RIO GRANDE
DIVERSION INFRASTRUCTURE INVENTORY

Structure Name: EXCELSIOR D

Reported By: Daniel Boyes

Date: April 10, 2019

Headgate Location:	**Latitude**	**Longitude**
	37.56975	-106.03066667

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

Headgate Condition: A ☐ B ☐ C ☒ D ☐ F ☐

Diversion and Other Condition: A ☐ B ☐ C ☒ D ☐ F ☐

River Miles From New Mexico State Line (Point Of Diversion): 74.58 mi

Structure Submerged: Yes ☒ No ☐

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.

Repair(s) or Improvement(s) Currently Needed: A new headgate, preferably automated, is needed. A new diversion dam that functions effectively at low flows is needed. Any new diversion dam should also be designed to create fish passage, safe boat passage, and adequate sediment transport capacity. The return flow gate should also be raised and the return flow ditch adjusted to improve the slope. The upstream river bank should be further stabilized (in addition to bank stabilization structures installed in 2014) to help prevent this structure from being washed out during high flow events. Fish and boat passage as well as riparian restoration should be considered as part of any repairs or improvements.

Structure Description: The diversion structure is an adjustable steel weir with hand cranks that spans the river and diverts river flow to the headgate, which is 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 functions poorly during both high and low river flows. The ditch is not able to divert its full decree during low river flows. This structure has inadequate sediment transport capacity. As a result, silt has accumulated upstream of the structure 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 towards the downstream ditch berm. Flow from the river has also backed up along the downstream return flow ditch and entered 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 and is currently occurring both upstream and downstream of the structure (see map). An emergency overflow channel which takes a significant portion of the river's flow during flood flows. This ditch can sweep the river during low flows.

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.

Notes:

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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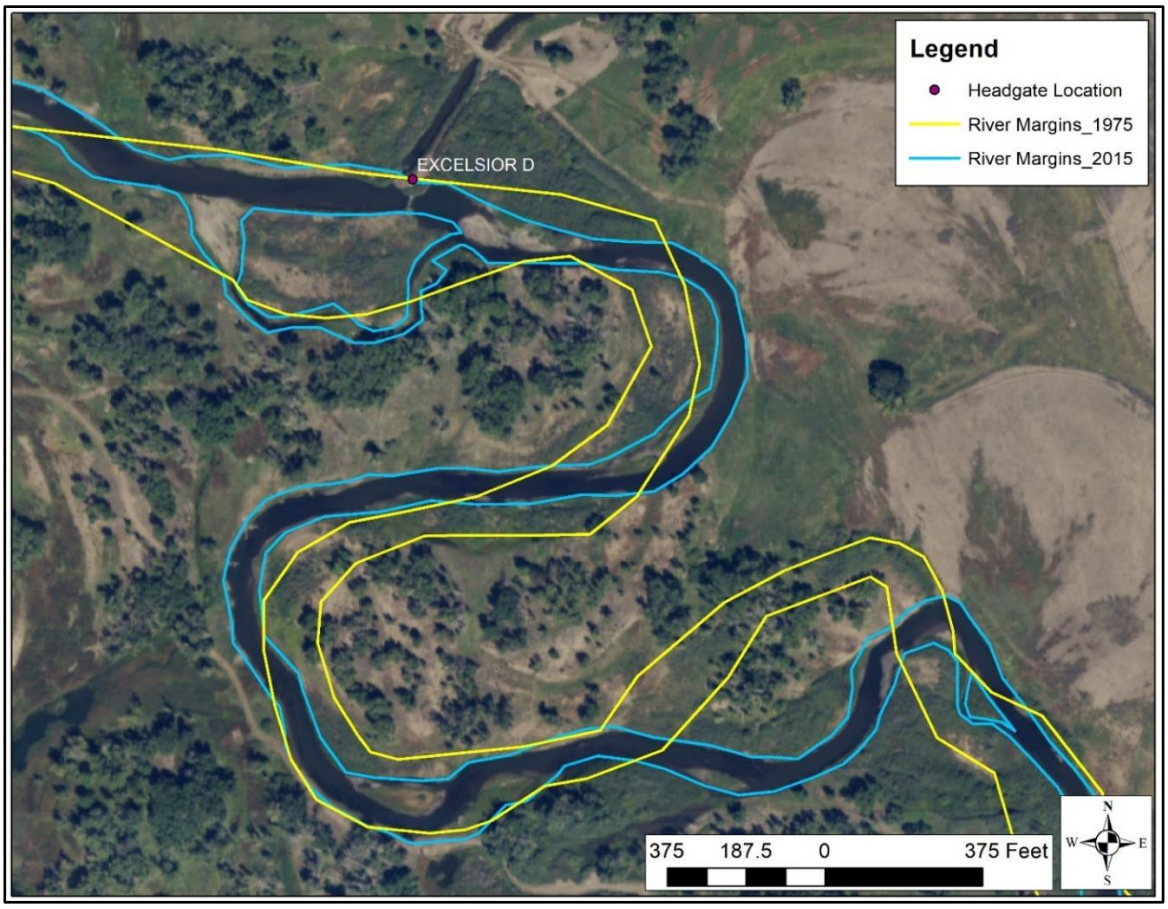
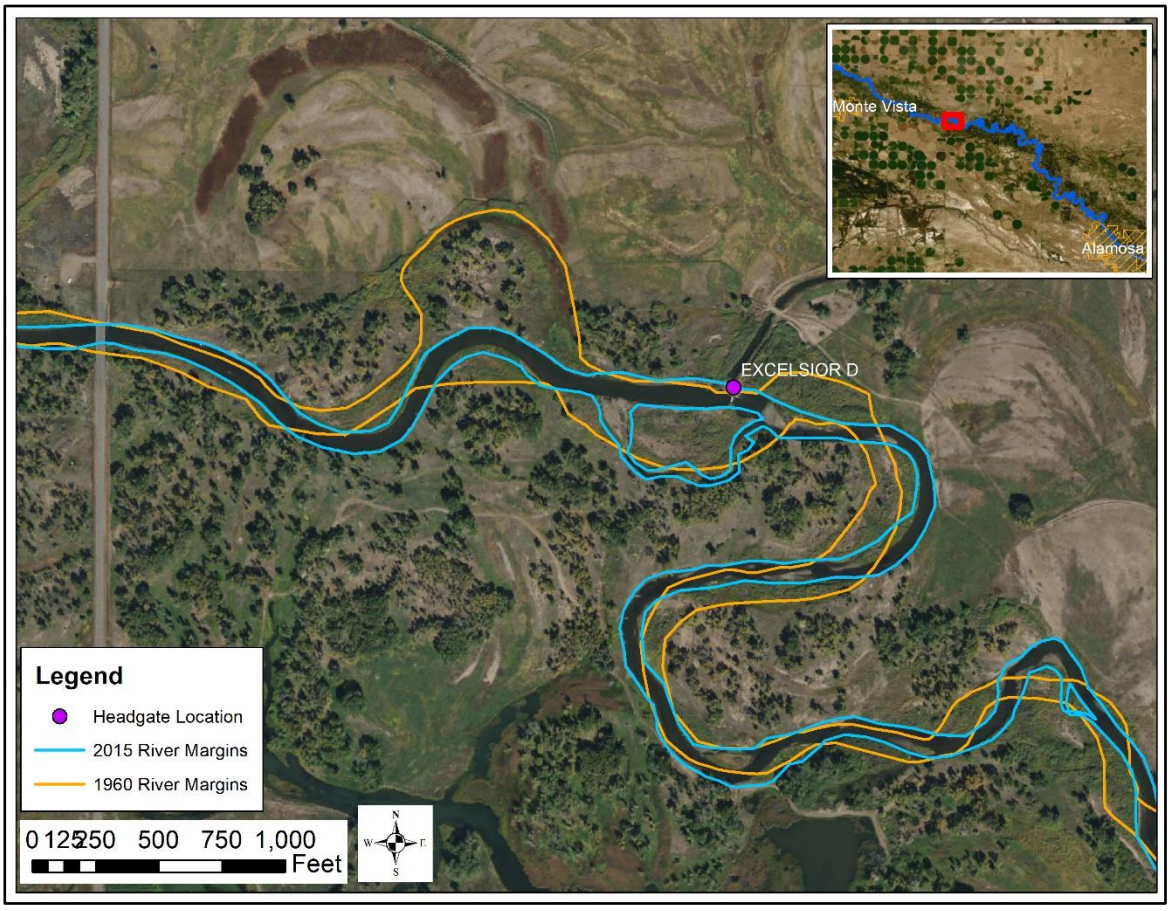
EXCELSIOR DITCH

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.