Joint Biological Assessment

Bureau of Reclamation and Non-Federal Water Management and Maintenance Activities on the Middle Rio Grande, New Mexico

Part I – Water Management

Middle Rio Grande Project, New Mexico
Upper Colorado Region

Submitted to the U.S. Fish and Wildlife Service

Rio Grande Silvery Minnow	**Southwestern Willow Flycatcher**
Pecos Sunflower	**Interior Least Tern**

U.S. Department of the Interior
Bureau of Reclamation

July 2012 (Amended January 2013)

Acronyms and Abbreviations

ABCWUA	Albuquerque Bernalillo County Water Utility Authority
ABQ SSWRP	Albuquerque South Side Water Reclamation Plant
AF	acre-feet
AFY	acre-feet per year
AM	adaptive management
AMAFCA	Albuquerque Metropolitan Arroyo Flood Control Authority
Annual Operating Plan	Middle Rio Grande Annual Operating Plan
BA	biological assessment
Basin	Rio Grande Basin
BDA	Bosque del Apache
BIA	Bureau of Indian Affairs
BiOp	biological opinion
Buckman Project	Buckman Direct Diversion Project
Bylaws	Collaborative Program's bylaws
CFR	Code of Federal Regulations
cfs	cubic feet per second
cm	centimeter
cm/sec	centimeter per second
Coalition	Coalition of the Six MRG Pueblos
Collaborative Program	Middle Rio Grande Endangered Species Collaborative Program
Compact	Rio Grande Compact
Corps	U.S. Army Corps of Engineers
CPUE	catch per unit effort
CWA	Conservation Water Agreement
Diversion Dams	Angostura, Isleta, and San Acacia Diversion Dams
DO	dissolved oxygen
EBID	Elephant Butte Irrigation District
EDWA	Emergency Drought Water Agreement

EPA	Environmental Protection Agency
EP#1	El Paso County Water Improvement District No. 1
ESA	Endangered Species Act.
FR	Federal Register
GIS	geographic information system
gpcd	gallons per capita per day
ha	hectare
Heron	Heron Dam and Reservoir
in.	inch
ISC	Interstate Stream Commission
JyS Plan	2003 Jemez y Sangre Regional Water Plan
km	kilometer
LFCC	Low Flow Conveyance Channel
LIDAR	Light Detection and Ranging
LJAA	La Joya Acequia Association
LTP	Long-Term Plan
m	meter
m^2	square meters
mi	mile
mg/L	milligrams per liter
mm	millimeter
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MRG	Middle Rio Grande
MRGAA	Middle Rio Grande Administrative Area
MRGCD	Middle Rio Grande Conservancy District
MRGESCP	Middle Rio Grande Endangered Species Collaborative Program
MRG Plan	Middle Rio Grande Regional Water Plan
MRG Project	Middle Rio Grande Project
NEPA	National Environmental Policy Act
NMDGF	New Mexico Department of Game and Fish

NMISC	New Mexico Interstate Stream Commission
NMOSE	New Mexico Office of the State Engineer
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWR	National Wildlife Refuge
O&M	operation and maintenance
OM&B	operation, maintenance, and betterment
PCE	primary constituent elements
PDO	Pacific Decadal Oscillation
PHVA workgroup	Population and Habitat Viability Assessment/Hydrology workgroup
PIT	passive integrated transponder
Program	Reclamation's Supplemental Water Program
Project	Middle Rio Grande Project
Pueblos	Cochiti, Santo Domingo, San Felipe, Santa Ana, Sandia and Isleta Pueblos (the Six MRG Pueblos)
PVA	Population Viability Analysis
RIP	Middle Rio Grande Recovery Implementation Program (Formal title to remain MRGESCP, but an alias containing "Recovery Implementation Program" will be developed by the Executive Committee)
RGSM	Rio Grande silvery minnow
RM	river mile
RPA	Reasonable and Prudent Alternative
RPM	reasonable and prudent measures
RR	Rio Rancho
Secretary	Secretary of the Interior
Service	U.S. Fish and Wildlife Service
SJC Project	San Juan Chama Project
Stat.	Statute
SS Plan	Soccoro-Sierra Regional Water Plan
SWFL	Southwestern willow flycatcher

TNC	The Nature Conservancy
URGWOM	Upper Rio Grande Water Operations Model
U.S.	United States
USGS	United States Geological Survey
WDFW	Washington Department of Fish and Wildlife
WWTP	waste water treatment plant
1928 Act	Act of March 13, 1928 (45 Statute 312)
1935 Act	Act of 1935, 49 Statute 887
1981 Agreement	Agreement: Procedures for the Storage and Release of Indian Water Entitlement of the Six Middle Rio Grande Pueblos, approved by the Secretary of the Interior, December 28, 1981
2003 BiOp	March 17, 2003, Biological Opinion
°C	degree Celsius
°F	degree Fahrenheit
>	greater than
<	less than
%	percent
§	section