SULTAN RIVER DRAINAGE

This section covers the 30 miles of the Sultan River plus 32 tributaries adding 91 linear stream miles. Location is 8 miles east of Monroe in central Snohomish County, with access via Highway 2. Much of the upper river is in Snoqualmie National Forest, with considerable state and private land below.

Stream Description

From the Vesper Peak vicinity the Sultan courses west more than 19 miles, then south-southwest 11 miles to the Skykomish River at Sultan. Principal tributaries are the South Fork Sultan, Elk, Williamson, Marsh, Chaplain and Winters creeks.

Over its upper 11 miles to Spada Lake (R.M. 19.5) the river cuts through a narrow steep-sloped, densely forested valley. The next 3 miles are through Spada Lake, a City of Everett reservoir impounded by the high, earth-fill Culmback Dam (R.M. 16.5). Below Culmback, the river cuts nearly 14 miles through a deep ravine. The steep side slopes above are densely forested with conifer and mixed deciduous growth. At R.M. 9.7 the Everett diversion dam directs water to Lake Chaplain, a second reservoir in the water supply system. Near mile 3 the Sultan emerges from the canyon onto a broad, relatively flat valley floor containing intermittent stands or strips of deciduous trees, underbrush and some mixed conifers. The drainage is managed primarily for water supply and timber harvest, with some mineral mining in the upper basin. The lower 3 miles contain numerous small farms, scattered residences, and the town of Sultan. Although access is limited, there is much recreational activity in the basin.

From Sultan River headwaters to Elk Creek (R.M. 22.8) the river has mostly steep gradient, its narrow channel containing small falls, many cascades and rapids, and a few short pool-riffle stretches. The bottom is rubble and boulder with some patch gravel. Fall stream widths range 3-7 yards. From Elk Creek to Spada Lake the gradient is moderate with only a few steeper areas and channel widths of 4-12 yards. It possesses a fairly good pool-riffle balance, with the bottom mainly rubble and gravel and a few boulders. Banks are natural earth or rock cuts, with mostly dense conifer forest. Much of Spada Lake shoreline cover has been removed, and periodic lake drawdowns reveal extensive barren shoreline.

Below Culmback Dam, for 13-14 miles, the Sultan has mostly steep gradients, confined channel, and numerous cascades and rapids separated by short pool-riffle stretches. The bottom is mainly large rock and boulders, some bedrock, and only a few patch gravel areas. Widths in the canyon range 5-15 yards. Much of the bank is sheer rock face or large rock cuts.

Over its lower 3 miles the river is of moderate gradient with a number of channel split sections. Fall widths range from 8 to over 20 yards. A good pool-riffle balance prevails, with numerous long, broad riffles. The bottom is mostly rubble and gravel, with a few boulder-strewn areas. Banks are low earth cuts or broad gravel-rubble beaches. Cover consists of stands of deciduous trees and underbrush separated by intermittent cleared areas.

Most tributaries exhibit typical mountain stream character over most of their lengths: steep gradients; narrow channels; numerous cascades and falls; and bottoms mainly of boulder and rubble. Only Winters and Ames creeks enter the lower river and have moderate gradient over their lower reaches, good pool-riffle conditions, and gravel bottoms. Most tributaries have dense cover.

Salmon Utilization

The Sultan River provides transportation, spawning and rearing for chinook, coho, pink, and chum. Adult fish may ascend to the diversion dam; however, most utilize the main river below R.M. 3. The lower tributaries support mainly coho.

Limiting Factors

The diversion dam at mile 9.7 is a barrier to upstream migration. Flow fluctuation and/or prolonged low flows have presented severe limitations. Extensive clear-cut logging in some sections, mainly below the diversion, has at times created excessive siltation over the lower river. Also, some gravel removal has impacted lower river production habitat.

Beneficial Developments

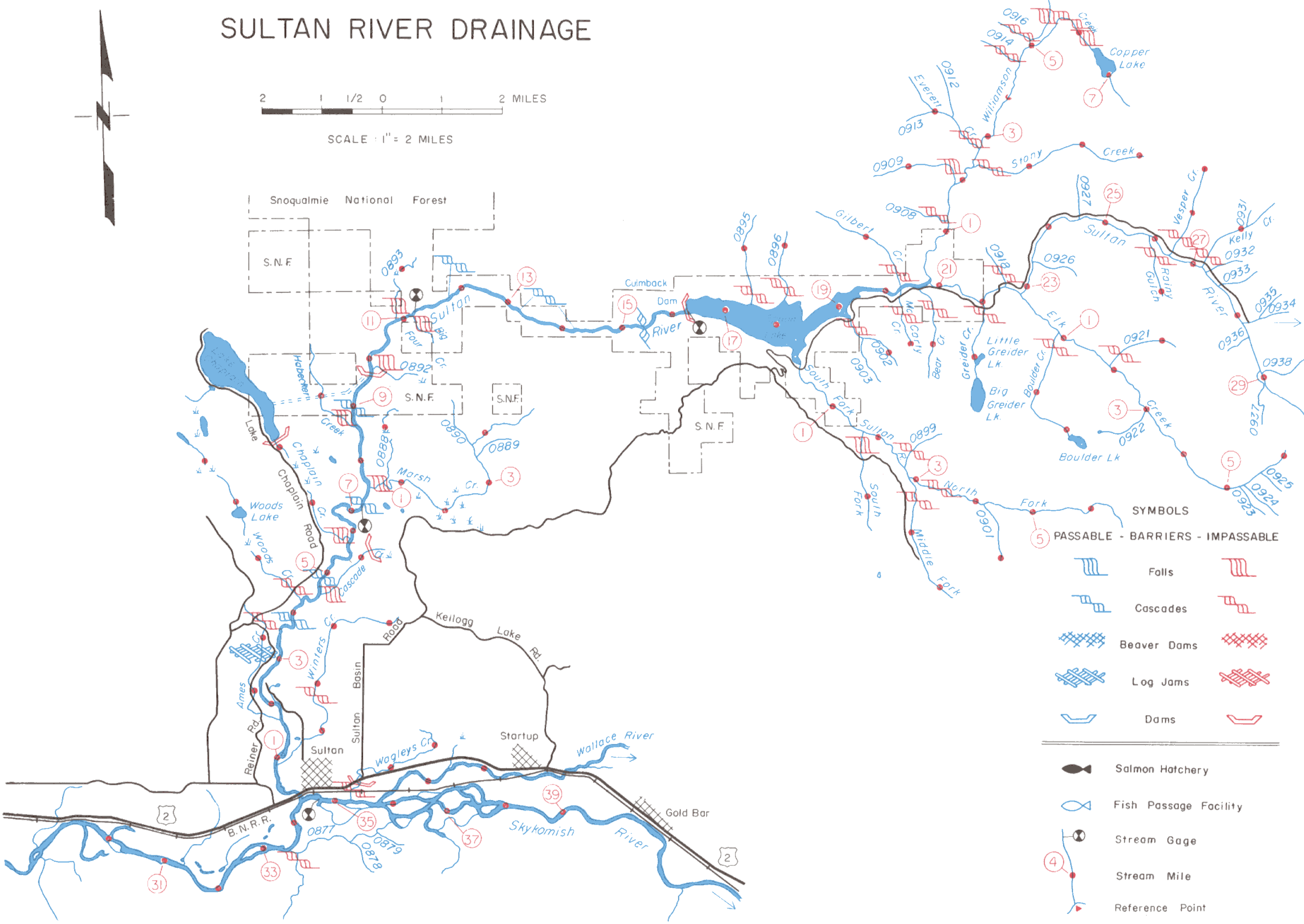
At present a water control schedule with the City of Everett, under agreement authorized by the Federal Power Commission, provides at least minimum fish use water during critical periods. Some planting of hatchery juveniles takes place in the drainage.

Habitat Needs

A major requirement will be to continue close coordination of flow control for the lower river. Stream-side cover should be preserved, and stream and streambed conditions maintained in as near natural state as possible. Gravel removal operations should be carefully monitored to not disrupt spawning habitat.

PHOTO 07-28. Diversion dam on the Sultan River.

SULTAN RIVER DRAINAGE



SULTAN RIVER DRAINAGE
Snohomish River Basin — WRIA 07

Stream Number	Stream Name	Location Of Mouth	Length	Drainage Area	Salmon Use
0012	Snohomish River				
	Snohomish R. cont. as Skykomish River	@ mi. 20.51	—	—	
0881	Sultan River	RB-34.4	30.4	—	Chin., Coho, Pink, Chum
0882	Winters Creek	LB-0.9	4.2	—	Coho, (Pink), (Chum)
0883	Ames Creek	RB-1.7	2.75	—	Coho, (Pink), (Chum)
0884	Woods Creek	RB-4.3	3.5	—	(Coho)
	Woods Lake	Outlet-1.7	—	—	
	Unnamed Lake	Outlet-3.5	—	—	
0885	Cascade Creek	LB-4.7	1.4	—	None
0886	Chaplain Creek	RB-5.9	2.2	—	None
0887	Marsh Creek	LB-7.6	4.9	6.38	None
0888	Unnamed	RB-0.25	1.4	—	None
0891	Habecker Creek	RB-8.7	1.9	—	None
0893	Unnamed	RB-10.85	1.4	—	None
	Spada Reservoir	Outlet-16.5	—	—	
0895	Unnamed	RB-17.4	1.5	—	None
0896	Unnamed	RB-18.1	1.2	—	None
0897	S. Fk. Sultan R.	LB-18.2	6.8	—	None
0898	S. Fork	LB-1.7	1.6	—	None
0900	Middle Fork	LB-2.9	2.3	—	None
	S. F. Sultan R. cont. as North Fk.	@ mi. 2.91	—	—	
0901	Unnamed	LB-4.2	1.0	—	None
0902	Unnamed	LB-18.9	1.2	—	None
0904	McCarty Creek	LB-20.4	1.0	—	None
0905	Gilbert Creek	RB-20.45	1.9	—	None
0906	Bear Creek	LB-20.75	1.6	—	None
0907	Williamson Creek	RB-20.9	7.6	15.8	None
0909	Unnamed	RB-1.9	1.6	—	None
0910	Stony Creek	LB-2.4	3.0	—	None
0911	Everett Creek	RB-2.7	1.7	—	None
0915	Unnamed	RB-5.0	1.5	—	None
	Copper Lake	Outlet-6.4	—	—	
0917	Greider Creek	LB-22.0	1.3	—	None
	Ltl. Greider Lk.	Outlet-1.0	—	—	

SULTAN RIVER DRAINAGE
Snohomish River Basin — WRIA 07

Stream Number	Stream Name	Location Of Mouth	Length	Drainage Area	Salmon Use
	Big Greider Lk.	Outlet-1.3	—	—	
0919	Elk Creek	LB-22.8	6.1	12.2	None
0920	Boulder Creek	LB-0.9	2.1	—	None
0921	Unnamed	RB-1.9	1.2	—	None
0928	Rainy Gulch Creek	LB-26.0	1.1	—	None
0929	Vesper Creek	RB-26.5	2.1	—	None
0930	Kelly Creek	RB-27.1	1.7	—	None
0934	Unnamed	RB-28.11	1.1	—	None
0938	Unnamed	RB-28.95	1.1	—	None