08NN013 IN CANADA

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

File No. Washington ---
Field 216
revised
Discharge Record 3-22-48 (Date)
S. K. Osborne
by
Checked by J. Savini

ion on Kettle
Ferry State of Wash.

in accordance with outline on back of Form 9-277. Plot cross section to scale. Initial and date all sheets.

ge recorder, lat. 48°58'40", long. 118°45'10", in lot 7, sec. 10, , near the town of Ferry in Ferry County, Wash.
is bout 1.5 miles below the U. S. Canadian Boundary line, 2.5 ow the U. S. Canadian boundary line and about 2 miles by river : of Boundary Creek with the river.
n from the U. S. Customs at Midway, B. C., drive about 1.5 miles to a point where the A-frame and cable car are visible from north from Curlew, Wash., the station can be reached by driving ntil a county bridge is reached. The cable car and A-frame are ond this bridge and can be easily seen from the road.

20 Sq mi (approximately)

Staff gage established Aug. 27, 1928. Recorder installed Nov. Dudley Records to date.

nuous recorder Type A-35, No. 4966-36, ratio 1:12, housed in a well and shelter.
f gage reads from 7.8 to 32.10. Tape gage is integral with

a 2-inch intake pipes which in turn have 2-inch riser pipes and for flushing purposes.
ipped with 13-inch galv. sheet iron "oil pipe".
e for medium stages is a slope reading from 11.3 to 19.9 ft. h-water gage consists of enameled sections attached to outside rom 29.7 to 30.5 ft. Former outside low-water gage reading from s been destroyed.

~~Krause, Ferry, Wash., He lives one-half mile below gage on right makes three trips to station per month at $7.50.~~

g.- Low-water measurements, below gage height of 10.5, can be vicinity of cable.
stage measurements can be made from cable 110 ft. below gage. v. crucible cast steel cable supported by standard wooden A-frames. 00 ft., unloaded sag 1½ ft. Right bank A-frame is 12 ft. wooden concrete piers. No platform on right bank. Right bank cable is n (buried). Left bank A-frame is 20 ft. wooden structure bolted to . Cable is attached to buried deadman on right bank. A 6-ft. ted on right bank and is attached to deadman.

Discharge measurements.-(Continued)
Cable is marked at 5 ft. intervals. I.F. is right bank A-frame.
Cable car is standard Lee-Au (standup type without roof), and has a wooden bracket to accommodate a Willet reel.
Staydrs, size #9 wire, is located 60 ft. above cable. It works best from right to left.
50C, 75C and 100C weights are stored in box at right bank A-frame.
Channel is straight for about 250 ft. upstream and 300 ft. downstream from the measuring section. One channel at all stages. The flow is swift but comparatively smooth. Angle of current normal to measuring section. Very good measurements should be obtained at this station.

Control.- The control for this gage is probably channel control although at low stages it may be a narrow fairly shallow place in the channel about 150 ft. downstream from the gage. There is no distinct riffle at this point, but along this section is where depths have been taken to estimate point of zero flow. The bed of the stream here and below is composed of gravel and small rock. The control is considered fairly permanent and not subject to shifts except at extreme high stages. There will probably be slight ice effect. The control at extreme low stages is probably as noted above; at medium and high stages it is channel control, while at extreme high stages an island about 1/4 to 1 mile below gage may effect gage. Rock dam 1/4 mile below gage may partly control at certain stages.

Ice.- There will be ice cover above the gage and at gage, also below wading section probably every winter. There may be ice cover at wading section in severe winters. Ice will effect gage-height discharge relation in severe winters.

Extremes.- Flood of 1894 at gage height 21.15 (1948) 23.0 ft., plus or minus 1.0 ft.
Flood of 1928 at gage height 17.6 ft., plus or minus 0.3 ft.

Regulation.- Little or no regulations except slight diversions from Boundary Creek in British Columbia.

Cooperation.-

Diversions.- Possibly one-tenth second-foot diverted from Boundary Creek about 3 miles above station in irrigation season. Numerous other similar diversions from there on up.

Reference marks.- B.M. No. 1, is a standard bronze marker set in concrete pier 38 ft. upstream from center of well, and 5 ft. streamward from line of stream face of stilling well. Elevation USGS datum 1857.14 ft. Elevation gage datum 17.14 ft. B.M. No. 2, is a standard bronze marker set in concrete pier on top of bank and 42 ft. upstream from center of well. Elevation USGS datum 1868.35. Elevation gage datum 28.35 ft.

Special conditions.-

1-604-666-3469
WATER SURVEY N. IDAH
6R1 P04
HPR 65 '45 08:50