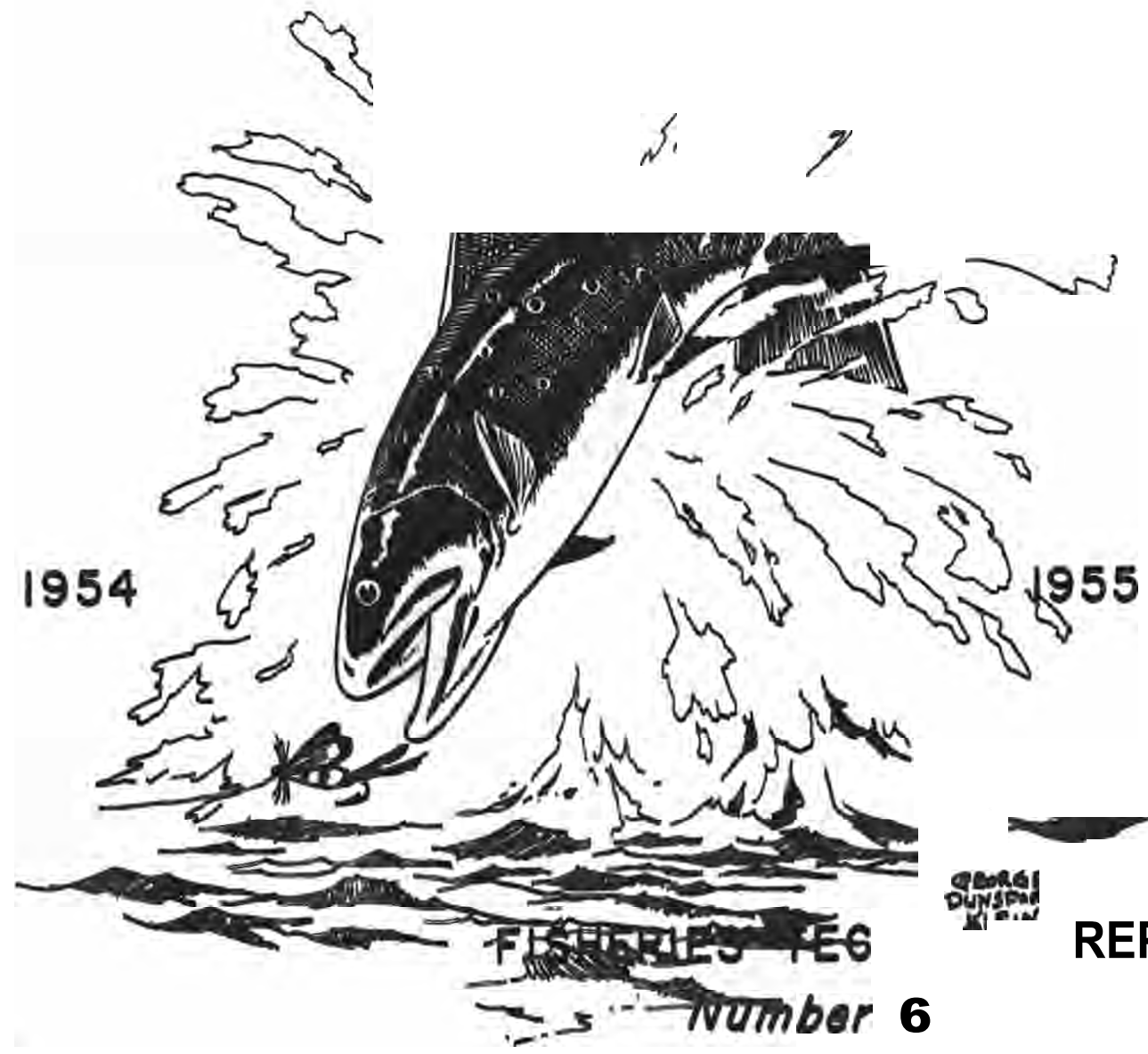


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A FISHERIES SURVEY of THE LITTLE SNAKE RIVER DRAINAGE



GEORGE DUNSMUIR

REPORT

Wyoming Game and Fish Commission

TABLE OF CONTENTS

	PAGE
INTRODUCTION - - - - -	1
GENERAL DESCRIPTION - - - - -	2
FISHERIES HISTORY - - - - -	4
METHODS AND MATERIALS - - - - -	5
FINDINGS - - - - -	6
LITTLE SNAKE RIVER - - - - -	6
MUDDY CREEK - - - - -	
MCKINNEY CREEK - - - - -	
EAGLE CREEK - - - - -	8
STONEY CREEK - - - - -	8
GROVE CREEK - - - - -	9
MUDDY CREEK (TRIBUTARY TO MCKINNEY CREEK) - - - - -	9
LITTLEFIELD CREEK - - - - -	9
EAST FORK MUDDY CREEK - - - - -	10
BIG SAVERY CREEK - - - - -	11
BIG GULCH CREEK - - - - -	12
LITTLE SANDSTONE CREEK - - - - -	13
BIG SANDSTONE CREEK - - - - -	13
DEEP CREEK - - - - -	15
MILL CREEK - - - - -	15
DOUGLAS CREEK - - - - -	15
LITTLE SAVERY CREEK - - - - -	16
TINY CREEK - - - - -	1
FULTON CREEK - - - - -	1
NORTH FORK SAVERY CREEK - - - - -	18
EVANOFF CREEK - - - - -	19
FISH CREEK - - - - -	20
DEEP GULCH CREEK - - - - -	20
SOUTH FORK OF SAVERY CREEK - - - - -	20
JIM CREEK - - - - -	22
MEXICAN CREEK - - - - -	22
DIRTYMAN CREEK - - - - -	22
BEAVER CREEK - - - - -	23
STRAWBERRY CREEK - - - - -	
BATTLE CREEK - - - - -	
HASKINS CREEK - - - - -	25
SMITH CREEK - - - - -	26
WEST FORK BATTLE CREEK - - - - -	27
HAGGERTY CREEK - - - - -	
LOST CREEK - - - - -	N

TABLE OF CONTENTS (CONTINUED)

MUDDY CREEK NEAR MOUTH OF MCKINNEY CREEK - - - - -	47
BEAVER DAM ON STONEY CREEK - - - - -	47
FISH CREEK SHOWING SHIFTING SAND BOTTOM - - - - -	48
MIDDLE SECTION OF ROARING FORK - - - - -	48
BATTLE CREEK SHOWING C.C.C. STREAM IMPROVEMENT DEVICE - - - - -	49
BEAVER DAM ON BIG SANDSTONE CREEK - - - - -	49
LITTLE SANDSTONE CREEK BELOW SANDSTONE ROAD - - - - -	50
LITTLE SAVERY CREEK NEAR HEAD - - - - -	50
BIG SANDSTONE CREEK AFTER A RAIN - - - - -	51
SILT IN BIG SANDSTONE CREEK AFTER A RAIN - - - - -	51
EFFECTS OF HEAVY FLOODING ON BIG SANDSTONE CREEK - - - - -	52
C.C.C. STREAM IMPROVEMENT DEVICE - - - - -	52
ELECTRO -FISHING ON UPPER BATTLE CREEK - - - - -	53
CADDIS FLY LARVAE CASES FROM LITTLE SANDSTONE CREEK - - - - -	53
RIFFLE ON WEST FORK BATTLE CREEK - - - - -	54
UPPER END OF BIG SANDSTONE CREEK - - - - -	54
BIG SAVERY CREEK NEAR LOWER END - - - - -	55
DIRTYMAN CREEK NEAR SANDSTONE ROAD - - - - -	55
BATTLE CREEK NEAR FOREST BOUNDARY - - - - -	
WATER SAMPLING ON HAGGERTY CREEK - - - - -	56
SHOCKING THE LITTLE SNAKE RIVER NEAR DIXON - - - - -	57
BEAVER DAMS ON MCKINNEY CREEK - - - - -	
SOLOMON CREEK - - - - -	58
NORTH FORK LITTLE SNAKE RIVER - - - - -	58
BEAVER DAMS ON BIG SANDSTONE CREEK - - - - -	59
HASKINS CREEK - - - - -	59
BROWN TROUT TAKEN FROM THE LITTLE SAVERY CREEK - - - - -	60
SMITH CREEK - - - - -	60
HASKINS CREEK - - - - -	61
LITERATURE CITED - - - - -	62

WYOMING GAME AND FISH COMMISSION

FISH DIVISION

COMPLETION REPORT

STATE OF WYOMING

PROJECT No. 154-FR-34-1

TITLE OF JOB: A FISHERIES SURVEY OF STREAMS IN THE LITTLE SNAKE RIVER DRAINAGE

PERSONNEL: FISHERIES MANAGEMENT CREW No. 5
JACK KANALY, PROJECT LEADER
FRED WILLIAMS, ROBERT MILLIS, GEORGE KIDD

INTRODUCTION

THE ESTABLISHED MANAGEMENT POLICIES OF MANY OF OUR LAKES AND STREAMS ARE NOT ALWAYS CONSISTENT WITH THEIR ACTUAL CONDITIONS AND REQUIREMENTS.

IN MANY CASES THE PLANTING POLICY WAS ESTABLISHED SIMPLY BY GEOGRAPHIC **BOUNDARIES**, DISREGARDING THE BIOLOGICAL CONDITIONS THAT PREVAILED. INDISCRIMINANT FISH DISTRIBUTION WAS COMMON IN THE EARLY PERIOD OF FISHERIES WORK AND THE MANAGEMENT POLICIES WERE OFTEN SET UP ON THE BASIS OF THESE PLANTS.

INCREASED **FISHING** PRESSURE SOMETIMES NECESSITATES A CHANGE IN SPECIES PLANTED IN ORDER TO ESTABLISH A FISH THAT WILL TOLERATE HEAVIER UTILIZATION.

CHEMICAL, PHYSICAL, AND BIOLOGICAL CHANGES CREATED BY INCREASED AGRICULTURAL, DOMESTIC, AND INDUSTRIAL WATER **USES**, OFTEN RESULT IN POLLUTION AND WATERSHED DISTURBANCES NECESSITATING A NEED FOR CHANGES IN MANAGEMENT.

THIS SURVEY WAS DESIGNED TO DETERMINE THESE CHARACTERISTICS IN ORDER THAT MANAGEMENT POLICIES MIGHT BE FORMULATED TO PRODUCE AN OPTIMUM SUSTAINED YIELD OF GAME FISH FROM THE WATERS CONCERNED.

OBJECTIVES

1. TO ESTABLISH MANAGEMENT POLICIES FOR THE VARIOUS WATERS WITHIN THIS DRAINAGE BASED ON KNOWLEDGE OF THE BIOLOGICAL, ~~PHYSICAL~~, AND CHEMICAL CONDITIONS.
2. TO ESTABLISH A GUIDE FOR FUTURE INVESTIGATIONS OF THIS TYPE IN OTHER DRAINAGE AREAS IN WYOMING.

IN 1955 A SURVEY OF THE EXISTING AND POTENTIAL FISHERIES RESOURCES OF THE STREAMS IN THE LITTLE SNAKE RIVER DRAINAGE WAS COMPLETED. THERE IS NO RECORD OF ANY SIMILAR INVESTIGATION ON THESE STREAMS PRIOR TO THIS STUDY.

THIS REPORT REPRESENTS A COMPENDIUM OF INFORMATION COLLECTED DURING THAT SURVEY. DETAILED INFORMATION OF IMMEDIATE INTEREST ONLY TO ADMINISTRATIVE AND FIELD WORKERS CAN BE FOUND ON FILE AT THE OFFICE OF THE WYOMING GAME AND FISH COMMISSION IN CHEYENNE OR AT THE FISHERIES FIELD OFFICE OF THE WYOMING GAME AND FISH COMMISSION AT LARAMIE.

DESCRIPTION

THE LITTLE SNAKE RIVER DRAINS OVER 1558 SQUARE MILES (997,120 ACRES) IN SOUTH-CENTRAL WYOMING. THIS AREA INCLUDES MOUNTAINS REACHING TO 10,500 FEET, ROCK SLIDE AREAS, HEAVILY TIMBERED MOUNTAIN SLOPES, ROLLING HILLS, GRASSY MOUNTAIN MEADOWS, BARREN PLATEAUS, AND SOME FERTILE RIVER BOTTOM LAND. LIFE ZONES WITHIN THE AREA ARE UPPER SONORAN, TRANSITION, AND CANADIAN.

ON NATIONAL FOREST LANDS, THE HILLS AND MOUNTAINS ARE COVERED WITH DENSE STANDS OF CONIFERS, INTERRUPTED BY OPEN PARKS COVERED WITH SAGEBRUSH, SEDGES AND GRASSES. OLD BURNT OVER AREAS ARE NOW COVERED WITH HEAVY STANDS OF ASPEN, OAK, AND OTHER DECIDUOUS SPECIES. THE UNDERBRUSH IN THESE "NEW" STANDS IS VERY HEAVY AND LUSH, CONTRIBUTING CONSIDERABLE TO EROSION CONTROL.

SAGEBRUSH COVERED HILLS COMPRISE MOST OF THE DRAINAGE OUTSIDE THE NATIONAL FOREST. THERE IS SOME GRASS ALONG THE CREEKS AND SLOPES. THE ONLY TREES ARE A FEW **ALDERS**; COTTONWOODS, AND WILLOWS GROWING ON THE CREEK BANKS. EXCEPT FOR ALONG THE **STREAMS**, THE SOIL IS APPARENTLY QUITE UNPRODUCTIVE AND THE VEGETATION IS GENERALLY SPARCE. THE ANNUAL RAINFALL IS LIGHT.

THE MOST IMPORTANT LAND USE IN THIS AREA IS SHEEP AND CATTLE RANCHING. FARMING IS CONDUCTED TO A VERY LIMITED DEGREE. SOME URANIUM EXPLORATIONS ARE BEING CARRIED OUT. THE REMOVAL OF VEGETATIVE COVER AND OTHER EXCAVATIONS RESULTING FROM THESE ACTIVITIES COULD RESULT IN EXCESSIVE EROSION IN THE FUTURE.

DOMESTIC **USE**, IRRIGATION, AND STOCK WATERING ARE THE MOST IMPORTANT WATER USES. BIG GAME POPULATIONS OF DEER, **ANTELOPE**, AND ELK ALSO UTILIZE THIS WATER RESOURCE. WATER FOR IRRIGATION HAS REACHED A POINT OF SUCH HIGH PRIORITY THAT ON SEVERAL CREEKS, SO MUCH WATER IS TAKEN OUT THAT THE FISHERIES POTENTIAL HAS BEEN ELIMINATED.

COPPER MINING WAS ONCE A FLOURISHING INDUSTRY IN THIS **AREA**, BUT RICHER DEPOSITS ELSEWHERE BROUGHT AN END TO THESE OPERATIONS IN 1916 AND 1917. HOWEVER, THIS PAST MINING CONTINUES TO INFLUENCE THE FISHERIES. WATER, RUNNING OVER EXPOSED COPPER **ORE**, HAS BEEN POLLUTED TO SUCH A DEGREE THAT PRACTICALLY NO AQUATIC LIFE CAN SURVIVE IN HAGGARTY CREEK.

FOREST **FIRES**, TIMBER OPERATIONS, **OVER-GRAZING**, AND OTHER WATERSHED DISTURBANCES HAVE INCREASED WATER RUNOFF AND SOIL EROSION IN CERTAIN PORTIONS OF THE DRAINAGE. THIS IS EVIDENCED BY EXCESSIVE SILT **DEPOSITS**; DEEP AND HEAVILY ERODED GULLIES AND **CANYONS**, LARGE TRASH PILES IN AND ALONG THE **STREAMS**, REPORTS OF HEAVY SPRINGTIME **FLOODING**, AND THE DRYING UP OF SMALLER STREAMS.

WHILE THE HUMAN POPULATION IS VERY SPARCE IN THE IMMEDIATE AREA, SURROUNDING CITIES AND TOWNS FURNISH A COMPARATIVELY LARGE NUMBER OF SPORTSMEN WHO UTILIZE THIS AREA.

THE DRAINAGE HAS A SCARCITY OF GOOD ROADS. EXISTING ROADS AND AUTOMOBILE TRAILS DO, HOWEVER, AFFORD ACCESS TO THE MAJORITY OF FISHABLE WATERS.

FISHERIES HISTORY

THERE ARE ALMOST FORTY STREAMS IN THE LITTLE SNAKE RIVER DRAINAGE IN WYOMING CAPABLE, AT LEAST IN CERTAIN SECTIONS, OF SUPPORTING GAME FISH POPULATIONS. THE ONLY TROUT NATIVE TO THIS DRAINAGE IS THE COLORADO RIVER CUTTHROAT (SALMO CLARKII PLEURITICUS). THIS FISH IS NOW FOUND IN ONLY A FEW STREAMS AND IN LIMITED NUMBERS. INTRODUCTION OF BROWN, BROOK, AND RAINBOW TROUT HAS HELPED TO CROWD OUT THIS NATIVE SPECIES. CHANGES IN PHYSICAL, CHEMICAL, AND BIOLOGICAL CHARACTERISTICS OF THIS DRAINAGE HAVE ALSO CONTRIBUTED TO THE DISAPPEARANCE OF THE CUTTHROAT.

THE OLDEST RECORDS AVAILABLE INDICATE THAT CUTTHROAT TROUT WERE FIRST PLANTED IN BIG SANDY CREEK IN 1933. THE TYPE OF CUTTHROAT PLANTED IS NOT RECORDED HOWEVER THE MAY WELL HAVE BEEN THE SNAKE RIVER OR THE YELLOWSTONE VARIETY. IT IS ASSUMED THAT UNRECORDED PLANTS WERE MADE BEFORE THIS TIME. FIRST RECORDED PLANTS OF RAINBOW TROUT WERE MADE IN BIG SAVERY CREEK IN 1936; BROOK TROUT IN THE LITTLE SNAKE RIVER, LITTLE SAVERY CREEK, AND BIG SAVERY CREEK IN 1936, AND BROWN TROUT IN THE LITTLE SANDSTONE CREEK ALSO IN 1936. BATTLE LAKE, THE SOURCE OF BATTLE CREEK, ONE OF THE MAIN TRIBUTARIES OF THE LITTLE SNAKE RIVER, WAS PLANTED WITH CUTTHROAT EXCLUSIVELY UNTIL 1950 WHEN BROOK TROUT WERE INTRODUCED. THIS ONE RECORDED PLANT OF BROOK WAS EVIDENTLY VERY SUCCESSFUL. GILL NETS SET IN 1955 IN BATTLE LAKE CAPTURED 145 BROOK TROUT AND ONLY ONE CUTTHROAT. THIS BROOK TROUT INTRODUCTION OPENED THE WAY FOR THEIR ESTABLISHMENT IN ALMOST ALL THE STREAMS IN THIS DRAINAGE.

THE EARLIEST CREEL REPORTS (1946) SHOWED THAT RAINBOW, BROOK, CUTTHROAT, AND BROWN TROUT WERE BEING CAUGHT. BY 1950 THE MAJORITY OF THE FISH HARVESTED WERE BROOK TROUT. REPORTS INDICATE THAT FISHING WAS ONCE VERY GOOD. THE REPORTED DECLINE OF THE FISHERIES IN RECENT YEARS MIGHT WELL BE ATTRIBUTED TO FACTORS SUCH AS DROUGHT CONDITIONS OCCURRING IN THIS AREA FOR THE PAST SIX YEARS, INCREASED WATER AND LAND USE, AND AN INCREASE IN FISHERMEN'S UTILIZATION OF THESE WATERS.

METHODS AND MATERIALS

PRIOR TO THE SURVEY LOCAL SPORTSMEN AND RESIDENTS WERE INTERVIEWED. A GENERAL RECONNAISSANCE OF THE AREA WAS MADE WITH LOCAL RESIDENTS AS GUIDES AND A MAP OF THE DRAINAGE WAS MADE USING AERIAL PHOTOS, COUNTY, FOREST SERVICE, AND GEOLOGICAL SURVEY MAPS.

FIELD INVESTIGATIONS WERE STARTED ON JULY 26, 1955 AND COMPLETED ON AUGUST 23, 1955, A PERIOD WHEN STREAM FLOWS APPROACHED THEIR LOWEST LEVEL.

EVERY STREAM WAS CHECKED AS THOROUGHLY AS WAS POSSIBLE AND PRACTICAL. STUDY SECTIONS WERE SET UP ON ALL MAJOR STREAMS AND BASIC PHYSICAL, CHEMICAL, AND BIOLOGICAL DATA WAS COLLECTED FOR AT LEAST ONE LOCATION ON EVERY STREAM.

BOTTOM TYPES WERE CLASSIFIED ACCORDING TO THE PERCENTAGE OF SILT, RUBBLE, SAND, GRAVEL, AND BOULDERS. POOL TYPES WERE CLASSIFIED ACCORDING TO SMITH (1949). AVERAGE STREAM WIDTHS WERE BASED ON TEN MEASUREMENTS. THESE WERE TAKEN EVERY FIFTEEN FEET. THE MAXIMUM DEPTHS OF SEVERAL POOLS WERE MEASURED WHEN DETERMINING THE AVERAGE MAXIMUM POOL DEPTH. THE AVERAGE MID-CHANNEL RIFFLE DEPTH WAS ALSO BASED ON SEVERAL MEASUREMENTS. STREAM FLOWS (C.F.S.) AND VELOCITY (FEET/SECOND) WERE DETERMINED BY A MODIFICATION OF THE METHOD USED BY ROBBINS AND CRAWFORD(1954). FISH SHELTER, BEAVER DAMS, AND CHARACTERISTICS OF THE IMMEDIATE SHORE WERE OBSERVED BY WALKING AND DRIVING SECTIONS OF THE STREAMS. FLOW VARIATIONS WERE DETERMINED BY OBSERVING TRASH PILES AND HIGH WATER MARKS.

ALL PH DETERMINATIONS WERE MADE BY USE OF A HELLIGE DISC COMPARATOR USING COLORED GLASS STANDARDS. ALKALINITIES WERE OBTAINED BY TITRATING N/50 SULPHURIC ACID AGAINST THE SAMPLE USING METHYL ORANGE AND PHENOLPHTHALEIN AS INDICATORS FOR CARBONATES AND BICARBONATES. WATER SAMPLES FROM HAGGERTY CREEK WERE SUBMITTED TO THE WYOMING GAME AND FISH RESEARCH LABORATORY AT LARAMIE FOR ANALYSIS. WATER COLOR AND TURBIDITY WERE DETERMINED BY VISUAL OBSERVATION. WATER AND AIR TEMPERATURES WERE TAKEN WITH A POCKET THERMOMETER (FAHRENHEIT). BELOW SURFACE WATER TEMPERATURES WERE TAKEN WITH A MAXIMUM-MINIMUM THERMOMETER.

FISH INVENTORIES WERE MADE BY MEANS OF AN A.C. 115 VOLT ELECTRIC SHOCKER. THE BOOK "WYOMING FISHES", SIMON (1946) WAS USED TO KEY OUT THE VARIOUS SPECIES OF FISH FOUND IN THE STREAMS. BOTTOM FOOD TYPES WERE DETERMINED BY VISUAL OBSERVATION OF THE VARIOUS CATEGORIES OF AQUATIC INSECT LARVAE AND SNAILS ON ROCKS IN THE STREAM SECTION UNDER STUDY. THE FOLLOWING CLASSIFICATION WAS USED IN ACCORDANCE WITH THE RELATIVE ABUNDANCE OF EACH TYPE: A (ABUNDANT), C (COMMON), AND R (RARE). THE RELATIVE NUMBERS OF EACH SPECIES OF FISH WERE ALSO CLASSIFIED IN THIS MANNER. NEEDHAM AND NEEDHAM (1953) WAS USED AS A GUIDE IN IDENTIFYING AQUATIC INVERTEBRATES. WHENEVER FEASIBLE TROUT STOMACHS WERE COLLECTED AND ANALYZED IN THE FIELD.

FINDINGS

LITTLE SNAKE RIVER - TRIBUTARY TO THE GREEN RIVER

THE NORTH FORK OF THE LITTLE SNAKE RIVER HEADS IN WYOMING AND THE MIDDLE AND SOUTH FORKS RISE IN COLORADO. THE UPPER PORTION OF THE LITTLE SNAKE RIVER PROPER MEANDERS BACK AND FORTH ACROSS THE WYOMING-COLORADO BORDER. IN THIS REGION IT IS A RAPID FLOWING CLEAR STREAM. THE FISH FOOD SUPPLY IS FAIR. FISH COVER IS ADEQUATE WITH LARGE DEEP HOLES THROUGHOUT THE STREAM PROPER. BELOW DIXON THE STREAM BECOMES VERY SILTY. THE WATER COLOR IS YELLOW TO GRAY. THIS PORTION OF THE RIVER IS SUBJECT TO EXTREME FLUCTUATIONS AND VIOLENT FLOODING AND ALMOST THE ENTIRE BOTTOM IS COVERED WITH SILT WHICH IS SIX INCHES DEEP IN LOCALIZED AREAS. NATURAL FOOD IS SCARCE. THE STREAM FLOW, MEASURED AT THE GALLOWAY RANCH ON AUGUST 11, 1955, WAS 24 CUBIC FEET PER SECOND. THIS, HOWEVER, FLUCTUATES THROUGH THE YEAR.

THE PLANTING RECORDS SHOW THAT WYOMING HAS PLANTED CUTTHROAT AND BROOK TROUT IN THIS STREAM SINCE 1936. THE MAJORITY OF THE FISH WERE CUTTHROAT, NONE OF WHICH WERE OVER FOUR INCHES LONG. THE STATE OF COLORADO HAS PLANTED RAINBOWS ALONG THE STATE LINE. ONE PLANT IN 1950 CONSISTED OF 10,535 SEVEN INCH RAINBOW.

ELECTRO-FISHING OPERATIONS WERE CONDUCTED AT FIVE POINTS ON THE RIVER BETWEEN BAGGS AND SAVERY AND ONLY THREE GAME FISH WERE RECOVERED; ONE 13 INCH WHITEFISH AND ONE 11 INCH RAINBOW AT SAVERY, AND ONE 19 INCH SOUTHERN CHANNEL CATFISH BELOW DIXON. EIGHT SPECIES OF ROUGH FISH WERE COLLECTED. THEY WERE FOUND TO BE ABUNDANT. BLUEHEAD MOUNTAIN SUCKERS AND FLANNELMOUTH SUCKERS WERE THE PREDOMINANT FISH.

LOCAL FISHERMEN REPORT CATCHING A FEW RAINBOW TROUT IN THE SPRING OF THE YEAR. ALSO A FEW CATFISH ARE CAUGHT IN THE BAGGS-DIXON AREA.

THIS STREAM IS ACCESSIBLE BY AUTOMOBILE ALONG MOST OF ITS COURSE. INFORMATION OBTAINED FROM LOCAL RESIDENTS INDICATES THAT MOST OF THE LANDOWNERS WILL ALLOW FISHING BY PERMISSION.

CATCHABLE CUTTHROAT TROUT WERE PLANTED IN 1956 IN THE VICINITY OF DIXON. IT IS FELT THAT LARGER FISH WILL STAND A BETTER CHANCE OF SURVIVAL IN COMPETITION WITH THE ROUGH FISH POPULATION AND THE EXTREME FLOW FLUCTUATIONS. IT IS ALSO HOPED THAT THESE LARGER FISH MAY ESTABLISH THEMSELVES AS A RESIDENT POPULATION. BETWEEN DIXON AND BAGGS THE ENVIRONMENT IS BORDERLINE FOR TROUT; THE STREAM HERE IS WARM AND FAIRLY TURBID. CHANNEL CATFISH WILL BE PLANTED IN AN ATTEMPT TO ESTABLISH A FISHABLE POPULATION. AT BAGGS, MUDDY CREEK DUMPS EXTREME AMOUNTS OF SILT INTO THE RIVER MAKING IT UNFIT FOR GAME FISH.

MUDDY CREEK - TRIBUTARY TO THE LITTLE SNAKE RIVER

THE HEADWATERS OF MUDDY CREEK HAVE NUMEROUS BEAVER PONDS SUITABLE FOR TROUT POPULATIONS. THE WATER IS CLEAR AND COLORLESS. STREAM FLOW VARIES FROM SLUGGISH TO RAPID AND THERE IS SOME EVIDENCE OF FLOODING. FISH COVER CONSISTS OF OVERHANGING BANKS, BRUSH, DEEP HOLES, AND IS CONSIDERED ADEQUATE. THE FISH FOOD SUPPLY WAS FOUND TO BE EXCELLENT. SPAWNING FACILITIES ARE LIMITED DUE TO SOME SILTATION.

THAT PORTION OF THE STREAM FROM THE OLD DALY SHEEP HEADQUARTERS UPSTREAM TO THE HEAD (EIGHT TO TEN MILES), REPRESENTS THE ONLY FISHERIES POTENTIAL. BELOW THIS POINT THE STREAM IS NOT SUITABLE FOR GAME FISH DUE TO EXTREME SILTING, HIGH TEMPERATURES, AND HEAVY FLOODING.

THE STREAM WAS SHOCKED AT FIVE LOCATIONS; ROUGH FISH WERE VERY NUMEROUS. A FEW BROWN AND BROOK TROUT WERE COLLECTED ABOVE THE OLD DALY SHEEP HEADQUARTERS.

PLANTING RECORDS SHOW THAT DURING THE FALL OF 1950, 6,873 TWO INCH BROOK TROUT WERE PLANTED IN THE UPPER PORTION OF THIS STREAM. ANOTHER PLANT OF 608 SEVEN INCH BROOK TROUT WAS MADE IN THE HEADWATERS DURING THE LATE SUMMER OF 1951. SHOCKING IN THIS SECTION PRODUCED ONLY TWO BROOK TROUT (14 AND 12 INCHES).

THE UPPER SECTION IS ACCESSIBLE BY AUTOMOBILE.

A PLANT OF BROOK TROUT WILL BE MADE ABOVE THE OLD DALY HEADQUARTERS DURING THE SUMMER OF 1957.

MC KINNEY CREEK - TRIBUTARY TO MUDDY CREEK

THIS IS A SMALL MEANDERING, SLUGGISH STREAM. THE WATER IS CLEAR, COLORLESS, AND MODERATELY ALKALINE. THE FOOD GRADE AND FISH COVER ARE GOOD. MODERATE SILTING OCCURS IN THE HOLES AND BEAVER PONDS, HOWEVER THE RIFFLES ARE CLEAN AND PROVIDE ADEQUATE SPAWNING. THE PORTION ABOVE THE MOUTH OF MUDDY CREEK IS ALMOST DRY AND OFFERS NO FISHERIES POTENTIAL.

A SUFFICIENT BROOK TROUT POPULATION WAS OBSERVED IN THE STREAM. FISHING PRESSURE IS MODERATE WITH FAIR TO GOOD SUCCESS.

THE MIDDLE PORTION IS PARTIALLY ACCESSIBLE BY VEHICLE BUT THE LOWER SECTION CAN BE REACHED ONLY ON FOOT. THE ENTIRE STREAM IS OPEN TO PUBLIC FISHING. AT THE PRESENT TIME NO PLANTING IS NECESSARY.

EAGLE CREEK - TRIBUTARY TO MCKINNEY CREEK

NO FISHERIES POTENTIAL; STREAM INTERMITTENT.

STONEY CREEK - TRIBUTARY TO MCKINNEY CREEK

THIS IS A SMALL (LESS THAN ONE-FOURTH C.F.S. FLOW) SLUGGISH STREAM WITH A LARGE NUMBER OF ACTIVE BEAVER DAMS THROUGHOUT ITS COURSE. THE WATER IS CLEAR. BEAVER PONDS PROVIDE THE ONLY FISHERIES POTENTIAL; THEY ARE MODERATELY SILTED.

NUMEROUS TROUT WERE OBSERVED IN THOSE DAMS IN THE LOWER SECTION OF THE STREAM WHERE SPAWNING IS APPARENTLY ADEQUATE. BEAVER PONDS IN THE UPPER PORTION WERE PLANTED WITH FINGERLING BROOK TROUT IN SEPTEMBER 1955. A PLANTING PROGRAM WILL BE CARRIED OUT SO A FISHABLE POPULATION CAN BE MAINTAINED.

GROVE CREEK - TRIBUTARY TO STONEY CREEK

NO FISHERIES POTENTIAL; STREAM INTERMITTENT.

MUDDY CREEK - TRIBUTARY TO MCKINNEY CREEK

MUDDY CREEK, TRIBUTARY TO MCKINNEY CREEK, IS A SMALL, SLUGGISH, MEANDERING STREAM WITH CLEAR WATER AND GOOD FISH COVER. THERE ARE NUMEROUS BEAVER DAMS IN THE LOWER SECTION. FISH COVER IS GOOD CONSISTING OF BEAVER DAMS, OVERHANGING BANKS, AND BRUSH. SILTATION IS MODERATE IN THE BEAVER DAMS AND POOLS. RIFFLE AREAS PROVIDE ADEQUATE SPAWNING.

ELECTRO-FISHING INDICATED A GOOD POPULATION OF BROOK TROUT, RANGING FROM TWO INCHES UP TO EIGHT INCHES.

ACCESSIBILITY IS GOOD ALONG THE LOWER HALF OF THE STREAM. THE UPPER PORTION CAN BE REACHED BY WALKING OR BY JEEP. THIS STREAM IS NOT POSTED. PORTIONS OF IT ARE BELIEVED TO BE ON TAYLOR GRAZING LANDS.

NO STOCKING IS NECESSARY AT THE PRESENT BECAUSE OF AN ADEQUATE POPULATION.

LITTLEFIELD CREEK - TRIBUTARY TO MUDDY CREEK

THE HEADWATERS OF LITTLEFIELD CREEK ARE SHALLOW WITH A SHIFTING SAND BOTTOM AND VERY LITTLE FISH COVER. THE WATER IS CLEAR AND THE NATURAL FOOD IS LIMITED. NO FISH WERE OBSERVED IN THIS SECTION.

SHOCKING OPERATIONS WERE CONDUCTED DIRECTLY ABOVE THE BRIDGE (SEE MAP) AND THIRTEEN BROOK TROUT WERE TAKEN. FIVE OF THESE WERE YOUNG-OF-THE-YEAR AND THE BALANCE RANGED FROM 8.8 TO 12.9 INCHES IN LENGTH. BECAUSE OF POOR FOOD, INADEQUATE COVER, AND HEAVY SILT CONDITIONS, IT IS DOUBTFUL THAT TROUT REMAIN HERE THE YEAR

AROUND. NUMEROUS SMALL SUCKERS WERE TAKEN. REMAINS OF OLD BEAVER DAMS INDICATE THEY MAY HAVE WASHED OUT DURING THE PAST TWO YEARS. DUE TO THE LACK OF SUITABLE FOOD IT IS IMPROBABLE THAT THE BEAVER WILL REBUILD THESE DAMS.

BELOW THE BRIDGE THE STREAM CONSISTS MAINLY OF SMALL BEAVER DAMS AND FLAT WATER. MODERATE TO HEAVY SILTING OCCURS. THE FISH FOOD GRADE IS GOOD AND COVER EXCELLENT. THIS PART OF THE MIDDLE SECTION SHOULD SUPPORT A TROUT POPULATION ALTHOUGH SPAWNING WOULD BE LIMITED. TWO BROOK TROUT WERE TAKEN BY SHOCKING (2.1 INCHES AND 8.4 INCHES). NUMEROUS SUCKERS WERE ALSO TAKEN.

MUCH OF THE LOWER PORTION OF THE STREAM IS IN A CANYON AND IS INACCESSIBLE. AT THE ROAD CROSSING BELOW THE CANYON THE STREAM IS SMALL AND AFFORDS VERY LITTLE NATURAL COVER FOR FISH. THE STREAM HERE IS SLIGHTLY TURBID AND HAS A SILTED, SHIFTING BOTTOM.

IN THE PAST THE PLANTING POLICY HAS BEEN BROOK TROUT, THE LAST PLANT BEING IN 1953 WHICH CONSISTED OF 4,400 FINGERLINGS. HOWEVER, FINGERLING CUTTHROAT WERE PLANTED BELOW THE BRIDGE IN 1956. THE ESTABLISHMENT OF A CUTTHROAT POPULATION IS DESIRED. IT IS FELT THAT THERE ARE NOT ENOUGH BROOK TROUT FOR ANY SERIOUS COMPETITION TO THE CUTTHROAT INTRODUCTION. IT WILL PROBABLY BE NECESSARY TO SUPPLEMENT THIS FIRST PLANT WITH REGULAR PLANTINGS SINCE THE REPRODUCTIVE POTENTIAL IS LIMITED.

EAST FORK MUDDY CREEK - TRIBUTARY TO MUDDY CREEK

THIS IS A SMALL, SLUGGISH, MEANDERING STREAM. THIRTEEN BEAVER DAMS WERE COUNTED IN THE UPPER PORTION. ALL HAD AN EXCELLENT SUPPLY OF FISH FOOD. ALTHOUGH SHALLOW, THEY REPRESENT THE ONLY FISHERIES POTENTIAL OF THE STREAM. THE MIDDLE SECTION CONSISTS OF SHALLOW RIFFLES AND HEAVILY SILTED HOLES. THE LOWER PORTION IS DIVERTED FOR IRRIGATION 1½ MILES ABOVE THE MOUTH AND HAS NO FISHERIES POTENTIAL. THE WATER VARIES FROM CLEAR, IN THE BEAVER PONDS, TO A MILKY COLOR IN THE STREAM PROPER. A LARGE PORTION OF THE STREAM IS ACCESSIBLE BY AUTOMOBILE AND IS ON THE TAYLOR GRAZING LAND.

NO FISH WERE OBSERVED IN THE BEAVER PONDS AND ONLY A FEW SMALL SUCKERS WERE COLLECTED AT THE ONE SHOCKING STATION.

MOST OF THE BEAVER DAMS ARE ON PRIVATE LAND. IT IS RECOMMENDED THAT NO PLANTS BE MADE UNTIL PUBLIC AVAILABILITY IS DETERMINED.

BIG SAVERY CREEK - TRIBUTARY TO THE LITTLE SNAKE RIVER

BIG SAVERY CREEK IS A SLUGGISH, MEANDERING STREAM WHICH DRAINS TIMBERED SLOPES, SAGEBRUSH HILLS, AND SOME MEADOW LAND. THE UPPER PORTION IS MOSTLY FLAT WATER AND BEAVER DAMS. THE MIDDLE SECTION GOES THROUGH A DEEP, ALMOST INACCESSIBLE CANYON. THE LOWER SECTION MEANDERS THROUGH RICH MEADOW LANDS. THE MIDDLE AND LOWER SECTIONS HAVE MANY DEEP HOLES AND EXTENSIVE FLAT WATER. THE STREAM GOES DRY NEAR THE MOUTH.

GOOD FISH SHELTER IS PROVIDED BY THE DEEP HOLES IN THE MIDDLE AND LOWER SECTIONS AND BY OVERHANGING BANKS AND BRUSH THROUGHOUT.

THE MIDDLE AND LOWER SECTIONS ARE SUBJECT TO EXTREME FLOODING. THE CANYON HAS MANY DRY WASHES WHICH PROBABLY CONTRIBUTE LARGE QUANTITIES OF WATER DURING THE SPRING AND RAINY PERIODS. THE FOOD GRADE IS GOOD, THE WATER IS CLEAR, AND THE STREAM HAS MODERATE SILTING. THE FLOW VARIES FROM SIX CUBIC FEET PER SECOND AT THE UPPER END TO EIGHT CUBIC FEET PER SECOND IN THE LOWER SECTION. SPAWNING CONDITIONS ARE POOR IN THE UPPER SECTION BUT ARE GOOD BELOW.

THERE ARE ACTIVE BEAVER DAMS SCATTERED THROUGHOUT THE ENTIRE STREAM. OBSERVATIONS OF SHORE VEGETATION SHOWED ONLY MODERATE CUTTING BY BEAVER.

SHOCKING OPERATIONS WERE CONDUCTED AT SIX STATIONS. ONE RAINBOW TROUT WAS RECOVERED IN THE LOWER SECTION. FOUR RAINBOW TROUT AND TWO CUTTHROAT TROUT WERE RECOVERED IN THE CANYON SECTION. THESE WERE THE ONLY TROUT FOUND AND THE REST OF THE FISH POPULATION CONSISTED OF SCULPINS, FLATHEAD MOUNTAIN SUCKERS, FLANNELMOUTH SUCKERS, CREEK CHUBS, SPECKLED DACE, AND BLUEHEAD MOUNTAIN SUCKERS. SEVERAL WHITE-FISH WERE ALSO TAKEN.

FISHING HISTORY IS SCARCE BUT SOME OF THE RESIDENTS REPORTED GOOD CUTTHROAT AND RAINBOW TROUT FISHING IN THE PAST. PLANTING RECORDS BACK AS FAR AS 1933 SHOW MOSTLY FINGERLING CUTTHROAT TROUT WERE PLANTED. IN 1936, RAINBOW TROUT WERE PLANTED ABOVE THE MOUTH OF LITTLE SAVERY CREEK. THIS SPECIES HAS APPEARED IN CREEL RECORDS SINCE 1946. THERE IS NO RECORD OF CUTTHROAT BEING CAUGHT AFTER 1949.

THE LAST TWO PLANTS MADE IN BIG SAVERY CREEK WERE FOUR INCH CUTTHROAT IN 1951 AND SIX INCH BROOK TROUT IN 1952. THESE PLANTS WERE MADE IN THE LOWER SECTION OF THE STREAM.

DEBRIS ALONG THE BANKS INDICATES EXTREME SPRING RUNOFF. THIS MAY BE A FAIRLY RECENT DEVELOPMENT CAUSED PARTLY BY OVERUSE OF THE WATERSHED. THIS POSSIBLY LIMITS OR INHIBITS SPRING SPAWNING. THE PRESENT PERIOD OF SUB-NORMAL PRECIPITATION HAS CAUSED MANY OF THE SMALLER TRIBUTARIES TO DRY UP. THESE SMALL TRIBUTARIES MAY WELL HAVE SERVED AS SPAWNING AREAS FOR THE BIG SAVERY CREEK. AN INCREASE IN BEAVER NUMBERS, WITH A SUBSEQUENT INCREASE IN THE NUMBER OF BEAVER DAMS, MAY HAVE BLOCKED FISH MIGRATION TO SUCH AN EXTENT AS TO HAVE CONTRIBUTED MEASURABLY TO THE DECLINE OF NATURAL REPRODUCTION.

RAINBOW TROUT STOCKING IS RECOMMENDED IN VIEW OF THE POOR SUCCESS OF PREVIOUS CUTTHROAT AND BROOK TROUT PLANTS. CATCH RECORDS INDICATE THIS SPECIES DOES BETTER IN THE STREAM. IN 1956, 3,316 NINE INCH RAINBOW WERE PLANTED IN THE STREAM. AN ADDITIONAL PLANT WILL BE MADE DIRECTLY ABOVE AND BELOW THE CANYON DURING 1957. PLANTING IN THE CANYON PROPER IS NOT FEASIBLE SINCE IT IS SOMEWHAT INACCESSIBLE. THESE PLANTS WILL BE CHECKED AT A LATER DATE TO SEE IF THEY HAVE ESTABLISHED THEMSELVES.

BIG GULCH CREEK - TRIBUTARY TO BIG SAVERY CREEK

THIS CREEK IS SUPPLIED WITH WATER FROM THE HAGGERTY CREEK IRRIGATION DIVERSION. IT GOES ALMOST COMPLETELY DRY DURING THE PERIOD WHEN IRRIGATION OPERATIONS ARE NOT BEING CARRIED ON AND THEREFORE HAS NO FISHERIES POTENTIAL.

LITTLE SANDSTONE CREEK - TRIBUTARY TO BIG SAVERY CREEK

THIS STREAM IS SLUGGISH IN THE UPPER SECTION AND THE FLOW DIMINISHES TO ALMOST NOTHING ABOUT FIVE MILES BELOW THE HEADWATERS. BEAVER DAMS IN THE UPPER PORTION OF THE STREAM REPRESENT THE ONLY FISHERIES POTENTIAL. THE WATER IS CLEAR AND THE FOOD GRADE IS ADEQUATE. MODERATE SILTING WAS OBSERVED IN ALL THE BEAVER DAMS AND SPAWNING CONDITIONS FOR TROUT ARE POOR.

ABOVE THE SANDSTONE ROAD THE STREAM IS ACCESSIBLE BY AUTOMOBILE FOR ABOUT THREE MILES. THE TWO MILES ABOVE THE STRATTON SHEEP HEADQUARTERS ARE INACCESSIBLE TO VEHICLES. THE STREAM IS SITUATED WITHIN THE MEDICINE BOW NATIONAL FOREST AND IS OPEN TO THE PUBLIC.

IN PAST YEARS CUTTHROAT HAVE BEEN PLANTED IN THE BEAVER PONDS IN THE UPPER SECTION. A SERIES OF BEAVER PONDS AND PORTIONS OF THE STREAM WERE SHOCKED. ONLY ROUGH FISH (CREEK CHUBS, FLATHEAD MOUNTAIN SUCKERS, SPECKLED DACE, AND SCULPINS) WERE COLLECTED. Two CUTTHROAT TROUT WERE OBSERVED IN THE HEADWATERS.

BROOK TROUT WERE PLANTED SEVERAL YEARS AGO BY MR. STRATTON BUT APPARENTLY THE CONDITIONS WERE NOT SUITABLE FOR THIS SPECIES SINCE NO BROOK TROUT HAVE EVER BEEN REPORTED CAUGHT OR OBSERVED IN THESE WATERS.

IN 1956, 3,600 FINGERLING CUTTHROAT TROUT WERE PLANTED IN THE BEAVER PONDS ABOVE THE SANDSTONE ROAD.

BIG SANDSTONE CREEK - TRIBUTARY TO BIG SAVERY CREEK

THE FISHERIES POTENTIAL OF THE BIG SANDSTONE CREEK VARIES FROM EXCELLENT AT THE HEADWATERS TO VERY POOR NEAR THE MOUTH. THE UPPER SECTION HAS A RAPID FLOW, NUMEROUS BEAVER DAMS, GOOD FISH COVER, AND MODERATE FLOW VARIATION. THE MIDDLE SECTION, AT THE SANDSTONE ROAD CROSSING, ALSO HAS A RAPID FLOW BUT WITH LIMITED FISH COVER. IT HAS MODERATE TO HEAVY FLOW FLUCTUATION. THE BEAVER DAMS IN THE MIDDLE SECTION ARE COMPOSED MOSTLY OF ROCK AND ARE PROBABLY WASHED OUT EACH YEAR BY THE SPRING RUNOFF.

SILT IN THE UPPER SECTION IS SLIGHT AND IS ONLY FOUND IN THE DAMS AND HOLES. NO SILT WAS OBSERVED IN THE MIDDLE PORTION. NEAR THE MOUTH THE STREAM IS HEAVILY SILTED.

SPAWNING CONDITIONS ARE GOOD IN THE UPPER AND MIDDLE PORTIONS, BUT LIMITED IN THE LOWER PART DUE TO THE SILT. THE WATER IS CLEAR EXCEPT IN THE LOWER SECTION WHERE IT BECOMES TURBID AND HAS A YELLOW-BROWN COLOR. VEGETATION IS SPARCE AND THE FOOD GRADE IS FAIR OVER THE ENTIRE STREAM.

FOURTEEN CUTTHROAT TROUT, BELIEVED TO BE COLORADO RIVER CUTTHROAT (3.1 INCHES TO 9.0 INCHES), WERE RECOVERED IN THE HEADWATERS. THIS WAS ONLY A FAIR POPULATION FOR THIS WATER. IN THE MIDDLE SECTION ONE WHITEFISH, ONE CUTTHROAT, ABUNDANT SCULPINS, BLUEHEAD MOUNTAIN SUCKERS, AND CREEK CHUBS. RECENT RAINS MADE THE STREAM EXTREMELY MUDDY AT THE TIME THE LOWER SECTION WAS SHOCKED AND FISH RECOVERY WAS DIFFICULT.

PLANTING RECORDS FOR THE BIG SANDSTONE SHOW ALL PLANTS WERE CUTTHROAT TROUT AND ALL WERE MADE ADJACENT TO THE SANDSTONE ROAD. THIS IS THE ONLY PORTION OF THE CREEK THAT IS ACCESSIBLE TO AUTOMOBILES. THE LAST PLANT, 1,160 FOUR TO FIVE INCH TROUT, WAS MADE IN 1953. THE ABSENCE OF TROUT IN THE STREAM IS BELIEVED DUE TO THE LACK OF ANY PERMANENT FISH SHELTER. HIGH WATER IN THE SPRING APPARENTLY SCOURS OUT THE STREAM IN THE MIDDLE SECTION, WASHES OUT BEAVER DAMS, MOVES LARGE QUANTITIES OF LOGS AND OTHER DEBRIS, AND REARRANGES THE STREAM BOTTOM.

THE UPPER SECTION OF THIS STREAM IS INACCESSIBLE EXCEPT BY PICKUP OR JEEP AND AT THE PRESENT TIME NOT CONSIDERED IMPORTANT AS A FISHERY. THE MIDDLE SECTION IS IN NEED OF STREAM IMPROVEMENT DEVICES TO SLOW DOWN THE CURRENT AND TO FORM PERMANENT POOLS AND FISH SHELTER BEFORE ANY PERMANENT FISH POPULATION CAN BE ESTABLISHED. THE COST OF THIS WORK IS CONSIDERED PROHIBITIVE AT THE PRESENT TIME. THE ABSENCE OF SMALL TROUT MAY BE DUE TO THE FACT THAT HIGH WATER IN THE SPRING MAKES SUCCESSFUL SPAWNING IMPOSSIBLE.

IN VIEW OF THE PRESENT PHYSICAL CONDITIONS OF THIS STREAM, NO PLANTING IS RECOMMENDED AT THIS TIME.

DEEP CREEK - TRIBUTARY TO BIG SANDSTONE CREEK

DEEP CREEK IS A VERY SMALL STREAM WITH A FLOW OF ONLY ONE-THIRD CUBIC FEET PER SECOND (MEASURED AUGUST 10, 1955). THERE IS NO EVIDENCE OF EXTENSIVE FLOODING OR EXTREME FLOW VARIATIONS.

THERE IS MODERATE SILTING IN THE FLAT WATER AREAS AND ABOUT SIX INCHES OF SILT WAS FOUND IN THE BEAVER DAMS. THE WATER IS CLEAR. SAND AND GRAVEL IN THE RIFFLES PROVIDES FAIR SPAWNING FACILITIES FOR TROUT. FISH COVER CONSISTS OF BOULDERS, BRUSH, AND SMALL BEAVER DAMS, BUT THE AMOUNT PRESENT IS INADEQUATE. THE FOOD GRADE IS GOOD.

FROM SHOCKING OPERATIONS FIFTEEN CUTTHROAT TROUT WERE RECOVERED. THEY WERE FROM ONE TO EIGHT INCHES LONG. THIS STREAM IS ACCESSIBLE ONLY AT THE SANDSTONE ROAD AND NEAR THE SHEEP DRIVEWAY BRIDGE.

SINCE THE STREAM IS SMALL AND HAS A FAIR TROUT POPULATION, NO STOCKING IS RECOMMENDED.

MILL CREEK - TRIBUTARY TO BIG SANDSTONE CREEK

THIS STREAM IS SMALL (LESS THAN ONE-FOURTH CUBIC FEET PER SECOND), SLUGGISH, AND OFFERS LITTLE FISHERIES POTENTIAL. THERE ARE MANY BEAVER PONDS IN THE UPPER HALF OF THE STREAM BUT THEY ARE SMALL, HEAVILY SILTED, AND SURROUNDED BY WILLOWS AND ALDERS WHICH WOULD MAKE THEM EXTREMELY DIFFICULT TO FISH. ABOUT ONE MILE OF THE STREAM IS ACCESSIBLE.

THE FISH COVER IS POOR EXCEPT IN THE BEAVER PONDS. THE FOOD GRADE IS GOOD. THERE ARE GOOD SPAWNING FACILITIES BELOW THE BEAVER DAMS BUT THE EXTREME SPRING RUN-OFFS WOULD MAKE SPAWNING SUCCESS DOUBTFUL. NO PLANTING 16 RECOMMENDED AT THIS TIME.

DOUGLAS CREEK - TRIBUTARY TO BIG SANDSTONE CREEK

DOUGLAS CREEK IS A SMALL, RAPID FLOWING STREAM ABOUT THREE MILES LONG. THE TERRAIN IN THE AREA OF DOUGLAS CREEK IS QUITE RUGGED AND HEAVILY FORESTED. ACCESSIBILITY IS POOR.

FISH COVER IS ADEQUATE WITH **BOULDERS**, OVERHANGING BANKS, LOGS, AND VEGETATION. THE WATER FLOW IS ABOUT ONE CUBIC FOOT PER SECOND. THE WATER IS CLEAR AND THE FOOD GRADE IS GOOD. MODERATE SILTING WAS SEEN IN THE BEAVER PONDS AT THE MOUTH OF THE STREAM. NEARER THE **HEADWATERS**, WHERE THERE ARE NO BEAVER **DAMS**, LITTLE SILT WAS NOTED.

RECORDS SHOW THAT NO FISH HAVE EVER BEEN PLANTED IN THE STREAM AND APPARENTLY IT HAS VERY LITTLE FISHING PRESSURE. THE FISH POPULATION CONSISTS ENTIRELY OF **CUT-THROAT** TROUT. NO ROUGH FISH WERE SEEN. THE AVERAGE LENGTH WAS SIX INCHES AND THE LARGEST TROUT TAKEN WAS EIGHT INCHES LONG. THEY ARE PRESENT IN ADEQUATE NUMBERS AND NO STOCKING IS NEEDED.

DOUGLAS CREEK SHOULD BE MANAGED AS A "CUTTHROAT SANCTUARY". INTRODUCTION OF ANY OTHER SPECIES IS NOT RECOMMENDED AT PRESENT. THE FISHERIES POTENTIAL IS LIMITED SINCE IT IS A VERY SMALL STREAM AND INACCESSIBLE.

LITTLE SAVERY CREEK - TRIBUTARY TO BIG SAVERY CREEK

THIS IS A SMALL (**4 C.F.S.**) MEANDERING STREAM. THERE ARE NUMEROUS BEAVER DAMS AND FLAT WATER IN THE UPPER SECTION. THE LOWER PORTION IS COMPOSED ALMOST ENTIRELY OF DEEP HOLES AND FLAT WATER WITH A FEW SMALL RIFFLES. FISH SHELTER IS VERY GOOD. SILTING IS **HEAVY** IN THE **UPPER** HALF OF THE STREAM AND MODERATE IN THE LOWER SECTION. THE WATER IS CLEAR. SPAWNING FACILITIES ARE POOR BECAUSE OF FEW RIFFLES AND SILTING. THE FOOD GRADE IS GOOD AND VEGETATION IS DENSE IN MANY PLACES.

SPRING FLOODING IS APPARENTLY LIGHT. THIS IS PROBABLY DUE TO THE NUMEROUS BEAVER DAMS IN THE UPPER SECTION. ALSO HEAVY VEGETATION IN AND ALONG THE STREAM COURSE MAY HAVE A SLOWING EFFECT ON HIGH WATER. ACCESSIBILITY IS GOOD.

SHOCKING OPERATIONS CARRIED OUT AT THREE STATIONS PRODUCED ONLY THREE **TROUT**; ONE 10 INCH RAINBOW, ONE 11 INCH **CUTTHROAT**, AND ONE 26 INCH BROWN. ABUNDANT CREEK CHUBS, **SCULPINS**, AND FLANNELMOUTH SUCKERS WERE FOUND. **BLUEHEAD** MOUNTAIN SUCKERS, WHITE SUCKERS, AND SPECKLED DACE WERE ALSO COLLECTED IN LESSER NUMBERS.

PLANTING RECORDS SHOW THAT BOTH BROOK AND CUTTHROAT TROUT HAVE BEEN PLANTED

IN THIS CREEK SINCE 1936. THESE HAVE ALL BEEN FINGERLINGS. ALL OF THE PLANTS WERE MADE IN THE UPPER SECTION AND WERE PRIMARILY UNSUCCESSFUL. THE EXCEPTION BEING CUTTHROAT TROUT PLANTED IN 1952 IN BEAVER PONDS ON THE CREEK. CUTTHROAT TROUT, 10 TO 12-INCHES LONG, WERE OBSERVED IN THEM. DURING 1956, 520 FIVE INCH CUTTHROAT TROUT WERE PLANTED. ADDITIONAL PLANTS OF THIS SPECIES ARE RECOMMENDED IN AN AREA ABOUT ONE MILE ABOVE THE MOUTH. THE LANDOWNER WILL ALLOW FISHING IN THE STREAM ABOVE HIS MEADOW. NO STOCKING IS RECOMMENDED FOR THE UPPER PORTION BECAUSE THE LAND HAS BEEN POSTED AND PRESENT OWNERS WILL ALLOW NO FISHING.

TINY CREEK - TRIBUTARY TO LITTLE SAVERY CREEK

TINY CREEK, AS THE NAME IMPLIES, IS A VERY SMALL STREAM AND IS PART OF THE LITTLE SAVERY CREEK DRAINAGE. THE SURROUNDING TOPOGRAPHY IS ROLLING, SAGE COVERED HILLS. THE IMMEDIATE SHORELINE HAS HEAVY GRASS WITH SCATTERED WILLOW THICKETS.

THIS CREEK FLOWS ABOUT ONE CUBIC FEET PER SECOND AT THE LOW WATER LEVEL. THE WATER IS CLEAR EXCEPT IN THE BEAVER PONDS WHERE IT IS SLIGHTLY GREEN BECAUSE OF THE HEAVY ALGAE GROWTH. COVER FOR FISH IS ADEQUATE WITH UNDERCUT BANKS, VEGETATION, AND OVERHANGING WILLOWS. ALTHOUGH THE STREAM IS ABOUT 90 PERCENT BEAVER DAMS, SPAWNING IS APPARENTLY ADEQUATE AS EVIDENCED BY THE PRESENT FISH POPULATION. FISH FOOD IS ABUNDANT.

FOURTEEN BROOK TROUT AND TWO CUTTHROAT TROUT WERE COLLECTED IN THE MIDDLE SECTION BY ELECTRO-FISHING. FIVE OF THE BROOK WERE ABOUT THREE INCHES LONG AND PROBABLY YOUNG-OF-THE-YEAR. NINE BROOK TROUT WERE FROM SEVEN TO NINE INCHES LONG AND APPEARED TO BE ONLY YEARLINGS. THIS SHOWS EXTREMELY GOOD GROWTH. ALL TROUT WERE IN EXCELLENT BODY CONDITION.

NO RECORDS ARE AVAILABLE, INDICATING PREVIOUS STOCKING IN TINY CREEK. FISHING PRESSURE IS MODERATE. NO STOCKING IS RECOMMENDED AT THE PRESENT TIME, HOWEVER, THE BEAVER PONDS NEAR THE HEAD MAY NEED STOCKING IN FUTURE YEARS AS FISHING PRESSURE INCREASES.

FULTON CREEK - TRIBUTARY TO LITTLE SAVERY CREEK

THIS IS A VERY SMALL CREEK WITH AN AVERAGE FLOW OF ABOUT ONE-FOURTH CUBIC FEET PER SECOND. THE WATER IS CLEAR AND COLORLESS. THE RIFFLES AND POOLS ARE COVERED WITH SILT AND SPAWNING FACILITIES ARE POOR.

THE FISH COVER IS SCARCE; THE BEAVER DAMS AT THE HEAD PROVIDE THE ONLY COVER. THE FOOD GRADE IS EXCELLENT AND NUMEROUS FRESH WATER SHRIMP WERE OBSERVED IN THE AQUATIC VEGETATION.

THE ONLY REAL FISHERIES POTENTIAL IS IN THE BEAVER PONDS AT THE HEAD AND THEY ARE CLOSED TO FISHING BY THE LANDOWNER. THE STREAM IS ACCESSIBLE BY A GOOD AUTOMOBILE TRAIL. THIS STREAM DOES NOT OFFER ENOUGH FISHERIES POTENTIAL TO BE STOCKED.

NORTH FORK SAVERY CREEK - TRIBUTARY TO BIG SAVERY CREEK

THE UPPER SECTION OF NORTH FORK OF SAVERY CREEK, WHICH LIES WITHIN THE MEDICINE BOW NATIONAL FOREST, HAS MANY BEAVER DAMS. MANY OF THESE DAMS ARE INACTIVE AND IN POOR SHAPE BUT A GOOD NUMBER OF THEM WILL SUPPORT TROUT. SILTATION IS QUITE HEAVY IN THE BEAVER PONDS AND IN THE STREAM PROPER REDUCING SPAWNING FACILITIES TO A FEW LIMITED AREAS. IN THE VICINITY OF THE SANDSTONE ROAD THERE ARE SOME LARGE BEAVER PONDS PRESENT, WHICH HAVE EXCELLENT FISHERIES POTENTIAL. SHOCKING IN THIS AREA PRODUCED ONLY THREE BROOK TROUT, 11.8 INCHES TO 15 INCHES.

IN THE MIDDLE SECTION (TWO MILES BELOW THE SANDSTONE ROAD TO TWO MILES ABOVE THE MOUTH), THE STREAM CONSISTS OF DEEP HOLES AND FLAT WATER. THE FOOD GRADE IS AMPLE FOR THE PRESENT TROUT POPULATION. DURING SHOCKING OPERATIONS, TWELVE RAINBOW TROUT (3.5 INCHES TO 16.5 INCHES), NINETEEN WHITEFISH (5.5 INCHES TO 14.5 INCHES), ONE BROOK TROUT (6.5 INCHES), AND NUMEROUS ROUGH FISH WERE TAKEN. SPAWNING CONDITIONS WERE ADEQUATE WITH GOOD GRAVELED RIFFLES AVAILABLE.

THE LOWER SECTION OF THE NORTH FORK OF SAVERY CREEK HAS GOOD FISH COVER AND A VERY GOOD FISH FOOD SUPPLY. THE WATER IS CLEAR AND THERE IS NO EVIDENCE OF HEAVY FLOODING. GRAVEL RIFFLES PROVIDE FACILITIES FOR GOOD TROUT SPAWNING. DURING SHOCK-

ING OPERATIONS THREE BROOK TROUT (11.8 INCHES TO 15 INCHES), AND A LARGE NUMBER OF ROUGH FISH WERE CAUGHT.

MOST OF THE STREAM IS ACCESSIBLE BY ROADS AND TRAILS.

IN 1955, 3,000 FINGERLING BROOK TROUT WERE PLANTED IN THE VICINITY OF THE SANDSTONE ROAD. DURING 1956, 3,000 FINGERLING BROOK TROUT WERE PLANTED IN THE BEAVER PONDS NEAR THE HEAD OF THE STREAM. IN 1956, 520 SIX INCH CUTTHROAT TROUT WERE PLANTED NEAR MORGAN CROSSING.

THE STREAM ABOVE THE SANDSTONE ROAD OFFERS VERY LITTLE POTENTIAL FOR A FISHERIES BECAUSE OF THE POOR CONDITION OF THE STREAM AND THE BEAVER DAMS. THE EXCEPTION TO THIS IS THE LARGE NUMBER OF DAMS NEAR THE HEADWATERS. THERE TROUT SHOULD ESTABLISH THEMSELVES WHEN PLANTED. THE MIDDLE PORTION OF THE CREEK NEAR MORGAN CROSSING HAS SOME GOOD POSSIBILITIES AND SHOULD BE ABLE TO SUPPORT A TROUT FISHERIES. BELOW MORGAN CROSSING, IN THE CANYON AND BELOW, THERE IS A FAIR TO GOOD TROUT AND WHITE-FISH POPULATION. THE COVER AND FEED IS GOOD. FISHING PRESSURE IS APPARENTLY LIGHT IN THIS SECTION.

EVANOFF CREEK - TRIBUTARY TO NORTH FORK OF BIG SAVERY CREEK

EVANOFF CREEK IS A SMALL MEANDERING STREAM WHICH FLOWS ABOUT ONE-HALF CUBIC FEET PER SECOND. THIS STREAM IS ABOUT THREE MILES LONG. THE WATER IS CLEAR AND FISH SHELTER IS PROVIDED BY BRUSH, OVERHANGING BANKS, AND BEAVER DAMS. SPAWNING CONDITIONS ARE FAIR. THERE ARE ABOUT FIFTEEN BEAVER DAMS NEAR THE HEAD WHICH WOULD PROBABLY SUPPORT TROUT.

A TOTAL OF NINE BROOK TROUT WERE COLLECTED WITH THE ELECTRIC FISH SHOCKER. FOUR OF THESE WERE 3.5 INCHES LONG AND WERE CLASSIFIED AS YOUNG-OF-THE-YEAR. THE OTHER FIVE WERE FROM 7.5 INCHES TO 10.5 INCHES, MOST OF WHICH WERE YEARLINGS; THE LARGEST POSSIBLY A TWO YEAR OLD. THIS SHOWS VERY GOOD GROWTH FOR WILD, STREAM REARED TROUT. SCULPINS WERE ALSO TAKEN IN LARGE NUMBERS. THE STREAM PROPER IS TOO SMALL TO OFFER ANY FISHERIES POTENTIAL. THE BEAVER DAMS NEAR THE HEAD WILL BE STOCKED WITH FINGERLING BROOK TROUT IN 1957.

FISH CREEK - TRIBUTARY TO NORTH FORK OF BIG SAVERY CREEK

THIS SMALL STREAM (ABOUT TWO MILES LONG), HAS A SHIFTING SAND BOTTOM WHICH IS VERY POOR FOR GOOD SPAWNING SUCCESS. THIS SITUATION ALSO GREATLY INHIBITS FISH FOOD PRODUCTION.

UNDERCUT BANKS PROVIDE GOOD FISH SHELTER. THERE ARE TWO GOOD BEAVER DAMS NEAR THE MOUTH OF THE CREEK.

NO TROUT WERE RECOVERED FROM ELECTRO-FISHING, HOWEVER, BROOK TROUT WERE TAKEN BY ANGLING AT A LATER DATE. FISH CREEK IS ONLY A SHORT DISTANCE FROM THE SANDSTONE ROAD AND IS FISHED RELATIVELY HEAVY. IT IS PLANNED THAT 800 CATCHABLE SIZE RAINBOW WILL BE PLANTED IN THIS CREEK DURING 1957. ANNUAL PLANTS OF CATCHABLE SIZE RAINBOW TROUT ARE RECOMMENDED BECAUSE OF LIMITED NATURAL REPRODUCTION AND RELATIVELY HEAVY FISHING PRESSURE.

DEEP GULCH CREEK - TRIBUTARY TO SOUTH FORK BIG SAVERY CREEK

THIS STREAM IS INTERMITTENT. THERE ARE NINE BEAVER DAMS AT THE HEAD BUT THEY ARE STAGNATE AND IN POOR CONDITION. NO PLANTING IS RECOMMENDED FOR THIS STREAM.

SOUTH FORK OF SAVERY CREEK - TRIBUTARY TO BIG SAVERY CREEK

THE SOUTH FORK OF SAVERY CREEK IS A STREAM ABOUT TEN MILES LONG. STREAM FLOW AT THE LOWEST LEVEL IS APPROXIMATELY $1\frac{1}{4}$ CUBIC FEET PER SECOND. THE WATERSHED SURROUNDING THE STREAM VARIES FROM HEAVILY TIMBERED AREAS AT THE HEADWATERS TO SAGEBRUSH HILLS AND LESS DENSELY TIMBERED COUNTRY IN THE MIDDLE AND LOWER SECTIONS. THE IMMEDIATE SHORELINE ON THE STREAM HAS GRASSY BANKS INTERSPERSED WITH WILLOWS AND SAGEBRUSH. BEAVER DAMS ARE NUMEROUS THROUGHOUT THE ENTIRE STREAM.

THE BOTTOM TYPE IN THE UPPER AND MIDDLE SECTIONS CONSISTS OF A HIGH PERCENTAGE OF RUBBLE; IN THE LOWER STRETCHES GRAVEL IS THE PREDOMINATE TYPE. SPAWNING CONDITIONS ARE EXCELLENT IN THE HEADWATERS IN CONTRAST WITH THE POOR SPAWNING CONDITIONS IN THE MIDDLE AND LOWER SECTIONS. THIS DIFFERENCE IS ATTRIBUTED MOSTLY TO THE SILTATION IN THE LOWER WATERS.

THE WATER IS CLEAR AND COLORLESS AT THE HEADWATERS AND BECOMES INCREASINGLY TURBID DOWNSTREAM TO THE MOUTH.

FISH COVER APPEARS TO BE GOOD FOR THE ENTIRE LENGTH OF THE STREAM WITH ~~OVER-~~
~~HANGING~~ BANKS AND BRUSH PROVIDING MOST OF THE SHELTER.

HEAVY FISHING PRESSURE IN THE PAST YEARS HAS BEEN RESTRICTED TO THE MIDDLE SECTION WITH MODERATE PRESSURE IN THE UPPER WATERS AND VERY LITTLE PRESSURE TOWARD THE MOUTH. THIS CAN PARTIALLY BE EXPLAINED BY THE FOLLOWING FACTS: 1) LOWER SECTION HAS VERY FEW GAME FISH PRESENT TO PROVIDE A GOOD CATCH FOR THE ANGLER. 2) MIDDLE SECTION IS MOST ACCESSIBLE. 3) UPPER SECTION IS MORE INACCESSIBLE BUT HAS A GOOD POPULATION OF SMALL BROOK TROUT.

RECORDS SHOW THAT SINCE 1953 ONE PLANT OF 2,340 FOUR INCH CUTTHROAT AND ONE PLANT OF 2,000 THREE INCH BROOK WERE MADE. THESE FISH WERE PLANTED IN THE HEAVILY FISHED AREA ABOVE AND BELOW THE SANDSTONE ROAD.

ELECTRO-FISHING OPERATIONS WERE CONDUCTED IN THE LOWER, MIDDLE, AND UPPER SECTIONS OF THE STREAM. SHOCKING OF 400 FEET OF WATER PRODUCED ONLY TWO SMALL RAIN BOWS IN THE LOWER SECTION. ALSO IN THIS AREA WERE DACE, CREEK CHUBS, SCULPINS, AND FLANNELMOUTH SUCKERS. FIFTEEN BROOK TROUT AND ONE RAINBOW TROUT WERE COLLECTED FROM A 400 FOOT LENGTH SHOCKED IN THE MIDDLE SECTION. THE RAINBOW WAS ONLY FIVE INCHES LONG; SEVEN OF THE BROOKS WERE YOUNG-OF-THE-YEAR (TWO TO THREE INCHES IN LENGTH); THE OTHER EIGHT WERE BETWEEN FOUR AND ONE-HALF TO EIGHT AND ONE-HALF INCHES. DACE AND SCULPINS WERE ALSO COLLECTED IN THIS AREA. THE UPPER SECTION PRODUCED 78 BROOK TROUT IN 300 FEET OF STREAM. SEVEN WERE YOUNG-OF-THE-YEAR BETWEEN ONE AND ONE-HALF INCHES AND TWO AND ONE-HALF INCHES. THIRTY-ONE WERE BETWEEN THREE AND FOUR AND ONE-HALF INCHES AND WERE PROBABLY YEARLINGS. THIRTY-NINE WERE BETWEEN FOUR AND ONE-HALF AND NINE INCHES AND WERE PROBABLY TWO YEAR OLDS. ONLY ONE WAS OVER TEN INCHES. THE BROOK TROUT COLLECTED IN THE UPPER SECTION DID NOT SHOW AS RAPID GROWTH AS THOSE IN THE MIDDLE SECTION. THIS RETARDED GROWTH IS ATTRIBUTED TO THE COLDER WATER, POSSIBLY AN OVERPOPULATION OF FISH, AND A SHORT LIFE EXPECTANCY.

THE HEADWATERS OF THE SOUTH FORK OF SAVERY CREEK REQUIRES NO PLANTING. THE STOCKING OF CATCHABLE RAINBOW OR BROOK TROUT SHOULD BE RESTRICTED TO THE MIDDLE SECTION, AN AREA RECEIVING HEAVY FISHING PRESSURE. THIS STRETCH WAS PLANTED IN 1955 AND WILL BE PLANTED IN 1957 WITH CATCHABLE RAINBOW TROUT.

THE FISHERY POTENTIAL IN THE LOWER SECTION IS VERY LIMITED AND NO STOCKING IS RECOMMENDED IN THIS STRETCH AT PRESENT.

JIM CREEK - TRIBUTARY TO THE SOUTH FORK OF BIG SAVERY CREEK

NO FISHERIES POTENTIAL; STREAM INTERMITTENT.

MEXICAN CREEK - TRIBUTARY TO THE SOUTH FORK OF BIG SAVERY CREEK

NO FISHERIES POTENTIAL; STREAM INTERMITTENT.

DIRTYMAN CREEK - TRIBUTARY TO SOUTH FORK SAVERY CREEK

THIS STREAM IS ALMOST CONTINUOUS BEAVER DAMS FROM THE FOREST BOUNDARY DOWN TO THE SANDSTONE ROAD. BELOW, THE STREAM IS SMALL AND SHALLOW. ABOVE THE FOREST BOUNDARY THERE ARE A FEW BEAVER DAMS AND THE FLOW IS RAPID.

THE WATER IS CLEAR AND THE FOOD GRADE IS EXCELLENT.

THAT PORTION OF THE STREAM ABOVE THE FOREST LINE IS VERY INACCESSIBLE. A LOCAL RANCHER REPORTED THAT THIS SECTION HAS MANY SMALL CUTTHROAT TROUT. THE BEAVER PONDS ABOVE THE SANDSTONE ROAD OFFER THE ONLY FISHERIES POTENTIAL AND ARE ACCESSIBLE BY PICKUP TRUCK. THESE DAMS ARE HEAVILY SILTED AND WEED-CHOKED BUT ARE STILL UTILIZED BY BEAVER. HEAVY BRUSH MAY MAKE FISHING DIFFICULT. SPAWNING IS ALMOST IMPOSSIBLE BECAUSE THERE ARE NO RIFFLE AREAS BETWEEN THE DAMS. MIGRATION OF TROUT IS GREATLY RESTRICTED.

LOCAL RESIDENTS REPORT GOOD FISHING IN THIS STREAM IN THE PAST. THEY ALSO STATED THAT THE CUTTHROAT TROUT PLANTING IN 1949 FURNISHED GOOD FISHING. FOUR HUNDRED FEET OF BEAVER DAMS WERE SHOCKED WITH ONLY ONE 16 INCH BROOK TROUT AND A FEW SPECKLED DACE, SCULPINS, AND BLUEHEAD MOUNTAIN SUCKERS COLLECTED. THE BROOK TROUT WAS

A FEMALE WITH HOLD-OVER EGGS WHICH WOULD TEND TO INDICATE A LACK OF SUITABLE SPAWNING AREA.

IN THE FALL OF 1955, 1,500 FINGERLING BROOK WERE PLANTED IN THE BEAVER PONDS ABOVE THE SANDSTONE ROAD. AN ADDITIONAL 2,100 WERE PLANTED IN 1956. IF SUBSEQUENT CHECKS SHOW THAT THESE FISH SURVIVED, REGULAR PLANTS WILL BE REQUIRED TO MAINTAIN A FISHABLE POPULATION.

BEAVER CREEK - TRIBUTARY TO SOUTH FORK SAVERY CREEK

THIS STREAM CONSISTS OF CONTINUOUS BEAVER DAMS WITH THE NEWEST ONES LOCATED UPSTREAM. THEY ARE UP TO $1\frac{1}{2}$ ACRES IN SIZE. BROOK TROUT WERE OBSERVED IN ALMOST EVERY POND.

THE FOOD GRADE WAS FAIR TO GOOD. THERE WAS VERY LITTLE EVIDENCE OF FLOODING. SPAWNING FACILITIES WERE CONSIDERED ADEQUATE IN THE RIFFLE AREAS BETWEEN DAMS.

THE ONLY SILT OBSERVED WAS IN THE BEAVER PONDS. THESE BEAVER DAMS ARE ACCESSIBLE ONLY WITH FOUR-WHEEL DRIVE UNITS. THE FISH POPULATION IS BELIEVED TO BE ADEQUATE FOR THE RELATIVELY LIGHT FISHING PRESSURE THE CREEK RECEIVES. NO STOCKING IS RECOMMENDED AT THE PRESENT TIME. THIS STREAM IS LOCATED ENTIRELY ON THE MEDICINE BOW NATIONAL FOREST.

STRAWBERRY CREEK - TRIBUTARY TO SOUTH FORK SAVERY CREEK

THIS STREAM IS COMPOSED ALMOST ENTIRELY OF BEAVER DAMS, THE MAJORITY OF WHICH WERE BEING UTILIZED BY BEAVER. A GOOD POPULATION OF TROUT WAS OBSERVED. THOSE IDENTIFIED WERE BROOK TROUT. THE FOOD GRADE IS **GOOD**, COVER **EXCELLENT**, AND THE SPAWNING IS ADEQUATE. IT IS DOUBTFUL IF THIS STREAM RECEIVES MUCH FISHING PRESSURE SINCE IT IS INACCESSIBLE BY VEHICLE. **NO** FISH ARE RECOMMENDED FOR THIS STREAM SINCE THE PRESENT POPULATION IS ADEQUATE FOR THE LIGHT FISHING PRESSURE RECEIVED.

BATTLE CREEK - TRIBUTARY TO LITTLE SNAKE RIVER

BATTLE CREEK, HEADING AT BATTLE LAKE, IS ALMOST ENTIRELY WITHIN THE MEDICINE BOW NATIONAL FOREST.

THE UPPER SECTION IS A RAPID FLOWING STREAM WITH GOOD FISH COVER AND EXCELLENT SPAWNING CONDITIONS. THE FOOD GRADE IS GOOD AND THERE IS NO EVIDENCE OF SILTING. CIVILIAN CONSERVATION CORPS STREAM IMPROVEMENTS (ABOUT 1933-1934) COMPRISE 25 PERCENT OF THE FISH COVER.

THE WATER IS CLEAR. THIS STREAM IS ACCESSIBLE AT THE RAMBLER GUARD STATION. THE FEW ACTIVE BEAVER DAMS IN THIS SECTION ARE SMALL AND ARE NOT MUCH WIDER THAN THE CREEK PROPER. FORTY-SIX BROOK TROUT (3.7 TO 7 INCHES), AND EIGHT CUTTHROAT TROUT (5.2 TO 7.4 INCHES), WERE RECOVERED BY SHOCKING 400 FEET OF STREAM. THIS WAS CONSIDERED AN ADEQUATE POPULATION FOR THIS SECTION OF STREAM. THE SMALL SIZE OF THE FISH IS PROBABLY DUE TO OVERPOPULATION OF BROOK TROUT AND A SHORT LIFE EXPECTANCY.

THE MIDDLE SECTION (AT THE BRIDGE BELOW THE SANDSTONE RANGER STATION) HAS A RAPID FLOW, FAIR SPAWNING CONDITIONS, AND NO EVIDENCE OF SILTING. ACCESSIBILITY IS FAIR BY AUTOMOBILE FOR ABOUT ONE MILE. IT CAN BE REACHED BY PICKUP TRUCK FOR ABOUT FOUR MILES BELOW THE BRIDGE. FISH COVER IS FAIR WITH LARGE BOULDERS, OVERHANGING LOGS, AND SOME HOLES.

SHOCKING ABOVE THE BRIDGE PRODUCED THREE RAINBOW, THREE BROOK, AND FIVE WHITE-FISH. ROUGH FISH CONSISTED OF BLUEHEAD MOUNTAIN SUCKERS, SPECKLED DACE, AND SCULPINS. THE ROUGH FISH WERE NOT CONSIDERED ABUNDANT ENOUGH TO OFFER ANY SERIOUS COMPETITION TO GAME FISH. SHOCKING THREE MILES BELOW THE BRIDGE PRODUCED SEVERAL RAINBOW AND NUMEROUS WHITEFISH. THE FOOD GRADE IS GOOD AND THE WATER IS CLEAR.

THE LOCAL GOVERNMENT TRAPPER REMARKED THAT HE HAD EXPERIENCED GOOD CUTTHROAT TROUT FISHING $2\frac{1}{2}$ MILES TO 3 MILES ABOVE THE BRIDGE. THERE IS A CAMPGROUND NEAR THE BRIDGE.

THE LOWER SECTION OF BATTLE CREEK EXTENDS FROM THE MOUTH UPSTREAM TO THE FOREST BOUNDARY. THIS SECTION OF STREAM IS ALL ON THE GEORGE SALISBURY RANCH. THE LOWER TWO MILES OF STREAM HAS BEEN STRAIGHTENED BY DREDGING AND IS NOT CONSIDERED GOOD FISH HABITAT.

THE FLOW IS RAPID AND THE SILT IS UP TO THREE INCHES DEEP IN THE STILL WATER AREAS. THE STREAM MEANDERS THROUGH A HAY MEADOW AND IS WASHING THE BANKS BADLY. SOME RIP-RAPPING HAS BEEN DONE TO CONTROL EROSION. THE FLOOD GRADE IS GOOD AND THE WATER CLEAR AND COLORLESS. THIS LOWER SECTION IS FAIRLY ACCESSIBLE BY PICKUP TRAIL. ELECTRO-FISHING THROUGH 600 FEET OF STREAM PRODUCED 19 RAINBOW, SCULPINS, CREEK CHUBS, SPECKLED DACE, AND FLANNELMOUTH SUCKERS WERE ALSO FOUND IN MODERATE TO HEAVY NUMBERS. THE GAME FISH POPULATION IS CONSIDERED ADEQUATE. AT PRESENT IT IS DOUBTFUL THAT THIS SECTION RECEIVES VERY MUCH FISHING PRESSURE. ONLY ONE BEAVER DAM WAS OBSERVED IN THIS SECTION AND IT COVERED ONLY ABOUT ONE-HALF OF THE STREAM.

RAINBOW MAY HAVE MIGRATED UP BATTLE CREEK AFTER BEING PLANTED IN THE LITTLE SNAKE RIVER.

THE UPPER SECTION HAS AN ADEQUATE FISH POPULATION. IT IS DOUBTFUL THAT THE LOWER PORTION RECEIVES ANY HEAVY FISHING PRESSURE. THE MIDDLE SECTION IS ACCESSIBLE FOR SEVERAL MILES; THE WATER IS EXCELLENT HABITAT FOR TROUT AND IT IS ENTIRELY WITHIN THE NATIONAL FOREST. FOR THESE REASONS 1,200 CATCHABLE CUTTHROAT WERE PLANTED IN THE MIDDLE SECTION IN 1956. FOLLOW-UP CHECKS WILL INDICATE THE FEASIBILITY OF ANNUAL PLANTS OF THIS TYPE.

HASKINS CREEK - TRIBUTARY TO BATTLE CREEK

HASKINS CREEK IS ENTIRELY WITHIN THE MEDICINE BOW NATIONAL FOREST. IT DRAINS HEAVY FORESTED AND ROCK SLIDE AREAS. THIS IS A SMALL (3.7 C.F.S.), RAPID STREAM. THE WATER IS CLEAR AND FISH COVER CONSISTS OF OVERHANGING BANKS AND BRUSH, BOULDERS, AND POOLS. SILTATION IS MODERATE IN THE HOLES AND SPAWNING CONDITIONS ARE ADEQUATE.

ACCESSIBILITY IS GOOD FROM THE BAGGS-ENCAMPMENT ROAD BRIDGE. THERE IS A CAMP-
GROUND LOCATED NEAR THE BRIDGE WHICH IS USED REGULARLY THROUGHOUT THE SUMMER.
THE STREAM ABOVE AND BELOW THE BRIDGE CAN BE REACHED ONLY ON FOOT. THE FOOD
GRADE IS FAIR.

FROM A TOTAL OF 450 FEET ELECTRO-FISHED AT TWO POINTS ON THE CREEK, 41
BROOK TROUT AND 11 CUTTHROAT TROUT WERE RECOVERED. THE SIZES RANGED FROM 1.5 TO
8.9 INCHES. THE MAJORITY OF THE FISH WERE 4.0 TO 4.4 INCHES IN LENGTH. THE SMALL
SIZE IS PROBABLY DUE TO A COMBINATION OF HEAVY FISHING, OVERPRODUCTION OF BROOK
TROUT, AND A SHORT LIFE EXPECTANCY. ALL PLANTS MADE IN HASKINS CREEK HAVE BEEN
CUTTHROAT. THE BROOK TROUT WERE PROBABLY INTRODUCED IN HASKINS CREEK FROM BATTLE
LAKE VIA BATTLE CREEK.

PLANTING IS NOT RECOMMENDED AT THE PRESENT TIME BECAUSE OF THE EXISTING
TROUT POPULATION.

SMITH CREEK - TRIBUTARY TO BATTLE CREEK

SMITH CREEK, ENTIRELY WITHIN THE MEDICINE BOW NATIONAL FOREST, DRAINS
HEAVY TIMBERED AREAS. THIS STREAM IS SMALL (1.75 C.F.S.), RAPID, AND THE WATER
IS CLEAR AND COLORLESS. THE FOOD GRADE IS VERY GOOD, FISH SHELTER IS EXCELLENT,
AND SPAWNING CONDITIONS ARE ADEQUATE. THIS STREAM IS BORDERED WITH WILLOWS AND
ALDERS WHICH HANG OVER THE CREEK PROVIDING EXCELLENT FISH COVER AND CREATING
EXTREMELY DIFFICULT FISHING CONDITIONS. THERE WAS NO EVIDENCE OF ANY FLOODING
AND NO SILT WAS OBSERVED.

ACCESSIBILITY IS GOOD AT THE MOUTH (RAMBLER GUARD STATION). ELECTRO-FISHING
200 FEET OF STREAM PRODUCED 51 BROOK TROUT WITH A SIZE RANGE OF 3.5 TO 7.5 INCHES.
THIS IS AN ADEQUATE POPULATION FOR THIS STREAM. THIS STREAM PROBABLY SERVES AS
A SPAWNING AREA FOR TROUT OUT OF BATTLE CREEK AND ALSO PROVIDES EXCELLENT HABITAT
FOR THE FRY AND FINGERLING STAGES. NO STOCKING IS NECESSARY AT THIS TIME DUE TO
THE EXCELLENT FISH HABITAT.

WEST FORK BATTLE CREEK - TRIBUTARY TO BATTLE CREEK

THIS STREAM DRAINS A MOUNTAINOUS, FORESTED AREA. THE FLOW VARIES FROM SLUGGISH TO RAPID (4.5 C.F.S.). COPPER POLLUTION FROM HAGGERTY CREEK, WHICH FLOWS INTO THIS CREEK, IS A LIMITING FACTOR TO THE FISHERIES POTENTIAL, ESPECIALLY WHEN IRRIGATION WATER IS NOT BEING DIVERTED FROM HAGGERTY CREEK.

THE WATER IS CLEAR AND COLORLESS. THE FISH COVER IS LIMITED. SPAWNING FACILITIES ARE GOOD. THE FOOD GRADE IS POOR, BUT THIS IS ATTRIBUTED TO THE POLLUTION FROM HAGGERTY CREEK.

A PLANT OF CUTTHROAT TROUT (2,500 - THREE INCHES) WAS MADE IN 1951 IN THE VICINITY OF THE CONFLUENCE WITH THE MAIN FORK OF BATTLE CREEK. DURING SHOCKING OPERATIONS AT THREE STATIONS FOUR BROOK TROUT, TWO CUTTHROAT TROUT, AND A FEW ROUGH FISH WERE RECOVERED. THESE FISH WERE ALL TAKEN NEAR THE MOUTH OF THE STREAM.

FROM THE MOUTH OF THE STREAM UPSTREAM ABOUT TWO MILES, ACCESSIBILITY IS GOOD. BEYOND THIS POINT THE STREAM IS INACCESSIBLE.

NO STOCKING IS RECOMMENDED AT PRESENT BECAUSE OF THE COPPER POLLUTION FROM HAGGERTY CREEK.

HAGGERTY CREEK - TRIBUTARY TO WEST FORK BATTLE CREEK

THIS STREAM DRAINS A FORESTED, MOUNTAINOUS AREA WITHIN THE CONFINES OF THE MEDICINE BOW NATIONAL FOREST. THE FLOW VARIES FROM RAPID TO TORRENTIAL. DURING THE SUMMER MOST OF THE WATER IS DIVERTED FOR IRRIGATION PURPOSES. SOME DREDGING WAS DONE IN THE VICINITY OF THE MINE, BUT THIS APPARENTLY HAS NO EFFECT ON THE STREAM.

THE WATER IS CLEAR AND COLORLESS. COPPER POLLUTION FROM THE MINE IS HEAVY AND THUS WOULD ACCOUNT FOR THE ABSENCE OF FISH FOOD BELOW THE MINE DRAIN. AT THE MINE DUMP THE COPPER IN THE WATER TOTALED 0.40 PPM AND THREE MILES BELOW THE DUMP THE TOTAL AMOUNT WAS 0.05 PPM.

FISR COVER CONSISTS OF BOULDERS AND OVERHANGING BRUSH. SPAWNING FACILITIES FOR TROUT ARE VERY LIMITED. SHOCKING OPERATIONS AT TWO DIFFERENT POINTS FAILED TO PRODUCE ANY FISH. A PLANT OF SMALL CUTTHROAT TROUT WAS MADE IN 1946.

THE STREAM IS ACCESSIBLE ONLY BY JEEP TRAIL.

NO STOCKING RECOMMENDED UNTIL POLLUTION FROM THE COPPER MINE CAN BE DIVERTED OR ELIMINATED.

ANALYSIS OF THE WATER FROM HAGGERTY CREEK

WATER SAMPLE TAKEN AUGUST 8, 1955

	<u>PPM OF CU ION</u>
ABOVE THE MINE DUMP - - - - -	0.00
MINE DUMP - - - - -	8.64 - (22.15 PPM AS $CuSO_4$)
BELOW JUNCTION WITH LOST CREEK - -	0.00

WATER SAMPLE TAKEN SEPTEMBER 9, 1955

	<u>PPM OF CU ION</u>
JUST BELOW MINE DUMP WHERE THE TWO FORKS OF HAGGERTY CREEK JOIN	0.49
APPROXIMATELY 4 MILES BELOW MINE DUMP - - - - -	0.05

LOST CREEK - TRIBUTARY TO WEST FORK OF BATTLE CREEK

THIS STREAM DWAINS A HEAVY TIMBERED AREA AND IS ENTIRELY WITHIN THE MEDICINE BOW NATIONAL FOREST. IT IS ACCESSIBLE ONLY AT THE CAMPGROUND AND ENCAMPMENT-BAGGS ROAD. THE WATER IS CLEAR AND SLIGHTLY ALKALINE. THE FOOD GRADE IS GOOD AND THERE IS ONLY MODERATELY SILTING. FISH SHELTER IS LIMITED. THE STREAM IS SMALL (1 C.F.S.), AND RAPID. FLUCTUATION IS MODERATE AND SPAWNING CONDITIONS ARE EXCELLENT. THERE ARE A FEW SHALLOW, SMALL BEAVER DAMS ALONG THE STREAM.

SHOCKING 300 FEET OF STREAM PRODUCED 55 BROOK TROUT 2.2 TO 7.3 INCHES IN LENGTH. APPROXIMATELY 40% OF THE FISH WERE MISSED. ACCORDING TO THE PLANTING RECORDS ONLY CUTTHROAT TROUT HAVE BEEN PLANTED IN THIS STREAM. THE PLANTING POLICY OF THIS STREAM WILL BE CHANGED TO BROOK TROUT SINCE IT IS OBVIOUS THAT CUTTHROAT CANNOT BE ESTABLISHED, HOWEVER, THE PRESENT POPULATION IS ADEQUATE AND NO PLANTING IS REQUIRED.

MINNOW CREEK - TRIBUTARY TO LOST CREEK

MINNOW CREEK IS A VERY SMALL STREAM. THE DRAINAGE IS WITHIN THE CONFINES OF THE MEDICINE BOW FOREST AND THE ONLY FISHERIES POTENTIAL ARE THE BEAVER PONDS

ABOVE THE SAVERY-ENCAMPMENT ROAD.

THE WATER IS SOMEWHAT TURBID AND THE FOOD GRADE IS RELATIVELY POOR. SPAWNING FACILITIES ARE VERY LIMITED FOR TROUT.

IN SEPTEMBER 1955, 750 ONE TO ONE AND ONE-HALF INCH BROOK TROUT WERE PLANTED IN THE BEAVER PONDS. NO FISH HAD BEEN PLANTED PRIOR TO THIS DATE.

STOCKING SHOULD BE RESTRICTED TO HEADWATER LOCATIONS.

NORTH FORK LITTLE SNAKE RIVER - TRIBUTARY TO THE LITTLE SNAKE RIVER

THIS STREAM IS PRACTICALLY ALL INACCESSIBLE EXCEPT AT THE ROAD CROSSING. IT IS A RAPID STREAM WITH FAIR FISH COVER, ONLY LIGHT SILT, AND GOOD SPAWNING FACILITIES. THE FOOD GRADE IS GOOD AND THE WATER IS CLEAR.

THIS STREAM DRAINS FORESTED HILLS AND IS WITHIN THE CONFINES OF THE NATIONAL FOREST. ONE SMALL BEAVER DAM WAS OBSERVED. THE FLOW, WHICH IS 10 C.F.S., FLUCTUATES ONLY MODERATELY.

SHOCKING 400 FEET OF THE STREAM PRODUCED 6 SMALL CUTTHROAT AND A FEW SCULPINS. ALL PLANTINGS HAVE BEEN CUTTHROAT TROUT. NOTHING IS KNOWN OF THE FISHING PRESSURE BUT IT IS PROBABLY RELATIVELY LIGHT. NO STOCKING IS RECOMMENDED AT PRESENT. THIS CREEK SHOULD BE RETAINED AS A "CUTTHROAT SANCTUARY" AND ANY FISH PLANTED WILL BE COLORADO RIVER CUTTHROAT, IF AVAILABLE.

WEST BRANCH OF THE NORTH FORK OF THE LITTLE SNAKE RIVER - TRIBUTARY TO THE NORTH FORK OF THE LITTLE SNAKE RIVER

THE FLOW VARIATIONS IN THIS STREAM FLUCTUATES FROM MODERATE TO HEAVY NEAR THE UPPER END DUE TO A HEAVY RUNOFF IN THE SPRING. FORESTED HILLS, SAGEBRUSH, AND WILLOWS COMPRISE THE DRAINAGE AREA. THE WATER IS CLEAR AND SLIGHTLY ALKALINE.

THERE HAVE BEEN FOUR PREVIOUS PLANTS OF CUTTHROAT, THE LAST PLANT OF 6,400 ONE TO ONE AND ONE-HALF INCH FISH WAS MADE IN 1952. ONE LANDOWNER REPORTS THAT LAST SUMMER FOUR MEN CAUGHT 48 TROUT IN ABOUT TWO HOURS.

THE UPPER SECTION HAS GOOD SPAWNING FACILITIES AND THE COVER, WHICH CONSISTS OF POOLS, FALLEN TREES, AND OVERHANGING BRUSH, IS QUITE ADEQUATE. THE SUPPLY OF FOOD AVAILABLE IS SUFFICIENT FOR THE PRESENT POPULATION. DURING SHOCKING OPERATIONS FORTY-NINE CUTTHROAT 3 TO 10 INCHES, FOUR RAINBOW 7 TO 10½ INCHES, AND NUMEROUS SCULPINS WERE RECOVERED.

INVESTIGATION OF THE LOWER SECTION INDICATED THAT THERE ARE GOOD SPAWNING FACILITIES AND AMPLE FISH SHELTER. THE FOOD GRADE IS GOOD. DURING SHOCKING OPERATIONS, THIRTY-FIVE CUTTHROAT 3½ TO 8 INCHES, TWO RAINBOW 7.5 AND 8.3 INCHES, AND A FEW SCULPINS WERE RECOVERED.

PORTIONS OF THE UPPER SECTION ARE ON PRIVATE LAND AND ARE ACCESSIBLE BY AUTOMOBILE. THE LOWER SECTION WHICH IS IN THE MEDICINE BOW NATIONAL FOREST, IS ACCESSIBLE AT ONLY A FEW PLACES. NO STOCKING IS NEEDED SINCE THE PRESENT POPULATION IS CONSIDERED ADEQUATE TO MEET THE PRESENT SPORT FISHING DEMAND.

COTTONWOOD CREEK - TRIBUTARY TO LITTLE SNAKE RIVER

FISHERIES POTENTIAL LIMITED; STREAM MAINLY INTERMITTENT. SECTION ON HARRY TEMPLE RANCH REPRESENTS BORDERLINE TROUT HABITAT. NO STOCKING RECOMMENDED.

SPRING CREEK - TRIBUTARY TO COTTONWOOD CREEK

NO FISHERIES POTENTIAL; STREAM INTERMITTENT.

ROARING FORK - TRIBUTARY TO LITTLE SNAKE RIVER

THIS STREAM IS NOT SUBJECT TO EXTREME SPRING FLOODING BUT IT FLUCTUATES CONSIDERABLY FROM IRRIGATION DIVERSIONS. WATER TAKEN OUT IN THE UPPER SECTION REDUCES THE FLOW FROM 3 C.F.S. TO 1 C.F.S. IN THE MIDDLE SECTION. THE WATER IS CLEAR AND MODERATELY ALKALINE. SOME SILTING WAS OBSERVED BUT THERE WAS AN ADEQUATE AMOUNT OF CLEAN RIFFLE AREA FOR GOOD SPAWNING. THE FOOD GRADE IS GOOD BUT THE FISH POPULATION SMALL. THERE ARE SEVERAL BEAVER DAMS AT THE HEAD, HOWEVER, MOST OF THEM WERE WASHED OUT AND ABANDONED. TWO ACTIVE BEAVER DAMS WERE OBSERVED IN THE

MIDDLE PORTION. ABUNDANT BROOK TROUT FRY AND FINGERLINGS WERE OBSERVED IN THE HEADWATERS.

SHOCKING 300 FEET OF THE STREAM PROPER IN THE MIDDLE SECTION, PRODUCED ONLY ONE BROOK TROUT AND TWO SCULPINS. ONE DEAD BROOK TROUT WAS FOUND NEAR A BEAVER DAM THAT APPEARED TO HAVE BEEN BLOWN OUT. A BEAVER DAM WAS ALSO SHOCKED AND 17 BROOK TROUT (4.6 TO 8.5 INCHES) WERE RECOVERED. IT WAS ESTIMATED THAT 50 PERCENT OF THE FISH WERE MISSED.

THE CREEK IS PARTIALLY ACCESSIBLE BY PICKUP TRAIL AT THE HEAD AND ALSO AT THE SHEEP BRIDGE IN THE MIDDLE SECTION.

THE ENTIRE STREAM IS WITHIN THE MEDICINE BOW NATIONAL FOREST. NO FISHERIES MANAGEMENT IS POSSIBLE SINCE THE IRRIGATION DIVERSION TAKES ALMOST THE ENTIRE FLOW.

SOLOMON CREEK - TRIBUTARY TO NORTH FORK LITTLE SNAKE RIVER

THIS CREEK DRAINS MEADOW AND FOREST LAND WITHIN THE MEDICINE BOW FOREST. FLOW VARIATIONS ARE MODERATE AND EXTENSIVE RUNOFF DOES NOT OCCUR. THE AVERAGE FLOW IS APPROXIMATELY 1.1 C.F.S.

SPAWNING FACILITIES AND COVER ARE EXCELLENT. DURING SHOCKING OPERATIONS 34 CUTTHROAT TROUT 3 TO 7 INCHES WERE RECOVERED. THIS STREAM HAS NEVER BEEN STOCKED AND SHOULD BE RETAINED AS A "CUTTHROAT SANCTUARY".

THE STREAM IS ACCESSIBLE ONLY BY MEANS OF A POOR SHEEP TRAIL.

NO STOCKING IS REQUIRED BECAUSE OF AN EXCELLENT TROUT POPULATION. IN THE FUTURE, IF STOCKING BECOMES NECESSARY, FISH PLANTED SHOULD BE COLORADO RIVER CUTTHROAT.

ROSE CREEK, GREEN TIMBER CREEK, DEADMAN CREEK, AND HARRISON CREEK - TRIBUTARIES TO THE NORTH FORK OF THE WEST BRANCH OF THE LITTLE SNAKE RIVER

THESE CREEKS ARE VERY INACCESSIBLE. THEY CAN BE REACHED ONLY BY HORSEBACK OR ON FOOT. A LOCAL RANCHER REPORTED THAT THESE STREAMS ARE SMALL POPULATED WITH CUTTHROAT TROUT AND RECEIVE NO FISHING.

SUMMARY OF RECOMMENDATIONS

LITTLE SNAKE RIVER

THAT PORTION OF THE LITTLE SNAKE RIVER BELOW BAGGS IS EXTREMELY TURBID AND SILTY AND OFFERS VERY POOR FISH HABITAT. BETWEEN BAGGS AND DIXON THE STREAM IS BETTER BUT IS VERY WARM FOR TROUT. CHANNEL CATFISH WILL BE PLANTED HERE IN AN ATTEMPT TO ESTABLISH A FISHERY. ABOVE DIXON THE WATER IS CLEARER, COOLER, AND MORE SUITABLE FOR TROUT. CATCHABLE SIZE RAINBOW TROUT ARE RECOMMENDED IN AN EFFORT TO ESTABLISH A FISHABLE POPULATION.

MUDDY CREEK DRAINAGE

ON THOSE PORTIONS OF MUDDY CREEK, EAST FORK OF MUDDY CREEK, AND LITTLEFIELD CREEK, OPEN TO PUBLIC FISHING AND HAVING A FISHERIES POTENTIAL, AN ATTEMPT WILL BE MADE TO FOSTER THIS POTENTIAL BY PLANTING FINGERLING TROUT IN ACCESSIBLE PLACES.

ALL OTHER CREEKS IN THIS DRAINAGE HAVE ADEQUATE FISH POPULATIONS WITH THE EXCEPTION OF A PORTION OF STONE CREEK. BEAVER PONDS ON THIS CREEK ARE RECOMMENDED FOR STOCKING WITH FINGERLING BROOK TROUT.

THE LOWER PORTIONS OF MOST OF THESE CREEKS ARE VERY TURBID, SILTY, AND TOO WARM FOR TROUT. NO STOCKING IS RECOMMENDED.

BIG SAVERY CREEK DRAINAGE

THE UPPER PORTIONS IN GENERAL, OF ALL THE CREEKS IN THIS DRAINAGE, HAVE AN ADEQUATE POPULATION OF TROUT. THOSE PORTIONS OF THE STREAMS LYING CLOSE TO ROADS HAVE LIMITED TROUT POPULATIONS BECAUSE OF FISHING PRESSURE, POOR HABITAT, OR NO SPAWNING FACILITIES. CATCHABLE TROUT WILL BE PLANTED IN FISH CREEK AND THE BIG SAVERY CREEK. IT IS ALSO RECOMMENDED THAT SUB-CATCHABLES BE PLANTED IN THESE STREAMS AS WELL AS IN THE LITTLE SAVERY CREEK (NEAR THE MOUTH), NORTH FORK SAVERY CREEK (BELOW THE SANDSTONE ROAD), AND IN THE SOUTH FORK SAVERY CREEK (NEAR THE

TABLE 4

INITIAL TROUT STOCKING RECOMMENDATIONS

BIG SAVERY CREEK	BOYER, BLAIR, AND TAYLOR RANCHES	5,000 FINGERLING RAINBOW
BIG SAVERY CREEK	MONTGOMERY RANCH - R 89, T 15, S 35	2,000 FINGERLING RAINBOW
EVANOFF CREEK	IN BEAVER PONDS	1,000 FINGERLING BROOK
NORTH FORK BIG SAVERY	BEAVER PONDS AT HEAD	5,000 FINGERLING BROOK
STONEY CREEK		1,000 FINGERLING BROOK
MUDDY CREEK	R 89, T 17, S 29, 32, 33	2,000 FINGERLING BROWN
LITTLE SNAKE RIVER	SAVERY TO DIXON	500 CATCHABLE RAINBOW
LITTLE SNAKE RIVER	BELOW DIXON	50,000 CHANNEL CATFISH
FISH CREEK		800 CATCHABLE RAINBOW
SOUTH FORK BIG SAVERY	NEAR SANDSTONE ROAD	500 CATCHABLE RAINBOW
BATTLE CREEK	BELOW FOREST BRIDGE	500 CATCHABLE RAINBOW

TABLE 5

CHEMISTRY AND BOTTOM FAUNA OF MAJOR WATERS

WATERS	PH	M.O.	PH-TH	BOTTOM FAUNA COLLECTED
LITTLE SNAKE RIVER	7.6	88 PPM	7 PPM	PHYSA GRANULUS HIRUDINEA TRICHOPTERA EPHEMERIDA DIPTERA PLECOPTERA
MUDDY CREEK	7.3	174 PPM	0	PHYSA PLECOPTERA TRICHOPTERA EPHEMERIDA DIPTERA COLEOPTERA HEMIPTERA ARACHNID
BIG SAVERY CREEK	7.0	142 PPM	8 PPM	PHYSA COLEOPTERA EPHEMERIDA TRICHOPTERA DIPTERA
BIG SANDSTONE CREEK	7.2	46 PPM	0	PHYSA TRICHOPTERA PLECOPTERA DIPTERA
LITTLE SAVERY CREEK	7.6	116 PPM	31 PPM	PHYSA PISIDIUM DIPTERA TRICHOPTERA PLECOPTERA EPHEMERIDA
NORTH FORK BIG SAVERY CREEK	7.6	104 PPM	11 PPM	PHYSA PISIDIUM TRICHOPTERA PLECOPTERA COLEOPTERA CHIRONOMIDEA
SOUTH FORK BIG SAVERY CREEK	7.4	122 PPM	0	PHYSA PLECOPTERA TRICHOPTERA COLEOPTERA HIRUDINEA
BATTLE CREEK	7.3	37 PPM	0	DIPTERA TRICHOPTERA PLECOPTERA EPHEMERIDA
NORTH FORK LITTLE SNAKE RIVER	7.2	29 PPM	0	TRICHOPTERA ODONATA EPHEMERIDA COLEOPTERA

TABLE 5

CHEMISTRY AND BOTTOM FAUNA OF MAJOR WATERS

WATERS	PH	M.O.	PH-TH	BOTTOM FAUNA COLLECTED
LITTLE SNAKE RIVER	7.6	88 PPM	7 PPM	PHYSA GRANULUS HIRUDINEA TRICHOPTERA EPHEMERIDA DIPTERA PLECOPTERA
MUDDY CREEK	7.3	174 PPM	0	PHYSA PLECOPTERA TRICHOPTERA EPHEMERIDA DIPTERA COLEOPTERA HEMIPTERA ARACHNID
BIG SAVERY CREEK	7.0	142 PPM	8 PPM	PHYSA COLEOPTERA EPHEMERIDA TRICHOPTERA DIPTERA
BIG SANDSTONE CREEK	7.2	46 PPM	0	PHYSA TRICHOPTERA PLECOPTERA DIPTERA
LITTLE SAVERY CREEK	7.6	116 PPM	31 PPM	PHYSA PISIDIUM DIPTERA TRICHOPTERA PLECOPTERA EPHEMERIDA
NORTH FORK BIG SAVERY CREEK	7.6	104 PPM	11 PPM	PHYSA PISIDIUM TRICHOPTERA PLECOPTERA COLEOPTERA CHIRONOMIDEA
SOUTH FORK BIG SAVERY CREEK	7.4	122 PPM	0	PHYSA PLECOPTERA TRICHOPTERA COLEOPTERA HIRUDINEA
BATTLE CREEK	7.3	37 PPM	0	DIPTERA TRICHOPTERA PLECOPTERA EPHEMERIDA
NORTH FORK LITTLE SNAKE RIVER	7.2	29 PPM	0	TRICHOPTERA ODONATA EPHEMERIDA COLEOPTERA

**LITTLE SNAKE RIVER
DRAINAGE
SOUTH CENTRAL
WYOMING**

WYOMING DEPARTMENT OF
FISH DIVISION
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LEGEND

- 1:50,000 Scale
- 1:100,000 Scale
- 1:200,000 Scale
- 1:500,000 Scale
- 1:1,000,000 Scale

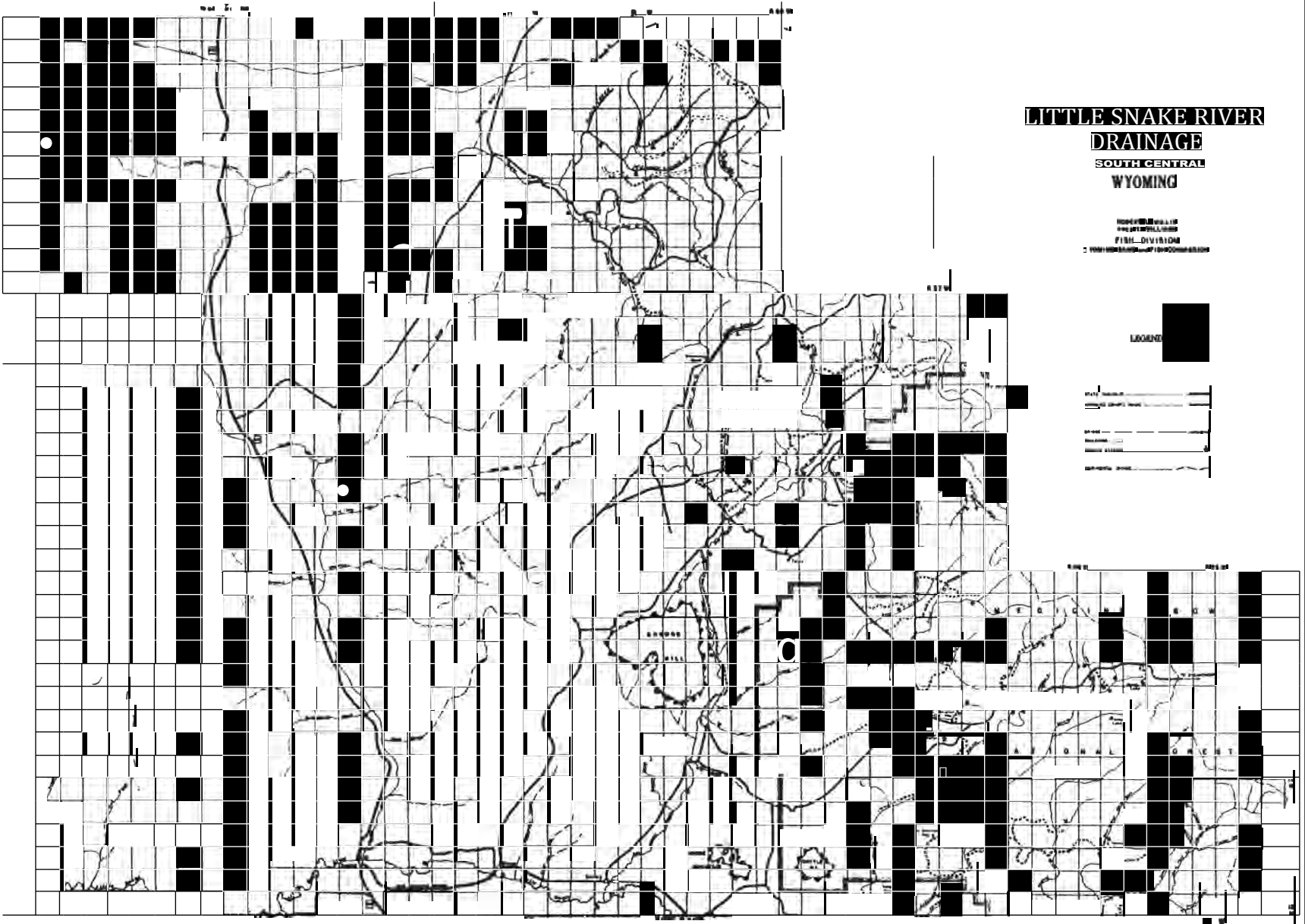




FIGURE 1. CHANNEL CATFISH TAKEN FROM THE LITTLE SNAKE RIVER BELOW DIXON.

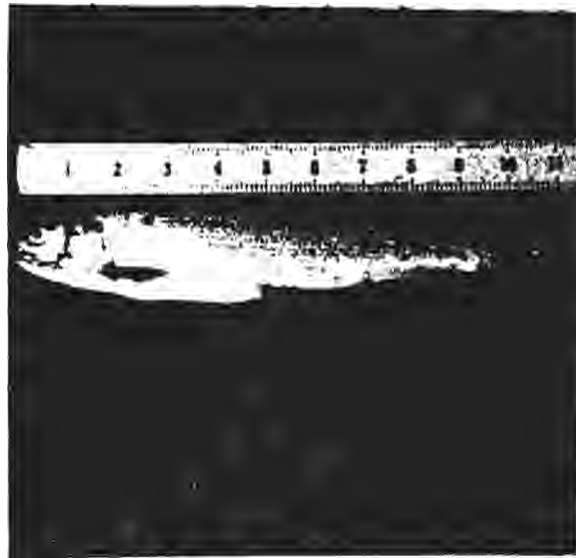


FIGURE 2. MOUNTAIN WHITEFISH FROM BIG SAVERY CREEK.

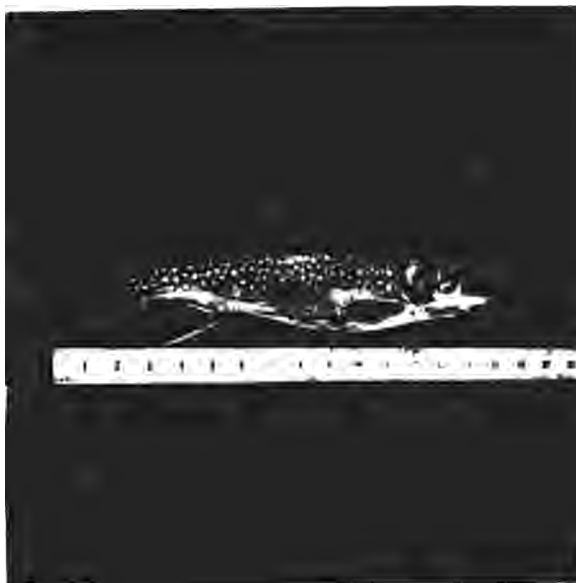


FIGURE 3. BROOK TROUT FROM NORTH FORK SAVERY CREEK.



FIGURE 4. LITTLE SNAKE RIVER AT BAGGS SHOWING EXTREME TURBIDITY; WATER TEMPERATURE WAS 84° F. TROUT HABITAT IS NON-EXISTENT IN THIS SECTION.



FIGURE 5. LITTLE SNAKE RIVER ABOVE DIXON. IN THIS SECTION THE TROUT FOOD SUPPLY IS FAIR AND COVER IS ADEQUATE.



FIGURE 6. SILT COVERED ROCKS IN LITTLE SNAKE RIVER. AQUATIC INSECTS USEFUL AS TROUT FOODS ARE GREATLY REDUCED IN NUMBER IN SITUATIONS OF THIS TYPE.



FIGURE 7. MUDDY CREEK NEAR THE MOUTH OF MCKINNEY CREEK.



FIGURE 8. BEAVER DAM ON STONEY CREEK. SITUATIONS LIKE THE PICTURED ARE THE ONLY FISHERIES POTENTIAL ON THIS CREEK.



FIGURE 9. FISH CREEK SHOWING SHIFTING SAND BOTTOM. THIS AREA WAS POOR IN TROUT FOOD AND SPAWNING AREAS WERE LACKING.



• FIGURE 10. MIDDLE SECTION OF ROARING FORK; WATER LOW DUE TO IRRIGATION DIVERSIONS. SCULPINS WERE THE ONLY FISH TAKEN IN 300 FEET OF ELECTRO-FISHING.



FIGURE 11 BATTLE CREEK
IMPROVEMENT

OLD C.C.C. STREAM



DAM ON
ALMOST
SANDSTON
REEF



FIGURE 13. LITTLE SANDSTONE CREEK BELOW THE SANDSTONE ROAD. NEARLY DRY ○ RING THE SUMMER OF 1955.



FIGURE 14. LITTLE SAVERY HEAD. THE FOOD GRADE AND SHELTER FOR TROUT IS GOOD, HOWEVER, LACK OF RIFFLE AND GRAVEL AREAS MAKE SPAWNING CONDITIONS POOR.



FIGURE 15. BIG SANDSTONE CREEK NEAR MOUTH AFTER A RAIN. NOTE THE EXTREMELY TURBID CONDITION OF THE STREAM; A SITUATION NOT CONDUSIVE TO GOOD TROUT PRODUCTION.



FIGURE 16. SILT IN BIG SANDSTONE CREEK NEAR MOUTH AFTER A RAIN. SILTING CONDITIONS HAVE REDUCED STREAM PRODUCTIVITY IN MANY AREAS OF THE LITTLE SNAKE RIVER DRAINAGE.



FIGURE 17. EFFECTS OF HEAVY FLOODING ON BIG SANDSTONE CREEK.



FIGURE 18. STREAM IMPROVEMENT DEVICE CONSTRUCTED IN 1936 BY C.C.C. AND IS STILL AFFORDING GOOD TROUT COVER.



FIGURE 19. ELECTRO-FISHING ON UPPER BATTLE CREEK. A GOOD TROUT POPULATION.



FIGURE 20. NATURAL FISH FOOD (CADDIS FLY LARVAE CASES) FROM LITTLE SANDSTONE CREEK.



FIGURE 21. TYPICAL LONG SHALLOW RIFFLE ON WEST FORK BATTLE CREEK. THIS AFFORDS POOR COVER AND LIMITED FISH FOOD.

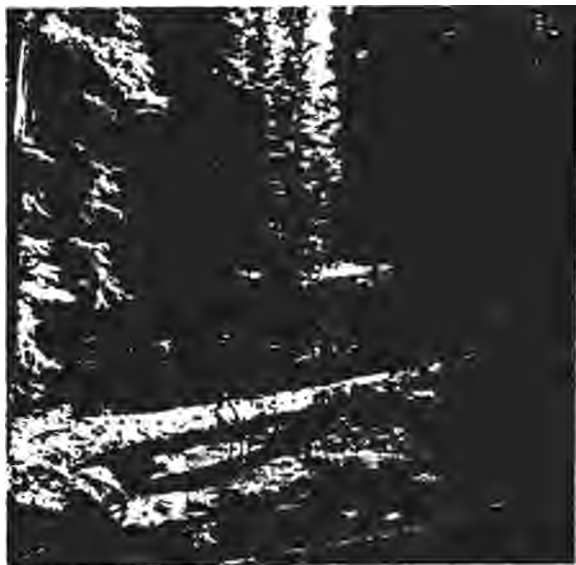


FIGURE 22. TYPICAL SECTION OF THE UPPER END OF BIG SANDSTONE CREEK.



FIGURE 23. BIG SAVERY CREEK NEAR LOWER END.

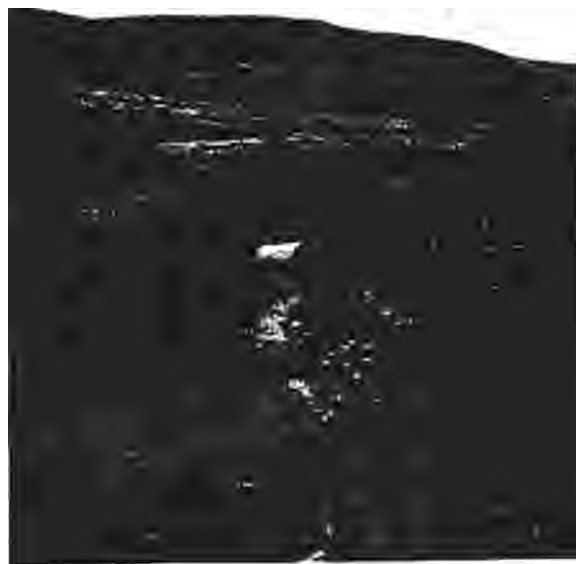


FIGURE 24. DIRTYMAN CREEK NEAR SANDSTONE ROAD; VERY LOW WITH SHALLOW RIFFLES.



FIGURE 25. BATTLE CREEK NEAR FOREST BOUNDARY.



FIGURE 26. TAKING WATER SAMPLES NEAR THE OLD COPPER MINE ON Haggerty Creek. THIS MINE IS THE SOURCE OF COPPER POLLUTION WHICH HAS KILLED ALL AQUATIC LIFE IN THE STREAM



BEAVER DAMSONN ININEYRIK



LOMON CREEK A GOOD POPULATION OF OUT-THRO T
HERE.





FIGURE 31. BEAVER DAMS ON BIG SANDSTONE CREEK WHICH ARE WASHED OUT ALMOST EVERY YEAR.



FIGURE 32. HASKINS CREEK. CLEAN GRAVEL BOTTOM IS AN EXCELLENT SPAWNING BED.



FIGURE 33. EIGHT POUND BROWN TROUT COLLECTED FROM THE LITTLE SAVERY CREEK.



FIGURE 34. SMITH CREEK. THIS STREAM HAS VERY GOOD COVER AND AN EXCELLENT POPULATION OF BROOK TROUT.



FIGURE 35. HASKINS CREEK. SMALL BROOK TROUT AND CUTTHROAT TROUT ARE COMMON. COVER LIMITED.

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