

RIO GRANDE DIVERSION INFRASTRUCTURE INVENTORY

Structure Name: EXCELSIOR D

Reported By: Daniel Boyes

Date: April 10, 2019

Headgate	Latitude	Longitude
Location:	37.56975	-106.03066667

Headgate Type: Manually operated 4' wide steel slide gates (2)

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"/>	74.58 mi	No <input type="checkbox"/>
	C <input checked="" type="checkbox"/>		C <input checked="" type="checkbox"/>		
	D <input type="checkbox"/>		D <input type="checkbox"/>		
	F <input type="checkbox"/>		F <input type="checkbox"/>		

Repair(s) or Improvement(s) Completed Since 2006: Bank stabilization structures installed upstream of the structure on the north bank or river. This work was conducted in partnership between the landowner, the Rio Grande Headwaters Restoration Project, and NRCS as part of Phase IV bank stabilization.

Structure Description: The diversion structure is an adjustable steel weir with hand cranks that spans the river and diverts river flow to the river headgate, located on the north bank of the river. There is a log trash boom in front of the headgate where woody debris accumulates. This structure does not function well during both high and low flow conditions. The ditch is not able to divert its full decree during low river flows and water users have difficulty adjusting diversion rates based on streamflow fluctuations. Silt has accumulated upstream of the diversion and the river is occasionally dredged. During previous high flow events, the ditch bank downstream of the headgate has washed out due to the river overtopping its banks upstream and draining toward the downstream ditch berm. Flow from the river also backs up in the downstream return flow ditch and enters the ditch through the return flow slide gate. The gradient on the return flow ditch is very low, and silt accumulates along the downstream side of the gate. Channel migration has previously and is currently occurring both upstream and downstream of the structure (see maps in below). An emergency overflow channel on the south bank is intended to mitigate damage by increasing channel capacity during high flows. Bank stabilization structures were installed upstream of the structure on the north bank or river.

Repair(s) or Improvement(s) Currently Needed: Given these issues, the Technical Advisory Team (TAT) recommends installing a new automated headgate and diversion dam at this location, improving the return flow structure, and upstream bank stabilization. CPW recommends fish passage and the TAT recommends creating safe boat passage and increasing sediment transport capacity. A new headgate, especially one with automation, would allow for increased water control, diurnal flow adjustments, and lower maintenance. A new diversion dam would improve the ability of the ditch to effectively divert its water rights at all water levels. Additionally, raising the elevation of the return flow gate and return flow ditch dredging would improve water control and reduce maintenance needs. Finally, stabilization of upstream banks (in addition to bank stabilization structures installed in 2014) would help prevent this structure from being washed out during high flow events.

Comments: The flume functions well and is rated B. This ditch uses the Costilla Canal as a carrier ditch. This structure includes priorities 74, 163, 249, and 262.

Estimated Range of Cost: High

Headgate looking downstream



Headgate and diversion dam



Headgate outlet



Diversion dam



Downstream adjustment gates



Flume looking upstream

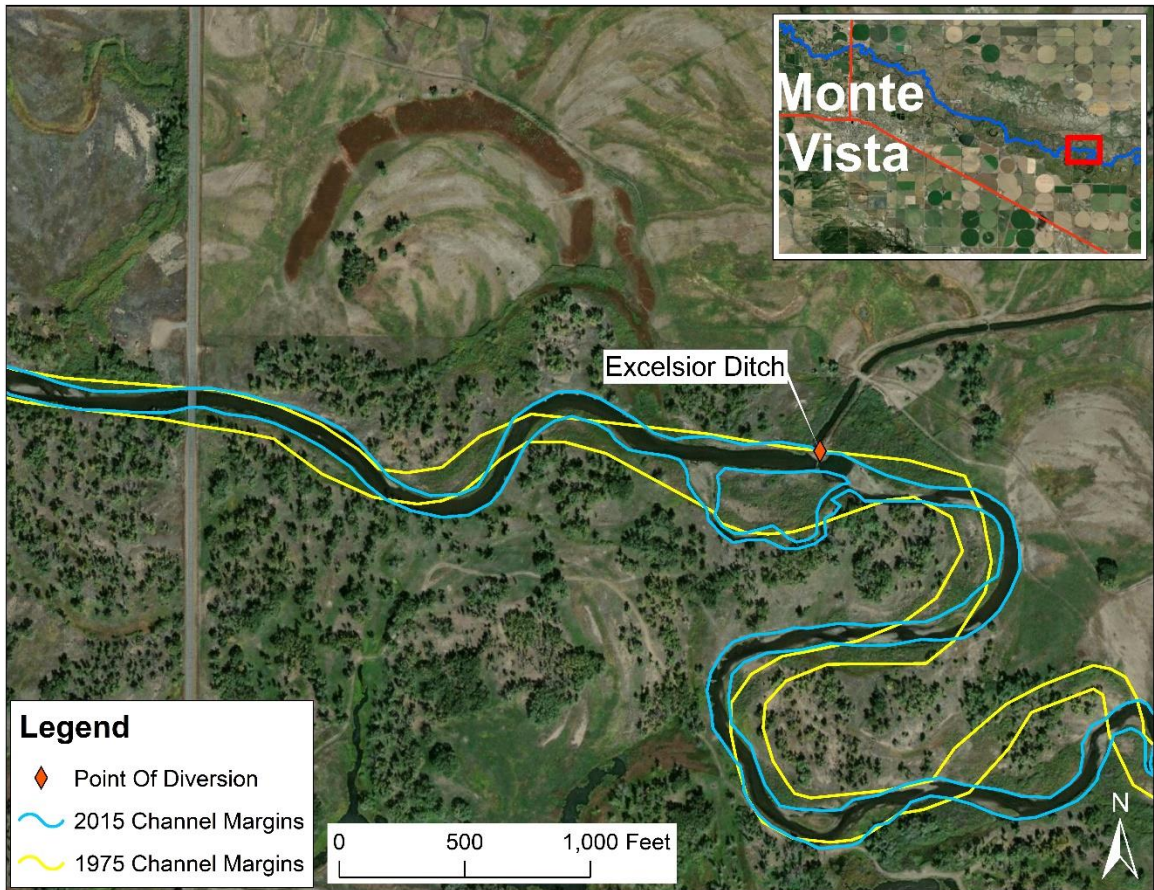


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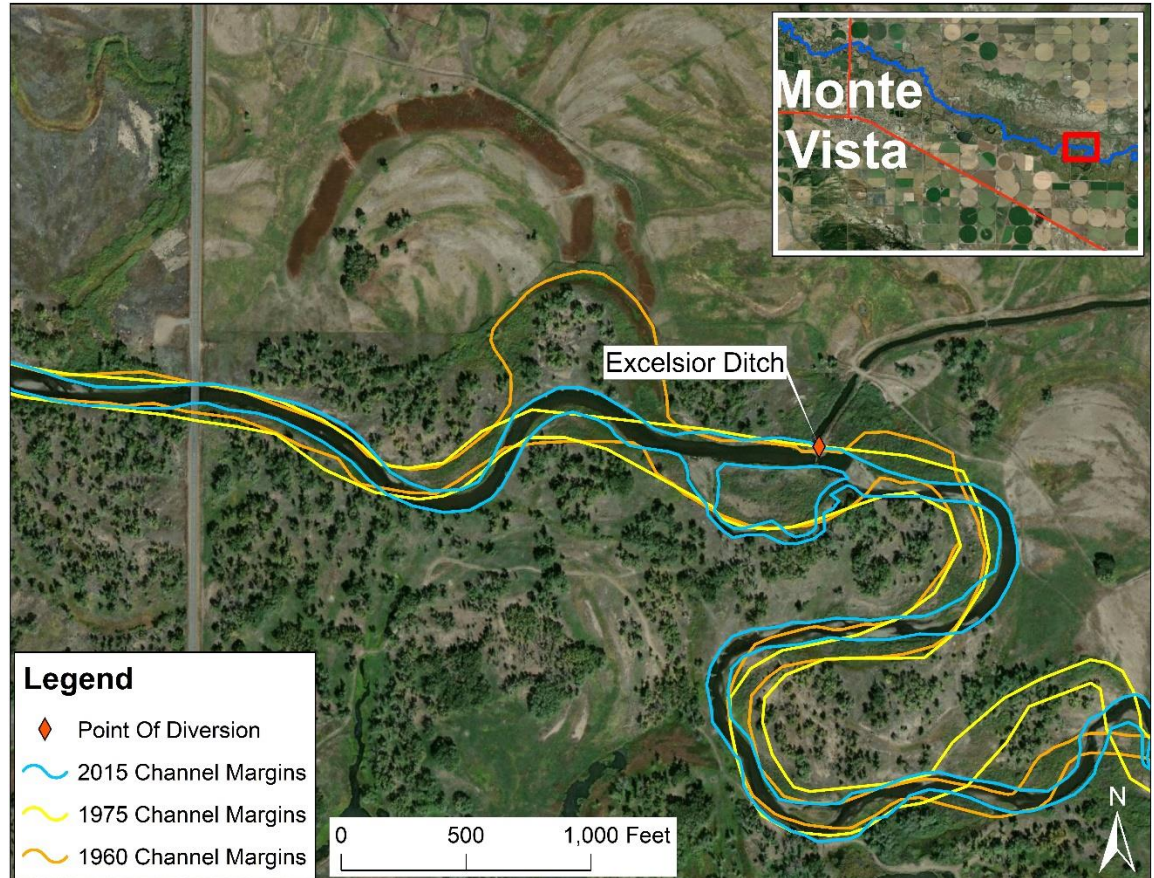
EXCELSIOR DITCH

PHOTO LOG

Rio Grande Stream
Management Plan



Map of headgate location with 1975 and 2015 channel margins overlaid



Map of headgate location with 1960 and 2015 channel margins overlaid