

RIO GRANDE DIVERSION INFRASTRUCTURE INVENTORY

Structure Name: MINOR D

Reported By: Daniel Boyes

Date: May 7, 2019

Headgate	Latitude	Longitude
Location:	37.688979	-106.542465

Headgate Type: Manually operated 2' 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 checked="" type="checkbox"/>		B <input type="checkbox"/>		No <input type="checkbox"/>
	C <input type="checkbox"/>		C- <input checked="" type="checkbox"/>	114.75 mi	
	D <input type="checkbox"/>		D <input type="checkbox"/>		
	F <input type="checkbox"/>		F <input type="checkbox"/>		

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

Structure Description: The Rio Grande splits around an island upstream of the structure's river headgate. The river headgate is located on the south bank of the channel. A roughly 0.5 mile feeder channel delivers water to the main headgates. An overflow channel directs unused water from the ditch back to the Rio Grande. This structure suffers from the poor condition of the river headgate, the potential for the structure to be cut off from the river in the event of a rerouting of the main channel to the north, and sediment and debris accumulation in the ditch. The concrete wingwalls on either side of the river headgate are heaving and falling in towards the river. The river channel is unstable and there is potential for the upstream meander to be cut off, causing the full capacity of the river to flow through the north channel. During spring 2019 runoff, significant flow entered the channel north of the island. If this continues to develop, the river will abandon the south channel, making the diversion nonfunctional. Additionally, debris accumulation occurs at the main headgate and in the feeder channel. Finally, there is a point on the feeder channel roughly halfway between the river headgate and main headgate where the ditch is dangerously close to the river and could fail at high flow (see maps below).

Repair(s) or Improvement(s) Currently Needed: Given the current and potential issues at this structure, the SMP Technical Advisory Team (TAT) recommends bank stabilization upstream of the island and on the feeder channel and headworks repair. Bank stabilization upstream of the diversion would help prevent potential channel avulsion, stabilization or feeder channel rerouting would prevent ditch failure, and new wingwalls adjacent to the headgate would ensure the headworks are stable.

Comments: The channel on the south side of the island that the feeds the headgate frequently silts in during times of low flow. The ditch owners have to dredge the channel approximately once every 10 years. This ditch includes priorities 105, 184, 190, 1903-34I, 1903-45H, 1916-40, 1934-10 and 1934-13.

Notes:

Estimated Range of Cost: Medium-High

Headgate looking downstream



Headgate outlet



River headgate on Rio Grande



River headgate outlet



Main headgates and overflow channel



Flume looking upstream

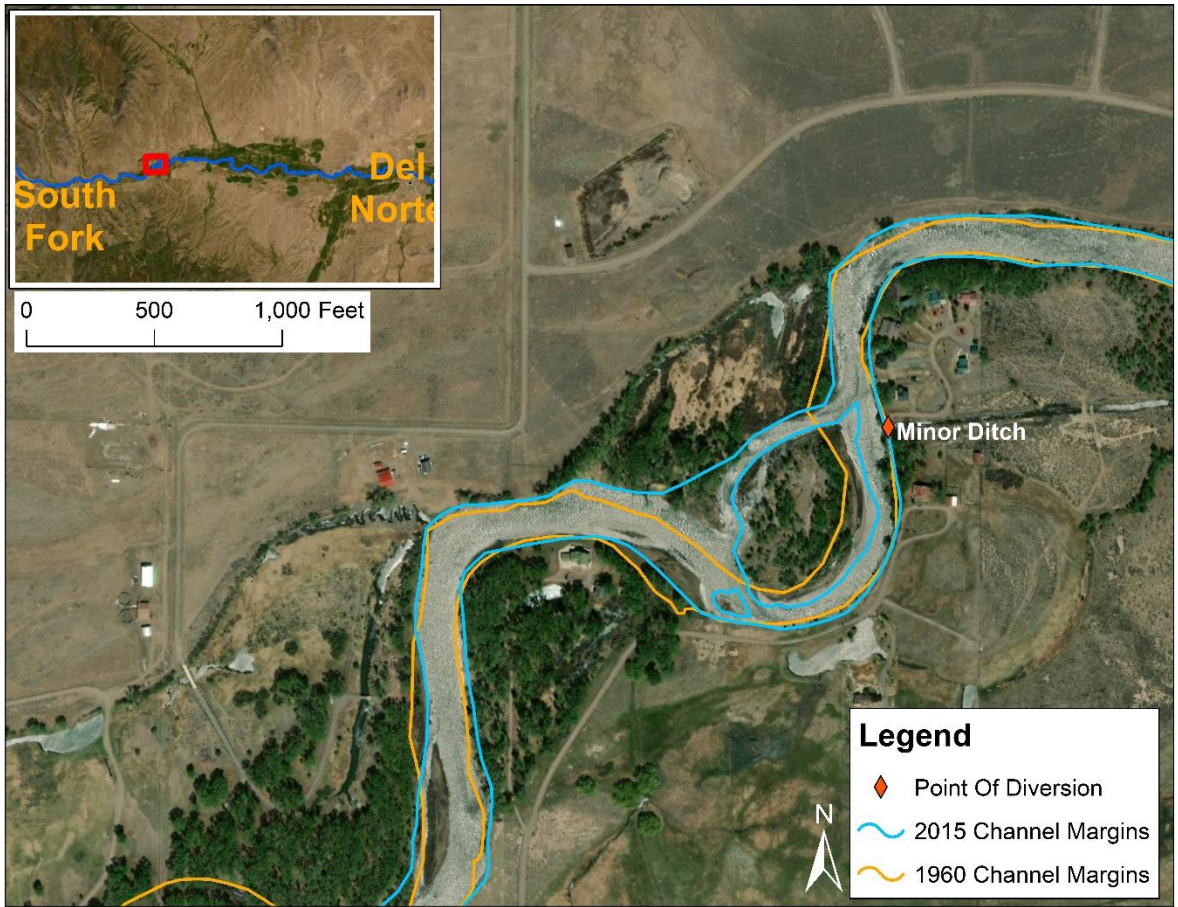


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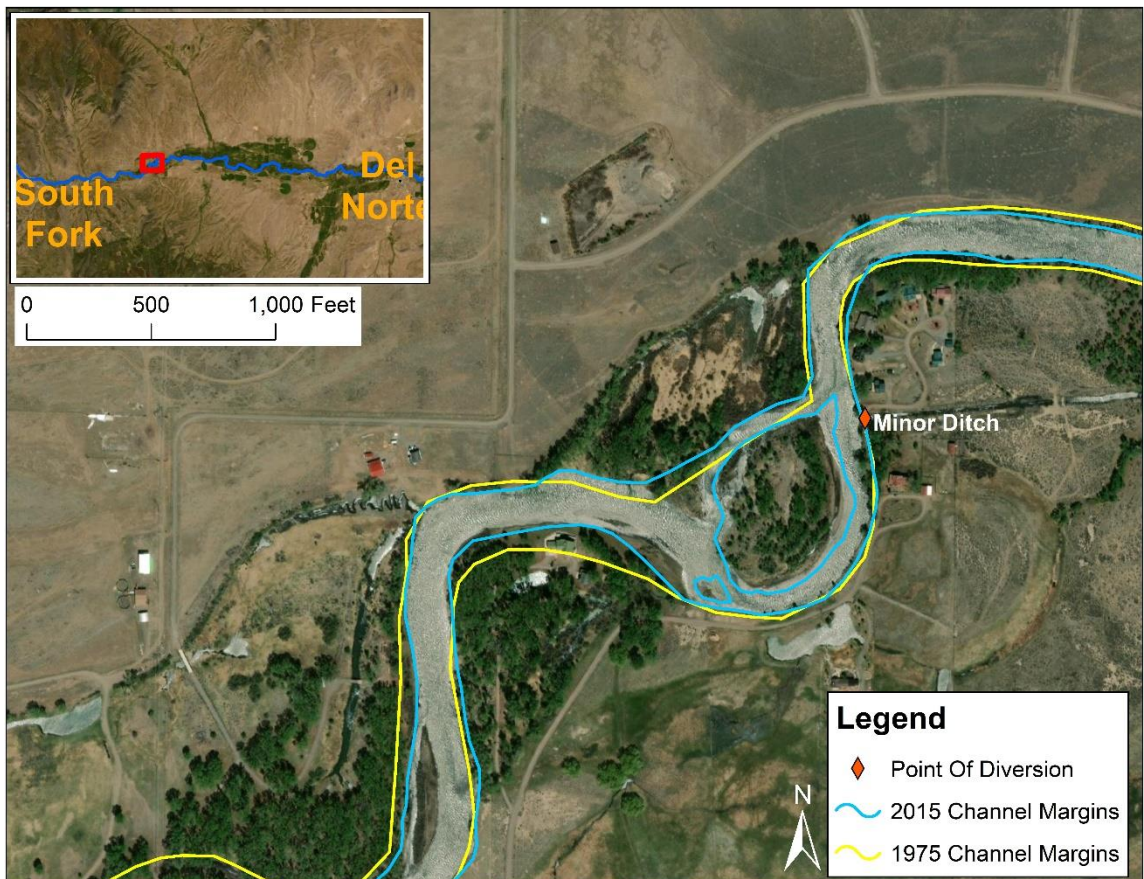
MINOR DITCH

PHOTO LOG

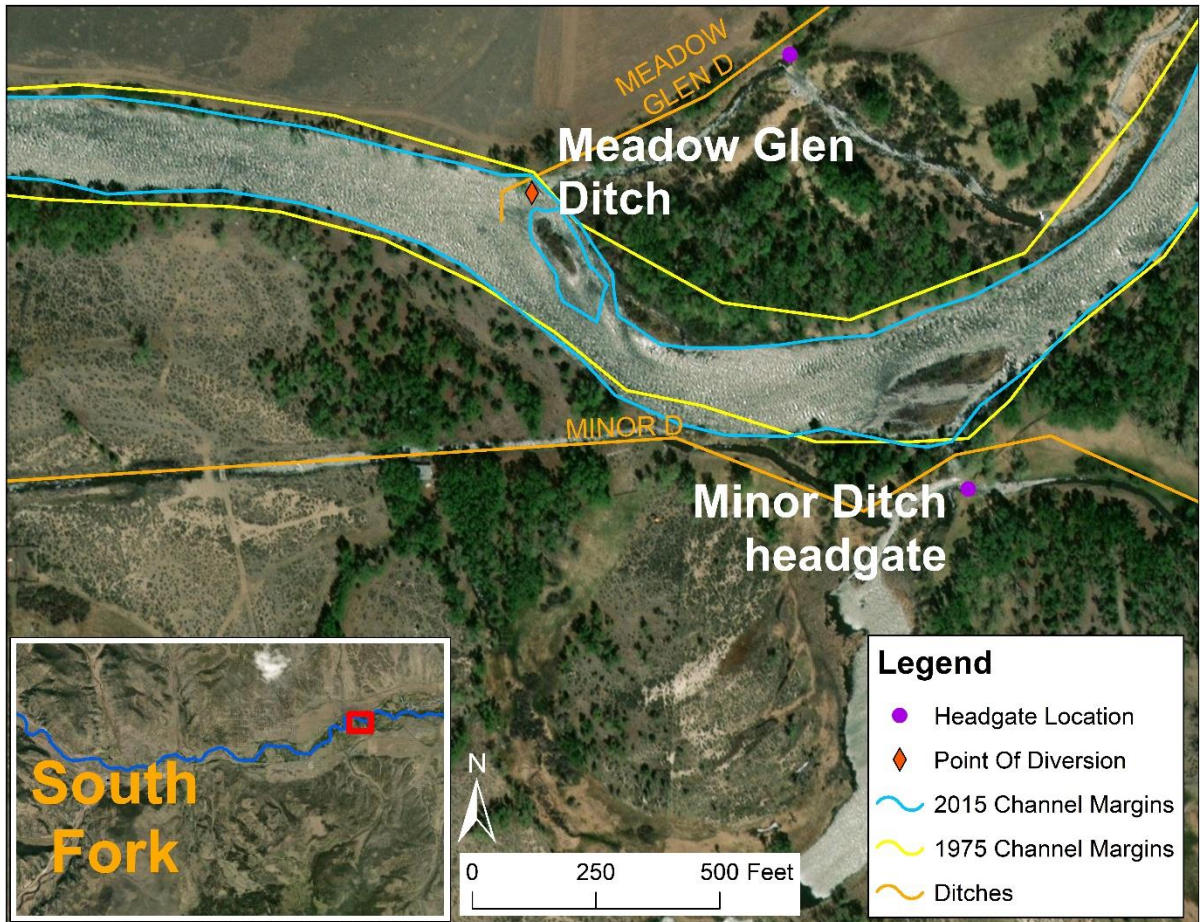
Rio Grande Stream
Management Plan



Map of point of diversion and headgate location with 1960 and 2015 channel margins overlaid.



Map of headgate location with 1975 and 2015 channel margins overlaid. This illustrates the channel avulsion occurring, with the north channel widening.



Map showing 1975 and 2015 channel margins relative to ditch location.



Photo showing sand bar development upstream of diversion.