

-Copy-

1592

Bill of Material for Toppenish Dam, No. 4, and Approximate Estimate.

See Vouchers M-11 4644 '93

✓ 36 logs 24 feet long for walls and wings, at \$1.30	\$46.80
✓ 4 logs 18 feet long for apron, at \$1.15	4.60
700 F.B.M. 3"x12" planking for apron & abut. filling,	11.20
200 lbs. 1" round iron delivered at .06	12.
30 lbs spike at .05 delivered,	1.50
Stone and gravel filling 35 cu. yds. at .80	28.00
Excavation 6 men 4 days at \$2.	48.00
✓ Carpenter at \$3.50, 4 laborers at \$2.8 da. Bldg. Cribbs,	92.00
✓ Add 10% for superintendence and incidentals,	<u>24.41</u>

Approximate estimate, Total -

\$286.51

268.51

Headgate for canal,

✓ 24 logs 24 feet long for cribs del. at \$1.15,	\$27.60
Stone filling 15 yards at .80	12.
300 F.B.M. 2"x 10" plank, flooring, sides & gates at \$13.	3.90
Framing gates, bldg cribs, carpenter \$3.50, laborers \$2, 4 da.	22.00
Excavation and refilling, 4 laborers at \$2. 2 days,	16.
Add 10% for superintendence, etc.	<u>8.15</u>

Approximate estimate, Total

\$89.65

Dam

268.51

Total Dam and Headgate -

\$358.16

George C. Mills,

Civil Engineer.

-Copy-

39341-1892

Bill of Material and Approximate Estimate
for Simcoe Creek Dam, No. 1.

See Vouchers M-10 4th 14 '93

✓ 50 logs 26 feet long at \$1.50,	\$75.00
Excavation, labor \$2. per day and refilling,	75.00
Puddling 20 cu. yards at .60,	12.
Gravel and rock filling and apron 100 cu. yards at .80,	80.
Earth backing 20 cu. Yards at .30,	6.
Iron: 125 feet 3-4" .07 per lb.	12.
✓ Framing and erecting cribs, carpenter \$3.50, labor No. 2	45.
✓ Add 10% superintendence, etc.	<u>30.50</u>
	\$335.50
Headgate 2 ditches -	<u>. 90.</u>
Total	\$425.50

George C. Mills,

Civil Engineer.

-Copy-

Approximate Estimate and Bill of Material for Ahtanum Dam.

9 feet 6" X 8" X 20'

9 " 6" X 8" 11'

9 " 6" X 8" X 5'

9 " 3" X 6" X 5' - - 1363 F.B.M.

Planking - 11' X 51' X 3" 1683 " "

3046 F.B.M. at \$20. per M. - - \$60.92

Logs - 64 - 16 ft. long, at \$1.00 64.00

Iron:

18 - 1" screw head bolts 12" long

27 - 1½" bolts 18" long

90 ft. 3-4" iron for drift bolts - 425 lbs at 08 34.00

40 d nails 100 lbs at 05 5.00

Rock filling 100 cu. yards at 80, 80.00

Earth " 75 " " at 20 15.00

Excavation for cribs, earth & loose rock, labor 2.00 75.00

Framing and erecting cribs & log abutments, carpenters 3.50

labor 2.00 - 65.00

Add 10% for Superintendence & incidentals, 39.89

\$438.81

G.C. Mills,

39341-1892.

Civil Engineer.

Bill of Material for Satus Dam, No. 3, and Approximate
Estimate.

495 ft 6" X 8" timbers for cribs,	1980 F.B.M.	
45 ft. 3" X 6" timbers for cribs,	75 " " "	
3" planking for face and apron (9' X 95')	2565 " " "	
3" planking for abut. filling 180 X 4' 2160	" " "	
	6780 F.B.M. at \$16.M	\$108.48
180 ft. 10" X 10" hewed timbers for mud sills		15.00
44 logs 24 ft. long for rock fill cribs at \$1.25		55.00
Iron: 60 drift bolts 3-4 " X 12 "		
<u>30 screw head bolts 3-4" X 12"</u>		
90 ft. 3-4" iron 1.5 lbs per ft. 135 lbs at .08		10.80
Excavating trenches		50.00
Framing and erecting cribs and planking, car \$3.50 lab. \$2.		115.
Backing and crib filling 90 cu. yds. at .80		72.
Puddling 50 cu. yds. at .60		30.
Add 10% for superintendence and incidentals		<u>45.63</u>
	Total Approximate estimate	\$501.91
Headgate same as for Toppenish Dam		<u>89.65</u>
Total Dam and Headgate		\$591.56

George C. Mills,

Civil Engineer.

Bill of Material and Approximate Estimate for Simcoe

Creek Dam No.2.

✓ 18 logs 30 ft.long at \$1.40	See Voucher No. 10 4th 1/4 1893 10 logs 30' } on ground 32 "	25.20
✓ 35 logs 23 ft.long at \$1.20		42.
Excavation, labor \$2. and refilling		85.
Puddling 25 cu.yards at .60		15.
Gravel and rock filling and apron 100 cu.yds. at .80		80.
Earth backing 20 cu.yards at 30		6.
Iron 125 ft. 3-4" iron 1.5 lbs per ft. at .07		12.
Framing and erecting cribs, carpenter \$3.50, labor \$2.		60.
Add 10% superintendence and incidentals		<u>32.52</u>
Total approximate estimate		\$357.72
Headgate		<u>45.</u>
		\$402.72

George C. Mills,

Civil Engineer.

-Copy-

Hon. Jay Lynch,

U.S. Indian Agent,

Yakima Agency, Wash.

Sir:

After a careful examination of Simcoe Creek, I find a dam placed below the narrows and avoiding the expensive fluming contemplated, will cover the land desired. Hereto attached are plans and specifications of the required dam, so placed and of a proper height to secure all the water at low stages and yet allow surplus water at all times a free and safe escape. The dam will raise the water sufficient to permit ditches to be taken out on both sides at a reasonable expense and will be above and carry water over approximately 4800 acres good land.

G.C. Mills.

Respectfully forwarded to Commissioner of Ind. Affairs,
October 25th, 1892.

Jay Lynch,

U.S. Indian Agent.

39341-1892.

-Copy-

Hon. Jay Lynch,
U.S. Indian Agent,
Yakima Agency.

Sir:

Attached hereto are plans and specifications for a dam on the Ahtanum creek. There is undoubtedly water sufficient that can be taken from this dam to irrigate all the land in the Ahtahnum valley on the Reservation side, which I estimate at about five thousand acres, of good land, by placing the dam at place selected, a short distance above the old mission.

G.C.Mills.

Respectfully forwarded to Commissioner of Ind. Affairs,
October 25th, 1892.

Jay Lynch,
U.S. Indian Agent.

39341-1892.

-Copy-

Hon. Jay Lynch,
U.S. Indian Agent,
Yakima Agency, Wash.

Sir:

Attached hereto are plans and specifications for dam No. 4, located on Toppennish Creek and is in fact two dams, the water from one branch of the creek being turned into the other during low water. Ditches are to be taken out on both sides and at no special expense. The dam will be above and carry water over 12,000 acres of Sage brush and grass lands.

G.C. Mills,

Respectfully forwarded to Commissioner of Ind. Affairs,
October 25th, 1892.

Jay Lynch,
U.S. Ind. Agent.

39341-1892.

-Copy-

Hon. Jay Lynch,

U.S. Indian Agent,

Yakima Agency, Wash.

Sir:

Attached hereto are plans and specifications for dam No. 3, located on Satus Creek, at a point as near where the bluffs close in as a suitable location could be found for taking out the water on the south side. On account of the volume of water passing down the Satus during the Spring, care was taken in the selection of the site and manner of construction to be fully met by the requirements of the stream. Water can be taken out on both sides, but as there is little desirable land on the north side, special attention was given to securing the best facilities for taking the water out on the south. The location and construction having that specially in view, an ample ditch can be constructed at reasonable expense, and will carry water over approximately 25,000 acres of bottom lands.

G.C. Mills.

Respectfully forwarded to Commissioner of Ind. Affairs,
October 25th, 1892.

Jay Lynch,

U.S. Ind. Agent.

39341-1892.

-Copy-

Hon. Jay Lynch,
U.S. Indian Agent,
Yakima Agency, Wash.

Sir:

Attached hereto are plans and specifications for dam No. 2, on Simcoe Creek, planned on the same theory as dam No. 1. Ditches to be taken out on both sides and at no expense beyond slight excavations at the immediate banks of the creek and will be above and carry water over about 6800 acres of most desirable lands.

G.C. Mills.

Respectfully forwarded to Commissioner of Ind. Affairs,
October 25th, 1892.

Jay Lynch,
U.S. Indian Agent.

39341-1892.

Copies of
Estimates
for Plans

Plans
Estimates

October 24th, 1898.

Respectfully forwarded to Commissioner of the U.S. Fish and Wildlife Service.

J. C. Mills

desirable range.

will be above and carry water over about 4800 acres of most
slight excavations at the immediate banks of the creek and
ditches to be taken out on both sides and at no expense beyond

Attached hereto are plans and specifications for dam