09/18/89		WDW	45	22	BD6BD7 R		MILL CR	A THE REAL PROPERTY.	45F	DV	BULL	0	0	0	0	1788	0
09/21/89		WDW	45	22	BD6BD7 R		MILL CR			DV	BULL	0	0	0	0	1	0
10/12/89	PROPERTY IN	MDH	45	22	BD6BD7 R	- ^ -	MILL CR	elliCore no. 2400b	768 D	DV	BULL	0	0	. 0	Õ	1	0
10/16/91		WNF	45	22	BD6BD7 R		MILL CR		43F	DV	BULL	0	0	1	0	1	0 /
10/07/80		LGB	39	21	A58A59 R		<ul><li>MINERAL</li></ul>	CR		DV	BULL			3	0	0 -	0
08/15/84	1500	JS	39	21	A58A59 R		• MINERAL	CR		DV	BULL	0	0	0	0	0	0
09/09/85	1133	JS	39	21	A58A59 R		MINERAL	CR		DV	BULL	0	0	0	0	0	ov.
08/27/86			39	21	A58A59 R		<ul> <li>MINERAL</li> </ul>			DV	BULL	0	0	0		0	0
10/16/91		NTS	39	21	A58A59 R		MINERAL		44F	DΥ	BULL	0	0	0		0	0 /
08/31/93			39		AS8AS9 R		<ul><li>MINERAL</li></ul>		49F	DV	BULL	0	_		^	0	0 V
09/16/93			39		AS8AS9 R		MINERAL		51F	DV	BULL	0	Field n	otes say 4	.6	0	0
09/30/93			39		AS8AS9 R				49F	DV	BULL	0		•		- 0	0
10/18/93			39		ASBAS9 R				44F	DV	BULL	0				0	0 (
09/18/84			45	22	BC9CD1 R		NASON C			DV	BULL	0				4	0/
09/27/83			45	50	BF4BF5 R					DV	BULL	12	2	14	1 POACHE	46	0
08/18/84			45	50	BF4BF5 R					DV	BULL	0	U	U		U	U
09/11/84			45	50	BF4BF5 R				48F	ĎΫ	BULL	7	3	10		8	7
09/19/84			45	50	BF4BF5 R				48.2F	DV	BULL	8	6	14		20	11
09/23/85			45	50	BF4BF5 R					DV	BULL	0	0		1 POACHE		50
09/09/86			45	50	BF4BF5 R				51.8F	DV	BULL	0	ő	0		2	1
09/16/86			45	50	BF4BF5 R				48.2F	DV	BULL	0	0	0		2	1
08/31/87			45	50	BF4BF5 R				58F	DV	BULL	0	0	0		0	Û
09/18/87			45	50	BF4BF5 R				47F	DV	BULL	0	3	3		0	ß
10/05/87			45	50	BF4BF5 R				48F	DV	BULL	0	0	0		11	11 /
09/12/88			45	50	BF4BF5 R				50F	DV	BULL	0	0	0		0	0
09/20/88			45	50	BF4BF5 R				46.5F	DV	BULL	7	9	16	1.00	8	11/1
09/27/88			45	50	BF4BF5 R				46F	DV	BULL	5	7	12		19	31/
10/03/88			45	50	BF4BF5 R				49F	DV	BULL	0	0	0		32	8
09/13/89			45	50	BF4BF5 R		PANTHER		50F	DV	BULL	2	7	9		2	2
09/21/89			45	50	BF4BF5 R		PANTHER		48.5F	DV	BULL	9	6	15		27	5
10/03/89			45	50	BF4BF5 R				45.5F	DV	BULL	2	2	4		33	3
09/20/90			45	50	BF4BF5 R	•	PANTHER		50F	DV	BULL	0	0	0		2	0
09/28/90	the second secon		45	50	BF4BF5 R		PANTHER		50F	DV	BULL	2	0	2			U
10/04/90			45	50	BF4BF5 R		PANTHER		JUF	DV	BULL	HIGH			NO SURVEY	POSS	0
09/17/91			45	50	BF4BF5 R				51F	DV	BULL	חטנח	9			12	3
09/25/91			45	50	BF4BF5 R				50F.	DV	BULL	2	7	16 5		31	3
10/01/91			45	50	BF4BF5 R				48F	DV		1	1		? ROTTEN SMELL	36	ž
10/01/91			45	50	BF4BF5 R				45F	DV		0	0				2
08/04/92			45	20	BF4BF5 R				435	DV	BULL	0		0		37	0 1
09/09/92			45						90		BULL	0	6	6	- 1 - 17 200	2	0 1
09/09/92			45		BF4BF5 R BF4BF5 R					DV			-7	1.5	ask way	2	
09/23/92			45						7.50	DV	BULL	8	/	15		21	8 ~
10/02/92			45		BF4BF5 R				10.80	DV	BULL	1	6		0 9	24	10 V
08/27/93					BF4BF5 R				9.50	DV	BULL	2	0			26	/
	come description to the		45		BF4BF5 R				51F	DV	BULL	0	15	15		0	
09/03/93			45		BF4BF5 R				52F	DV	BULL	4	8		0 1	10	2 V
09/13/93			45		BF4BF5 R				49F	DV	BULL	4	14		0 V	10	3
09/22/93			45		BF4BF5 R				44F	DV	BULL	17	2		1 (SKIN) UNKNOWN		6 /
10/01/93			45		BF4BF5 R				48F	DA	BULL	3	2	5		45	8
10/15/93			45	0.7	BF4BF5 R				47F	DV	BULL	0	0	0		41	12
09/19/89	1401	WUW	45	23	H27H28 R	1899	PHELPS (	K	EST THE SHIPES	₽V₫	BULL			land a second	U	0	0

		Maverick Saddle as only one (level II?) count was made on Sept.22nd. This timing is intermediate between counts done on lower sections on 9/9-14 and 10/19-20.
	. 29	and 10/19-20.
09/29/89 WDW	*MEADO MEADOW CR	OUDUEY FROM FLOT WING TO CHAIL CUFFLED
09/18/89 WDW	BD6BD7 MILL CR	SURVEY, FROM EAST HWY2 TO SNOW SHELTER TAKES 1 HOUR OR LESS. 45F @1500
09/21/89 WDW 10/12/89 WDW	BD6BD7 MILL CR BD6BD7 MILL CR	•
10/16/91 WNF	BD6BD7 MILL CR	WENATCHEE NATIONAL FOREST SURVEYS.  AREA SURVEYED REDDS FISH TEMP/ETC  Mouth to E lanes Hwy2 1 1 43F
		(Sec.1 abt 1650 ft) Hwy2 upstream 1000 ft
10/07/80 LGB	A58A59 MINERAL CR	SHOCKER SURVEY WITH JUDITH PARSONS, CLE ELUM RD. FOUND 3 LARGE MALES (21, 28, 26 INCHES TL) FROM KACHESS RIVER TO APPARENT IMPASSE IN CATARACTS.
	IN MUDEF	ALSO SAMPLED 3 JUVENILE BULL TROUT 8-10 INCHES. NO SIGN OF ANY FEMALES OR REDDS. THIS IS THE
		FIRST RECORDS OF ADFLUVIAL BULL TROUT HERE. NOTED THAT LOWER KACHESS CHANNEL GOES SUBTERRANEAN ANNUALLY NEAR TRAIL CROSSING, OFTEN STRANDING
08/15/84 1500 JS	A58A59 MINERAL CR	ADULT BULL TROUT IN THE FALL.
09/09/85 1133 JS	A58A59 MINERAL CR	
08/27/86 0900 LGB	A58A59 MINERAL CR	Surveyed Kachess R and Mineral Cr. No adult bull trout found. Flows very low. Goes dry within 300 yds of leaving forested area and flowing across
79		alluvial plain. Fished Mineral Cr from barrier falls to alluvium area. Caught 3 CT 16,17,19 cm and 2 DV 19,15 cm. Observed fry from 1-2" from
		Mineral Cr to where goes intermittent (about 500 yds.)
10/16/91 NTS	A58A59 MINERAL CR	NATAPOC TIMBER SERVICES UNDER CONTRACT W/USFS. SURVEYED FROM MOUTH TO IMPASSE ABOUT 2000 FT. FLOW INTERRUPTS NEAR WILDERNESS BNDRY. 5 HOUR SURVEY. 44F @1245.
08/31/93 1045 LGB	ASBAS9 MINERAL CR	SET UP NEW SPANNING INDEX AREA FROM MOUTH OF MINERAL CREEK TO IMPASSABLE VERTICAL 20ft FALLS ABOUT 1/2 MILE UPSTREAM.
09/16/93 1400 LGB 09/30/93 1330 LGB	AS8AS9 MINERAL CR AS8AS9 MINERAL CR	STILL NOTHING IN THIS CREEK OR IN UPPER KACHESS R.
10/18/93 1405 LGB	AS8AS9 MINERAL CR	SAW NO ADULT BLC OR REDDS THIS SEASON.
		THE ONLY CHANCE IS FOR EARLY FALL FAINS TO RE-WATER THE CHANNEL OF KACHESS RIVER, ALLOWING BULL TROUT (AND KOKANEE) ACCESS TO THE SYSTEM FOR
		SPAWNING.
09/18/84 1200 LGB	BC9BDI IN MUDEE	Observed the four good redds in the stretch from the mouth of Whitepine Cr upstream for about 3/4 mile. Redds were too small for chinook salmon,
Described as red be	llies, orange tails, and white	and "assumed" dolly redds even though no DV were
09/27/83 1200 LGB	BF4BF5 PANTHER CR	actually seen. 9/21/83 call from Rick Hartung (206-772-4898) reporting about 100 fish spawning in Panther Cr

about 1/2 mile to 1 mile above the White

Sept. 27, 1983 Panther Cr. Survey (trib. White River) 728N, RISE, Sec. 10/11 Based on report of Rick Hartung (9-21-83) (206) 772-4878 - Saw about 100 fish 18-24" sporting in creak 12 to 1 mile above confluence w/ white River described as red bellies forange fails with white edges on paired fine. Sounded like dollies, so went to see. Typical high gradient sobble creek in lower 12 mile then changes to Very steep bedrock cataracts with numerous 3' to 8' falls. Extreme boulder- 3 one habitat with gravel pocketed below bedrock and boulder plunge pools. Found dolly redds from about 12 mile upstream from white viver all the way through cataraat carryon until stopped by a 60 foot sheer bedrock talls. Total spawned area about 3/4 mile. 11 reads below major cataract 35 redds (minimum) within I zone plus 2 dv. males observed nearby, = 13 fish obs, (over) all est, at 22"-30"

one & mortality-probably man-caused as belly slit open (for eggs?)
63 cm total length badly decomposed, ever atoliths DO CRKAGES book & line pamples obtained 14.2 cm 3(8) 1 DV imm 1 KB mature 18,2 cm of 1 RB Jumm 21.8cm 09 2+ 1 RB mature 29 cm & 4+ otolith disintegrated 1 DV mort. 63cm "Typical" Redd measurements -except Shallower 
obs. depths from

6" to 6 feet

30" wide mostly 1";" minus

depression with

1" 63" -> 1/2 to 4" gravel on bo How main packet 18"wide x 24" long entire redd 30" wide x 48" long depth at \$\mathcal{B} = 11" and \$\mathcal{B} = 6" (obs. up t/sec.) valocity across redd = 1.0 ft./sec. (2.5 ft/sec.) transpatout water Temp, 7,5°C at 1230-