

RIO GRANDE DIVERSION INFRASTRUCTURE INVENTORY

Structure Name: BILLINGS D

Reported By: Daniel Boyes

Date: April 1, 2019

Headgate	Latitude	Longitude
Location:	37.59988333	-106.1127

Headgate Type: Manually operated 3' wide steel slide gate

Headgate Condition:	A <input type="checkbox"/>	Diversion and Other Condition:	A <input type="checkbox"/>	River Miles From New Mexico State Line (Point of Diversion):	Structure Submerged: Yes <input checked="" type="checkbox"/>
	B <input type="checkbox"/>		B <input type="checkbox"/>		No <input type="checkbox"/>
	C <input type="checkbox"/>		C <input type="checkbox"/>		
	D <input checked="" type="checkbox"/>		D <input type="checkbox"/>	81.07 mi	
	F <input type="checkbox"/>		F <input checked="" type="checkbox"/>		

Repair(s) or Improvement(s) Completed Since 2006: None

Repair(s) or Improvement(s) Currently Needed: The issue of sediment and debris accumulation needs to be addressed. A new diversion dam with sediment and debris-passing capabilities is recommended. Headgate repair or replacement is also recommended. In addition, bank restoration work upstream and downstream of this structure is critical to maintaining the function of the ditch and river. An alternative solution for all these issues is to move the point of diversion upstream. Fish and boat passage, as well as riparian restoration should be considered as part of any repairs or improvements.

Structure Description: This structure is located near the apex of a meander. Channel migration analysis shows the meander is tightening and may be cut off in the future (see map below). If this occurs, the ditch will no longer be functional. There is a diversion dam made of rocks and debris along the river that directs flow to a short feeder ditch. There is a log trash boom at the entrance of the feeder ditch. At the end of the feeder ditch is a welded steel plate headwall with the headgate attached. The headgate does not seal properly and needs to be repaired. Debris accumulates on the diversion dam and is especially an issue at headgate. Sediment accumulation is also a serious issue at this structure. The flume is too large for the volume of the ditch and does not measure accurately at low flows.

Comments: This ditch is a priority 34, 209, 305, 324, and 349.

Notes:

Estimated Range of Cost: High

Headgate looking downstream



Headgate outlet



Diversion dam during 2019 spring runoff



Diversion dam looking upstream



Headgate during 2019 spring runoff



Flume looking downstream

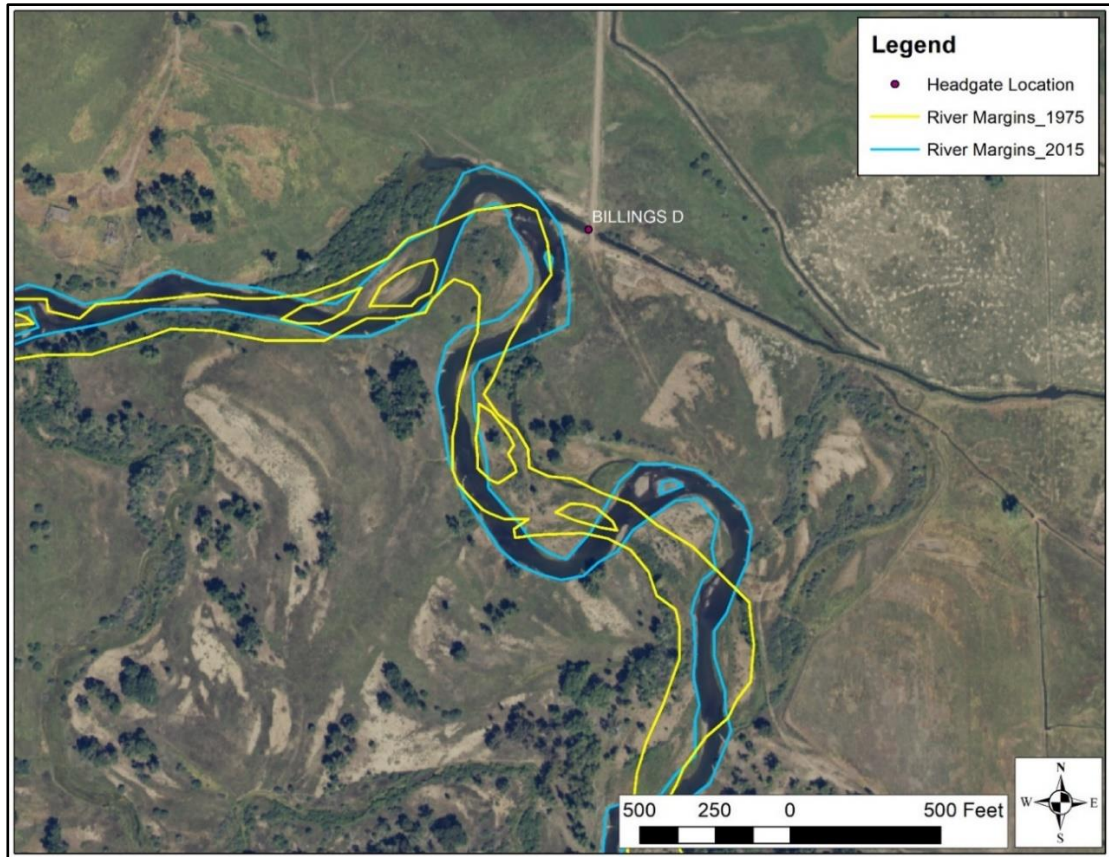


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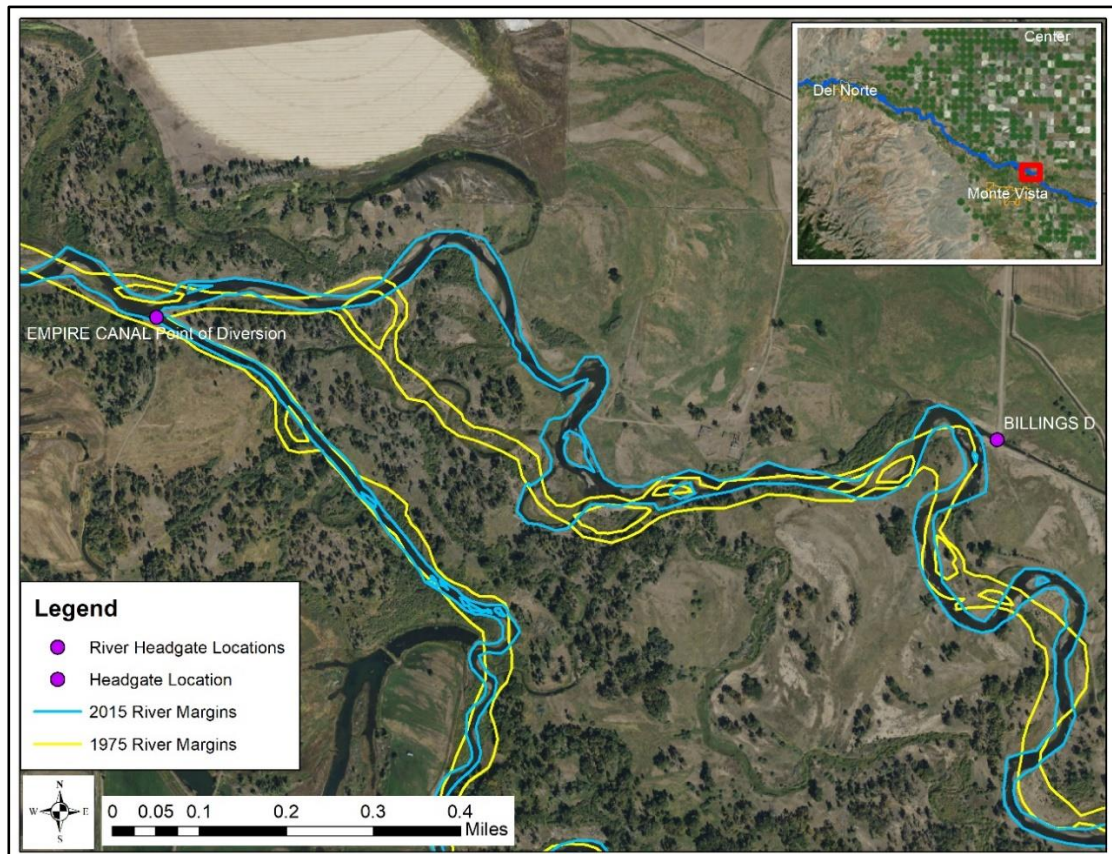
BILLINGS DITCH

PHOTO LOG

Rio Grande Stream
Management Plan



Map showing Rio Grande margins in 1975 and 2015. Channel migration analysis shows the channel has migrated north and east since 1975, which has led to increased bank erosion, sediment and debris accumulation, and other challenges for Billings Ditch.



Map of 1975 and 2015 channel margins upstream of Billings Ditch.