

2019

MRGCD Ditches and Drains: Status and Assessment of 2015 MRG CAP Targets

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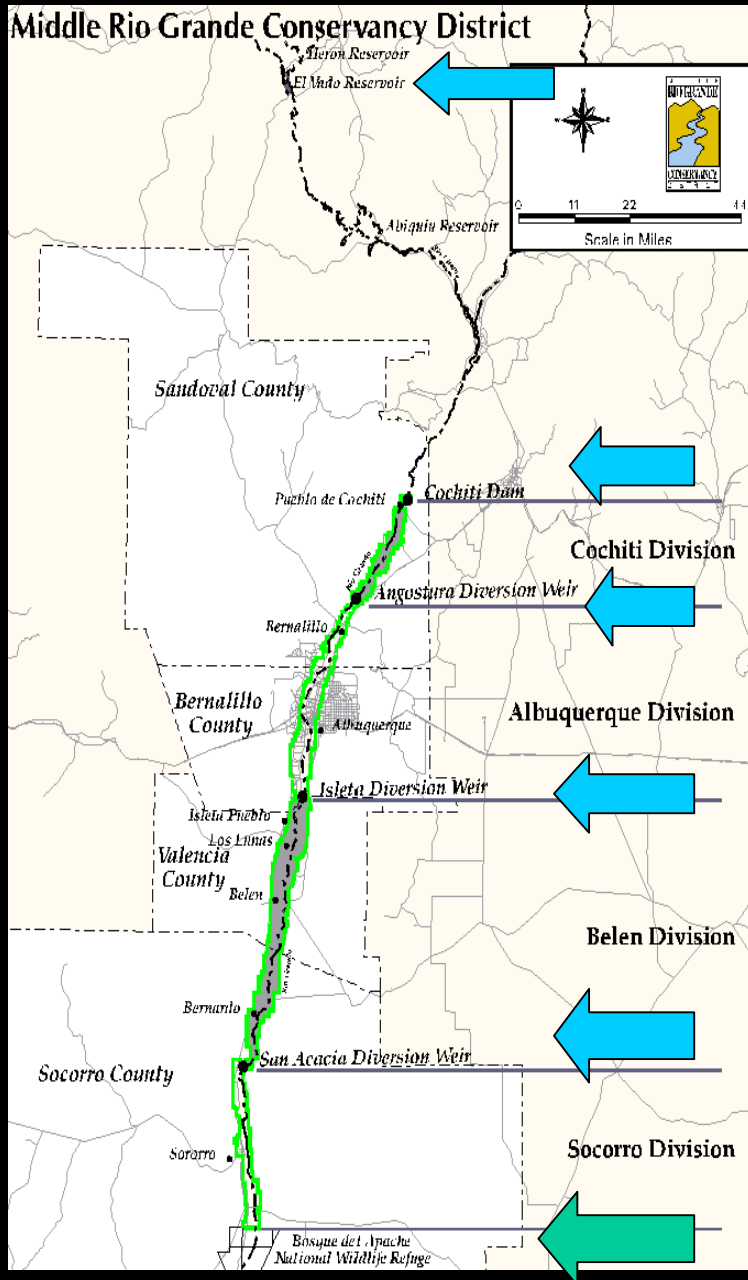


MRGCD DITCHES AND DRAINS:

STATUS AND ASSESSMENT OF 2015 MRG CAP TARGETS

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EL VADO DAM

On the Rio Chama - For water storage

COCHITI DAM

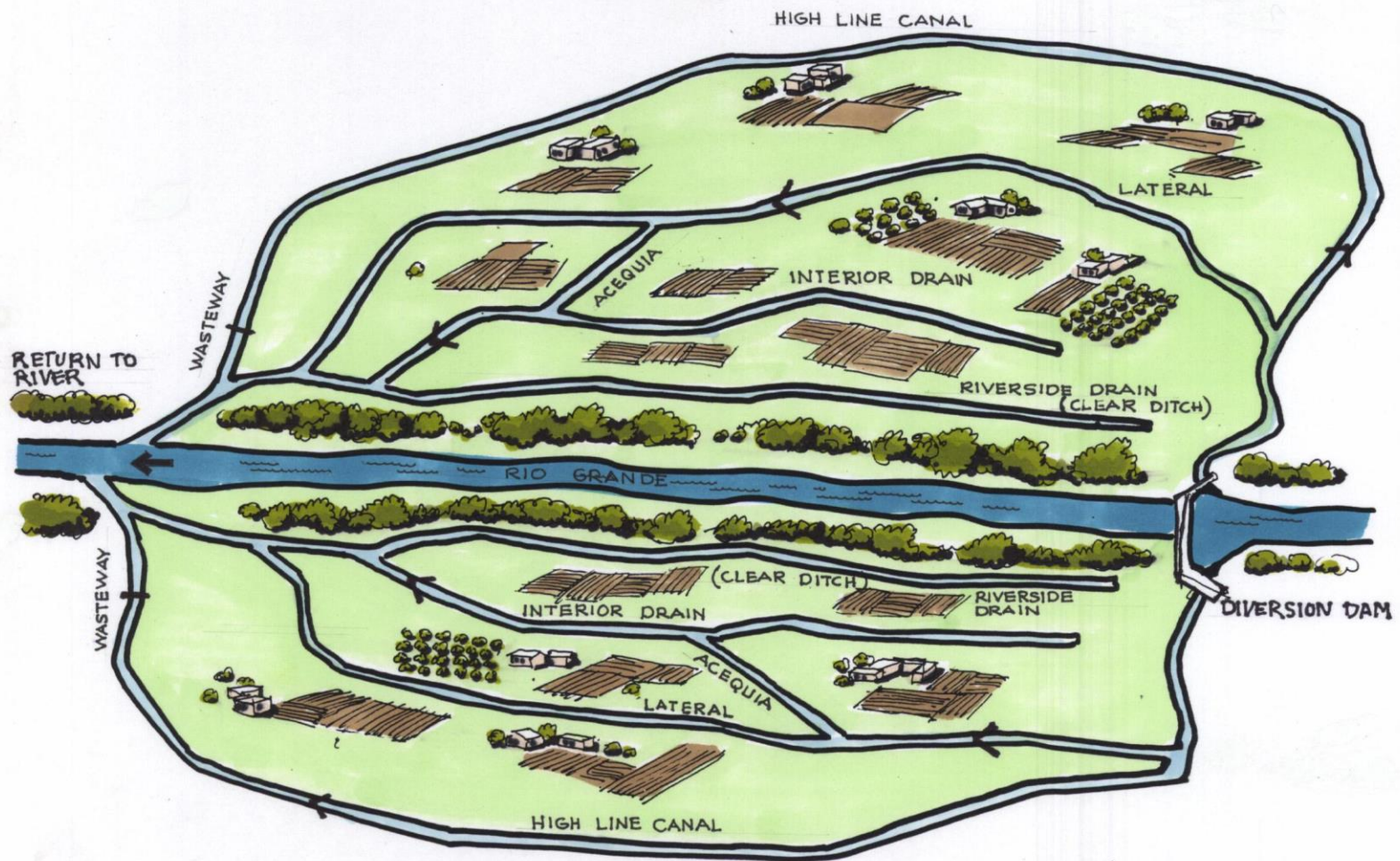
ANGOSTURA Diversion Weir

ISLETA Diversion Weir

SAN ACACIA Diversion Weir

Bosque del Apache Refuge

Irrigation ditches and drains connect the river and bosque and create green corridors to other habitats and open spaces





- Ditches and drains can provide supplemental habitat for wildlife, particularly birds and, to an extent, fishes.
- Not many known studies or surveys of habitat on MRGCD water facilities, which are managed primarily to convey water.
- 13 Hink and Ohmart transects monitoring vegetation and bird use on riverside drains also fish use/habitat at drain outfalls and BEMP water quality monitoring
- Surveys consistently show Drain Type 5 transects have among the highest # winter and summer avian species per transect and avian abundance



Ditch and Drain Habitat – Viability Analysis

Condition

Key Attribute	Indicator	Poor	Fair	Good	Very Good	S1	R2	Current	Trend	Future
Vegetation composition and structure	[1] Ditch and drains % cover of perennial vegetation	<25% of ROW with perennial vegetation.	25-50% of ROW with perennial vegetation.	50-75% of ROW with perennial vegetation.	>75% of ROW with perennial vegetation.	Exp		F	SD	VG
Vegetation composition and structure	[2] Ditch ROW w oody vegetation	<10% w oody vegetation in the outer ROWs.	10 -25% w oody vegetation in the outer ROWs.	25-33% woody vegetation in the outer ROWs.	33-50% w oody vegetation in the outer ROWs.	Exp		G		VG
Vegetation composition and structure	[3] Exotic w oody cover	>50% of cover is non-native trees or shrubs.	Betw een 25% and 50% cover of non-native trees and shrubs.	Betw een 10% and 25% cover of non-native trees and shrubs.	Less than 10% cover is non-native trees.	Exp		P		G
Vegetation composition and structure	[4] Ditch noxious weeds	>10% New Mexico Class A & B weeds.	5-10% Class A & B.	1-5% Class A & B.	<1% New Mexico Class A & B weeds.	Exp		F		G



Chamisal Lateral (Bernalillo Co.)

% Cover = 35%; perennial est. 25%

% Woody (Outer ROW) = 85%

% Exotic woody cover = 85%

Albuquerque Main Canal (Sandoval Co.)

% Cover = 30%; perennial est. 25%

% Woody (Outer ROW) = 80%

% Exotic Woody Cover = 80%



Bosque Lateral #3 (Valencia Co.)

% Cover = 25%; perennial 15% max.

% Woody (Outer ROW) = 60%

% Exotic Woody Cover = 60%

Lower Belen Riverside Drain (Valencia Co.)

% Cover = 40%; perennial est. 35% max.

% Woody (Outer ROW) = 0%

% Exotic Woody Cover = 0%

Percent New Mexico Class A and B Noxious Weeds in 2011

MRGCD facilities Bernalillo and Valencia Counties

Acreage of noxious weed species by county *Parametrix 2011	Total Acres	Estimated Treatment Acres*	Number of Occurrences
Bernalillo	102.6	34.6	395
Camelthorn	4.0	0.9	12
Giant cane	1.3	0.7	61
Hoary cress	0.1	0.0	3
Pampas grass	0.0	0.0	3
Perennial pepperweed	5.8	0.8	47
Quackgrass	0.0	0.0	3
Russian knapweed	44.4	23.2	32
Ravenna grass	0.0	0.0	1
Tree of heaven	46.9	9.0	233
Valencia	428.2	98.8	709
Bull thistle	0.0	0.0	3
Canada thistle	0.0	0.0	1
Chicory	0.0	0.0	1
Common reed	0.1	0.0	1
Giant cane	0.9	0.3	10
Hoary cress	0.0	0.0	2
Perennial pepperweed	373.4	63.5	595
Russian knapweed	30.6	25.9	17
Tree of heaven	23.1	9.1	79
Grand Total	530.7	133.4	1104
*Treatment acres estimated by multiplying total acreage by percent cover at each patch.			

**Riverside and Interior Drains,
Canals and Laterals: Estimated
Acreages**

Bernalillo County – 2408 acres
Percent cover noxious weeds = 1.4%

Valencia County – 2944 acres
Percent cover noxious weeds = 3.4%



Perennial Pepperweed

Ditch and Drain Habitat – Viability Analysis

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Vegetation composition and structure	[2] Ditch ROW w oody vegetation	<10% w oody vegetation in the outer ROWs.	10 -25% w oody vegetation in the outer ROWs.	25-33% w oody vegetation in the outer ROWs.	33-50% w oody vegetation in the outer ROWs.	Exp		G	->G (?)	VG
Vegetation composition and structure	[3] Exotic w oody cover	>50% of cover is non-native trees or shrubs.	Between 25% and 50% cover of non-native trees and shrubs.	Between 10% and 25% cover of non-native trees and shrubs.	Less than 10% cover is non-native trees.	Exp		P	-> P	G
Vegetation composition and structure	[4] Ditch noxious weeds	>10% New Mexico Class A & B weeds.	5-10% Class A & B.	1-5% Class A & B.	<1% New Mexico Class A & B weeds.	Exp		F (G)	By 2030	G

Vegetation Management

Constant head weir systems – keep the head in irrigation ditches at a constant level. Better supply for irrigators and lessens erosive impact to the ditches from changing water levels. Could improve water tables for ditch vegetation but less aquatic and other vegetation inside the ditch.

Reduced herbicide use District-wide estimated 30%; Bernalillo County 80%.

Increase mowing height to 12 inches to shade annual weeds, increase plant cover of perennial grasses and deter rodents like gophers.

Experimental in-season burning to establish bunch grasses

Remove trees inside canals and drains causing damage, stagnant water and preventing access and maintenance.

Encourage healthy stands of trees and shrubs in outer ROWs by thinning small diameter non-natives like elms. May be able to have or retain higher % canopies in non agricultural areas.

Target #5 -- Ditch and Drain Habitat

Source: MRG CAP update 9/2019

Threats	Severity of Threat	Scope of Threat	Threat Magnitude	Irreversibility	Threat Rank
Channelization	Low	Low	Low	Low	Low
Dam Operations	High	Very High	High	Medium	High
Housing & Urban Areas	High	Medium	Medium	Very High	High
Wildfire	Medium	Low	Low	Medium	Low
Introduced Species	High	High	High	High	High
Diversions	Low	High	Low	Low	Low
Habitat Modification	Very High	High	High	Medium	High
Drought	High	Very High	High	Medium	High
Recreational Activities	Low	Very High	Low	Medium	Low







Target #5 -- Ditch and Drain Habitat

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Threats	Severity of Threat	Scope of Threat	Threat Magnitude	Irreversibility	Threat Rank
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Introduced Species	High	Very High	Very High	High	High
Diversions	Low	High	Low	Low	Low
Habitat Modification	Very High	High	High	Medium	High
Drought	High	Very High	High	Medium	High
Recreational Activities	Medium	Very High	Medium	Medium	Medium

