ proposed action is that the Bureau of Reclamation would continue to maintain the existing spoilbank, including repair and/or maintenance of portions damaged by flood flows. The removal of the spoilbank without a replacement structure was never contemplated, is not a practical or responsible course of action, and therefore, would not be considered a “reasonable” project alternative relative to implementing NEPA regulations at 40 CFR §152.14. Similarly, the ESA only requires the consideration of effects that are “reasonably certain to occur” (50 CFR §402.02). Removal of the spoil bank structure is not now, nor was it ever, reasonably certain to occur; therefore, the with-spoilbank condition properly establishes the environmental baseline.

B. *Future Without-Project Condition (No Action Alternative)*

The Corps also fails to put forth a proper no action alternative. At a minimum, the “no action alternative” should have assumed that the spoil bank levee would fail at some point in the future and the unobstructed floodplain condition would again exist. *Id.* at 3-4 (as the height of the channel increases so does the risk the spoil bank levees will fail); 6-5 (“during large floods with existing conditions it is probable that the existing spoil bank would break”). Instead, the Corps assumes that “no changes to the existing environment in and around the existing levees are expected unless catastrophic levee failure occurs.” *Id.* at 4-21. The Corps states, however, that even if a spoil bank breach occurs “the existing spoil bank is projected to be maintained by Reclamation into the future, as it has done for decades.” *See Id.* at 3-4. This maintenance of the “existing conditions” is not representative of a true no action alternative. The purpose of the future without-project condition or no action alternative is to consider the conditions that will occur if “no Federal project is implemented.” *Id.* at 3-1. Thus, the Corps is assuming some federal action would be required to maintain the levees into the future, but has passed that responsibility onto Reclamation. As a result of this assumption, the Corps states “[i]n total, there is very little opportunity for any lateral movement of the floodway in the future, and flooding potentials in the study area would be expected to remain very similar to current conditions.” *Id.* at 3-4.

Corps response to Comment III-B: The proposed Federal project entails the rehabilitation of the existing spoilbank to the status of an engineered levee, which will in turn increase functionality and reliability. There is no evidence to suggest that the No Action Alternative would result in a failed spoilbank that would not be replaced. Without implementation of that proposed action, Reclamation would continue to maintain and repair the existing spoilbank (see the response to Comment III-A above). CEQ guidance (46 FR 18026, Question 3) specifically states: “Where a choice of ‘no action’ by the agency would result in predictable actions by others, this consequence of the ‘no action’ alternative should be included in the analysis.” The No Action Alternative assessed by the Corps accomplishes exactly that: it assesses the predictable continued effects of existing spoilbank. Therefore, the Corps has precisely followed the implementing NEPA regulations and CEQ guidance in the with- and without-project alternatives.

C. *Effects of the Proposed Action Alternative*

In its analysis of the river geomorphology and sedimentation in section 6.2.3.1, the Corps concludes in one paragraph that “[t]he construction of a new levee would not significantly affect overall flow characteristics and sediment transport in the Rio Grande.” *Id.* at 6-6. The paragraph goes on to state “[t]he floodway would essentially function in the same manner with or without the project during normal flow conditions typical most of the year. Therefore, the perceived impacts would be small.” *Id.* This is the section of the DGRR/SEIS-II that should have included an analysis similar to the one included in the Biological Opinion. The Corps—in structuring the baseline and no action conditions—have effectively eliminated the need for any analysis regarding the impacts of the proposed levee project.

The Corps fails to analyze one of the key issues associated with the proposed action—aggradation of the river channel—by choosing to narrowly define the baseline condition. As stated in our original comment letter, Guardians questions the ability of the Corps to adequately analyze the environmental impacts of the proposed actions based on the “flawed description of baseline conditions.” *See* WEG Comments at 7. As noted in our comments, “[t]he concept of a baseline against which to compare predictions of the effects of the proposed action and reasonable alternatives is critical to the NEPA process.” *Id.* Despite the importance of the

baseline in the environmental review process, the Corps has managed to marginalize the direct, indirect and cumulative impacts of the proposed action by conservatively defining the baseline.

Corps response to Comment III-C: As stated in the responses above, the Corps has defined environmental baseline in a manner consistent with law and regulation. Environmental baseline is the condition which now exists, and has continuously existed, for over 50 years, that being the with spoilbank condition. Therefore, the effects of the proposed action are accurately defined. Further, the impacts described in the comment above were assessed by the Service in their Biological Opinion. The Service has provided Reasonable and Prudent Measures to be undertaken, and the Corps has agreed to implement those measures fully.

IV. Other Deficiencies of the DGRR/SEIS-II

The Corps DGRR/SEIS-II does not include the following updated reports or analysis that need to be included as a part of its environmental impact analysis:

A. *Supplemental Fish and Wildlife Coordination Report*

Appendix E to the DGRR/SEIS-II contains the *Supplemental Fish and Wildlife Coordination Act Report* date 1997. See **Exhibit D**. This report is out of date and must be updated in order to satisfy the consultation requirement under the Fish and Wildlife Coordination. For example, when the Final SEIS for this project was issued in 1992, it was based on a 1989 report under the Fish and Wildlife Coordination Act. The report was released three years before the final environmental impact analysis was released. The 1997 report is already more than 15 years old. Since the time of its completion, both the silvery minnow and the flycatcher were listed as endangered species and critical habitat was designated. Based on the significant new information that exists since that report was finalized, this report needs to be updated to be at all relevant to the existing environmental impact analysis.

Corps response: The current, recommended plan for the San Acacia to Bosque del Apache Unit Project entails an earthen levee on the same alignment and with the same extent (~43 miles) as the 1997 tentatively selected plan addressed in the Fish and Wildlife Coordination Act (FWCA) Report. The current plan has been designed to updated hydrology that estimates the 1%-chance event to be approximately 29,900 cfs at San Acacia, significantly less than the 1997 hydrological estimate of 51,000 cfs. Therefore, the current design entails a significantly smaller footprint and less adverse impacts than the 1997 design.

Since 1997, the Corps and the Service have continued to fulfill the purpose and requirements of the FWCA relative to the San Acacia to Bosque del Apache Unit Project. In September 2002, the Corps provided a FWCA scope to the Service to update existing wildlife resource conditions throughout the project reach. The following year, the FWCA task was expanded to include fish and wildlife resources and needs relative to a basin-wide, multi-agency investigation — the Upper Rio Grande Water Operations Review. In August 2006, the Corps and Reclamation received a final FWCA Report based on extensive coordination by the Service with both Federal and non-Federal water and resource managers involved in that study, which included the entire reach of the San Acacia to Bosque del Apache Unit Project. The 2006 report included updated resource conditions and also provided reach-wide guidance on mitigation recommendations.

Section 402.06 of the Endangered Species Act (ESA) states that consultation under the act may be consolidated with the cooperation procedures of the FWCA and other laws. In the February 2013 Biological Opinion for the San Acacia to Bosque del Apache Unit Project, the USFWS included extensive analysis and mitigation requirements regarding potential adverse impacts to the aquatic habitat in the Rio Grande (relative to the endangered Rio Grande silvery minnow) and the adjacent riparian forest-and-shrub habitat (relative to the endangered Southwestern Willow Flycatcher). The subject river channel and riparian zone include all of the affected wildlife resources within the project area. The majority of the unavoidable impacts occurs on National Wildlife Refuge lands administered by the USFWS, and SPA has coordinated with refuge staff regarding project conduct and mitigation. The development of the mitigation plan included in the GRR-SEIS-II was based on an index of overall wildlife habitat value, the USFWS's FWCA resource

value categorization, and the needs of listed species, therefore, fulfilling the obligations of both the FWCA and the ESA for the proposed project.

B. *Updated Determination of Compatibility by the Service*

Section 5.1.16.4, provides that “[a]n updated Determination of Compatibility will be obtained for the proposed project prior to submittal of the GRR/SEIS-II for approval.” *Id.* at 5-18. Based on the new information—including the listing of endangered species and designation of critical habitat, as well as the analysis set forth in the Biological Opinion—the compatibility determination may have significantly changed since the last determination was completed in 1992.

Corps response to Comment IV-B: The Corps agrees. As stated in Section 5.1.16.4 of the final GRR/SEIS-II: “New or updated Determinations of Compatibility will be obtained for the proposed project from Sevilleta and Bosque del Apache NWRs prior to the initiation of construction.”

We appreciate you considering our supplemental comments. Since this new information has been released, it is clear to Guardians that a number of very important environmental impacts were ignored in the original DRGG/SEIS-II. We strongly encourage the Corps to take a “hard look” at its existing analysis and the new information detailed in the letter and issue a supplemental DGRR/SEIS-II in order to provide an adequate analysis of the significant impacts on the environment caused by the proposed Rio Grande Floodway project.

Sincerely,

[The original letter was signed electronically on 07/26/2013.]

Jen Pelz
Wild Rivers Program Director
WildEarth Guardians
516 Alto Street
Santa Fe, NM 87501
jpelz@wildearthguardians.org
(303) 884-2702



February 24, 2014

Via Electronic Mail

Mr. Jerry Nieto
Project Manager
U.S. Army Corps of Engineers
4101 Jefferson Plaza NE
Albuquerque, NM 87109
Jerry.D.Nieto@usace.army.mil

RE: WildEarth Guardians' Comments on the Final General Reevaluation Report and Supplemental Environmental Impact Statement II for the Proposed Rio Grande Floodway, San Acacia to Bosque del Apache, Socorro County, NM, Project

Dear Mr. Nieto:

This letter is submitted by WildEarth Guardians ("Guardians") to provide the U.S. Army Corps of Engineers ("Corps") with comments on the final *General Reevaluation Report and Supplemental Environmental Impact Statement II: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, Socorro County, New Mexico* dated October 2013 ("Final GRR/SEIS-II") and draft record of decision.

On June 11, 2012, Guardians submitted its original comments on the DGRR/SEIS-II. *See Appendix G, GRR/SEIS-II* at 41. Guardians also provided supplemental comments to the Corps on July 26, 2013, based on significant new information that became available in 2013 including:

1) the U.S. Fish and Wildlife Service's ("Service") issuance of its final rule revising the critical habitat designation for the Southwestern willow flycatcher (*see* 78 Fed. Reg. 344) on January 3, 2013; and 2) the Service's issuance of a final programmatic biological opinion on the effects of the Corps proposed action of construction, operation and maintenance of the Rio Grande Floodway, San Acacia to Bosque del Apache Unit, in Socorro County, New Mexico (Consultation No. 02ENNM00-2012-F-0015) ("Biological Opinion") on February 28, 2013. *See* 40 C.F.R. §1502.9(c)(1)(ii). Since Guardians' supplemental comments were not included in Appendix G or anywhere acknowledged by the Corps, we resubmit these comments as Exhibit A attached hereto and incorporate the comments herein by this reference. Guardians urges the Corps consider and incorporate these comments into its Final GRR/SEIS-II prior to issuing its final record of decision.

Corps response: Guardians' July 26, 2013 comments were received 13 months after the end of the public comment period for the draft GRR/SEIS-II, and after the final GRR/SEIS-II had been submitted for Corps Headquarters review. Those comments pertained to the U.S. Fish and Wildlife Service' Programmatic Biological Opinion and recommended content of the final GRR/SEIS-II. For these reasons, the Corps has addressed Guardians' July 2013 comments concurrently with comments generated during the public review period for the final GRR/SEIS-II (January-February 2014). The July 2013 comments and the Corps'

responses will be included in an addendum to Appendix G of the GRR/SEIS-II. Guardians' comments contained in this (February 24, 2014) letter, as well as the Corps' responses, also will be included in Appendix G.

Since those supplemental comments were filed, the Corps in finalizing its GRR/SEIS-II acknowledged that the revised critical habitat for the flycatcher “substantially increased the area of critical habitat for the flycatcher within the project area.” *See* Final GRR/SEIS-II at 2-23. The Corps inserted two maps (figures 2.3 and 2.4) into the Final GRR/SEIS-II showing the revised designation, the proposed infrastructure, and the location of existing flycatcher territories established in the past five years. *See* Final GRR/SEIS-II at 2-25 and 2-26. Figures 2.3 and 2.4 illustrate that the proposed levee project threatens to disconnect a large portion of the flycatcher's critical habitat within the Bosque del Apache National Wildlife Refuge from the river. *Id.* However, despite these (and other) significant impacts on the environment, the Corps continues to refuse to include any analysis of these effects in its Final GRR/SEIS-II.

Corps response: The Service designated numerous non-contiguous areas in both the river corridor and the adjacent floodplain in their January 2013 revision of flycatcher critical habitat. (See GIS data files available at < http://www.fws.gov/southwest/es/arizona/SWWF_revisedCH_2013.htm>.) The designation pointedly excluded the alignment of the Low Flow Conveyance Channel and the spoilbank—located between the river channel and the western floodplain—along 38 river-miles from San Acacia to San Marcial. Hydraulically, those structures have separated the floodplain (including Bosque del Apache NWR) from inundation by river flows for more than 50 years. The proposed levee would not alter the geographical designation of critical habitat or the dominant, existing hydrologic regime throughout the San Acacia reach. Analyses supporting this finding are included in detail in the final GRR/SEIS-II and its supporting appendices.

The Corps cannot simply rely on the Service's Biological Opinion associated with the projects effects on listed endangered species to satisfy its obligation under the National Environmental Policy Act (“NEPA”). *See Fund For Animals v. Hall*, 448 F. Supp. 2d 127, 136 (D.D.C. 2006) (Endangered Species Act consultation does not substitute for NEPA review). Relying on consultation to satisfy NEPA ignores the second of the twin objectives of NEPA—to “inform the public that it has indeed considered environmental concerns in its decisionmaking process.” *Earth Island Inst. v. U.S. Forest Serv.*, 442 F.3d 1147, 1153–54 (9th Cir. 2006)¹.

Corps response: The Corps' consultation with the Service fulfilled its requirement under Section 7 of the Endangered Species Act (ESA). Fulfillment the provisions of NEPA was accomplished in strict accordance with the provisions of 42 USC 4321 et seq. and regulations promulgated by the Council on Environmental Quality. NEPA itself does not mandate particular results, but prescribes a necessary process to ensure a fully informed and well considered decision. NEPA ensures that the agency will inform the public that it has considered concerns presented to it in that agency's decision-making process. In this case, the Corps has accepted comments from the public during the course of two comment periods, first from April 27 to June 11, 2012, and then from January 24 to February 24, 2014. Guardians has now provided comments on three separate occasions, twice during open public comment periods during the NEPA process, and once following the ESA Section 7 consultation process. All comments have been fully considered. The responses to all comments have been included in the GRR/SEIS-II (Appendix G and its addendum). Although the Corps considered comments received as part of the ESA Section 7 consultation process, that was not the sole opportunity for the public to comment and be heard.

The Corps provided no notice to the public of how the re-engineered levee system would “raise the floodway elevations above the water table that is necessary to sustain and establish robust riparian vegetation throughout the floodway” or the effects of such changes to

the environment. *See Biological Opinion* at 117. These impacts were not mentioned in the Corps Final GRR/SEIS-II nor were the impacts made public until the Service released its Biological Opinion in February of 2013, which was eight months after the comment period closed.² It is the Corps, not the Service that is responsibility under NEPA to analyze and make public the impacts of its proposed levee project.

Guardians does not believe that the Corps has satisfied its obligations under NEPA to take a “hard look” and provide an adequate analysis of the significant impacts on the environment caused by the proposed San Acacia levee project. Based on the numerous issues raised in our two prior comment letters dated June 11, 2012 and July 26, 2013, we also believe that it is premature for the Corps to issue a record of decision based on its failure to analyze these environmental impacts. We strongly encourage the Corps to consider Guardians’ supplemental comments dated July 26, 2013 and these additional comments on the Final GRR/SEIS-II and draft record of decision prior to moving forward with the San Acacia levee project.

Corps response: The Corps has extensively described the proposed project with sufficient clarity to enable the public to have a reasonable opportunity to make meaningful comment. The Corps has discussed appropriate points in its final GRR/SEIS-II, including responsible opposing views. Responses have been compiled, and modifications to the GRR/SEIS-II have been accordingly made, or the Corps has sufficiently described why the comments do not warrant and further agency response. An agency must consider responsible comments, but it is not required to agree with them. If an agency has addressed specific comments and explained why they have been found unpersuasive, no more is required. All substantive comments have been considered, responded to, and incorporated as Appendix G to the final GRR/SEIS-II.

Sincerely,

Digitally signed by Jen Pelz
DN: cn=Jen Pelz, o=WildEarth Guardians,
ou=Wild Rivers Program Director,
email=jpelz@wildearthguardians.org, c=US
Date: 2014.02.24 14:04:12 -07'00'

Jen Pelz
Wild Rivers Program Director
WildEarth Guardians
516 Alto Street
Santa Fe, NM 87501
jpelz@wildearthguardians.org
(303) 884-2702

¹ “[P]ublic scrutiny is essential to implementing NEPA.” *See Oregon Natural Desert Association v. BLM*, 531 F.3d 1114, 1120 (9th Cir. 2008) (quoting 40 C.F.R. § 1500.1(b)). This is because “NEPA’s purpose is realized not through substantive mandates but through the creation of a democratic decisionmaking structure that, although strictly procedural, is ‘almost certain to affect the agency’s substantive decision[s].’” *Id.* (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989)).

² The Corps cannot avoid analyzing these impacts simply by narrowly defining the environmental baseline to marginalize any such impacts.

Corps response: Please see our response to Comment II of your July 26, 2013 letter.

