

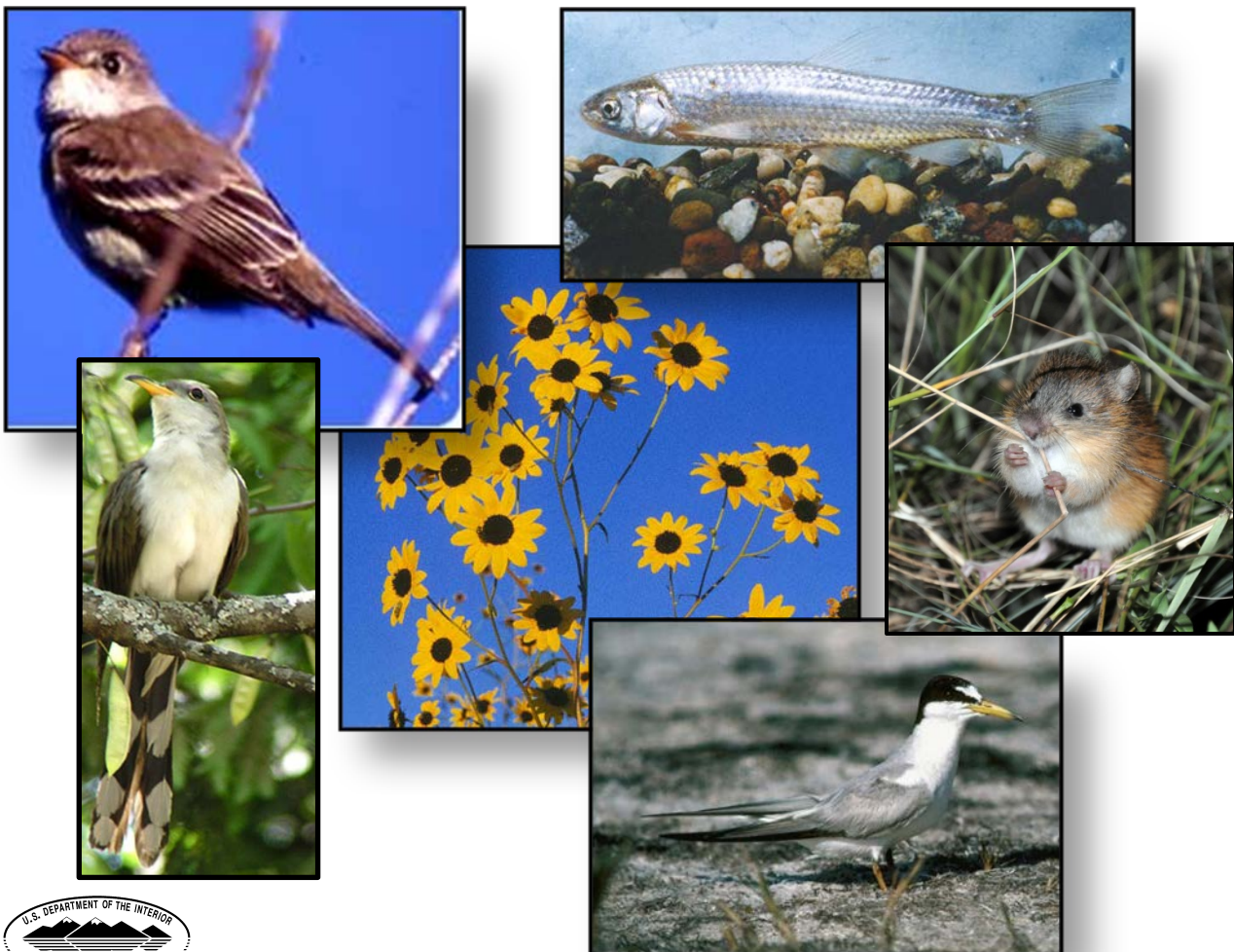
# RECLAMATION

*Managing Water in the West*

## Joint Biological Assessment

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

**Middle Rio Grande Project, New Mexico  
San Juan-Chama Project, New Mexico  
Upper Colorado Region**



## Mission Statements

The U.S. Department of the Interior protects America's natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

The Bureau of Indian Affairs' mission is to enhance the quality of life, to promote economic opportunity, and to carry out the responsibility to protect and improve the trust assets of American Indians, Indian tribes and Alaska Natives.



# **Joint Biological Assessment**

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

## **Acronyms and Abbreviations**

**Middle Rio Grande Project, New Mexico  
San Juan-Chama Project, New Mexico  
Upper Colorado Region**

**Submitted to the U.S. Fish and Wildlife Service**

**Rio Grande Silvery Minnow**

**Southwestern Willow Flycatcher**

**Yellow-billed Cuckoo**

**New Mexico Meadow Jumping Mouse**

**Pecos Sunflower**

**Interior Least Tern**





# Acronyms and Abbreviations

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 BO	March 17, 2003 Biological Opinion
°C	degree Celsius
°F	degree Fahrenheit
>	greater than
<	less than
%	percent
§	section
ABCWUA	Albuquerque-Bernalillo County Water Utility Authority
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
AT&SF	Atchison, Topeka, and Santa Fe
ATV	all-terrain vehicle
BA	biological assessment
Basin	Rio Grande Basin
BDA	Bosque del Apache National Wildlife Refuge
BIA	Bureau of Indian Affairs
BiOp	biological opinion
BLM	Bureau of Land Management
BMP	best management practice
BO	biological opinion
BDD	Buckman Direct Diversion Project
Bylaws	Collaborative Program's bylaws
CFR	Code of Federal Regulations

## Acronyms and Abbreviations (cont.)

cfs	cubic feet per second
cm	centimeter
cm/s	centimeter(s) 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
cuckoo	yellow-billed cuckoo
CWA	Conservation Water Agreement
Diversion Dams	Angostura, Isleta, and San Acacia Diversion Dams
DMI	data management interface
DO	dissolved oxygen
DPS	Distinct Population Segment
EB	Elephant Butte
EBID	Elephant Butte Irrigation District
EC	Executive Committee
EDWA	Emergency Drought Water Agreement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ET	evapotranspiration
Fed Reg	Federal Register
flycatcher	Southwestern willow flycatcher
FM	flow model
ft	feet
GIS	geographic information system
gpcd	gallons per capita per day
GPS	global positioning system
ha	hectare
Heron	Heron Dam and Reservoir

## Acronyms and Abbreviations (cont.)

HO	hydrologic objective
IT	incidental take
ITS	Incidental Take Statement
jumping mouse	New Mexico meadow jumping mouse
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
LLSMR	Los Lunas Silvery Minnow Refugium
LTP	Long-Term Plan
m	meter
m <sup>2</sup>	square meters
MBTA	Migratory Bird Treaty Act
MCP	minimum convex polygon
mg/L	milligrams per liter
mi	mile
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
MRG Plan	Middle Rio Grande Regional Water Plan
MRG Project	Middle Rio Grande Project
NEPA	National Environmental Policy Act
NM	New Mexico
NMDGF	New Mexico Department of Game and Fish
NMED	New Mexico Environment Department
NMISC	New Mexico Interstate Stream Commission

## Acronyms and Abbreviations (cont.)

NMOSE	New Mexico Office of the State Engineer
NMSA	New Mexico Statutes Annotated
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 element
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
PVA	Population Viability Analysis
Reclamation	U.S. Bureau of Reclamation
RG	Rio Grande
RGC	Rio Grande Compact
RIO	River Integrated Operations
RIP	Middle Rio Grande Recovery Implementation Program
RM	river mile
RPA	reasonable and prudent alternative
RPM	reasonable and prudent measure
SADD	San Acacia Diversion Dam
SE	State Engineer
Secretary	Secretary of the Interior
Service	U.S. Fish and Wildlife Service
silvery minnow	Rio Grande silvery minnow
Six MRG Pueblos	Cochiti, Santo Domingo, San Felipe, Santa Ana, Sandia, and Isleta Pueblos
SJC Project	San Juan-Chama Project



## Acronyms and Abbreviations (cont.)

SNOTEL	snowpack telemetry
Stat.	Statute
State	State of New Mexico
SS Plan	Socorro-Sierra Regional Water Plan
SWFL	Southwestern willow flycatcher
tern	interior least tern
TNC	The Nature Conservancy
URG	Upper Rio Grande
URGWOM	Upper Rio Grande Water Operations Model
U.S.	United States
U.S.C.	United States Code
USGS	U.S. Geological Survey
WDFW	Washington Department of Fish and Wildlife
WMA	Wildlife Management Area
WWTP	wastewater treatment plant
YOY	young-of-year