

A24-04018 Field Insp. Narrative 3 Aug 2005

On July 23, 2005 I met w/ Mr. Mark Nickell of Geneva Land and Cattle, the new owner. He will get a change of ownership form from the internet and submit it (I had lost my briefcase & didn't have any forms).

There are 4 claims from two sources on this ranch:

A24-04018	Crow Creek	50 acres
A24-04019	Sage Creek	40 acres
A24-04020	Sage Creek	60 acres
A24-04022	Crow Creek	<u>40 acres</u>
Total		220 acres

Because of the layout of the ditches there is considerable overlap between the Sage Creek and Crow Creek irrigation. The ditch marked "B" on the attached map sketch picks up tailwater from both diversions and redistributes it to the center part of the P.O.U. GIS analysis based on sketch shows 95.3 acres of irrigation from the two Sage Creek rights (claims sum to 100 acres) and 87.4 acres of irrigation from the two Crow Creek rights (claims sum to 90 acres). The total irrigated area with overlap is 136 acres.

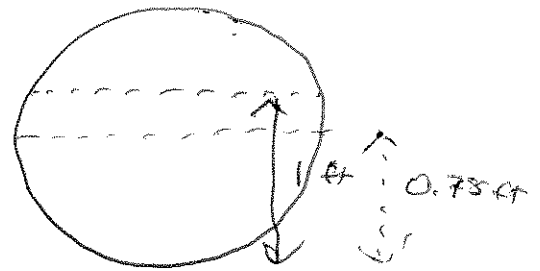
Because Sage Creek is shared w/ claim A24-04017 (Hartman Ranch LLC), at times A24-04018 and A24-04022 together will need to supply the full 87.4 acres from Crow Creek. Assuming 0.03 to 0.04 ft³/s/acre for wild flood irrigation, the required diversion capacity is 2.6 to 3.5 ft³/s.

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One diversion was noted to have an 18" pipe running $\approx$ 1 foot deep with velocity estimated at 2 ft/s.

$$A \approx \left(\frac{1.5}{2}\right)^2 (\pi) \times \frac{3}{4} \approx 1.3 \text{ ft}^2$$

$$Q = VA = (1.3 \text{ ft}^2)(2 \text{ ft/s}) \\ = 2.6 \text{ ft}^3/\text{s}$$



The other diversion was not operating but had a 24" culvert. Assuming it could run $\frac{1}{2}$ full at 2 ft/s:

$$Q = VA = (2 \text{ ft/s}) \left(\frac{1}{2}\right) (1 \text{ ft})^2 (\pi) = 3.1 \text{ ft}^3/\text{s}$$

It appears the diversion works capacity is adequate to support the acreage found.

3 Aug 2005

Byron A. Contor