

IDAHO DEPARTMENT OF FISH AND GAME

Stephen P. Mealey, Director

FEDERAL AID IN FISH RESTORATION
Job Performance Report
Program F-71-R-20



REGIONAL FISHERIES MANAGEMENT INVESTIGATIONS SOUTHWEST REGION (Subprojects 1-D, II-D III-D, IV-D)

- PROJECT I. SURVEYS AND INVENTORIES
 - Job a. Southwest Region Mountain Lakes Investigations
 - Job b. Southwest Region Lowland Lakes Investigations
 - Job c. Southwest Region Rivers and Streams Investigations
 - Job d. Southwest Region Salmon and Steelhead Investigations
- PROJECT II. TECHNICAL GUIDANCE
- PROJECT III. HABITAT MANAGEMENT
- PROJECT IV. POPULATION MANAGEMENT

BY

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1995 ANNUAL PERFORMANCE REPORT

State of: Idaho

Program: Fisheries Management F-71-R-20

Project I: Surveys and Inventories

Subproject I-D: Southwest Region

Job No.: a

Title: Mountain Lakes Investigations

Contract Period: July 1, 1995 to June 30, 1996

ABSTRACT

Sixty-one high mountain lakes were visited in 1995. Lakes were in the Little Queens River drainage of the Middle Fork Boise River, upper South Fork Payette River drainage and in the Pinchot and Lake Creek drainages of the upper South Fork Payette River drainage. Gill net sampling only was conducted in 20 lakes, gill net and angling in 12 lakes, angling only in 5 lakes and observations only in 24 lakes. Twenty-eight of 61 lakes contained fish populations. A database was developed to store and retrieve high mountain lake information.

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OBJECTIVES

To survey all mountain lakes within the region and document presence and absence of fish populations. Information will be used to develop a high lake management plan for the Southwest Region.

METHODS

Mountain lakes were surveyed by regional fisheries staff during three extended trips in 1995. All lakes were in or near the Sawtooth National Recreation Area or the Sawtooth Wilderness Area. The lakes were visited to identify the presence of fish and to identify which lakes should remain fishless. Some lakes were sampled with gill nets, some were angled and some were just observed for fish activity. Gill nets were 30.5 m long with 7.6 m panels of 19, 25, 32 and 38 mm square mesh monofilament. All fish captured in gill nets were measured to the nearest mm and weighed to the nearest g. Fish condition was calculated and reported. Lake position was established with a Global Positioning System hand-held device. Lakes were visually surveyed for campsites and signs of human use and notes taken about difficulty of access. Any amphibians observed were documented. Water quality measurements were taken at some lakes. Data collected was entered into a mountain lakes database and one page reports were produced on each lake visited.

RESULTS

Sixty-one lakes were visited by regional fishery staff in this program in 1995. Three extended trips were taken, two via horse and pack animal, and one utilizing pack goats and backpacking. A total of 40 lakes in the South Fork Payette, 19 in the Middle Fork Boise, and 2 in the Middle Fork Salmon River drainages were surveyed. Gill net sampling only was conducted in 20 lakes, gill net and angling in 12, angling only in 5 and observations only taken in 24 lakes. The 24 lakes with observations only taken were small shallow lakes that had not been stocked historically. These lakes were visited to document presence or absence of fish. Of the lakes visited, 28 had fish populations and 33 had no fish. Appendix A contains a report of each of the 61 lakes visited in 1995.

Appendix A. Mountain Lake General Information

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	ARDETH	Quadmap:	Mount Everly
Planting Number:	090211	Outlet:	Tenlake Ck
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	7N	Lake Type:	Moraine
Range:	12E	Elevation:	2509 m
Section:	1	Size:	36.3 ha
Latitude:	43 58.10 N	Maximum Depth:	16.8 m
Longitude:	115 00.94 W	Aspect:	NW
Spawning Potential:	Good spawning potential for WCT, excellent potential for BKT.		
		Comments:	Receives heavy angling pressure.

Chemical Report:

Date: 8/15/95
 Alkalinity (mg/l CaCO3): 20
 Hardness (mg/l CaCO3):
 pH: 8.3
 Conductivity (uS/cm): 10
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/15/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
BKT	Gillnet	8/15/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
BKT	241	79	223	112	1.8

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
BKT		1			1	

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	ARLIN	Quadmap:	Mount Everly
Planting Number:	09U138	Outlet:	Unnamed
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	7N	Lake Type:	Moraine
Range:	12E	Elevation:	2714 m
Section:	16	Size:	1.77 ha
Latitude:	43 56.92 N	Maximum Depth:	9.14 m
Longitude:	115 03.55 W	Aspect:	N
Spawning Potential:		Comments:	

Chemical Report:

Date: 8/11/95
 Alkalinity (mg/l CaCO3): 20
 Hardness (mg/l CaCO3):
 pH: 9
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/11/95
 Number of Anglers: 2
 Hours Fished: 1.5
 Total Caught: 0
 Catch per Hour: 0

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
 Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	BENEDICT	Quadmap:	Mount Everly
Planting Number:	090193	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	7N	Lake Type:	Moraine-meadow
Range:	12E	Elevation:	2604 m
Section:	9	Size:	6.81 ha
Latitude:	43 57.81 N	Maximum Depth:	6.1 m
Longitude:	115 01.03	Aspect:	S
Spawning Potential:		Comments:	Moderate to heavy human use, used by "Sawtooth Outfitters."

Chemical Report:

Date: 8/12/95
 Alkalinity (mg/l CaCO3): 20
 Hardness (mg/l CaCO3):
 pH: 7.6
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/12/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Mean Length and Weight Report:

Species	Geartype	Date	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	Gillnet	8/12/95	268	68	247	148	1.1

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT		1			1	

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	BROWNS	Quadmap:	Nahneke Mtn
Planting Number:	100221	Outlet:	Little Queens R
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	MFBR
Township:	7N	Lake Type:	Moraine
Range:	11E	Elevation:	2524 m
Section:	23	Size:	5.45 ha
Latitude:	43 56.00 N	Maximum Depth:	6.1 m
Longitude:	115 06.70 W	Aspect:	NW
Spawning Potential:		Comments:	Lake receives heavy camping use, big trail around entire lake, campsites located wherever possible.

Chemical Report:

Date: 8/25/95
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C): 58
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/25/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
WCT	Gillnet	8/25/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	220		93		0.9

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT			1			

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	CACHE CREEK #4	Quadmap:	Cache Creek
Planting Number:	070847	Outlet:	Cache Ck
County:	VALLEY	Drainage:	MFSR
National Forest:	BOISE	Tributary To:	Bear Valley Ck
Township:	11N	Lake Type:	
Range:	9E	Elevation:	2372 m
Section:	19	Size:	0.90 ha
Latitude:		Maximum Depth:	2 m
Longitude:		Aspect:	
Spawning Potential:		Comments:	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/12/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Species	Geartype	Date	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor

Amphibian Report:

Date: 8/12/95
 Spotted Frog Adults: 3
 Spotted Frog Juv: 100
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	CAMP	Quadmap:	Mount Everly
Planting Number:	100291	Outlet:	Flytrip Ck
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	Flytrip Ck
Township:	7N	Lake Type:	Bog
Range:	12E	Elevation:	2592 m
Section:	13	Size:	ha
Latitude:		Maximum Depth:	4.3 m
Longitude:		Aspect:	SE
Spawning Potential:		Comments:	
Good; possible in both inlet and outlet.		Saw six, 2" trout in outlet stream.	

Chemical Report:

Date: 8/13/95
 Alkalinity (mg/l CaCO3): 20
 Hardness (mg/l CaCO3):
 pH: 8
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 8/13/95
 Human Use:
 Campsite Condition: Poorly Developed
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: Good
 Trail Difficulty: Moderate
 Litter:

Angler Information:

Date: 8/13/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Mean Length and Weight Report:

Species	Geartype	Date	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	Gillnet	8/13/95	222	0	95	0	0.9

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
 Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT			2			

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name: DIAMOND
 Planting Number: 100218
 County: ELMORE
 National Forest: BOISE
 Township: 7N
 Range: 11E
 Section: 23
 Latitude: 43 55.62
 Longitude: 115 02.79
 Spawning Potential:
 No inlet, possibly in the outlet.

Quadmap: Nahneke Mtn
 Outlet: Little Queens R
 Drainage: MFBR
 Tributary To: MFBR
 Lake Type: Moraine
 Elevation: 2456 m
 Size: 1.59 ha
 Maximum Depth: 9.2 m
 Aspect: NW

Comments:
 There is a pack trail from Little Queens trail, fish observed were nice; the stocking rate/time looks good, there is a light hiking trail in some spots.

Chemical Report:

Date: 8/25/95
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C): 61
 Secchi (m):

Human Use Report:

Date: 8/25/95
 Human Use:
 Campsite Condition:
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: Poor
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/25/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Mean Length and Weight Report:

Species	Geartype	Date	Mean Length (mm)	Mean Weight (g)	S.E.	C-Factor
WCT	Gillnet	8/25/95	258	168		1.0

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT				1		

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	EDNA (#1)	Quadmap:	Snowside Peak
Planting Number:	090234	Outlet:	SFPR
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	7N	Lake Type:	Moraine
Range:	13E	Elevation:	2562 m
Section:	6	Size:	25.4 ha
Latitude:	43 58.22 N	Maximum Depth:	10.7 m
Longitude:	114 59.28 W	Aspect:	N
Spawning Potential:		Comments:	Angler use is very heavy, anglers report that fish are large (14"-17") and in good condition, lake appears much deeper than maximum observed depth.

Chemical Report:

Date: 8/15/95
 Alkalinity (mg/l CaCO3): 20
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/15/95
 Number of Anglers: 1
 Hours Fished: 6
 Total Caught: 12
 Catch per Hour: 2

Mean Length and Weight Report:

Species	Geartype	Date
WCT	Gillnet	8/15/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	310	40	361	144	1.1

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
WCT	12	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT				1	1	

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	ELK	Quadmap:	Warbonnet Peak
Planting Number:	090185	Outlet:	SFPR
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Meadow-bog
Range:	12E	Elevation:	2028 m
Section:	16	Size:	10 ha
Latitude:	44 01.45 N	Maximum Depth:	2.9 m
Longitude:	115 04.15 W	Aspect:	NW
Spawning Potential:	Comments:		
Potential good for BKT, there are many seeps that feed the lake, potential is poor for WCT spawning.	Heavy camping and fishing use. There are many campsites and fire rings around the lake.		

Chemical Report:

Date: 8/16/95
 Alkalinity (mg/l CaCO₃): 40
 Hardness (mg/l CaCO₃):
 pH:
 Conductivity (uS/cm): 30
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/16/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Mean Length and Weight Report:

Species	Gear type	Date
BKT	Gillnet	8/16/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
BKT	198	33	87	38	1.1

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
BKT		1	1			

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
 Salamanders:

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	FALL CREEK #1	Quadmap:	Mount Everly
Planting Number:	090186	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Bog
Range:	12E	Elevation:	2616 m
Section:	29	Size:	2.27 ha
Latitude:	43 59.82	Maximum Depth:	3.7 m
Longitude:	115 5.63	Aspect:	E
Spawning Potential:		Comments:	
Limited or none.		Fairly shallow bog lake with mud bottom. Recommend GRY for this lake.	

Chemical Report:

Date: 9/21/95
 Alkalinity (mg/l CaCO3): 5
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C): 54
 Secchi (m): 3.7

Human Use Report:

Date: 9/21/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: Rare

Angler Information:

Date: 9/21/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
	Gillnet	9/21/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date: 9/21/95
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	FALL CREEK #2	Quadmap:	Mount Everly
Planting Number:	090187	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Bog
Range:	12E	Elevation:	2616 m
Section:	32	Size:	2.72 ha
Latitude:	43 59.48	Maximum Depth:	8 m
Longitude:	115 5.59	Aspect:	E
Spawning Potential:		Comments:	
Excellent. Several year classes of trout represented in net catch indicating successful reproduction most or all years.		Recommend no stocking, there is ample natural production.	

Chemical Report:

Date: 9/21/95
 Alkalinity (mg/l CaCO₃): 5
 Hardness (mg/l CaCO₃):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C): 54
 Secchi (m): 7

Human Use Report:

Date: 9/21/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: None

Angler Information:

Date: 9/21/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0

Mean Length and Weight Report:

Species	Geartype	Date
	Gillnet	9/21/95
WCT	Gillnet	9/21/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	217	15	104	24	0.8

Catch per Hour:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT	1	4	3	3		

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	FALL CREEK #3	Quadmap:	Mount Everly
Planting Number:	090188	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Cirque
Range:	12E	Elevation:	2653 m
Section:	32	Size:	5.90 ha
Latitude:	43 59.38	Maximum Depth:	8 m
Longitude:	115 5.70	Aspect:	E
Spawning Potential:		Comments:	
No inlet or outlet. No reproduction likely.		Recommend WCT for this lake.	

Chemical Report:

Date: 9/21/95
 Alkalinity (mg/l CaCO3): 5
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C): 53
 Secchi (m):

Human Use Report:

Date: 9/21/95
 Human Use:
 Campsite Condition: Poorly Developed
 Campsite Number: 0
 Campfire Rings: 1
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: None

Angler Information:

Date: 9/21/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
Captured						

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	FLATTOP #1, LOWER	Quadmap:	Nahneke Mtn
Planting Number:	100212	Outlet:	Little Queens R
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	MFBR
Township:	7N	Lake Type:	Moraine
Range:	11E	Elevation:	2515 m
Section:	26	Size:	1.13 ha
Latitude:	43 55.05	Maximum Depth:	6.1 m
Longitude:	115 08.44	Aspect:	NW
Spawning Potential:		Comments:	Lake is hard to find, poor trail with one little campsite, catch fish on every cast, gillnet was out for 1.5 hours in early evening, caught 5 WCT.

Chemical Report:

Date: 8/23/95
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C): 59
 Secchi (m):

Human Use Report:

Date: 8/23/95
 Human Use:
 Campsite Condition: Poorly Developed
 Campsite Number: 1
 Campfire Rings: 0
 Trail Condition: Poor
 Trail Difficulty:
 Litter: None

Angler Information:

Date: 8/23/95
 Number of Anglers: 2
 Hours Fished: 3
 Total Caught: 50
 Catch per Hour: 16.6

Mean Length and Weight Report:

Species	Geartype	Date
WCT	Gillnet	8/23/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	211		120		1.3

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
WCT	50	150	299
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT			1			

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	FLATTOP #2, UPPER	Quadmap:	Nahneke Mtn
Planting Number:	100213	Outlet:	Little Queens R
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	MFBR
Township:	7N	Lake Type:	Cirque
Range:	11E	Elevation:	2775 m
Section:	25	Size:	1.36 ha
Latitude:	43 54.71	Maximum Depth:	1.2 m
Longitude:	115 08.20	Aspect:	NE
Spawning Potential:	None.	Comments:	Shallow lake, no fish were observed in looking for half hour. No stocking history for lake.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/23/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Species	Geartype	Date	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	FROG POND	Quadmap:	Edaho Mtn
Planting Number:	09U124	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Bog
Range:	11E	Elevation:	2689 m
Section:	26	Size:	0.45 ha
Latitude:	43 59.95	Maximum Depth:	2.5 m
Longitude:	115 8.58	Aspect:	E
Spawning Potential:		Comments:	
None Outlet to lake 09U083. No flow at this time. Too steep for potential fish movement upstream.		No fish production potential.	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/19/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: None

Angler Information:

Date: 9/19/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	FROG POND	Quadmap:	Edaho Mtn
Planting Number:	09U125	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Bog
Range:	11E	Elevation:	2677 m
Section:	26	Size:	0.22 ha
Latitude:	44 0.02	Maximum Depth:	3 m
Longitude:	115 8.48	Aspect:	E
Spawning Potential:	None.	Comments:	Small shallow pond with no fish production potential.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/19/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: None

Angler Information:

Date: 9/19/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	HEART	Quadmap:	Snowside Peak
Planting Number:	100292	Outlet:	Pack Ck
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	Flytrip Ck
Township:	7N	Lake Type:	Moraine
Range:	12E	Elevation:	2611 m
Section:	13	Size:	13.6 ha
Latitude:	43 56.415	Maximum Depth:	19 m
Longitude:	114 59.885	Aspect:	W
Spawning Potential:	Some. Observed 2" trout at outlet.		
	Comments: Rock, sand, mud bottom. Good inlet from PS#1. Limited spawn potential. Saw several (>10) 2-3" trout in outlet.		

Chemical Report:

Date: 8/13/95
 Alkalinity (mg/l CaCO3): 20
 Hardness (mg/l CaCO3):
 pH: 8.1
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/13/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
WCT	Gillnet	8/13/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	214	8	100	10	1.0

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT	2	10	8	7		

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	INGEBORG	Quadmap:	Mount Everly
Planting Number:	100306	Outlet:	MFBR
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	MFBR
Township:	7N	Lake Type:	Moraine
Range:	12E	Elevation:	2711 m
Section:	15	Size:	12.7 ha
Latitude:	43 57.03 N	Maximum Depth:	11 m
Longitude:	115 02.51 W	Aspect:	SE
Spawning Potential:		Comments:	
Very limited.			

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/12/95
 Number of Anglers: 3
 Hours Fished: 4.5
 Total Caught: 12
 Catch per Hour: 2.66

Mean Length and Weight Report:

Species	Geartype	Date
WCT	Gillnet	8/12/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	301	44	254	86	0.9

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
WCT	12	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT				1	1	

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	LAKE CREEK #1	Quadmap:	Edaho Mtn
Planting Number:	090175	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Cirque
Range:	11E	Elevation:	2559 m
Section:	14	Size:	7.72 ha
Latitude:	44 2.18	Maximum Depth:	9 m
Longitude:	115 8.76	Aspect:	NE
Spawning Potential:		Comments:	
Poor, No inlet or outlet.			

Chemical Report:

Date: 9/18/95
 Alkalinity (mg/l CaCO3): 5
 Hardness (mg/l CaCO3):
 pH: 7.3
 Conductivity (uS/cm): 10
 Surface Temp(C): 58
 Secchi (m): 9

Human Use Report:

Date: 9/18/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Very Difficult
 Litter: None

Angler Information:

Date: 9/18/95
 Number of Anglers: 1
 Hours Fished: 0.5
 Total Caught: 8
 Catch per Hour: 16

Mean Length and Weight Report:

Species	Gear type	Date
WCT	Gillnet	9/18/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	327	20	265	42	0.9

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
WCT	8	254	356
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT		1	2	2	2	7

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	LAKE CREEK #2	Quadmap:	Idaho Mtn
Planting Number:	090176	Outlet:	
County:	BOISE	Drainage:	NFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Bog
Range:	11E	Elevation:	2531 m
Section:	14	Size:	2.72 ha
Latitude:		Maximum Depth:	3 m
Longitude:		Aspect:	NE
Spawning Potential:		Comments:	
Excellent. Outlet with lots of fry visible. Inlet spawning potential unknown.		Good potential for GRY- shallow, sand bottom with woody debris.	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/18/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: Poor
 Trail Difficulty: Moderate
 Litter: None

Angler Information:

Date: 9/18/95
 Number of Anglers: 2
 Hours Fished: 0.5
 Total Caught: 10
 Catch per Hour: 20

Mean Length and Weight Report:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)	Mean		S.E. C-Factor
				Length (mm)	Weight (g)	
WCT	10	305	356			
	0	0	0			
	0	0	0			

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name: LAKE CREEK #3
 Planting Number: 090177
 County: BOISE
 National Forest: BOISE
 Township: 8N
 Range: 11E
 Section: 13
 Latitude: 44 1.92
 Longitude: 115 7.71
 Spawning Potential:
 None. No inlet or outlet, gravel along edge. 2-3m maximum depth.

Quadmap: Idaho Mtn
 Outlet:
 Drainage: NFPR
 Tributary To: SFPR
 Lake Type: Cirque
 Elevation: 2507 m
 Size: 0.90 ha
 Maximum Depth: 3 m
 Aspect: W
 Comments:
 Three small lakes. No flow between lakes except during runoff. Very little if any fish production potential. No stocking recommended for these lakes.

Chemical Report:

Date: 9/18/95
 Alkalinity (mg/l CaCO3): 5
 Hardness (mg/l CaCO3):
 pH: 10.5
 Conductivity (uS/cm): 1
 Surface Temp(C): 54
 Secchi (m): 3

Human Use Report:

Date: 9/18/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: None

Angler Information:

Date: 9/18/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Mean Length and Weight Report:

Species	Geartype	Date	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm

Amphibian Report:

Date: 9/18/95
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	LAKE CREEK #4	Quadmap:	Idaho Mtn
Planting Number:	09U072	Outlet:	
County:	BOISE	Drainage:	NFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Bog
Range:	11E	Elevation:	2344 m
Section:	13	Size:	0.68 ha
Latitude:	44 2.13	Maximum Depth:	3 m
Longitude:	115 8.26	Aspect:	ALL
Spawning Potential:		Comments:	
Excellent. Numerous small trout observed in both inlet and outlet.		Lake is located on Lake Creek. Silt bottom.	

Chemical Report:

Date: 9/18/95
 Alkalinity (mg/l CaCO3): 10
 Hardness (mg/l CaCO3): 20
 pH: 9
 Conductivity (uS/cm): 3
 Surface Temp(C): 56
 Secchi (m): 3

Human Use Report:

Date: 9/18/95
 Human Use:
 Campsite Condition: Poorly Developed
 Campsite Number: 1
 Campfire Rings: 0
 Trail Condition: Poor
 Trail Difficulty: Difficult
 Litter: Rare

Angler Information:

Date: 9/18/95
 Number of Anglers: 2
 Hours Fished: 0.3
 Total Caught: 4
 Catch per Hour: 13.3

Mean Length and Weight Report:

Species	Geartype	Date
WCT	Angling	9/18/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	331	8	270	39	0.8

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
WCT	4	314	345
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT					4	

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	LAKE CREEK #5	Quadmap:	Edaho Mtn
Planting Number:	09U073	Outlet:	
County:	BOISE	Drainage:	NFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Meadow-bog
Range:	11E	Elevation:	2342 m
Section:	15	Size:	0.22 ha
Latitude:		Maximum Depth:	1.5 m
Longitude:		Aspect:	E
Spawning Potential:	None.	Comments:	Shallow frog pond. No fish production potential.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/18/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Moderate
 Litter: Rare

Angler Information:

Date: 9/18/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
 Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	LAKE CREEK #6	Quadmap:	Edaho Mtn
Planting Number:	09U120	Outlet:	
County:	BOISE	Drainage:	NFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Bog
Range:	11E	Elevation:	2555 m
Section:	13	Size:	0.22 ha
Latitude:		Maximum Depth:	2 m
Longitude:		Aspect:	N
Spawning Potential:		Comments:	
None.		No fish production potential.	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/18/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: None

Angler Information:

Date: 9/18/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	LAKE CREEK #7	Quadmap:	Edaho Mtn
Planting Number:	09U119	Outlet:	
County:	BOISE	Drainage:	NFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Bog
Range:	11E	Elevation:	2555 m
Section:	13	Size:	0.45 ha
Latitude:		Maximum Depth:	3 m
Longitude:		Aspect:	N
Spawning Potential:	None.	Comments:	No fish production potential.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 9/18/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)	Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
	0	0	0						
	0	0	0						
	0	0	0						

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
Captured						

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	LOST	Quadmap:	Cache Creek
Planting Number:	071099	Outlet:	Cache Ck
County:	VALLEY	Drainage:	MFSR
National Forest:	BOISE	Tributary To:	Bear Valley Ck
Township:	11N	Lake Type:	Bog
Range:	9E	Elevation:	2240 m
Section:	18	Size:	2.72 ha
Latitude:		Maximum Depth:	7 m
Longitude:		Aspect:	W
Spawning Potential:		Comments:	
Good.			Lots of WRB are being produced. No stocking recommended. Wild BLT present.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 8/12/95
 Human Use: MODERATE
 Campsite Condition: GOOD
 Campsite Number: 3
 Campfire Rings: 3
 Trail Condition: GOOD
 Trail Difficulty: EASY
 Litter: MODERATE

Angler Information:

Date: 8/12/95
 Number of Anglers: 1
 Hours Fished: 1
 Total Caught: 0
 Catch per Hour: 0

Mean Length and Weight Report:

Species	Geartype	Date
BLT	Gillnet	8/12/95
WCT	Gillnet	8/12/95
WRB	Gillnet	8/12/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
BLT	146	13	27	9	0.8
WCT	224	32	113	45	0.9
WRB	160	9	50	9	0.8

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date: 8/12/95
 Spotted Frog Adults:
 Spotted Frog Juv: 100
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
BLT	2	1				
WCT		1	1	1		
WRB	22	8	6	2		

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	PINCHOT CREEK #1	Quadmap:	Edaho Mtn
Planting Number:	090179	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Bog
Range:	11E	Elevation:	2649 m
Section:	23	Size:	1.81 ha
Latitude:	44 0.87	Maximum Depth:	4.5 m
Longitude:	115 8.32	Aspect:	E
Spawning Potential:	None.	Comments:	Mud bottom. Relatively shallow. Recommend continue GRY stocking.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/19/95
 Human Use:
 Campsite Condition: Poorly Developed
 Campsite Number: 1
 Campfire Rings: 1
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: Rare

Angler Information:

Date: 9/19/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
GRY	Gillnet	9/19/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
GRY	280		235		1.1

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
GRY				1		

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	PINCHOT CREEK #2(WEST)	Quadmap:	Nahneke Mtn
Planting Number:	090180	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Cirque
Range:	11E	Elevation:	2555 m
Section:	26	Size:	2.27 ha
Latitude:	43 59.89	Maximum Depth:	4.5 m
Longitude:	115 8.45	Aspect:	E
Spawning Potential:		Comments:	
Gravel around shore. No inlet or outlet. Little spawning potential.		Possible GDN lake. Shallow depth may present a problem.	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/19/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: None

Angler Information:

Date: 9/19/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	PINCHOT CREEK #3 (EAST)	Quadmap:	Nahneke Mtn
Planting Number:	090181	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Cirque
Range:	11E	Elevation:	2674 m
Section:	23	Size:	0.90 ha
Latitude:	44 04.04	Maximum Depth:	8 m
Longitude:	115 8.20	Aspect:	S
Spawning Potential:		Comments:	
No inlet or outlet. some gravel around shore. Very limited or no spawning potential.		Mostly mud bottom. 1994 burned area around lake. If fire retardant was used fighting fire its likely it got into the lake and may have killed fish.	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/19/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: None

Angler Information:

Date: 9/19/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
Captured						

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	PINCHOT CREEK #4 (MIDDLE)	Quadmap:	Nahneke Mtn
Planting Number:	090189	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Cirque
Range:	11E	Elevation:	2672 m
Section:	26	Size:	5 ha
Latitude:	44 0.01	Maximum Depth:	18 m
Longitude:	115 8.30	Aspect:	S
Spawning Potential:	None.	Comments:	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/19/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: None

Angler Information:

Date: 9/19/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
GDN	Gillnet	9/19/95
GRY	Gillnet	9/19/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
GDN	422	1	620		0.8
GRY	457	3			

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency						
Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
GDN						2
GRY						2

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	PINCHOT CREEK #6	Quadmap:	Nahneke Mtn
Planting Number:	090182	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Moraine
Range:	11E	Elevation:	2555 m
Section:	23	Size:	2.72 ha
Latitude:	43 59.68	Maximum Depth:	5 m
Longitude:	115 7.98	Aspect:	S
Spawning Potential:		Comments:	
Good. Both inlet and outlet have spawning potential. Lake was full of naturally spawned WRB.		Recommend lake not be stocked. Natural production should carry this lake.	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/20/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: None

Angler Information:

Date: 9/20/95
 Number of Anglers: 2
 Hours Fished: 2
 Total Caught: 11
 Catch per Hour: 5.5

Mean Length and Weight Report:

Species	Gear type	Date
WRB	Angling	9/20/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WRB	290	8	219	17	0.9

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
WRB	11	260	340
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WRB			1	6	4	

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	PINCHOT CREEK #7	Quadmap:	Mount Everly
Planting Number:	09U128	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Chain
Range:	12E	Elevation:	2677 m
Section:	36	Size:	1.81 ha
Latitude:	43 58.91	Maximum Depth:	4 m
Longitude:	115 6.81	Aspect:	W
Spawning Potential:	None.	Comments:	Lakes should remain fishless. This is a neat series of chain lakes in the rocks above timberline.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/21/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Very Difficult
 Litter: None

Angler Information:

Date: 9/21/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date: 9/21/95
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	PINCHOT CREEK #8	Quadmap:	Mount Everly
Planting Number:	09U129	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Chain
Range:	12E	Elevation:	2689 m
Section:	36	Size:	0.45 ha
Latitude:	43 58.93	Maximum Depth:	1.5 m
Longitude:	115 7.09	Aspect:	W
Spawning Potential:	None.	Comments:	Lakes should remain fishless. This is a neat series of chain lakes above timberline.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/21/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Very Difficult
 Litter: None

Angler Information:

Date: 9/21/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date: 9/21/95
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	PINCHOT CREEK #9	Quadmap:	Mount Everly
Planting Number:	09U130	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Chain
Range:	12E	Elevation:	2781 m
Section:	36	Size:	0.22 ha
Latitude:	43 58.91	Maximum Depth:	2 m
Longitude:	115 6.81	Aspect:	W
Spawning Potential:		Comments:	
None.		Recommend no stocking.	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/21/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Very Difficult
 Litter: None

Angler Information:

Date: 9/21/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Amphibian Report:

Date: 9/21/95
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	PINCHOT CREEK LAKE	Quadmap:	Edaho Mtn
Planting Number:	090178	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Moraine
Range:	11E	Elevation:	2523 m
Section:	23	Size:	4.09 ha
Latitude:	44 0.57	Maximum Depth:	3.5 m
Longitude:	115 8.24	Aspect:	E
Spawning Potential:		Comments:	
No natural production is evident. No inlet or outlet in late summer. There may be some spawning potential during runoff.		Moraine blocked creek forming lake. Shallow lake that is filling in. Perhaps a good GRY lake.	

Chemical Report:

Date: 9/19/95
 Alkalinity (mg/l CaCO3): 10
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm): 2
 Surface Temp(C): 56
 Secchi (m): 3.5

Human Use Report:

Date: 9/19/95
 Human Use:
 Campsite Condition: Poorly Developed
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: None

Angler Information:

Date: 9/19/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Mean Length and Weight Report:

Species	Geartype	Date	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
GRY	Gillnet	9/19/95	360		335		0.7
WCT	Gillnet	9/19/95	335	8	411	35	1.1

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
GRY						1
WCT				1	5	

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	PITCHFORK	Quadmap:	Warbonnet Peak
Planting Number:	090184	Outlet:	Pitchfork Ck
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	Pitchfork Ck
Township:	8N	Lake Type:	Moraine
Range:	12E	Elevation:	2396 m
Section:	20	Size:	7.27 ha
Latitude:	44 1.07	Maximum Depth:	7.5 m
Longitude:	115 5.49	Aspect:	N
Spawning Potential:		Comments:	
Excellent. Several inlets with area for spawning.		No stocking recommended for this lake. Natural production	
GN information indicates spawning is occurring.		should be adequate.	

Chemical Report:

Date: 9/23/95
 Alkalinity (mg/l CaCO3): 5
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm): 10
 Surface Temp(C): 52
 Secchi (m): 7

Human Use Report:

Date: 9/23/95
 Human Use:
 Campsite Condition: Well Developed
 Campsite Number: 1
 Campfire Rings: 1
 Trail Condition: Poor
 Trail Difficulty: Difficult
 Litter: Rare

Angler Information:

Date: 9/23/95
 Number of Anglers: 1
 Hours Fished: 1
 Total Caught: 0
 Catch per Hour: 0

Mean Length and Weight Report:

Species	Gear type	Date
RCT	Gillnet	9/23/95
WCT	Gillnet	9/23/95
WRB	Gillnet	9/23/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
RCT	222	13	117	18	1.0
WCT	348	43			
WRB	200		75		0.9

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date: 9/23/95
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
RCT		2	6			
WCT					1	1
WRB		1				

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	PITCHFORK #1	Quadmap:	Warbonnet Peak
Planting Number:	09U126	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Bog
Range:	12E	Elevation:	2592 m
Section:	20	Size:	0.22 ha
Latitude:	44 0.47	Maximum Depth:	3 m
Longitude:	115 5.87	Aspect:	N
Spawning Potential:		Comments:	
Good potential exists in outlet. However, outlet is mostly sand.		Saw 2 16" WCT in pond. This pond or the pond above it was probably stocked sometime in the past. Recommend continued WCT stocking.	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/22/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: None

Angler Information:

Date: 9/22/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Gear type	Date
WCT	Gillnet	9/22/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	400		0		

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date: 9/22/95
 Spotted Frog Adults: 1
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
Captured						
WCT						2

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	PITCHFORK #2	Quadmap:	Warbonnet Peak
Planting Number:	09U127	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Bog
Range:	12E	Elevation:	2616 m
Section:	30	Size:	1.81 ha
Latitude:	44 0.38	Maximum Depth:	3 m
Longitude:	115 5.94	Aspect:	N
Spawning Potential:		Comments:	
Saw no evidence of fish in this lake while we ate lunch. Inlet appears capable of supporting fish and successful spawning.		Lack of fish in this lake may indicate winterkill problems. There is a good inlet stream that should support spawning. Recommend continued stocking with WCT.	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/22/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: None

Angler Information:

Date: 9/22/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)	Species	Mean	S.E.	Mean	S.E.	C-Factor
					Length (mm)		Weight (g)		
	0	0	0						
	0	0	0						
	0	0	0						

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	QUEENS R #10	Quadmap:	Nahneke Mtn
Planting Number:	100237	Outlet:	Queens R
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	MFBR
Township:	7N	Lake Type:	Cirque
Range:	11E	Elevation:	2525 m
Section:	25	Size:	ha
Latitude:		Maximum Depth:	m
Longitude:		Aspect:	
Spawning Potential:		Comments:	Viewed QR #10, 11, 12 from above on ridge. Small, shallow tight canyon, unsafe to fly for stocking, no human use in the valley.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/23/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	QUEENS R #11	Quadmap:	Nahneke Mtn
Planting Number:	100239	Outlet:	Queens R
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	MFBR
Township:	7N	Lake Type:	Cirque
Range:	11E	Elevation:	2554 m
Section:	25	Size:	ha
Latitude:		Maximum Depth:	m
Longitude:		Aspect:	
Spawning Potential:		Comments:	Viewed lakes from above on ridge, shallow small tight canyon, unsafe for flying, no human use observed.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/23/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Gear type	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	QUEENS R #12	Quadmap:	Nahneke Mtn
Planting Number:	100240	Outlet:	Queens R
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	MFBR
Township:	7N	Lake Type:	Cirque
Range:	11E	Elevation:	2555 m
Section:	25	Size:	ha
Latitude:		Maximum Depth:	m
Longitude:		Aspect:	
Spawning Potential:		Comments:	Viewed lakes from above on ridge, shallow small tight canyon, unsafe to fly for stocking, no human use observed in the valley.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/23/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	QUEENS R #5	Quadmap:	Nahneke Mtn
Planting Number:	100232	Outlet:	Unnamed
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	MFBR
Township:	6N	Lake Type:	Cirque
Range:	11E	Elevation:	2540 m
Section:	2	Size:	1.36 ha
Latitude:	43 53.21	Maximum Depth:	12.2 m
Longitude:	115 07.54	Aspect:	NE
Spawning Potential:		Comments:	
None, there are no inlets and the outlet drops over a cliff.		No human use observed, it would be very tough to hike and camp at this lake.	

Chemical Report:

Date: 8/22/95
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C): 62
 Secchi (m):

Human Use Report:

Date: 8/22/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Very Difficult
 Litter: None

Angler Information:

Date: 8/22/95
 Number of Anglers: 1
 Hours Fished: 0.5
 Total Caught: 12
 Catch per Hour: 24

Mean Length and Weight Report:

Species	Gear type	Date
RCT	Gillnet	8/22/95
WCT	Gillnet	8/22/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
RCT	243		136		0.9
WCT	282		192		0.9

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
WCT	10	0	0
HRB	2	0	0
RCT	0	2	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
RCT			1			
WCT				1		

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	QUEENS R #7	Quadmap:	Nahneke Mtn
Planting Number:	10U115	Outlet:	Unnamed
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	Queens R
Township:	7N	Lake Type:	Moraine-meadow
Range:	11E	Elevation:	2424 m
Section:	36	Size:	1.36 ha
Latitude:	43 54.27 N	Maximum Depth:	3.05 m
Longitude:	115 07.40 W	Aspect:	NE
Spawning Potential:		Comments:	
Few small inlet streams.		One end of lake deep, other end very shallow, would definitely support fish but none were caught in GN. No recent human use.	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/21/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
Captured						

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	QUEENS R #8	Quadmap:	Mount Everly
Planting Number:	10U114	Outlet:	Unnamed
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	Queens R
Township:	7N	Lake Type:	Moraine
Range:	11E	Elevation:	2435 m
Section:	36	Size:	0.45 ha
Latitude:		Maximum Depth:	1.5 m
Longitude:		Aspect:	NE
Spawning Potential:		Comments:	
Small inlet stream.		No obvious fish, no human use, mostly shallow with one deep spot.	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/21/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	QUEENS R #9	Quadmap:	Nahneke Mtn
Planting Number:	100236	Outlet:	Unnamed
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	MFBR
Township:	7N	Lake Type:	Cirque
Range:	11E	Elevation:	2645 m
Section:	36	Size:	0.68 ha
Latitude:	43 53.95 N	Maximum Depth:	7.6 m
Longitude:	115 08.11 W	Aspect:	S
Spawning Potential:		Comments:	No human use, observed 2-3 WCT in 400 mm size range, no smaller fish observed, it appears that someone put a few fish in lake years ago.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/21/95
 Number of Anglers: 1
 Hours Fished: 0.45
 Total Caught: 0
 Catch per Hour: 0

Mean Length and Weight Report:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Species	Geartype	Date	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	RAKER #1	Quadmap:	Mount Everly
Planting Number:	09U131	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Bog
Range:	12E	Elevation:	2677 m
Section:	31	Size:	2.72 ha
Latitude:	43 59.37	Maximum Depth:	3 m
Longitude:	115 6.90	Aspect:	ALL
Spawning Potential:	None.	Comments:	Fairly shallow lake with no fish. Recommend it remains fishless. Observed a lot of tadpoles and spotted frogs (?) in and around this lake.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/21/95
 Human Use:
 Campsite Condition: Poorly Developed
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: Poor
 Trail Difficulty: Difficult
 Litter: Rare

Angler Information:

Date: 9/21/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date: 9/21/95
 Spotted Frog Adults: 30
 Spotted Frog Juv: 100
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	RAKER #2	Quadmap:	Mount Everly
Planting Number:	09U132	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Bog
Range:	12E	Elevation:	2738 m
Section:	31	Size:	1.81 ha
Latitude:	43 59.34	Maximum Depth:	3 m
Longitude:	115 6.42	Aspect:	ALL
Spawning Potential:	None.	Comments:	Fairly shallow. No stocking recommended.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 9/21/95
 Human Use:
 Campsite Condition: None
 Campsite Number: 0
 Campfire Rings: 0
 Trail Condition: None
 Trail Difficulty: Difficult
 Litter: Rare

Angler Information:

Date: 9/21/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date: 9/21/95
 Spotted Frog Adults: 20
 Spotted Frog Juv: 100
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	RAKER #3	Quadmap:	Mount Everly
Planting Number:	09U133	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Cirque
Range:	12E	Elevation:	2750 m
Section:	31	Size:	1.81 ha
Latitude:	43 59.26	Maximum Depth:	7 m
Longitude:	115 6.56	Aspect:	W
Spawning Potential:		Comments:	
None. No inlet or outlet.		No fish in this lake presently. Recommend WCT or GDN.	

Chemical Report:

Date: 9/20/95
 Alkalinity (mg/l CaCO3): 5
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C): 53
 Secchi (m): 7

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 9/20/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Gear type	Date
	Gillnet	9/20/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
	0		0		
	0		0		
	0		0		

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	RAKER #4	Quadmap:	Mount Everly
Planting Number:	09U134	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Cirque
Range:	12E	Elevation:	2762 m
Section:	31	Size:	1.13 ha
Latitude:	43 59.34	Maximum Depth:	7.5 m
Longitude:	115 6.56	Aspect:	W
Spawning Potential:	None. No Inlet or outlet.	Comments:	No fish present. Recommend WCT or GDN, same species as in 09U133.

Chemical Report:

Date: 9/20/95
 Alkalinity (mg/l CaCO3): 5
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C): 52
 Secchi (m): 7.5

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 9/20/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
	Gillnet	9/20/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	RAKER #5	Quadmap:	Mount Everly
Planting Number:	09U135	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	Meadow-bog
Range:	12E	Elevation:	2677 m
Section:	31	Size:	0 ha
Latitude:		Maximum Depth:	m
Longitude:		Aspect:	
Spawning Potential:		Comments:	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 9/21/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
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Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	RAKER #6	Quadmap:	Mount Everly
Planting Number:	09U136	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	8N	Lake Type:	
Range:	12E	Elevation:	2677 m
Section:	31	Size:	0 ha
Latitude:		Maximum Depth:	m
Longitude:		Aspect:	
Spawning Potential:		Comments:	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 9/21/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
---------	------------------	------	-----------------	------	----------

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	ROCK SLIDE/ROBERT	Quadmap:	Mount Everly
Planting Number:	090195	Outlet:	unnamed
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	Benedict Ck
Township:	7N	Lake Type:	Moraine
Range:	12E	Elevation:	2643 m
Section:	10	Size:	4.09 ha
Latitude:	43 57.20 N	Maximum Depth:	7.6 m
Longitude:	115 03.18 W	Aspect:	NW
Spawning Potential:	Poor.	Comments:	Moderate human use, one RCT caught in the gillnets.

Chemical Report:

Date: 8/11/95
 Alkalinity (mg/l CaCO3): 20
 Hardness (mg/l CaCO3):
 pH: 7.9
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/11/95
 Number of Anglers: 2
 Hours Fished: 2
 Total Caught: 6
 Catch per Hour: 3

Mean Length and Weight Report:

Species	Geartype	Date
RCT	Gillnet	8/11/95
WCT	Gillnet	8/11/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
RCT	225		110		1.0
WCT	292	8	200	30	0.8

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
WCT	6	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
RCT			1			
WCT				2		

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	SCENIC, BIG	Quadmap:	Nahneke Mtn
Planting Number:	100211	Outlet:	Queens R
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	MFBR
Township:	7N	Lake Type:	Cirque
Range:	11E	Elevation:	2558 m
Section:	35	Size:	2.72 ha
Latitude:	43 54.06	Maximum Depth:	9.2 m
Longitude:	115 08.62	Aspect:	NW
Spawning Potential:	Possible in the outlet, it was blocked by woody debris, intermittent inlet was very steep.		
Comments:			

Chemical Report:

Date: 8/21/95
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C): 54
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/21/95
 Number of Anglers: 1
 Hours Fished: 2
 Total Caught: 6
 Catch per Hour: 3

Mean Length and Weight Report:

Species	Geartype	Date
WCT	Gillnet	8/21/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	249		169		1.1

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
WCT	6	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT			1			

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	SCENIC, LITTLE	Quadmap:	Nahneke Mtn
Planting Number:	100210	Outlet:	Little Queens R
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	LQR
Township:	7N	Lake Type:	Cirque
Range:	11E	Elevation:	2525 m
Section:	35	Size:	1.36 ha
Latitude:	43 54.16	Maximum Depth:	9.2 m
Longitude:	115 08.77	Aspect:	N
Spawning Potential:		Comments:	
Good inlet and outlet.		Light human use, two campsites on north end.	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date: 8/21/95
 Human Use:
 Campsite Condition: Poorly Developed
 Campsite Number: 2
 Campfire Rings: 2
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/21/95
 Number of Anglers: 1
 Hours Fished: 5
 Total Caught: 26
 Catch per Hour: 5.2

Mean Length and Weight Report:

Species	Geartype	Date
WCT	Gillnet	8/21/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	213		104		1.1

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
WCT	26	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT			1			

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	SPANGLE	Quadmap:	Mount Everly
Planting Number:	100302	Outlet:	Unnamed
County:	ELMORE	Drainage:	MFBR
National Forest:	BOISE	Tributary To:	MFBR
Township:	7N	Lake Type:	Moraine
Range:	12E	Elevation:	2618 m
Section:	14	Size:	25 ha
Latitude:	43 56.79 N	Maximum Depth:	21.3 m
Longitude:	115 02.10 W	Aspect:	SE
Spawning Potential:		Comments:	
Poor for WCT, good for BKT.		Moderate human use.	

Chemical Report:

Date: 8/13/95
 Alkalinity (mg/l CaCO3): 20
 Hardness (mg/l CaCO3):
 pH: 8.3
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/13/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0

Catch per Hour:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Mean Length and Weight Report:

Species	Geartype	Date	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
BKT	Gillnet	8/13/95	268	43	206	75	1.0

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
BKT			1		1	

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	TENLAKE #11 SUMMIT #2	Quadmap:	Mount Everly
Planting Number:	090222	Outlet:	Tenlake Ck
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	7N	Lake Type:	Moraine-meadow
Range:	12E	Elevation:	2592 m
Section:	2	Size:	13.6 ha
Latitude:	43 57.99 N	Maximum Depth:	5 m
Longitude:	115 01.32 W	Aspect:	NE
Spawning Potential:		Comments:	
Marginal, poor.		Caught several GRY in GN.	

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/14/95
 Number of Anglers: 2
 Hours Fished: 2
 Total Caught: 0
 Catch per Hour: 0

Mean Length and Weight Report:

Species	Geartype	Date
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Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
---------	------------------	------	-----------------	------	----------

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
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Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	TENLAKE #3 SUMMIT #1	Quadmap:	Mount Everly
Planting Number:	090213	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	7N	Lake Type:	Moraine
Range:	12E	Elevation:	2598 m
Section:	11	Size:	1.81 ha
Latitude:	43 57.56 N	Maximum Depth:	3 m
Longitude:	115 01.50 W	Aspect:	N
Spawning Potential:	Good.	Comments:	No fish observed, low-moderate human use, no apparent fishing pressure.

Chemical Report:

Date: 8/14/95
 Alkalinity (mg/l CaCO3): 20
 Hardness (mg/l CaCO3):
 pH: 7.3
 Conductivity (uS/cm): 10
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/14/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Species	Geartype	Date	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
 Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	THREE ISLAND	Quadmap:	Mount Everly
Planting Number:	090198	Outlet:	
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	7N	Lake Type:	Moraine
Range:	12E	Elevation:	2622 m
Section:	16	Size:	6.81 ha
Latitude:	43 57.42	Maximum Depth:	9.1 m
Longitude:	115 03.75	Aspect:	N
Spawning Potential:		Comments:	
Excellent.			

Chemical Report:

Date: 8/10/95
 Alkalinity (mg/l CaCO3): 20
 Hardness (mg/l CaCO3):
 pH: 8.3
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/10/95
 Number of Anglers: 2
 Hours Fished: 6
 Total Caught: 10
 Catch per Hour: 1.66

Mean Length and Weight Report:

Species	Geartype	Date
WCT	Gillnet	8/10/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	340	70	450	160	1.2

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
WCT	10	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:
Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT				1		1

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name: TRIANGLE
 Planting Number: 100220
 County: ELMORE
 National Forest: BOISE
 Township: 7N
 Range: 11E
 Section: 23
 Latitude: 43 55.73
 Longitude: 115 09.03
 Spawning Potential: None.

Quadmap: Nahneke Mtn
 Outlet: Little Queens R
 Drainage: MFBR
 Tributary To: MFBR
 Lake Type: Moraine
 Elevation: 2521 m
 Size: 1.13 ha
 Maximum Depth: 9.2 m
 Aspect: NW

Comments:
 Hike in from Diamond Lake, not Browns Lake, little fishing and camping pressure, gillnets out for 1.2 hour, caught 3 WCT.

Chemical Report:

Date: 8/25/95
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C): 60
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/25/95
 Number of Anglers: 1
 Hours Fished: 1
 Total Caught: 14
 Catch per Hour: 14

Mean Length and Weight Report:

Species	Geartype	Date
WCT	Gillnet	8/25/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	222		86		0.8

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
WCT	14	200	399
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT			1			

Appendix A. Mountain Lake General Information Reports

Mountain Lake General Information

Lake Name:	VERNON	Quadmap:	Snowside Peak
Planting Number:	090243	Outlet:	SFPR
County:	BOISE	Drainage:	SFPR
National Forest:	BOISE	Tributary To:	SFPR
Township:	7N	Lake Type:	Cirque
Range:	13E	Elevation:	2579 m
Section:	6	Size:	14.5 ha
Latitude:	43 58.00 N	Maximum Depth:	6.2 m
Longitude:	114 59.58 W	Aspect:	N
Spawning Potential:		Comments:	Low angler pressure, no visible signs of use.

Chemical Report:

Date:
 Alkalinity (mg/l CaCO3):
 Hardness (mg/l CaCO3):
 pH:
 Conductivity (uS/cm):
 Surface Temp(C):
 Secchi (m):

Human Use Report:

Date:
 Human Use:
 Campsite Condition:
 Campsite Number:
 Campfire Rings:
 Trail Condition:
 Trail Difficulty:
 Litter:

Angler Information:

Date: 8/15/95
 Number of Anglers: 0
 Hours Fished: 0
 Total Caught: 0
 Catch per Hour:

Mean Length and Weight Report:

Species	Geartype	Date
WCT	Gillnet	8/15/95

Species	Mean Length (mm)	S.E.	Mean Weight (g)	S.E.	C-Factor
WCT	286	49	227	113	0.9

Species	Number Caught	Minimum Length (mm)	Maximum Length (mm)
	0	0	0
	0	0	0
	0	0	0

Amphibian Report:

Date:
 Spotted Frog Adults:
 Spotted Frog Juv:
 Tailed Frog Adults:
 Tailed Frog Juv:
 Tree Frog Adults:
 Tree Frog Juv:

Salamanders:

Length Frequency

Species Captured	<151mm	151-200mm	201-250mm	251-300mm	301-350mm	>350mm
WCT			1		1	

1995 ANNUAL PERFORMANCE REPORT

State of: Idaho

Program: Fisheries Management F-71-R-20

Project I: Surveys and Inventories

Subproject I-D: Southwest Region

Job No.: b

Title: Lowland Lakes Investigations

Contract Period: July 1, 1995 to June 30, 1996

ABSTRACT

Arrowrock Reservoir was sampled with gill nets and trap nets. A total of 416 fish were collected. Fish collected included bridgelip sucker *Catostomus columbianus*, bull trout *Salvelinus confluentus*, chiselmouth *Acrocheilus alutaceus*, hatchery rainbow trout *Oncorhynchus mykiss*, largescale sucker *C. macrocheilus*, mountain whitefish *Prosopium williamsoni*, northern squawfish *Ptychocheilus oregonensis*, rainbow-cutthroat hybrid *O. mykiss* x *O. clarki*, redbside shiner *Richardsonius balteatus*, westslope cutthroat *O. c. lewisi*, wild rainbow *O. mykiss* and yellow perch *Perca flavescens*. Nongame species and perch composed 84.8% of the catch by number.

Attempt was made in mid-May 1995 to capture bull trout in Arrowrock Reservoir to insert radio tags. Not enough bull trout were captured to warrant placement of radio tags.

Brownlee Reservoir was sampled by shoreline electrofishing on May 3, 1995. A total of 529 fish was collected. Black crappie *Pomoxis nigromaculatus*, bluegill *Lepomis macrochirus*, bridgelip sucker, channel catfish *Ictalurus punctatus*, chiselmouth, common carp *Cyprinus carpio*, hatchery rainbow trout, largemouth bass *Micropterus salmoides*, largescale sucker, smallmouth bass *M. dolomieu*, white crappie *P. annulatis*, wild rainbow trout and yellow perch were represented in the catch. Nongame species represented 5.3% of the catch by number, black crappie, smallmouth bass and white crappie represented 11.5, 60.5, and 14.0% of the catch by number, respectively; and wild and hatchery rainbow trout represented 0.4% of the catch by number.

The second year of a three year catfish tagging study was completed in 1995. A total of 1,178 channel and flathead catfish *Pylodictis olivaris* were tagged with Carlin Dangler reward tags. Mean length, weight and condition factor of channel and flathead catfish collected was 446 mm and 615 mm, 893 g and 3,540 g, and 90.8 and 114.3, respectively, A total of 46 tags (3.8%) was returned in 1995. Movement of catfish averaged 22.9 miles upstream or 12.6 miles downstream, with the largest movement 101.9 miles upstream.

C.J. Strike Reservoir was sampled by electrofishing, gill nets, and trap nets on April 17, 1995. Black crappie, brown bullhead *Ameiurus nebulosus*, bluegill, bridgelip sucker, channel catfish, chiselmouth, hatchery rainbow trout, largemouth bass, largescale sucker, northern squawfish, peamouth *Mylocheilus caurinus*, pumpkinseed *L. gibbosus*, smallmouth bass, white crappie and yellow perch were represented in the catch. Standard unit catch-per-effort (catch per one hour of electrofishing, one pair of floating and sinking experimental gill nets and one trap net fished overnight) was 753 fish and 95.6 kg. Nongame species, hatchery rainbow trout, largemouth bass, smallmouth bass and yellow perch represented 23.4, 11.2, 5.0, 3.3, and 51.5% of the catch by

number, respectively. Nongame species, hatchery rainbow trout, largemouth bass, smallmouth bass and yellow perch represented 16.6, 10.4, 21.2, 5.5, and 34.2% of the catch by weight, respectively. Weather conditions during sampling greatly impacted composition of the catch and number collected.

Bass tournaments on C.J. Strike Reservoir were monitored on March 25, April 2, June 10, and August 26, 1995. A total of 488 tournament caught bass were tagged with floy tags and released. A total of 49 recaptures was reported between release date and May 31, 1996. Smallmouth bass represented between 93.6 and 97.9% of the bass caught on the four dates. Mean length of tournament caught smallmouth increased from 327 to 348 mm from March through August tournaments.

On Cove Arm Lake, between March 1 and December 31, anglers were estimated to have fished 6,173 hours to harvest 19 largemouth bass, 824 hatchery rainbow trout, 66 bluegill, 80 smallmouth and 4,272 yellow perch. Harvest rate was .86 fish per hour. Additionally, anglers were estimated to have caught and released 131 largemouth bass, 785 hatchery rainbow trout, 175 bluegill, 601 smallmouth bass and 481 yellow perch. Total catch rate including harvested and released fish was 1.20 fish per hour. Anglers harvested an estimated 13.7% of stocked rainbow trout. Hatchery rainbow trout provided 15.7% of the gamefish harvest and 21.7% of the game fish catch. Bait, lure and fly anglers represented 78.9, 13.2 and 7.9% of the angler use, respectively. Anglers were estimated to have spent 2,661 angling trips during the survey. Rainbow trout was the preferred species of catch for 58.9% of the anglers interviewed during this survey.

Crane Creek Reservoir was sampled by electrofishing, gill nets and trap nets on June 13, 1995. Black crappie, bridgelip sucker, brown bullhead, channel catfish, common carp, largemouth bass, white crappie and yellow perch were represented in the catch. Standard unit catch-per-effort was 752 fish and 194.6 kg. Common carp and white crappie represented 41.5 and 50.1% of the number, and 74.7 and 22.7% of the weight of fish collected, respectively. Length-at-age of white crappie was estimated from scales to be 60, 99, 144, 196 and 232 mm for age 1 to 5, respectively. Length-at-age of black crappie was estimated from scales to be 58, 101, 134, 170 and 211 mm for age 1 to 5, respectively.

On Crane Falls Lake, between March 1 and December 31, anglers were estimated to have fished 13,601 hours to harvest 58 largemouth bass, 2,640 hatchery rainbow trout, 1,166 bluegill, 16 smallmouth and 494 yellow perch. Harvest rate was .32 fish per hour. Additionally, anglers were estimated to have caught and released 2,279 largemouth bass, 2,613 hatchery rainbow trout, 1,311 bluegill, 752 smallmouth bass and 1,274 yellow perch. Total catch rate including harvested and released fish was .93 fish per hour. Anglers harvested an estimated 44% of stocked rainbow trout. Hatchery rainbow trout provided 60.4% of the game fish harvest and 41.7% of the game fish catch. Bait, lure and fly anglers represented 62.1, 24.6 and 12.9% of the angler use, respectively. Anglers were estimated to have spent 8,344 angling trips during the survey. Rainbow trout was the preferred species of catch for 78.5% of the anglers interviewed during this survey.

Deadwood Reservoir was sampled by gill nets on September 20, 1995. Atlantic salmon *Salmo salar*, kokanee *O. nerka*, mountain whitefish, rainbow x cutthroat hybrid, westslope cutthroat trout and wild rainbow trout were represented in the catch. Mountain whitefish and wild rainbow trout represented 72.2 and 11.4% of the catch by number, respectively. Mean length of Atlantic salmon, kokanee, mountain whitefish, rainbow x cutthroat hybrid, westslope cutthroat trout and wild rainbow trout was 267, 244, 301, 243, 237 and 214 mm, respectively.

Lake Lowell was electrofished on April 10, April 11, August 22 and October 24, 1995. Black crappie, bluegill, bridgelip sucker, brown bullhead, common carp, largemouth bass, largescale

sucker, smallmouth bass, white crappie and yellow perch were represented in the catch. Largemouth bass generally represented 33-37% of the catch by number. During some surveys, nongame species were not weighed. Nongame species generally represented at least 95% of the fish weight collected.

A conservation bass tournament was conducted on Lake Lowell on April 29 and 30, 1995 to capture adult bass. Sixty anglers in 30 boats fished 1,080 hours to catch 51 largemouth and 2 smallmouth bass. Mean length, weight and condition factor of largemouth and smallmouth caught was 391 mm, 1,134 g, and 1.84, and 380 mm, 815 g, and 1.46, respectively. Length-at-age of largemouth bass was estimated from scales to be 57, 112, 233, 305, 344, 368, 383, 412 and 432 mm for age classes 1 to 9, respectively.

Water samples were collected from Lake Lowell at 10 sites monthly by regional staff and a class from Eagle High School. Students measured water temperature and dissolved oxygen profiles, pH, 5-day BOD, orthophosphate, nitrate nitrogen, turbidity and total solids. Samples were also taken to the Pacific Northwest Bureau of Reclamation Laboratory where nitrate nitrogen, total nitrogen, ammonia, 5-day BOD, suspended solids and turbidity were analyzed.

Channel catfish were aged using pectoral spines collected in 1994 from Lake Lowell. Length-at-age estimates were 127, 210, 304, 398, 469, 507, 555, 606, 631 and 671 mm for age 1 to 10 channel catfish, respectively.

Lucky Peak Reservoir was sampled by electrofishing on May 16, 1995. A total of 349 fish was collected. Bridgelip sucker, chiselmouth, largescale sucker, mountain whitefish, northern squawfish, redbreast shiner, smallmouth bass and yellow perch were represented in the catch. Nongame species represented 84.4% of the fish collected and 86.2% of the weight collected. Smallmouth bass represented 6.6% of the number and 13.8% of the weight collected. Length-at-age for smallmouth bass was estimated from scales to be 75, 118, 166, 213, 265, 373, 408 and 429 mm for age 1 to 8, respectively.

Manns Creek Reservoir was sampled by electrofishing, gill nets and trap nets on June 12, 1995. Black crappie, hatchery rainbow trout, largemouth bass and wild rainbow trout were represented in the catch. Standard unit catch-per-effort was 264 fish and 36.2 kg. Black crappie, hatchery rainbow trout, largemouth bass, and wild rainbow trout represented 49.2, 15.1, 20.6 and 36.1 % of the catch by number, and 38.7, 20.6, 36.1 and 4.3% of the catch by weight, respectively. No nongame fish were captured. Length-at-age of largemouth bass was estimated from scales to be 69, 139, 193, 241, 282, 364, 396 and 408 mm for age 1 to 8, respectively. Length-at-age of black crappie was estimated from scales to be 77, 104, 134, 173 and 207 mm age 1 to 5, respectively.

On Mountain Home Reservoir, between May 1 and July 31, 1995, anglers were estimated to have fished 2,989 hours to harvest 638 and release 539 hatchery rainbow trout. Harvest and catch rates were .21 and .39 fish per hour.

Paddock Reservoir was sampled by electrofishing, gill nets and trap nets on April 3, 1995. Black crappie, bluegill, brown bullhead and largemouth bass were represented in the catch. Standard unit catch-per-effort was 676 fish and 151.6 kg. Largemouth bass represented 95.5% of the number and 92% of the weight of fish collected.

Riddle area reservoirs, including Bybee, Grassmere, Little Blue Creek, Shoofly and Squaw Creek, were sampled by gill and trap nets in May 1995. In Bybee Reservoir, a total of 58 fish was collected. Fish represented in the catch included bridgelip sucker, Lahonton cutthroat *O. c. henshawi* and redbreast shiner. Lahonton cutthroat trout represented 91.4% of the catch. Mean length of Lahonton cutthroat trout collected was 346 mm. In Grassmere Reservoir, a total of 167 fish

were collected. Fish represented in the catch included bridgelip sucker, Lahonton cutthroat trout and redbreast shiner. Lahonton cutthroat trout represented 88.6% of the catch. Mean length of Lahonton cutthroat trout collected was 326 mm. In Little Blue Creek Reservoir, a total of 110 fish were collected. Bridgelip sucker, Lahonton cutthroat trout and redbreast shiner were represented in the catch. Lahonton cutthroat trout represented 84% of the fish collected. Mean length of Lahonton cutthroat trout collected was 309 mm. In Shoofly Reservoir, a total of 132 fish were collected. Fish represented in the catch included bluegill and Lahonton cutthroat trout. Lahonton cutthroat trout represented 99.2% of the catch. Mean length of Lahonton cutthroat trout collected was 295 mm. In Squaw Creek Reservoir, a total of 24 fish were collected in gill nets. Catch was represented by bridgelip sucker and northern squawfish. Mean length of bridgelip sucker and northern squawfish was 275 and 280 mm, respectively.

Sagehen Reservoir was sampled by trap nets on June 1, 1995. Catch was 45 wild and 7 hatchery rainbow trout. No other fish were collected. Mean length of wild and hatchery rainbow trout collected was 222 and 318 mm, respectively.

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METHODS

General Fish Sampling

Electrofishing was conducted from a boom mounted electrofishing boat. Netting of immobilized fish was conducted with 1 or 2 netters. Electrofishing was conducted along shoreline. Attempts were made to collect all fish immobilized. One unit of electrofishing effort was defined as one hour of activated electrode time. Unless noted below, electrofishing occurred during darkness. Electrofishing catch-per-unit of effort was calculated as catch, by both number and weight, per hour of activated electrode time.

Gillnetting was done using floating and sinking experimental gill nets. Experimental gill nets were 45.7 m long by 1.8 m deep, and were composed of 6-7.6 m panels of 1.9, 2.5, 3.2, 3.8, 5.2 and 6.4 cm bar mesh. Nets were set in late afternoon and pulled the following morning. Nets were set by tying or anchoring one end of the net near or on shore in water less than .5 m deep and extending the net toward the center of the water, perpendicular to shore. When more than one floating or one sinking net was used per water, nets were set such that both large and small mesh ends of the nets were set next to shore. One unit of gill net effort was defined as one floating and one sinking experimental gill net fished overnight. Gill net catch-per-unit of effort was calculated as combined catch of one floating and one sinking experimental net, by both number and weight, per night (Hereafter, 'gill net' catch refers to combined catch from one floating and one sinking experimental gill net).

Trap netting was conducted using standard trap nets composed of two light steel frames measuring 1.8 m x .9 m, covered with 19 mm square black mesh and with 5-76 cm steel round hoops with crow foot throats on the first and third hoops, and with 23 m long lead lines .9 to 1.3 m in height. Trap nets were set on shallow sloping areas with the top of the steel frame within 0.3 m of the water surface. The lead line was tied to shore. Trap nets were set late in the afternoon and pulled the following morning. One unit of trap net effort was defined as one trap net fished overnight. Trap net catch-per-unit of effort was calculated as catch of one trap net, by both number and weight, per night.

Attempts were made to measure a sample of each size group of each species collected to the nearest mm, and to weigh a sample of each size group collected to the nearest g. In some cases, scale samples were collected to estimate age and growth. Scales from trout were collected from above the lateral line posterior to an imaginary line between the posterior end of the dorsal fin and the anterior end of the anal fin. Scales from bass were collected at the end of the pectoral fin as it laid against the body of the fish from above the lateral line. Entire pectoral fin spines were removed from catfish to estimate age and growth. Fins and scales were placed in coin envelopes and processed later in the lab.

At bass fishing tournaments bass brought in for weighing as part of tournament catch were measured to the nearest mm and weighed to the nearest g. However, no weights were obtained on larger bass in some tournaments. At some tournaments, scales were collected. At some tournaments, bass were tagged with individually numbered floy tags prior to release.

Creel Survey

Four weekend and four weekdays days per month were scheduled to make angler counts. Angler count days were selected at random except that no more than one weekday and one weekend day per week were scheduled.

Two angler counts were scheduled on angler count days. Time for the first count was randomly selected from the first half of the angler day. The second count was scheduled one half of the angler day later.

Angler day length was defined to be from 0800-1800 in March, 0700-2000 in April, 0630-2130 in May, 0600-2130 in June, 0600-2100 in July, 0630-2100 in August, 0700-2000 in September, 0800-1900 in October, 0800-1730 in November and 0800-1700 in December.

Between the first and second angler counts, anglers were interviewed to determine angler residence, length of time spent fishing, and number of fish kept and released by species.

All data was collected by volunteers.

RESULTS

Arrowrock Reservoir

Standard Sampling

Arrowrock Reservoir is a 1,256 ha (3,100 acre) impoundment of the Boise River near Boise, Idaho that has a full pool volume of 105,877 ha-m (286,600 acre-ft). The reservoir provides storage for flood control, irrigation, recreation and instream flows. Arrowrock is planted with fingerling and catchable rainbow trout *Oncorhynchus mykiss* and supports many species including wild rainbow trout *O. m. gairdneri*, bull trout *Salvelinus confluentus*, and mountain whitefish *Prosopium williamsoni*. The reservoir was full and spilling at the time of sampling and had an estimated secchi disc of over 5 m. No record of any historical sampling on Arrowrock could be found.

Arrowrock Reservoir was sampled with 2.5 gill net and 4 trap net units of effort in 1995 (Table 1).

A total of 416 fish were collected. Fish collected included bridgelip sucker *Catostomous columbianus*, bull trout, chiselmouth *Acrocheilus alutaceus*, hatchery rainbow trout, largescale sucker *C. macrocheilus*, mountain whitefish, northern squawfish *Ptychocheilus oregonensis*, rainbow cutthroat hybrid *O. mykiss* x *O. clarki*, redbelt shiner *Richardsonius balteatus*, westslope cutthroat *O. c. lewisi*, wild rainbow trout and yellow perch *Perca flavescens*. Catch-per-effort by number and weight was 143.2 fish and 111.9 kg, and 14.5 fish and 1.3 kg for gill nets and trap nets, respectively (Appendix A).

Number, length range, mean length, weight and condition factor, standard errors, catch-per-effort by number and weight and percent of total catch by number and weight of fish collected for

each species and gear type are shown in Appendix A. Length frequency by cm size group of each species collected by gear type and relative weight by size group are included in Appendix B.

Gill nets caught 358 (86%) of the total fish. Northern squawfish, bridgelip sucker and largescale sucker dominated the catch representing 83% of the catch by number. Hatchery rainbow trout, wild rainbow trout and bull trout represented 6.2, 0.3 and 3.1% of the catch by number.

Trap nets caught 58 (14%) of the total fish. Northern squawfish, bridgelip and largescale sucker made up 39.6% of the catch by number. Hatchery rainbow trout, wild rainbow trout and bull trout made up 12.1%, 3.5% and 3.5% of the catch by number, respectively.

Wild rainbow trout, bull trout, and westslope cutthroat trout had average lengths of 218 mm, 354 mm and 480 mm, respectively.

Bull Trout Sampling

Five trap nets were set to catch bull trout to install radio transmitters. Nets were set between Cottonwood Creek mouth and Willow Creek campground. Four gill nets with the small mesh rolled up were also set and checked three times between 2100 and 2359 in mid-May. Gill nets were set above Cottonwood Creek mouth.

Only two bull trout were captured which did not warrant placement of radio tags. Likely the bull trout had moved into the river system.

In addition, gill nets caught 17 wild and hatchery rainbow trout (mean length 301 mm), 2 bridgelip sucker, 27 largescale sucker, 4 northern squawfish and 2 mountain whitefish. Trap nets caught 5 wild and hatchery rainbow trout (mean length 184 mm), one bridgelip sucker, 4 largescale sucker, 2 northern squawfish, 35 redbelly dace and 2 yellow perch.

Brownlee Reservoir

Electrofishing

Electrofishing on Brownlee Reservoir was conducted on the night of May 3, 1995. A joint effort with two electrofishing boats was done between Idaho Department of Fish and Game (IDFG) and Oregon Department of Fish and Wildlife (ODFW). Each boat had two fish capture netters. Standard sampling sites were electrofished including Brownlee Creek, Sturgill Creek, Robinette Creek Island, First Cove downstream and across from Powder Arm and Sheep Creek. Sampling conditions were ideal; clear, calm, good water visibility and water levels approximately 12 m from full pool.

A total of 1.42 h of electrofishing effort was expended (Table 1). Black crappie *Pomoxis nigromaculatus*, bluegill *Lepomis macrochirus*, bridgelip sucker, channel catfish *Ictalurus punctatus*, chiselmouth, common carp *Cyprinus carpio*, hatchery rainbow trout, largemouth bass *Micropterus salmoides*, largescale sucker, smallmouth bass *M. dolomieu*, white crappie *Pomoxis annularis*, wild rainbow trout and yellow perch were represented in the catch. Catch-per-effort was 373 fish and

83.8 kg per hour. Number collected, length range, mean length, weight, condition factor and standard errors, catch-per-effort by number and weight and percent of total catch by number and weight of fish collected for each species and gear type are shown in Appendix A. Length frequency by cm size group of each species collected by gear type and relative weight by size group are included in Appendix B.

Smallmouth bass comprised 60.5% of the number and 72.8% of weight of the catch. White crappie represented 14.0% of the number and 19.9% of the weight collected. Black crappie represented 11.5% and 6.0% of the catch by number and weight, respectively. Wild and hatchery rainbow trout represented 0.4% of the catch by number (Appendix A). Nongame species represented 5.3% of the catch by number.

Catfish Sampling

A cooperative study to document angler exploitation on the channel and flathead *Pylodictis olivaris* catfish population in Brownlee Reservoir began in 1995 with IDFG, ODFW and Idaho Power Company participating.

Catfish were captured primarily by floating and sinking experimental nets. Nets were set for varying lengths of time during both daylight and night hours. Gill nets were modified to only fish with panels of 2.54 cm bar mesh and larger. This reduced the amount of non-target by catch, including small catfish. Only 300 mm and larger catfish were tagged. The 300 mm size was considered to be the smallest size harvested by fishermen.

Catfish were also captured by hook and line and by long lines set by ODFW in the free flowing section of the Snake River. Angler caught catfish were sampled and tagged and released at the Memorial Day Catfish Tournament near Huntington, Oregon by ODFW personnel.

Catfish were tagged with a Carlin Dangler type produced by Floy Tag Manufacturing Company. "Reward" was written on one side with the address to return tags to written on the back. Rewards were \$5. The tags were oval in shape approximately 0.5 cm by 2 cm long, and yellow in color. The tags were attached to the catfish just ventral of the posterior end of the dorsal fin, ventral of the skeletal plate of the dorsal spine. The actual attachment was accomplished by inserting two hypodermic needles held in pliers, through the muscle tissue; inserting the two ends of stainless steel wire of the tag from the opposite side; removing the needles; thus pulling the ends of wire through the musculature of the fish. The wire was pulled tight and twisted against itself and the excess clipped off and the fish released. The tagged fish were not held for observation after tagging.

The ODFW staff developed posters and handouts about the tagging and return reward program and distributed materials to area license vendors in areas along the stateline. Press releases were also produced for the local media by both IDFG and ODFW.

Tag reward payment and record keeping was administered by ODFW. A database tracked the capture length, weight, tag number, release site by river mile, recapture date and location. For incomplete tag return information, ODFW staff attempted to contact the individuals that sent in tags to gather missing information.

A total of 1,178 reward tags were attached to channel and flathead catfish in Brownlee Reservoir and the Snake River in 1995. Table 2 shows the relative location of the tagged fish, number of tagged fish in the strata and a description of the strata boundaries. More fish were tagged in the upper reservoir (583) than in other areas. Two reasons for the skewed distribution of tagged fish; there are more catfish and more catfish fishermen in that area of the reservoir than in any others.

Forty-six tags (3.8%) were returned to ODFW by the end of 1995. Rewards were paid to all anglers who returned tags and one tag returner received an additional \$50 from a special drawing of tag returners. The ODFW personnel expressed concern that the \$5 reward was inadequate to stimulate of all angler caught tagged catfish.

Movements of returned tagged catfish were greater than expected; 15 catfish moved upstream, 13 catfish moved downstream and 18 catfish harvest locations were not reported. The upstream moving fish averaged 22.9 miles from where they were tagged, while the downstream moving catfish averaged 12.6 miles. The furthest movement was 101.9 miles from near Steck Park to Marsing, Idaho.

Length frequency of tagged channel catfish is presented in Figures 1-5. Average length of 1,178 channel catfish was 446 mm with an average weight of 893 g. Channel catfish average relative weight was 90.8. Twenty-two flathead catfish had an average length of 615 mm and an average weight of 3,540 g with a relative weight of 114.3.

C.J. Strike Reservoir

Lowland Lake Sampling

C.J. Strike Reservoir is a 3,036 ha impoundment of the Snake River in Elmore and Owyhee counties in southwest Idaho. The reservoir is a popular fishery for anglers from the Boise and Mountain Home areas. Fish management is for a multi-species warmwater fishery with the additional stocking of rainbow trout. Rainbow trout fingerlings are typically stocked in the early spring and return to the anglers that fall through the next two years.

The reservoir was sampled on April 17 and 18, 1995. Sample effort included 4 units of trap net effort, 2 units of gill net effort, and .678 units of electrofishing effort (Table 1). The sampling gears were set at standard sampling locations established previously. Sampling was only conducted in the Bruneau and main reservoir pool areas.

Black crappie, brown bullhead *Ameiurus nebulosus*, bluegill, bridgelip sucker, channel catfish, chiselmouth, hatchery rainbow trout, largemouth bass, largescale sucker, northern squawfish, peamouth *Mylocheilus caurinus*, pumpkinseed *L. gibbosus*, smallmouth, white crappie and yellow perch were represented in the catch. Standard unit catch-per-effort was 753 fish and 95.6 kg (Table 3). Nongame species, hatchery rainbow trout, largemouth bass, smallmouth bass and yellow perch represented 23.4, 11.2, 5.0, 3.3 and 51.5% of the catch by number, respectively. Nongame species, hatchery rainbow trout, largemouth bass, smallmouth bass and yellow perch represented 16.6, 10.4, 21.2, 5.5 and 34.2% of the catch by weight, respectively (Table 3). Number collected, length range, mean length, weight, condition factor, standard errors, catch-per-effort by number and weight and

percent of total catch by number and weight, of fish collected for each species and geartype are shown in Appendix A. Length frequency by cm size group of each species collected by geartype and relative weight by size group are included in Appendix B.

Sampling in 1995 was conducted too early in the year to electrofish sample all fish species effectively. Water temperature was 8.5°C.

Smallmouth Bass: Electrofishing in April 1995 did not capture smallmouth bass effectively when compared to previous experiences on the reservoir. Standard unit catch for smallmouth bass was 3.3% by number compared to 33% in 1993 (Table 3 and Allen et al. 1996).

Yellow Perch: Yellow perch catch increased from 12% of the catch in 1993 to 51.6% of the catch in 1995 (Table 3 and Allen et al. 1996). Average yellow perch length increased in 1995 to 194 mm (se=1.7). Several large year classes will continue to produce a good yellow perch fishery.

Rainbow Trout: Average length was less in 1995 at 253 mm (se=12.6) than 1993 (Appendix A and Allen et al. 1996). A majority of the catch was the 1995 spring planted fingerlings which slightly increased the standard unit catch by number. Trout greater than 350 mm were less common in 1995.

Tournament Catch

Angler caught bass from fishing tournaments on March 25, April 4, June 10 and August 26, 1995 were measured to the nearest mm, weighed to the nearest g, tagged with individually numbered floy tags, returned to the middle of the reservoir and released. No weights were obtained on larger bass in some tournaments.

A total of 70, 95, 141 and 182 bass were measured and tagged on March 25, April 2, June 10 and August 26, 1995, respectively. Largemouth and smallmouth bass were represented in the catch. Largemouth represented 4.3, 2.1, 6.4 and 5.5% respectively, of the catch by number for the four tournament dates (Appendix A).

Mean length of largemouth caught was 353, 385, 380 and 349 mm for the four tournament dates, respectively. Mean length for smallmouth bass was 327, 330, 337 and 348 mm for the four tournament dates, respectively (Appendix A).

Length frequency and relative weight of largemouth and smallmouth bass by cm group are given in Appendix B. Generally, relative weight was less in June and August, than in March and April.

From the time of tagging until May 31, 1996 a total of 11, 13, 12 and 12 tags was returned from the four tournament tag dates, respectively. Distribution of tag returns, tag date, and number tagged are given in Table 4.

Anglers catching some tagged bass reported sores around the tags. Likely some delayed mortality results from tagging. This mortality should be considered in future tagging efforts.

Cove Arm Reservoir

A creel survey was conducted on Cove Arm Reservoir from March through December. Numerous deviations were made from the sampling schedule. As a result, variance estimates were not calculated for the point estimates reported here.

Anglers were estimated to have fished 6,173 h to harvest 13 largemouth bass, 824 rainbow trout, 66 bluegill, 80 smallmouth bass, and 4,272 yellow perch (Table 5). In addition, anglers reported releasing an additional 131 largemouth bass, 785 rainbow trout, 175 bluegill, 601 smallmouth bass and 481 yellow perch (Table 5). Harvest rate and catch rate for these species for the March to December period was .85 and 1.41 fish/h, respectively.

Five thousand 230 mm hatchery rainbow trout were planted in Cove Arm Reservoir prior to the start of the creel survey. Anglers were estimated to have harvested 824 (16.5%). In addition, anglers reported releasing 785 rainbow trout (15.7%). Total catch of hatchery rainbow trout in Cove Arm Reservoir during the study period was 32.2% of the number planted.

Hatchery rainbow trout provided 15.7% of the gamefish harvest and 21.7% of the gamefish catch (harvest + release) from Cove Arm Reservoir.

Of the anglers fishing Cove Arm Reservoir who identified their area of residence, 43.1% were from Ada County and 51% were from Elmore county. The remainder were from other states and two other Idaho counties.

Bank, boat and float tube fishermen represented 70.1, 24.0 and 5.9% of the anglers interviewed.

Average length of completed trip for completed trip anglers was 2.32 h. Estimated number of angler trips was 2,661.

Bait, lure and fly anglers represented 78.9, 13.2 and 7.9% of the angling hours on the reservoir.

The preferred species of fish to catch for 58.9% of the interviewed anglers was trout or rainbow trout. Bass, yellow perch, and crappie were the preferred species for 14.4, 13.3 and 12.2% of the interviewed anglers, respectively.

Cove Arm Reservoir is connected to C.J. Strike Reservoir by a narrow channel that does not prohibit movement of fish between the two waters. Numerous complaints were received during 1995 regarding the poor quality of trout fishing in C.J. Strike Reservoir. The same lot of fish planted in C.J. Strike Reservoir was planted in Cove Arm Reservoir. The reason for poor returns in C.J. Strike Reservoir has not been determined, but may have been related to an above average water year with high flows during much of the summer. Many of the planted fish may have migrated downstream, out of C.J. Strike Reservoir during high flows.

A 32.2% return rate for rainbow trout planted in Cove Arm is not good, but appears to be much better than the return of trout in C.J. Strike Reservoir. A large majority of anglers continue to prefer trout fishing opportunity in C.J. Strike Reservoir and nearby reservoirs. Concentrating hatchery trout in Cove Arm may be a way to continue to provide trout fishing opportunity while improving hatchery trout return rates, particularly in high flow years.

Crane Creek Reservoir

Crane Creek Reservoir is east of Midvale, Idaho and lies on a high desert bench. The reservoir was built in the 1930s and is used as a irrigation storage reservoir for the Crane Creek Reservoir Board for irrigation water delivery in the Weiser, Idaho area. The reservoir drains into the Weiser River and then water is withdrawn downstream for irrigation. Most of the lands around the reservoir are privately owned by the reservoir board. The reservoir is wind swept and is turbid from suspended clays. Fishing pressure is light because of limited access and a historical boom and bust white crappie fishery. The reservoir was drained in the fall of 1986 and greatly impacted the fishery. The draining caused the introduction of white crappie into the Weiser and Snake rivers and eventually led to Brownlee Reservoir's tremendous white crappie fishery in the early 1990s.

Crane Creek Reservoir was sampled by gill nets, trap nets and electrofishing on June 13 and 14, 1995. Sample effort included four trap net units of effort, two gill net units of effort, and one electrofishing unit of effort (Table 1).

Black crappie, bridgelip sucker, brown bullhead, channel catfish, common carp, largemouth bass, white crappie, and yellow perch were represented in the catch. Number collected, length range, mean length, weight, and condition factor and standard errors, catch-per-effort by number and weight and percent of total catch by number and weight, of fish collected for each species and gear type are shown in Appendix A. Length frequency by cm size group of each species collected by gear type and relative weight by size group are included in Appendix B. Standard unit catch-per-effort for all species was 752 fish and 194.6 kg. Standard unit catch-per-effort by species and gear type are given in Table 3.

The reservoir is dominated by common carp and white crappie. White crappie were the most numerous species at 50.1% by number and 22.7% by weight (Table 3). Carp represented 41.5% of the total number and 74.8% of the weight collected (Table 3).

Back calculated length-at-age for black crappie was 58, 101, 133, 169 and 210 mm for age 1 to 5, respectively (Table 6). Back calculated length-at-age for white crappie was 60, 99, 144, 196 and 232 mm, respectively for age 1 to 5 (Table 6).

Crane Falls Lake

A creel survey was conducted on Crane Falls Lake from March through December. Numerous deviations were made from the sampling schedule. As a result, variance estimates were not calculated for the point estimates reported here.

Anglers were estimated to have fished 13,601 h to harvest 58 largemouth bass, 2,640 rainbow trout, 1,166 bluegill, 16 smallmouth bass and 484 yellow perch (Table 7). In addition, anglers reported releasing 2,278 largemouth bass, 2,613 rainbow trout, 1,311 bluegill, 752 smallmouth bass and 1,274 yellow perch (Table 7). Total harvest rate and total catch rate for all species for the March to December period was 0.32 and 0.93 fish per hour, respectively (Table 7).

Eight thousand 230 mm hatchery rainbow trout were planted in Crane Falls Lake prior to the start of the creel survey. Anglers were estimated to have harvested 2,640 (33.0%). In addition, anglers reported releasing 2,613 rainbow trout (32.7%) (Table 7). Total catch of hatchery rainbow trout in Crane Falls Reservoir during the study period was 65.7% of the number planted.

Hatchery rainbow trout provided 60.4% of the gamefish harvest and 41.7% of the gamefish catch (harvest + release) from Crane Falls Reservoir.

Of the anglers fishing Crane Falls Reservoir who identified their area of residence, 27.9% were from Ada County and 52.8% were from Elmore county. The remainder were from 4 other states and 8 other Idaho counties.

Bank, boat and float tube fishermen represented 67.7, 9.4 and 22.9% of the anglers interviewed.

Average length of completed trip for completed trip anglers was 1.63 h. Estimated number of angling trips was 8,344.

Bait, lure and fly anglers represented 62.1, 24.6 and 12.9% of the angling hours, respectively.

The preferred species of fish to catch for 78.5% of the interviewed anglers was trout or rainbow trout. Bass and bluegill was the preferred species for 18.5 and 3.0%, respectively, of the interviewed anglers.

The return rate for planted trout in this lake is excellent. Even though a large population of largemouth bass in the lake provides a good fishery, angler demand for trout and good return rates justify continuing this program.

Deadwood Reservoir

Deadwood Reservoir is a 1,300 ha impoundment of the Deadwood River in the Boise National Forest. The reservoir is operated by the U.S. Bureau of Reclamation (USBOR) and provides storage for flood control, irrigation, recreation, and instream flows.

Deadwood Reservoir was sampled September 26, 1995 with two units of gill net effort (Table 1). Gill net catch-per-unit effort was 104.5 fish and 26.6 kg (Appendix A). Atlantic salmon *Salmo salar*, kokanee salmon *O. nerka kennerlyi*, mountain whitefish, rainbow x cutthroat hybrid, westslope cutthroat trout and wild rainbow trout were represented in the catch. Number collected, length range, mean length, weight, condition factor and standard errors, catch-per-effort by number and weight and percent of total catch by number and weight of fish collected for each species and gear type are shown in Appendix A. Length frequency by cm size group of each species collected by gear type, and relative weight by size group are included in Appendix B.

Mountain whitefish were the most abundant species encountered and made up 72.2% of the total catch with an average length of 301 mm. Wild rainbow trout were the second most abundant fish encountered, comprising 11.5% of the catch and averaged 214 mm in length. Kokanee, rainbow-cutthroat hybrids, westslope cutthroat trout and Atlantic salmon represented 5.3, 3.8, 3.8 and 3.3% of the total catch, respectively. No nongame fish species were captured.

The average length of the sampled kokanee slightly decreased from 253 mm in 1994 to 244 mm in 1995 (Allen et al. In Press). The fall sampled kokanee have been following a trend of increasing overall average length since a low of 196 mm measured in 1992 (Allen et al. 1995).

The reservoir level was approximately 5 m down from full pool at the time of sampling and had a Secchi depth of approximately 6.5 m.

Lake Lowell

Electrofishing

Electrofishing occurred from 1100-1600 h on April 10, from 1500-2000 h on April 11, from 2100-2400 h on August 22 and from 1015-1630 h on October 24, 1995. Total activated electrode time was 1.64 h, 0.79 h, 0.87 h and 1.74 h on April 10, 11, August 22 and October 24, respectively (Table 1).

Brown bullheads, black crappie, bluegill, bridgelip sucker, carp, largemouth bass, largescale sucker, smallmouth bass, white crappie and yellow perch were represented in the catch. Fish catch on all occasions was dominated by suckers and carp. Game fish represented only a minimal portion of the catch by number. Gamefish collected were generally small, and were usually young-of-the-year or age 1+. Number collected, length range, mean length, weight, condition factor and standard errors, catch-per-effort by number and weight and percent of total catch by number and weight, of fish collected for each species and gear type are shown in Appendix A. Length frequency by cm size group of each species collected by gear type, and relative weight by size group are included in Appendix B.

The lack of age 2+ and older bass, and age 1+ and older bluegill and crappie is disturbing. Presence of young-of-the-year bass indicates bass spawn successfully in the lake. Lack of older bass indicates relatively poor survival into older size classes. Absence or near absence of young bluegill and crappie may indicate spawning success is very limited for these species. Former successful fisheries for bluegill and crappie indicates successful spawning did occur prior to the loss of most bass, bluegill and crappie from the lake sometime after 1989.

Catch-per-hour of electrofishing for all sample days on Lake Lowell ranged from 66 to 210 fish of all species. As a comparison catch-per-hour of electrofishing on Lucky Peak, Paddock, C.J. Strike and Brownlee reservoirs in 1995 was 308, 463, 492 and 373 fish, respectively. Catch-per-hour of electrofishing on Lake Lowell was only 42-68% of the catch-per-effort at other southern Idaho reservoirs.

Current information does not indicate the fish population in Lake Lowell has begun to recover from fish kills that occurred after 1989.

Channel Catfish Aging

Pectoral fin spines from 25 channel catfish collected during netting activities in May, 1994 were sectioned and ages determined. Length of catfish netted in 1994 ranged from 275 to 690 mm. Back-calculated length-at-age estimates were 127, 210, 304, 398, 469, 507, 555, 606, 631 and 671 mm for ages 1-10, respectively. Back-calculated length-at-age by year class are given in Table 8.

Fishing Tournament

A bass fishing tournament was held on April 29 and 30. Sixty anglers in 30 boats fished 1,080 h to catch 51 largemouth bass and 2 smallmouth bass. Mean length and weight of largemouth bass

was 391 mm and 1,134 g, respectively (Appendix A). Mean length and weight of smallmouth bass was 380 mm and 815 g, respectively (Appendix A). No bass less than 305 mm were reported caught by tournament anglers.

All bass were tagged with floy tags prior to release. No recaptures had been reported as of June 1, 1996.

Largemouth bass back-calculated length-at-age estimates were 57, 112, 233, 305, 344, 368, 383, 412 and 431 mm for age 1 to 9 bass, respectively, caught during the fishing tournament. Table 9 shows back-calculated length-at-age by year class.

Age estimates for bass appear to be inflated. Perhaps late summer conditions in the lake cause a growth check that were interpreted as additional annuli. Further work is warranted to better determine growth of largemouth in Lake Lowell.

Water Samples

Dissolved oxygen and temperature profiles were measured at sites a, b, and c (Table 10) during May through December 1995 and in March and May 1996. Dissolved oxygen and temperature profiles are shown in Figure 6. Generally, oxygen and temperature profile data seemed adequate for bass, bluegill and crappie production.

Surface water samples at various sites were collected and analyzed to monitor water quality both in the lake and in several tributary drains on the south side of the lake (Table 10). Water samples were usually collected by Eagle High School students as part of the SITE (Students Investigating Today's Environment) program. Samples were analyzed by students using Hach Kits and by the USBOR in Boise, Idaho.

Students measured water temperature, dissolved oxygen, pH, 5-day Biochemical Oxygen Demand (BOD), orthophosphate, nitrate nitrogen, turbidity and total solids. The USBOR lab reported nitrate nitrogen, total nitrogen, ammonia, 5-day BOD, suspended solids and turbidity.

Water sample analysis results are shown in Table 11 (taken from Weiss, 1995). Water quality from the lake itself was adequate and likely not limiting to fish production during the time period water samples were taken. Water samples from some sites at some times from the south side of the lake contained high phosphate, nitrate and BOD values. In addition, several sample fecal coliform counts exceeded standards for primary contact recreation (swimming).

Generally, water quality data indicate the lake is eutrophic. Periodic fish kills can be expected in the future, particularly in years water levels in the lake are low.

Lucky Peak Reservoir

Lucky Peak Reservoir was sampled with 1.15 units of electrofishing effort on May 16, 1995. Bridgelip sucker, chiselmouth, largescale sucker, mountain whitefish, northern squawfish, redbelt shiner, smallmouth bass, and yellow perch were represented in the catch (Appendix A). Sucker spp. and squawfish represented 85.6% of the weight of fish collected (Appendix A). Number collected, length range, mean length, weight, condition factor and standard errors, catch-per-effort by number

and weight and percent of total catch by number and weight, of fish collected for each species and gear type are shown in Appendix A. Length frequency by cm size group of each species collected by gear type, and relative weight by size group are included in Appendix B.

Average length-at-age for smallmouth bass from Lucky Peak Reservoir for age 1 to 8 was 75, 118, 166, 213, 265, 373, 408 and 429 mm, respectively. Back-calculated length-at-age by year class is given in Table 12.

Manns Creek Reservoir

Manns Creek Reservoir is located approximately 13 km north of Weiser, Idaho. The USBOR dam was completed in 1967 and impounds 115 ha. Storage is primarily for irrigation but water recreation is popular. A 305 mm minimum length limit for bass has been on the reservoir for many years. Approximately 10,000 catchable rainbow trout are planted each year.

The reservoir was sampled by gill nets, trap nets and electrofishing on June 12 and 13, 1995. Sample effort included 4 trap net units of effort, 2 gill net units of effort and 1.01 units of electrofishing effort (Table 1).

Black crappie, wild and hatchery rainbow trout and largemouth bass were represented in the catch. Number collected, length range, mean length, weight, condition factor and standard errors, catch-per-effort by number and weight and percent of total catch by number and weight, of fish collected for each species and gear type are shown in Appendix A. Length frequency by cm size group of each species collected by gear type and relative weight by size group are included in Appendix A.

Standard unit catch-per-effort was 264 fish and 36.2 kg (Table 3). Black crappie were the most numerous species captured equaling 49.4% of catch. The next most numerous species was largemouth bass at 20.7%. No nongame fish species were captured (Appendix A and Table 3). Electrofishing survey work in 1990 captured sucker species in low numbers (Grunder et al. 1993). Standard unit catch-per-unit effort for black crappie, hatchery rainbow trout, largemouth bass and wild rainbow trout was 130, 40, 55 and 39 fish and 14.0, 7.4, 13.0 and 1.7 kg, respectively. Catch-per-effort for each species by gear type is given in Appendix A.

Largemouth bass electrofishing catch-per-hour was 79.1 and 54.2 for 1990 and 1995 (Grunder, 1993 and Table 3), respectively. Average total length was similar in 1990 versus 1995 at 238 mm and 242mm, respectively (Grunder, et al., 1993).

Back calculated length-at-age estimates for largemouth bass were 69, 139, 194, 241, 282, 364, 396 and 408 mm for age 1 to 8 largemouth bass, respectively (Table 13). Largemouth bass take 5 years to become available for harvest with the 305 mm minimum length limit.

Back calculated length-at-age estimates for black crappie were 77, 104, 134, 173 and 207 mm, respectively, for age 1 to 5 (Table 13). Black crappie growth was slow and comparable to Crane Creek Reservoir (this report). Mean length decreased from 1990 to 1995 from 250 mm to 188 mm, (Appendix A and Grunder et al. 1993).

Wild and hatchery rainbow trout each comprised 15% of the standard unit catch (Table 3). The Mann Creek drainage is a strong producer of redband trout and was obviously contributing to the reservoir fishery.

The reservoir was at full pool at time of sampling and very clear with an estimated secchi disc of over 5 m. Trap nets did not fish effectively, most likely from the clear water. Gill nets slightly selected for larger trout than electrofishing, while electrofishing and gill nets were generally equal in sampling black crappie (Appendix A).

Mountain Home Reservoir

A creel survey was conducted on Mountain Home Reservoir from May through July 1995. Numerous deviations were made from the sampling schedule. As a result, variance estimates were not calculated for the point estimates reported here.

Anglers were estimated to have fished 2,989 h to harvest 638 rainbow trout (Table 14). In addition, anglers reported releasing 539 rainbow trout (Table 14). Harvest rate and catch rate for these species for the March to July period was 0.21 and 0.39 fish per hour, respectively (Table 14).

Three thousand 230 mm hatchery rainbow trout, and 15,000 125 mm hatchery rainbow trout were planted in Mountain Home Reservoir prior to the start of the creel survey. During May through July, anglers were estimated to have harvested 638 (21%) of the 230 mm trout. In addition, anglers reported releasing 539 rainbow trout. Many of the released trout were likely 125 mm fingerlings.

Of the anglers fishing Mountain Home Reservoir who identified their area of residence, 90% were from Elmore county.

Bank, boat and float tube fishermen represented 99.2, 0.0, and 0.8% of the anglers interviewed.

Average length of completed trip for anglers was 1.50 h. Estimated number of angling trips was 1,992.

Bait, lure and fly anglers represented 88.9, 6.5 and 4.6% of the angling hours on the reservoir, respectively.

The preferred species of fish to catch for 100% of the interviewed anglers was trout or rainbow trout.

Paddock Reservoir

Paddock Reservoir is located approximately 28 km east of Weiser, Idaho and is a 529 ha reservoir owned and operated by the Little Willow Irrigation District. At full pool the reservoir storage is 25,100 ac-ft and is frequently drawn down in the summer months to meet irrigation demands. Historically, Paddock Reservoir has supported brown bullhead, largemouth bass, black crappie and bluegill.

Paddock Reservoir was sampled April 3, 1995 with 4 units of trap net effort, 2 units of gill net effort and 1.06 units of electrofishing effort (Table 1). Black crappie, bluegill, brown bullhead and largemouth bass were represented in the catch. Number collected, length range, mean length, weight, condition factor and standard errors, catch-per-effort by number and weight and percent of total catch by number and weight, of fish collected for each species and gear type are shown in

Appendix A. Length frequency by cm size group of each species collected by gear type and relative weight by size group are included in Appendix B. Standard unit catch-per-effort was 676 fish and 151.6 kg (Table 3).

The reservoir was full at the time of sampling and was very turbid with a Secchi of less than 1 m. Paddock Reservoir essentially went dry in 1992 and was subsequently restocked with 1,400 black crappie, 1,168 bluegill and 432 largemouth bass in 1993.

Riddle Area Reservoirs

The Riddle area reservoirs lie in the southern high desert of Owyhee County near the town of Riddle, Idaho just north of the Idaho-Nevada border. Bybee, Grasmere, Little Blue Creek and Shoofly reservoirs have been stocked annually with Lahontan cutthroat *O. c. henshawi* trout since 1989. Fall fingerlings were stocked for three years and then in 1993 a switch to fry stocking in June was made. During the first years, a 20 inch minimum length limit and two fish harvest limit were imposed on the lakes. These limits were removed beginning in 1994 due to lack of fishing pressure.

Bybee, Grasmere, Little Blue, Shoofly and Squaw Creek reservoirs were sampled on May 23-26, 1995 with trap nets and gill nets. Sample effort on each reservoir included two trap net units of effort and one gill net unit of effort (Table 1).

Bybee Reservoir

A total of 58 fish were collected (Appendix A). Bridgelip sucker, Lahontan cutthroat trout and reaside shiner were represented in the catch. Number collected, length range, mean length, weight, and condition factor and standard errors, catch-per-effort by number and weight, and percent of total catch by number and weight, of fish collected for each species and gear type are shown in Appendix A. Length frequency by cm size group of each species collected by gear type and relative weight by size group are included in Appendix B.

Lahontan cutthroat trout comprised 91% of the catch by number. Mean length was 346 mm and mean weight was 306 g. Catch-per-effort for Lahontan cutthroat trout was 43 and 5 for gill and trap nets, respectively (Appendix A).

Only one Lahontan cutthroat trout was captured in sampling in Bybee Reservoir in 1994 (Allen et al. In Press). Smaller fish, ages 0 and 1+ were not captured in 1995. Overall, the catch of Lahontan cutthroat trout in this reservoir has been variable and the absence of the smaller fish was probably not an indication of a year class failure.

Grasmere Reservoir

A total of 167 fish were collected (Appendix A). Bridgelip sucker, Lahontan cutthroat trout and reaside shiner were represented in the catch. Number collected, length range, mean length, weight, and condition factor and standard errors, catch-per-effort by number and weight, and percent of total

catch by number and weight, of fish collected for each species and gear type are shown in Appendix A. Length frequency by cm size group of each species collected by gear type and relative weight by size group are included in Appendix B.

Lahontan cutthroat trout made up 87.7% by number of the fish collected (Appendix A). Mean length of Lahontan cutthroat trout collected was 326 mm. Catch-per-effort for gill and trap nets for Lahontan cutthroat trout was 112 and 23.5, respectively (Appendix A).

Little Blue Reservoir

A total of 110 fish were collected (Appendix A). Bridgelip sucker, Lahontan cutthroat trout and redbreasted sunfish were represented in the catch. Number collected, length range, mean length, weight, condition factor and standard errors, catch-per-effort by number and weight, and percent of total catch by number and weight, of fish collected for each species and gear type are shown in Appendix A. Length frequency by cm size group of each species collected by gear type and relative weight by size group are included in Appendix B.

Lahontan cutthroat trout comprised 85% of the total catch by number (Appendix A). Mean length of Lahontan cutthroat trout collected was 309 mm. Catch-per-effort for Lahontan cutthroat trout for gill and trap nets was 61 and 15.5, respectively. Number of cutthroat trout captured were up from 1993 and less than 1994 (Allen et al. In press).

Shoofly Reservoir

Lahontan cutthroat trout comprised 99% of the catch (Appendix A). Mean length of Lahontan cutthroat trout was 296 mm. Catch-per-effort for Lahontan cutthroat trout for gill and trap nets was 61 and 35, respectively (Appendix A). Catch-per-effort for bluegill was much less in 1995 than in 1993 and 1994 (Allen et al. In press).

Back calculated length-at-age estimates from scales for Lahontan cutthroat trout was 137, 232 and 294 mm for age 1 to 3 fish (Table 15). The results are similar to a previous age interpretation of a combined data set of two reservoirs (Allen et al. In Press).

Squaw Creek Reservoir

A total of 24 fish were collected (Appendix A). Bridgelip sucker and northern squawfish were represented in the catch. Number collected, length range, mean length, weight, condition factor and standard errors, catch-per-effort by number and weight and percent of total catch by number and weight of fish collected for each species and gear type are shown in Appendix A. Length frequency by cm size group of each species of fish collected by gear type and relative weight by size group are included in Appendix B.

Sagehen Reservoir

Sagehen Reservoir was sampled with two units of trapnet effort June 1, 1995 (Table 1), to identify any marked hatchery trout carry-over from 1994.

Number collected, length range, mean length, weight, condition factor and standard errors, catch-per-effort by number and weight and percent of total catch by number and weight of fish collected for each species and gear type are shown in Appendix B. Length frequency by cm size group of each species collected by gear type and relative weight by size group are included in Appendix A.

Mean length of seven hatchery rainbow trout was 318 mm, and mean weight of 45 wild rainbow trout was 222 mm (Appendix A). Only a portion of the hatchery trout planted were fin-clipped. Identification of wild or hatchery was sometimes difficult in the absence of a finclip.

RECOMMENDATIONS

Brownlee Reservoir

1. Continue tagging in 1996.
2. Intensify catfish sampling and tagging in the free flowing Snake River in 1996.

C.J. Strike Reservoir

1. Sample reservoir with multi-gear effort each May. The April time frame was too early for effective bass samples.
2. Produce an annual fishing forecast for distribution directly after sampling.

Cove Arm Reservoir

1. Continue to stock hatchery trout in Cove Arm Reservoir as they are available and periodically monitor return rates.

Crane Creek Reservoir

1. Focus angler effort on the crappie population in Crane Creek Reservoir.
2. Re-sample in spring 1998 using only gill nets and trap nets, the electrofish catch was primarily carp.

Crane Falls Lake

1. Continue present hatchery trout put-grow-and-take fishery for trout and trophy bass management programs.

Manns Creek Reservoir

1. Continue present regulations.
2. Continue annual stocking of 10,000 catchable rainbow trout.
3. Re-sample in five years.

Mountain Home Reservoir

1. Conduct a 12-month creel survey on this water as time allows.

Paddock Reservoir

1. Continue present regulations.
2. Supplement bluegill and black crappie populations with stocking.
3. Re-sample in three years.

Riddle Area Reservoirs

1. Re-sample the reservoirs in three to five years.
2. Continue fry stocking in June because of cost effectiveness.
3. Encourage anglers to utilize the fisheries.

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TABLES

Table 1. Units of sampling effort^a for Lowland Lakes sampling, 1995.

Water Name	DATE	Electrofish	Gill Net	TrapNet
ARROWROCK RES	04/13/95		2.5	4
BROWNLEE RES	05/03/95	1.4197		
BYBEE RES	05/26/95		1	2
C.J. STRIKE RES	04/17/95	0.6786	2	4
CRANE CREEK RES	06/13/95	1.0042	2	4
DEADWOOD RES	09/20/95		2	
GRASMERE RES	05/23/95		1	2
LAKE LOWELL	04/10/95	1.6378		
LAKE LOWELL	04/11/95	0.7872		
LAKE LOWELL	08/22/95	0.866		
LAKE LOWELL	10/24/95	1.74		
LITTLE BLUE CREEK	05/24/95		1	2
LUCKY PEAK RES	05/16/95	1.145		
MANN'S CREEK RES	06/12/95	1.015	2	4
PADDOCK RES	04/03/95	1.06	2	4
SAGEHEN RES	06/01/95			2
SHOOFLY RES	05/25/95		1	2
SQUAW CREEK RES	05/23/95		1	2

^aUnits of effort: Electrofish = 1 h of activated electrode time; Gill net = 1 floating and 1 sinking experimental gill net set overnight; Trap net = 1 trap net set overnight.

Table 2. Location and number of tagged catfish in Brownlee Reservoir in 1995.

Strata	River Miles	Number of Channel Catfish Tagged	Number of Flathead Catfish Tagged	Description of Strata
1	284.6 to 298.6	41	0	Dam to 2 mile upstream Powder R.
2	298.6 to 312.2	159	3	Up to Dennett Creek
3	312.2 to 325.8	293	3	Up to 1 mile below Spring ramp
4	325.8 to 339.4	583	15	Up to bend above Farewell Bend
5	339.4 to 365.5	102	1	To confluence of Payette River

Table 3. Electrofishing, gill net, and trap net catch-per-effort (CPUE) by number and weight for lowland lake sampling, 1995.

WATER	DATE	SPECIES	EF CPUE (Number)	GN CPUE (Number)	TN CPUE (Number)	TOTAL CPUE (Number)	EF CPUE (Weight kg)	GN CPUE (Weight kg)	TN CPUE (Weight kg)	Total CPUE (Weight kg)
C.J. STRIKE RES	4/17/95	Black crappie	15	1	0	16	0.68	0.14	0.02	0.84
		Bluegill	16	0	0	16	0.39	0.00	0.00	0.39
		Bridgelip sucker	46	0	0	46	6.47	0.00	0.00	6.47
		Brown bullhead	0	1	0	1	0.00	0.06	0.00	0.06
		Channel catfish	0	7	0	7	0.00	9.22	0.00	9.22
		Chiselmouth	1	0	0	2	0.00	0.00	0.06	0.06
		Hatchery rainbow trout	71	11	2	84	5.21	4.71	0.02	9.94
		Largemouth bass	38	0	0	38	20.28	0.00	0.00	20.28
		Largescale sucker	103	0	1	104	8.33	0.00	0.88	9.20
		Northern squawfish	15	0	0	15	0.18	0.00	0.01	0.19
		Peamouth	4	5	0	9	0.00	0.68	0.00	0.68
		Pumpkinseed	1	0	0	1	0.09	0.00	0.00	0.09
		Smallmouth bass	22	3	0	25	3.62	1.67	0.00	5.28
		White crappie	0	2	0	2	0.00	0.15	0.00	0.15
		Yellow perch	159	137	93	388	6.44	18.46	7.82	32.71
Total	492	165	96	753	51.68	35.08	8.80	95.56		
CRANE CREEK RES	6/13/95	Black crappie	6	1	4	10	0.29	0.05	0.33	0.68
		Bridgelip sucker	34	1	1	35	0.16	0.00	0.00	0.16
		Brown bullhead	3	1	11	15	0.52	0.17	1.31	2.00
		Channel catfish	0	1	0	1	0.00	2.00	0.00	2.00
		Common carp	280	29	4	312	144.69	0.00	0.79	145.48
		Largemouth bass	2	0	0	2	0.13	0.00	0.00	0.13
		White crappie	31	279	67	377	3.87	35.16	5.08	44.12
		Yellow perch	1	0	0	1	0.03	0.00	0.00	0.03
		Total	357	310	86	752	149.71	37.37	7.52	194.60
		MANNS CREEK RES	6/12/95	Black crappie	89	36	6	130	9.61	3.79
Hatchery rainbow trout	20			20	1	40	2.74	4.63	0.07	7.44
Largemouth bass	54			1	0	55	13.01	0.03	0.00	13.04
Wild rainbow/redband	36			3	0	39	1.31	0.37	0.00	1.68
Total	199			59	6	264	26.67	8.81	0.67	36.16
PADDOCK RES	4/3/95	Black crappie	0	2	5	7	0.00	0.87	1.45	2.32
		Bluegill	5	0	0	5	0.82	0.00	0.00	0.82
		Brown bullhead	4	15	0	19	1.62	7.26	0.08	8.96
		Largemouth bass	455	180	11	645	94.52	42.05	2.95	139.52
		Total	463	197	16	676	96.96	50.18	4.47	151.61

Table 4. Number of bass tagged, date tagged and number of recaptures by month for C.J. Strike Reservoir.

Tag Date	3/25/95	4/2/95	6/10/95	8/26/95
Number tagged	70	95	141	182
Recapture Month	Number	of	Recaptures	
3/95	1			
4/95	1			
5/95	3	3		
6/95	3	5	4	
7/95	2	3	2	
8/95	1	2	2	1
9/95	1		1	6
10/95			1	2
3/96			1	
4/96				1
5/96			1	2

Table 5. Estimated angling hours, number of fish harvested and number of fish released from Cove Arm Reservoir, March - December, 1995.

Month	Estimated Hours	Largemouth	Rainbow	Bluegill	Smallmouth	Yellow	Largemouth	Rainbow	Bluegill	Smallmouth	Yellow
		Bass Kept	Trout Kept	Kept	Bass Kept	Perch Kept	Bass Released	Trout Released	Released	Bass Released	Perch Released
March	280	0	13	5	8	55	0	0	71	0	0
April	607	0	0	14	0	0	0	28	0	69	0
May	2037	0	594	28	0	85	28	453	28	85	0
June	1265	0	133	19	38	932	19	304	76	228	285
July	448	0	0	0	34	2068	0	0	0	0	138
August	385	19	39	0	0	116	39	0	0	39	58
September	909	0	45	0	0	1016	45	0	0	181	0
October	242	0	0	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0	0	0
Total	6173	19	824	66	80	4272	131	785	175	601	481

Table 6. Average back-calculated lengths for each age class of white and black crappie captured in lowland lake sampling on Crane Creek Reservoir on June 13-14, 1995.

WHITE CRAPPIE

AGE	1	2	3	4	5
mm	60.0	98.9	144.1	195.7	232.1
N	78	78	64	43	19

BLACK CRAPPIE

AGE	1	2	3	4	5
mm	58.0	101.4	133.5	169.5	210.6
N	20	20	17	6	3

Table 7. Estimated angling hours, and number of fish harvested and number of fish released from Crane Falls Lake, March-December, 1995 .

Month	Estimated Hours	Largemouth	Rainbow	Bluegill	Smallmouth	Yellow	Largemouth	Rainbow	Bluegill	Smallmouth	Yellow
		Bass Kept	Trout Kept	Kept	Bass Kept	Perch Kept	Bass Released	Trout Released	Released	Bass Released	Perch Released
March	764	5	234	10	0	5	135	249	36	0	0
April	1928	0	41	61	0	0	82	530	0	20	0
May	4138	0	1185	47	16	16	203	1247	125	545	0
June	1472	53	550	53	0	0	621	532	35	0	0
July	2073	0	45	676	0	135	991	0	135	0	0
August	1841	0	378	318	0	338	139	20	856	100	896
September	834	0	130	0	0	0	93	19	0	56	317
October	456	0	77	0	0	0	15	15	124	31	62
November	95	0	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0	0	0
Total	13601	58	2640	1166	16	494	2279	2613	1311	752	1274

Table 8. Number aged (N) and back-calculated length (mm) at age for catfish collected from gillnetting in Lake Lowell, May 1994.

Year Class	Age	N	Age 1	Age 2	Age 3	Age 4	Age 5	Age 6	Age 7	Age 8	Age 9	Age 10
1993	1	0										
1992	2	6	104	216								
1991	3	3	99	191	274							
1990	4	1	125	192	272	372						
1989	5	6	145	228	332	412	484					
1988	6	6	139	196	303	401	469	513				
1987	7	0										
1986	8	0										
1985	9	2	134	217	290	369	444	498	549	594	620	
1984	10	1	144	223	298	377	434	488	567	631	651	671

Table 9. Number aged (N) and back-calculated length (mm) at age for largemouth bass collected during a fishing tournament held on Lake Lowell, April 29-30, 1995.

Year Class	Age	N	Age 1	Age 2	Age 3	Age 4	Age 5	Age 6	Age 7	Age 8	Age 9
1994	1	0									
1993	2	0									
1992	3	1	46	108	287						
1991	4	7	52	113	291	345					
1990	5	7	61	123	199	305	360				
1989	6	6	59	116	229	304	346	387			
1988	7	2	52	88	146	195	312	335	402		
1987	8	1	47	76	225	288	329	367	387	418	
1986	9	1	63	90	217	267	299	319	342	407	432

Table 10. Location of sample sites on Lake Lowell for water sample collection, May 1995 - May 1996.

Site	Latitude/Longitude	Site Location
A	43 32.87; 116 39.18	Open water site south of upper dam, middle of lake.
B	43 39.44; 116 43.54	Open water site, southeast end of lake one half mile east of lower dam.
C	43 34.36; 116 42.43	Open water site, lower lake area northwest of north side recreation area.
D	43 34.38; 116 44.82	Drain at access area 8; Kuna-Mora canal.
E	43 32.39; 116 41.58	Drain at access area 4.
F	43 21.45; 116 38.10	Drain at access area 1.
G	43 30.97; 116 37.03	Drain at Lewis Lane and Lakeshore Drive, south side of lake.
H	43 30.67; 116 35.58	Drain at Lynwood Rd and Lakeshore Drive.
I	43 30.61; 116 34.73	New York Canal at Lakeshore Drive.
J	43 33.50; 116 38.86	At the boat launch area on the east end of the upper dam.

Table 11. Water quality measurements from Lake Lowell, May 1995 through April 1996.

Site	Date	Dissolved Oxygen	Fecal Coliform	BOD	Ortho phosphate	Nitrates	Turbidity	Suspended Solids
#1	5/23/95	4	201		0.05	4.4	65	
	6/23/95	5	1.5	0.14		6.16	20	
	7/20/95	6	60	8	0.26	0.088	20	
	8/21/95	7	201	3	0.48	0.308	30	
	9/27/95	8			0.167	0.396	9	
	10/26/95	6.75			0.086	0.044	10	
	12/20/95	0	0					
	3/14/96	9	10	7	0.07	0.088	13	300
	4/20/96	8	900	3	0.05	0.044	40	100
#4	5/23/95	5	201	1	0.306		30	
	6/23/95	4		1	0.32	3.5	25	
	7/20/95	6	201	1	0.34	0.044	3	
	8/21/95	5	201	1		0.22	50	
	9/27/95	8		2.1	0.22	0.132	10.8	
	10/26/95	6.5			0.04	0.528	28.6	
	11/29/95	6.5	0			0		
	12/20/95	0	0			0.76	3	300
	3/14/96	8	20	7	0.235	0.2	30	300
	4/20/96	4	400	1	0	0	25	400
#8	5/23/95	10.5	201		0.6		440	
	6/23/95	10	180	8	0.1	3.96	30	
	7/20/95	10	460	3	0.3	0.088	40	
	8/21/95	9	201	8		0.352	60	
	9/27/95	12		1	0.06	0.74	10	
	10/26/95	5			0	0.44	50	
	11/29/95	0	0			0		
	12/20/95	0	0	10		0		
	3/14/96	10.5	20	3.5	0.09	0.704	30	50
	4/20/96	9	80	0	0.04	0.176	250	100
Boat launch	5/23/95	10.3	201	2.3	0.83	1.3	40	
	6/23/95	7		4.5		0.5	5	
	7/20/95	8	10	1	0.134		15	
	8/21/95	12	201	5	0.18	0.44	20	
	9/27/95	10		2	0.015	1.88	20	
	10/26/95	12			0	0.02	10	
	11/29/95	14.5	0		0.18	0	10	100

Table 11. (Continued)

Site	Date	Dissolved Oxygen	Fecal Coliform	BOD	Ortho phosphate	Nitrates	Turbidity	Suspended Solids
	12/20/95	13.5	2	5.5	0.02	0.088	8.5	
	1/15/96	11	2			0.1	10	0
	3/14/96	12	6	5	0.04	0	20	25
	4/20/96	0	10	0	0	0.308	20	
Lake A	5/23/95	9	10		4.67	0.44	50	
	6/23/95	7		3.5	0.036	0	30	
	7/20/95	12		2	7	0.25		
	8/21/95	9	50	1	0.14	0.44	30	
	9/27/95	9		1	0.02	2.2	20	
	10/26/95	11			0.06	0.264	10	
	11/29/95	0	0		0.2	0	9	500
	12/20/95	11	4	2	0.2	0.44	10	
	3/14/96	15	10	5	0.02	0	10	0
Lake B	5/23/95		201					
	6/23/95	8			0.08		20	
	7/20/95	8		2	0.11		10	
	8/21/95	9	165	6	0.06	0.264	20	
	9/27/95	10		2	0	5.5	30	
	10/26/95	10			0.034	0.528	5	
	11/29/95	0	0		0.04	0	10	0
	12/20/95	10	6	1	0.1	0.352	10	
	3/14/96	11	6	2	0.02	0	10	250
Lake C	5/23/95	9.75			1.73	0.616	30	
	6/23/95	9			0.32	6.16	10	
	7/20/95	7	2	3	0.08		20	
	8/21/95	10	50	8	20			
	9/27/95	9		2	0	0.44	20	
	10/26/95	5			0.14		5	
	11/29/95	0	0		0.04	0	20	0
	12/20/95	9.5	2	1.5	0.04	0	12	
	3/14/96	11	2	6	0.02	0	10	0
Lewis Lane	5/23/95		201					
	6/23/95	8		5	0.42	0.88	200	
	7/20/95	8	1600	2	0.92		40	
	8/21/95	10	401	3	0.26	0.016	90	
	9/27/95	8		5	0.168	1.76	10	
	10/26/95	1			.4	2.55	60	
	11/29/95	0	0			0		

Table 11. (Continued)

Site	Date	Dissolved Oxygen	Fecal Coliform	BOD	Ortho phosphate	Nitrates	Turbidity	Suspended Solids
	12/20/95	0	4					
	3/14/96	11	2800	3	0.24	0.528	23	
	4/20/96	12	0	6	0.48	0		1100
Lynwood	5/23/95	9	48	6		0.5	200	
	6/23/95	8			0.32		17	
	7/20/95	8	1900	3	0.86		43	
	8/21/95	9	401	7		0.15	70	
	9/27/95	9		0.5	0.14	0.792	42	
	10/26/95							
	11/29/95	0	0			0		
	12/20/95	0	0					
	3/14/96	0	0					
	4/20/96	12	1500	2	0.28	0.022	333	200
NY Canal	5/23/95		201		0.5		65	
	6/23/95	8.5		7.5	0.14	4.4	10	
	7/20/95	9	580	1	0.42		23	
	8/21/95	10.5	201	6		0.264	10	
	9/27/95							
	10/26/95	8			0.35	0.352	60	
	11/29/95	0	90			0		
	12/20/95	0	2		0.08	0.044	10	100
	3/14/96	13	1300	7	0.02	0	20	125
	4/20/96	7	0	1	0.12	0	25	100

Table 12. Sample size and length-at-age for smallmouth bass collected from Lucky Peak Reservoir, May 1995.

Year Class	N	Age 1	Age 2	Age 3	Age 4	Age 5	Age 6	Age 7	Age 8
1994	0								
1993	3	71	120						
1992	19	72	114	167					
1991	12	79	125	165	211				
1990	5	75	114	156	205	251			
1989	0								
1988	0								
1987	1	79	131	191	279	335	373	408	429

Table 13. Average back-calculated lengths for each age class of largemouth bass and black crappie collected on June 12 and 13, 1995 in Manns Creek Reservoir near Weiser, Idaho.

Largemouth Bass								
AGE	1	2	3	4	5	6	7	8
mm	68.7	138.6	193.6	241.3	282.3	363.9	395.5	407.5
n	27	26	22	19	16	5	1	1

Black Crappie					
AGE	1	2	3	4	5
mm	76.5	103.8	134.3	172.7	207.1
n	34	33	31	28	2

Table 14. Angling hours, number of rainbow trout harvested and number of rainbow trout released from Mountain Home Reservoir, May-July, 1995.

<u>Month</u>	<u>Estimated Hours</u>	<u>Rainbow Kept</u>	<u>Rainbow Released</u>
May	933	0	0
June	907	98	539
July	1149	540	0
Total	2989	638	539

Table 15. Average back-calculated lengths for each age class of Lahontan cutthroat trout collected on May 25, 1995 in Shoofly Reservoir near Riddle, Idaho.

Lahontan Cutthroat Trout Age Estimation			
Back-calculated length-at-annulus			
AGE	1	2	3
mm	137.5	232.1	297.4
n	32	24	11

FIGURES

Brownlee Reservoir Channel Catfish

Strata 1, Brownlee Dam to River Mile 298.6

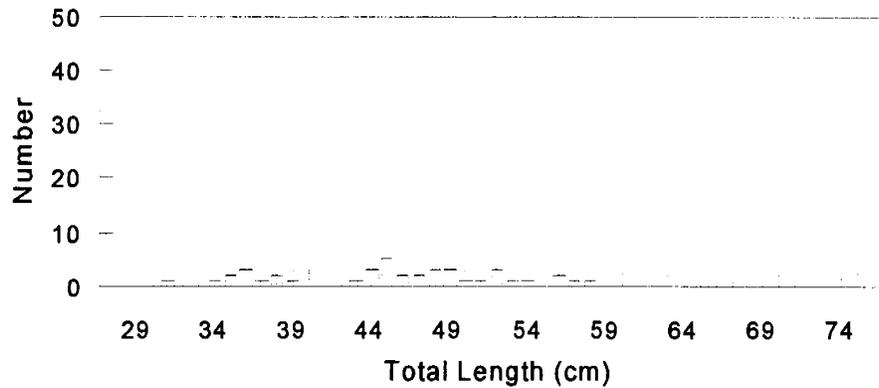


Figure 1. Length frequency of channel catfish from Brownlee Reservoir, strata 1, 1995.

Brownlee Reservoir Channel Catfish

Strata 2, River Mile 298.6 to 312.2

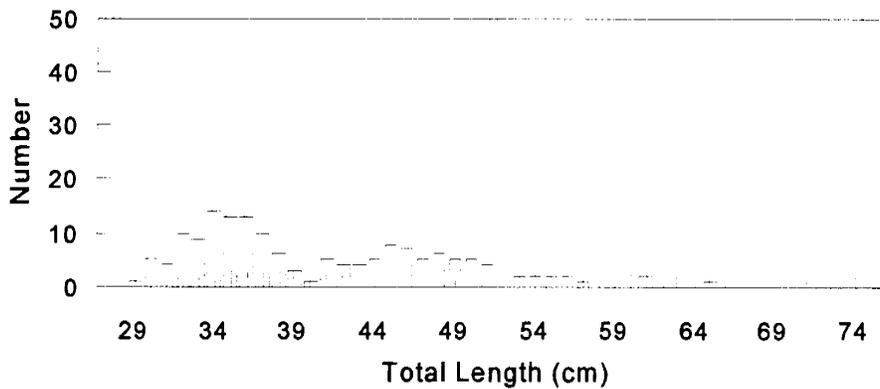


Figure 2. Length frequency of channel catfish from Brownlee Reservoir, strata 2, 1995.

Brownlee Reservoir Channel Catfish

Strata 3, River Mile 312.2 to 325.8

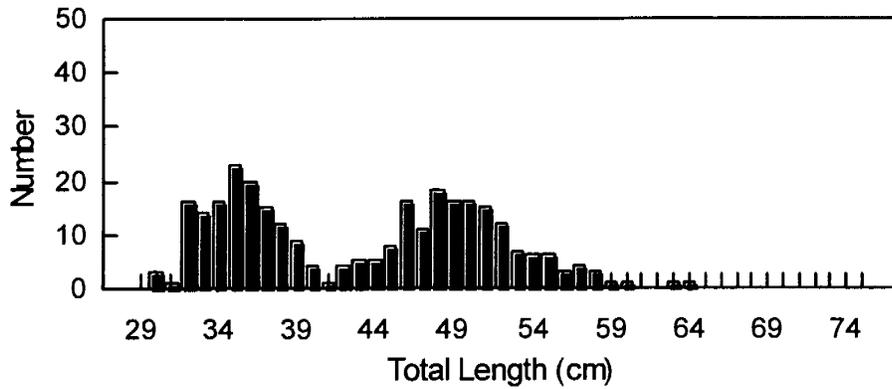


Figure 3. Length frequency of channel catfish from Brownlee Reservoir, strata 3, 1995.

Brownlee Reservoir Channel Catfish

Strata 4, River Mile 325.8 to 339.4

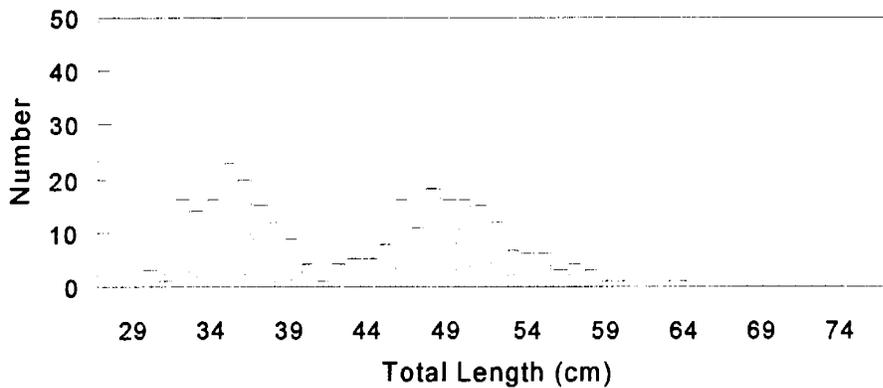


Figure 4. Length frequency of channel catfish from Brownlee Reservoir, strata 4, 1995.

Brownlee Reservoir Channel Catfish

Strata 5, River Mile 339.4 to Payette River

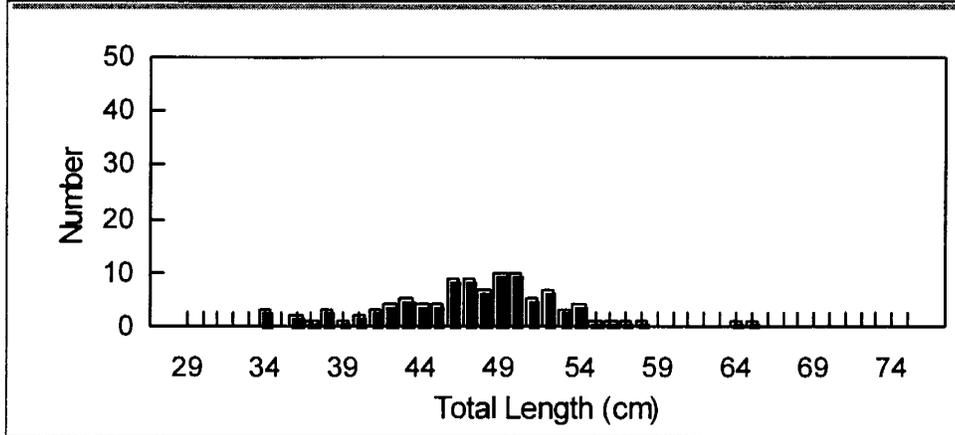


Figure 5. Length frequency of channel catfish from Brownlee Reservoir, strata 5, 1995.

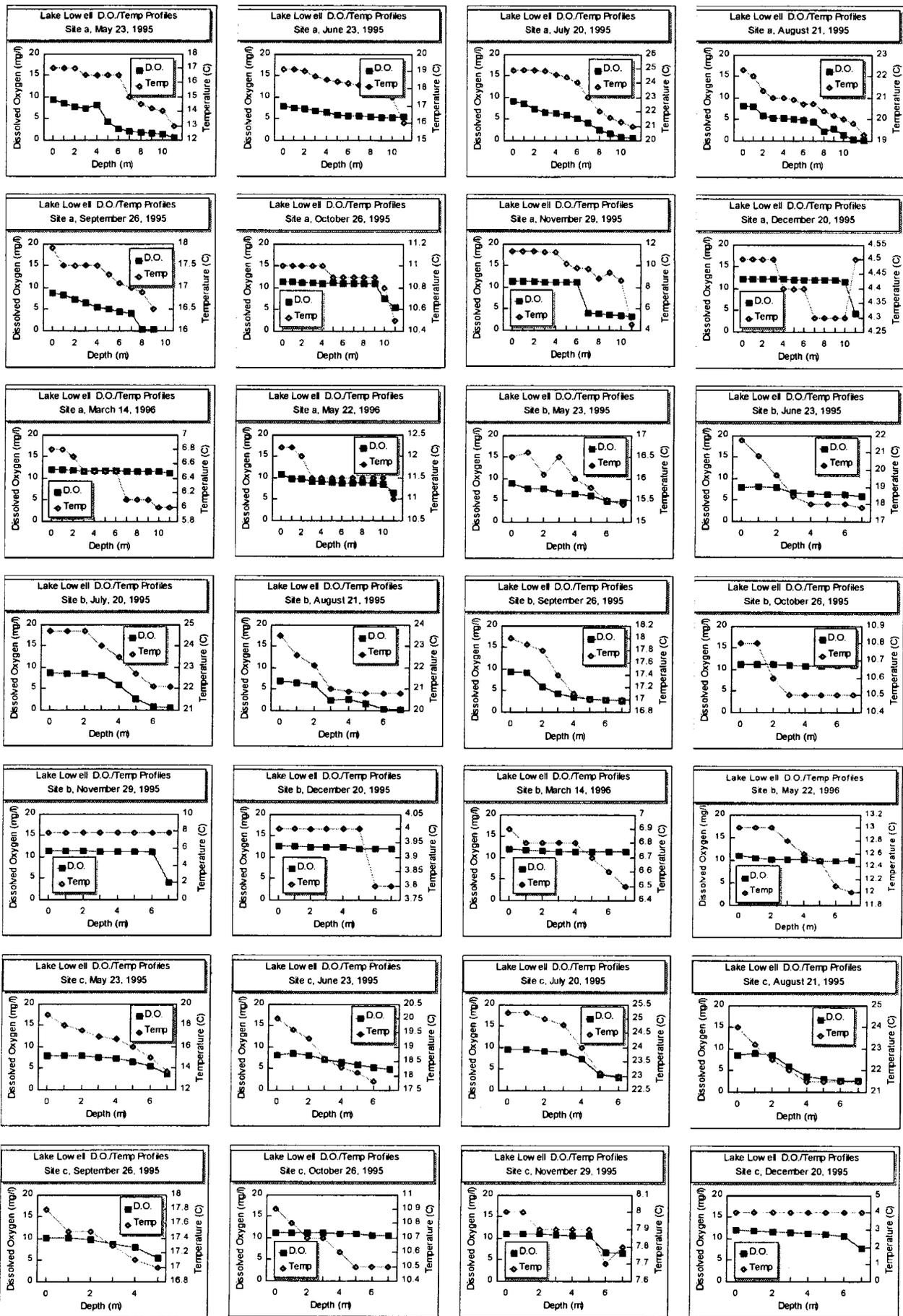


Figure 6. Dissolved oxygen/temperature profiles, sites a, b, and c, Lake Lowell, May 1995-May 1996.

APPENDICES

Appendix A. Number of fish collected, minimum and maximum length, mean length, weight and condition factor and standard errors, catch-per-effort (CPUE) and percent of total by number and weight for fish collected during lowland lake sampling, 1995.

Water	Total	Min	Max	Mean	SE	Mean	SE	Mean	SE	CPUE	CPUE	Percent	Percent
Date	Collected	Length	Length	Length	Length	Weight	Weight	CondFact	CondFact	(Number)	(Weight	(Number)	(Weight)
Method		(mm)	(mm)	(mm)		(g)					kg)		
Species													
ARROWROCK RES													
4/13/95													
Gill Net													
Bridgelip sucker	60	181	465	319	8.29					24.00	0.66	16.76	5.55
Bull trout	11	275	465	360	21.78	468.55	100.63	0.84	0.06	4.40	2.06	3.07	17.29
Chiselmouth	1	272	272	272						0.40	0.28		
Hatchery rainbow trout	22	209	346	266	8.61	324.67	28.67	0.83	0.04	8.80	0.60	6.15	5.02
Largescale sucker	58	164	520	336	8.20					23.20		16.20	
Mountain whitefish	13	185	360	269	12.01	181.00	35.03	0.82	0.03	5.20	0.72	3.63	6.03
Northern squawfish	178	140	394	267	3.08	154.40	19.33	0.80	0.02	71.20	6.86	49.72	57.53
Rainbow X cutthroat trout	1	322	322	322		270.00		0.81		0.40	0.11	0.28	0.91
Redside shiner	11	145	278	166	11.29					4.40	0.16	3.07	1.30
Westslope cutthroat trout	1	480	480	480		1800.00		1.63		0.40	0.72	0.28	6.04
Wild rainbow/redband trout	1	192	192	192		58.00		0.82		0.40	0.02	0.28	0.19
Yellow perch	1	139	139	139		40.00		1.49		0.40	0.02	0.28	0.13
Total	358									143.20	11.92		
Trap Net													
Bridgelip sucker	6	171	445	298	37.39	304.00	169.31	0.88	0.04	1.50	0.30	10.34	23.63
Bull trout	2	265	375	320	55.00	300.00	160.00	0.81	0.06	0.50	0.15	3.45	11.66
Hatchery rainbow trout	7	200	370	288	26.60	266.00	52.40	0.75	0.05	1.75	0.34	12.07	26.38
Largescale sucker	2	311	330	321	9.50					0.50		3.45	
Mountain whitefish	2	121	126	124	2.50					0.50		3.45	
Northern squawfish	15	168	333	232	13.36	70.50	12.09	0.76	0.02	3.75	0.27	25.86	21.03
Rainbow X cutthroat trout	1	181	181	181		42.00		0.71		0.25	0.01	1.72	0.82
Redside shiner	17	94	170	144	5.04	41.50	2.87	1.13	0.05	4.25	0.11	29.31	8.51
Wild rainbow/redband trout	2	227	235	231	4.00	107.00	17.00	0.86	0.09	0.50	0.05	3.45	4.16
Yellow perch	4	150	180	162	6.49	49.00	7.94	1.12	0.10	1.00	0.05	6.90	3.81
Total	58									14.50	1.29		
BROWNLEE RES													
5/3/95													
Electrofishing													
Black crappie	61	65	295	177	8.76	284.28	14.88	1.74	0.02	42.97	5.01	11.53	5.97
Bluegill	25	42	198	118	9.29	122.00	14.39	2.47	0.06	17.61	0.60	4.73	0.72
Bridgelip sucker	14	150	342	261	17.54					9.86		2.65	
Channel catfish	2	435	510	473	37.50	525.00		0.64		1.41	0.37	0.38	0.44
Chiselmouth	8	125	327	216	28.55	36.00		0.97		5.63	0.03	1.51	0.03
Common carp	4	220	790	491	150.78					2.82		0.76	

Appendix A. (Continued)

Water	Date	Total Collected	Min Length (mm)	Max Length (mm)	Mean Length (mm)	SE Length	Mean Weight (g)	SE Weight	Mean CondFact	SE CondFact	CPUE (Number)	CPUE (Weight kg)	Percent (Number)	Percent (Weight)
Species	Method													
Hatchery rainbow trout		1	185	185	185						0.70		0.19	
Largemouth bass		1	192	192	192		104.00		1.47		0.70	0.07	0.19	0.09
Largescale sucker		15	163	535	280	31.73					10.57		2.84	
Smallmouth bass		320	66	356	248	4.02	290.14	9.69	1.42	0.01	225.40	61.02	60.49	72.79
White crappie		74	47	327	262	7.33	380.31	9.01	1.57	0.02	52.12	16.64	13.99	19.86
Wild rainbow/redband trout		1	98	98	98						0.70		0.19	
Yellow perch		3	98	206	164	33.41	120.00		1.37		2.11	0.08	0.57	0.10
Total		529									372.61	83.83		
BYBEE RES														
5/26/95														
Gill Net														
Bridgelip sucker		2	272	335	304	31.50	345.00	155.00	1.14	0.19	2.00	0.69	4.35	4.07
Lahontan cutthroat trout		43	260	580	337	8.49	386.43	28.22	1.01	0.02	43.00	16.23	93.48	95.67
Redside shiner		1	150	150	150		45.00		1.33		1.00	0.04	2.17	0.27
Total		46									46.00	16.97		
Trap Net														
Bridgelip sucker		1	137	137	137						0.50		8.33	
Lahontan cutthroat trout		10	284	570	383	31.62					5.00	0.98	83.33	100.00
Redside shiner		1	132	132	132						0.50		8.33	
Total		12									6.00	0.98		
C.J. STRIKE RES														
3/25/95														
Angling														
Largemouth bass		3	334	365	353	9.74	780.00	72.11	1.76	0.06	3.00	2.34	4.29	5.74
Smallmouth bass		67	294	427	327	3.41	576.18	22.36	1.60	0.02	67.00	38.46	95.71	94.26
Total		70									70.00	40.80		
4/2/95														
Angling														
Largemouth bass		2	310	460	385	75.00	1140.00	710.00	1.67	0.23	2.00	2.28	2.11	4.17
Smallmouth bass		93	300	445	330	2.92	571.63	21.89	1.54	0.02	93.00	52.44	97.89	95.83
Total		95									95.00	54.72		
4/17/95														
Electrofishing														
Black crappie		10	105	115	108	1.33	60.00	35.00	4.20	2.18	14.74	0.68	4.17	1.31
Bluegill		11	40	175	86	14.68	88.33	16.41	2.34	0.15	16.21	0.39	4.58	0.76
Bridgelip sucker		9	110	315	213	21.72	141.67	36.34	1.27	0.08	45.68	6.47	3.75	12.52

Appendix A. (Continued)

Water	Date	Method	Total Collected	Min Length (mm)	Max Length (mm)	Mean Length (mm)	SE Length	Mean Weight (g)	SE Weight	Mean CondFact	SE CondFact	CPUE (Number)	CPUE (Weight kg)	Percent (Number)	Percent (Weight)
Species	6/13/95	Electrofishing													
Chiselmouth			1	110	110	110						1.47	0.42		
Hatchery rainbow			26	130	360	212	12.33	351.67	94.00	1.22	0.09	70.73	5.21	10.83	10.09
Largemouth bass			26	90	480	268	21.92	590.30	159.74	1.61	0.06	38.31	20.28	10.83	39.24
Largescale sucker			20	110	280	188	11.70	87.22	13.52	1.24	0.05	103.15	8.33	8.33	16.12
Northern squawfish			10	110	240	164	10.33	55.00		1.22		14.74	0.18	4.17	0.34
Peamouth			3	125	270	198	41.87					4.42		1.25	
Pumpkinseed			1	135	135	135		60.00		2.44		1.47	0.09	0.42	0.17
Smallmouth bass			15	90	325	218	16.13	214.45	58.75	1.38	0.06	22.10	3.62	6.25	7.00
Yellow perch			108	85	235	140	4.09	72.83	6.20	1.22	0.04	159.15	6.44	45.00	12.46
Total			240									492.19	51.68		
		Gill Net													
Black crappie			2	105	240	173	67.50	140.00	115.00	2.00	0.16	1.00	0.14	0.62	0.40
Brown bullhead			1	195	195	195		110.00		1.48		0.50	0.06	0.31	0.16
Channel catfish			14	420	610	494	13.58	1317.86	147.24	1.04	0.02	7.00	9.22	4.35	26.30
Hatchery rainbow trout			22	180	445	331	18.15	426.09	54.29	1.03	0.02	11.00	4.71	6.83	13.42
Peamouth			2	210	290	250	40.00	135.00	55.00	0.82	0.04	5.00	0.68	0.62	1.92
Smallmouth bass			5	315	355	334	7.48	666.00	44.48	1.78	0.04	2.50	1.67	1.55	4.75
White crappie			3	120	220	178	30.05	101.33	39.79	1.52	0.05	1.50	0.15	0.93	0.43
Yellow perch			273	120	300	223	2.24					136.50	18.46	84.78	52.62
Total			322									165.00	35.08		
		Trap Net													
Black crappie			1	115	115	115						0.25	0.02	0.26	0.22
Chiselmouth			1	290	290	290		235.00		0.96		0.25	0.06	0.26	0.67
Hatchery rainbow trout			8	140	205	167	7.73	75.00		0.87		2.00	0.02	2.09	0.26
Largescale sucker			2	570	600	585	15.00	1750.00	100.00	0.87	0.02	0.50	0.88	0.52	9.94
Northern squawfish			1	160	160	160		25.00		0.61		0.25	0.01	0.26	0.11
Yellow perch			370	90	305	188	2.10	125.58	14.67	0.98	0.05	92.50	7.82	96.61	88.80
Total			383									95.75	8.80		
		6/10/95													
		Angling													
Largemouth bass			9	320	505	380	21.45	988.89	180.03	1.67	0.03	9.00	8.90	6.38	10.34
Smallmouth bass			132	295	520	337	3.59	588.31	25.80	1.49	0.05	132.00	77.17	93.62	89.66
Total			141									141.00	86.07		
		8/26/95													
		Angling													
Largemouth bass			10	305	407	349	10.32	680.56	57.88	1.66	0.04	10.00	6.13	5.49	6.54
Smallmouth bass			172	296	500	348	3.33	561.94	15.61	1.45	0.03	172.00	87.49	94.51	93.46
Total			182									182.00	93.61		

Appendix A. (Continued)

Water	Date	Method	Total Collected (mm)	Min Length (mm)	Max Length (mm)	Mean Length	SE Length (g)	Mean Weight	SE Weight	Mean CondFact	SE CondFact	CPUE (Number)	CPUE (Weight kg)	Percent (Number)	Percent (Weight)
***Species															
CRANE CREEK RES															
Species															
6/13/95															
Electrofishing															
Black crappie			6	120	180	142	8.83	52.50	10.94	1.75	0.07	5.97	0.29	5.71	0.20
Bridgelip sucker			34	75	345	158	10.42	17.50	2.50	1.50	0.00	33.86	0.16	32.38	0.11
Brown bullhead			3	200	225	212	7.26	176.67	10.14	1.87	0.08	2.99	0.52	2.86	0.35
Common carp			28	275	505	378	10.31	787.67	19.24	1.35	0.16	279	144.69	26.67	96.65
Largemouth bass			2	142	187	165	22.50	67.50	22.50	1.47	0.10	1.99	0.13	1.90	0.09
White crappie			31	130	280	191	10.35	128.50	16.88	1.53	0.05	30.87	3.87	29.52	2.59
Yellow perch			1	120	120	120		35.00							
Total			105							2.03		1.00	0.03	0.95	0.02
Gill Net															
Black crappie			1	180	180	180		110.00		1.89		0.50	0.05	1.37	0.13
Bridgelip sucker			1	230	230	230						0.50		1.37	
Brown bullhead			2	200	210	205	5.00	162.50	2.50	1.89	0.11	1.00	0.17	2.74	0.44
Channel catfish			1	530	530	530		4000.00		2.69		0.50	2.00	1.37	5.35
Common carp			2	165	235	200	35.00					29.00		2.74	
White crappie			66	120	269	194	5.52	136.94	10.52	1.56	0.04	278.50	35.16	90.41	94.08
Total			73									310.00	37.37		
Trap Net															
Black crappie			15	125	240	174	10.47	86.67	14.30	1.48	0.05	3.75	0.33	6.02	4.43
Bridgelip sucker			2	140	210	175	35.00					0.50		0.80	
Brown bullhead			18	180	230	215	3.16					10.75	1.31	7.23	17.39
Common carp			7	300	430	351	20.17					3.50	0.79	2.81	10.56
White crappie			207	110	300	161	2.62	157.38	22.88	1.38	0.04	67.25	5.08	83.13	67.61
Total			249									85.75	7.52		
DEADWOOD RES															
9/20/95															
Gill Net															
Atlantic salmon			7	245	310	267	9.05	157.86	13.92	0.82	0.03	3.50	0.55	3.35	2.08
Kokanee salmon			11	185	310	244	13.80	152.73	24.74	0.95	0.01	5.50	0.84	5.26	3.16
Mountain whitefish			151	95	410	301	4.83	296.85	11.49	1.03	0.05	75.50	22.41	72.25	84.43
Rainbow X cutthroat trout			8	165	350	243	22.28	158.75	37.28	1.01	0.04	4.00	0.64	3.83	2.39
Westslope cutthroat trout			8	170	430	237	28.85	170.63	70.80	1.03	0.05	4.00	0.68	3.83	2.57
Wild rainbow/redband			24	155	395	214	11.66	118.54	22.70	1.08	0.03	12.00	1.42	11.48	5.36
Total			209									104.50	26.55		

Appendix A. (Continued)

GRASMERE RES

5/23/95

Water	Date	Method	Total Collected	Min Length (mm)	Max Length (mm)	Mean Length (mm)	SE Length	Mean Weight (g)	SE Weight	Mean CondFact	SE CondFact	CPUE (Number)	CPUE (Weight kg)	Percent (Number)	Percent (Weight)
		Gill Net													
		Bridgelip sucker	12	165	360	238	21.05					12.00		10.00	
		Lahontan cutthroat trout	101	170	435	311	5.41	276.18	15.02	0.88	0.01	112.00	32.07	84.17	100.00
		Redside shiner	7	125	145	134	2.83					7.00		5.83	
		Total	120									131.00	32.07		
		Trap Net													
		Lahontan cutthroat trout	47	280	490	358	6.81					23.50	5.48	100.00	100.00
		Total	47									23.50	5.48		

LAKE LOWELL

4/10/95

Electrofishing

Black crappie	3	85	125	105	11.55							1.83		0.90	
Bluegill	1	55	55	55								0.61		0.30	
Bridgelip sucker	3	120	120	120	0.00							1.83		0.90	
Brown bullhead	2	250	260	255	5.00	165.00	10.00	0.99	0.00			1.22	0.20	0.60	0.60
Common carp	12	130	610	458	45.60	1760.50	180.19	1.20	0.04			7.33	10.75	3.60	31.76
Largemouth bass	125	60	360	103	3.85	192.00	119.84	1.34	0.10			76.32	0.63	37.54	1.88
Largescale sucker	104	85	530	241	17.57	1040.15	22.79	0.88	0.01			63.50	22.11	31.23	65.33
Smallmouth bass	50	60	245	99	4.50	155.00		1.46				30.53	0.09	15.02	0.28
White crappie	4	100	120	109	4.27							2.44		1.20	
Yellow perch	29	90	205	109	3.81	90.00		1.04				17.71	0.05	8.71	0.16
Total	333											203.32	33.85		

4/11/95

Electrofishing

Bluegill	1	60	60	60								1.27		1.59	
Brown bullhead	2	232	235	234	1.50							2.54		3.17	
Common carp	32	143	520	400	21.03							44.46		50.79	
Largescale sucker	28	108	502	313	31.98							45.73		44.44	
Total	63											94.00			

4/29/95

Angling

Largemouth bass	51	330	470	391	5.70	1134.41	49.81	1.84	0.02			51.00	57.85	96.23	97.26
Smallmouth bass	2	350	410	380	30.00	815.00	185.00	1.46	0.01			2.00	1.63	3.77	2.74
Total	53											53.00	59.48		

8/22/95

Electrofishing

Bridgelip sucker	6	196	386	266	34.01	200.67	115.56	0.50	0.23			6.93	1.39	10.53	86.74
Brown bullhead	2	106	230	168	62.00	68.00	68.00	0.56	0.56			2.31	0.16	3.51	9.80

Appendix A. (Continued)

Water	Date	Method	Total Collected	Min Length (mm)	Max Length (mm)	Mean Length (mm)	SE Length	Mean Weight (g)	SE Weight	Mean CondFact	SE CondFact	CPUE (Number)	CPUE (Weight kg)	Percent (Number)	Percent (Weight)
Species															
Common carp			8	95	462	192	57.70	4.00	2.00	0.35	0.18	9.24	0.04	14.04	2.31
Largemouth bass			19	64	132	86	4.67	0.84	0.84	0.04	0.04	21.94	0.02	33.33	1.15
Largescale sucker			7	82	246	110	22.77	0.00	0.00	0.00	0.00	8.08	0.00	12.28	0.00
White crappie			9	52	95	70	4.60	0.00	0.00	0.00	0.00	10.39	0.00	15.79	0.00
Yellow perch			6	73	83	80	1.52	0.00	0.00	0.00	0.00	6.93	0.00	10.53	0.00
Total			57									65.82	1.60		
10/24/95															
Electrofishing															
Black crappie			3	85	125	105	11.55					1.72		0.90	
Bluegill			1	55	55	55						0.57		0.30	
Bridgelip sucker			4	120	120	120	0.00					2.30		1.20	
Brown bullhead			2	250	260	255	5.00	165.00	10.00	0.99	0.00	1.15	0.19	0.60	0.59
Common carp			12	130	610	458	45.60	1760.50	180.19	1.20	0.04	6.90	10.12	3.59	31.71
Largemouth bass			124	60	350	101	3.27	192.00	119.84	1.34	0.10	71.26	0.60	37.13	1.87
Largescale sucker			104	85	530	241	17.57	1040.15	22.79	0.88	0.01	59.77	20.81	31.14	65.22
Smallmouth bass			50	60	245	99	4.50	155.00		1.46		28.74	0.09	14.97	0.28
White crappie			4	100	120	109	4.27					2.30		1.20	
Yellow perch			30	90	205	113	4.87	90.00	0.00	1.04	0.00	17.24	0.10	8.98	0.32
Total			334									191.95	31.91		
LITTLE BLUE CREEK RES															
5/24/95															
Gill Net															
Bridgelip sucker			5	150	255	218	20.52	111.25	29.89	1.09	0.06	5.00	0.45	7.14	2.78
Lahontan cutthroat trout			61	165	410	300	4.23	255.16	8.99	0.95	0.03	61.00	15.57	87.14	97.22
Redside shiner			4	135	145	139	2.39					4.00		5.71	
Total			70									70.00	16.01		
Trap Net															
Bridgelip sucker			8	200	280	235	10.86					4.00		20.00	
Lahontan cutthroat trout			31	285	490	327	7.93					15.50	3.80	77.50	100.00
Redside shiner			1	125	125	125						0.50		2.50	
Total			40									20.00	3.80		
LUCKY PEAK RES															
5/16/95															
Electrofishing															
Bridgelip sucker			63	55	415	206	9.63	170.94	32.82	0.91	0.02	55.02	4.53	17.85	9.46
Chiselmouth			54	60	395	174	9.46	53.75	15.19	0.84	0.05	47.16	0.29	15.30	0.61
Largescale sucker			94	137	453	358	6.77	500.73	39.57	0.98	0.02	82.10	32.19	26.63	67.25

Appendix A. (Continued)

Water	Date	Method	Total Collected	Min Length (mm)	Max Length (mm)	Mean Length (mm)	SE Length	Mean Weight (g)	SE Weight	Mean CondFact	SE CondFact	CPUE (Number)	CPUE (Weight kg)	Percent (Number)	Percent (Weight)
Species															
Mountain whitefish			3	295	325	307	9.28					2.62		0.85	
Northern squawfish			47	45	535	316	13.46	247.11	41.63	0.83	0.02	41.05	4.25	13.31	8.89
Redside shiner			40	40	138	82	3.65					34.93		11.33	
Smallmouth bass			40	127	450	216	8.48	188.93	40.65	1.49	0.02	34.93	6.60	11.33	13.79
Yellow perch			8	44	197	141	15.82					6.99		2.27	
Total			349									304.80	47.86		
MANN'S CREEK RES															
6/12/95															
Electrofishing															
Black crappie			90	75	225	188	2.58	110.96	5.06	1.53	0.02	88.67	9.61	44.55	36.03
Hatchery rainbow trout			20	185	275	233	6.02	158.75	25.28	1.07	0.10	19.70	2.74	9.90	10.27
Largemouth bass			55	110	420	242	9.12	242.89	32.68	1.39	0.04	54.19	13.01	27.23	48.77
Wild rainbow/redband trout			37	112	240	149	4.81	46.14	19.89	1.19	0.05	36.45	1.31	18.32	4.93
Total			202									199.01	26.67		
Gill Net															
Black crappie			72	165	220	188	1.46	104.37	3.25	1.56	0.02	36.00	3.79	61.02	42.98
Hatchery rainbow trout			39	215	477	273	6.80	252.19	30.75	1.12	0.02	19.50	4.63	33.05	52.48
Largemouth bass			1	165	165	165		60.00		1.34		0.50	0.03	0.85	0.34
Wild rainbow/redband trout			6	150	305	208	23.05	122.50	36.76	1.25	0.11	3.00	0.37	5.08	4.20
Total			118									59.00	8.81		
Trap Net															
Black crappie			23	95	215	185	5.75	40.00	18.03	1.65	0.06	5.75	0.60	92.00	89.23
Hatchery rainbow			2	220	227	224	3.50					0.50	0.07	8.00	10.77
Total			25									6.25	0.67		
PADDOCK RES															
4/3/95															
Electrofishing															
Bluegill			5	50	222	143	38.66	289.33	56.34	3.30	0.01	4.72	0.82	1.02	0.84
Brown bullhead			4	241	305	279	14.72	405.00	56.94	1.83	0.05	3.77	1.62	0.81	1.67
Largemouth bass			482	119	441	244	1.53	249.02	19.77	1.39	0.05	454.72	94.52	98.17	97.49
Total			491									463.21	96.96		
Gill Net															
Black crappie			4	270	300	281	7.18	428.00	66.01	1.92	0.08	2.00	0.87	1.02	1.73
Brown bullhead			30	203	345	284	7.55	525.17	39.04	2.08	0.04	15.00	7.26	7.63	14.48
Largemouth bass			359	180	471	252	1.63	2250.00	0.00	2.88	0.05	179.50	42.05	91.35	83.79
Total			393									196.50	50.18		
Trap Net															
Black crappie			19	210	295	245	7.45	305.79	26.49	2.00	0.05	4.75	1.45	29.23	32.37

Appendix A. (Continued)

Water	Date	Method	Total Collected	Min Length (mm)	Max Length (mm)	Mean Length (mm)	SE Length	Mean Weight (g)	SE Weight	Mean CondFact	SE CondFact	CPUE (Number)	CPUE (Weight kg)	Percent (Number)	Percent (Weight)
Species															
Brown bullhead			1	245	245	245		245.00		1.67		0.25	0.08	1.54	1.70
Largemouth bass			45	205	375	263	4.51	306.50	31.93	1.38	0.02	11.25	2.95	69.23	65.93
Total			65									16.25	4.47		
SAGE HEN RES															
6/1/95															
Trap Net															
Hatchery rainbow trout			7	250	375	318	14.05	278.57	30.11	0.85	0.02	3.50	0.97	13.46	27.98
Wild rainbow/redband trout			45	156	370	222	7.39	112.11	13.94	0.87	0.01	22.50	2.51	86.54	72.02
Total			52									26.00	3.48		
SHOOFLY RES															
5/25/95															
Gill Net															
Lahontan cutthroat trout			61	175	355	276	5.95	204.41	10.01	0.89	0.02	61.00	12.65	100.00	100.00
Total			61									61.00	12.65		
Trap Net															
Bluegill			1	162	162	162		95.00		2.23		0.50	0.05	1.41	0.48
Lahontan cutthroat trout			70	255	375	312	3.88	288.14	9.77	0.93	0.01	35.00	9.95	98.59	99.52
Total			71									35.50	10.00		
SQUAW CREEK RES															
5/23/95															
Gill Net															
Bridgelip sucker			12	185	360	275	19.52					34.00		50.00	
Northern squawfish			12	200	455	280	23.07					69.00		50.00	
Total			24									103.00			

Appendix B. Number collected by angling, electrofishing, gillnetting and trap netting, and relative weight by water and size group of fish collected during lowland lake sampling, 1995

Water Relative	Date	Species Group	CM	Number	Number	Number	Number	Total
			Caught Angling	Caught Electrofishing	Caught in Gill Nets	Caught in Trap Nets	Caught	Weight
ARROWROCK RES	4/13/95							
		Bridgelip sucker						
		17	0	0	0	1	1	
		18	0	0	2	0	2	
		19	0	0	1	0	1	
		20	0	0	1	0	1	
		21	0	0	1	0	1	
		22	0	0	5	0	5	
		23	0	0	1	0	1	
		25	0	0	0	1	1	
		27	0	0	3	0	3	
		28	0	0	1	1	2	
		29	0	0	4	1	5	
		30	0	0	4	0	4	
		31	0	0	2	0	2	
		32	0	0	6	0	6	
		33	0	0	4	0	4	
		34	0	0	1	1	2	
		35	0	0	5	0	5	
		36	0	0	8	0	8	
		37	0	0	3	0	3	
		38	0	0	3	0	3	
		39	0	0	2	0	2	
		41	0	0	1	0	1	
		44	0	0	1	1	2	
		46	0	0	1	0	1	
		Bull trout						
		26	0	0	0	1	1	
		27	0	0	1	0	1	
		28	0	0	1	0	1	
		29	0	0	1	0	1	
		31	0	0	2	0	2	
		32	0	0	1	0	1	
		37	0	0	0	1	1	
		38	0	0	1	0	1	
		40	0	0	1	0	1	
		43	0	0	1	0	1	
		46	0	0	2	0	2	
		Chiselmouth						
		27	0	0	1	0	1	
		Largescale sucker						
		16	0	0	1	0	1	
		22	0	0	2	0	2	
		23	0	0	2	0	2	
		27	0	0	1	0	1	
		28	0	0	1	0	1	
		29	0	0	4	0	4	
		30	0	0	3	0	3	
		31	0	0	8	1	9	
		32	0	0	4	0	4	
		33	0	0	8	1	9	
		34	0	0	7	0	7	
		35	0	0	3	0	3	
		36	0	0	4	0	4	
		37	0	0	2	0	2	
		39	0	0	1	0	1	
		42	0	0	1	0	1	

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			43	0	0	1	0	1	
			44	0	0	2	0	2	
			46	0	0	1	0	1	
			49	0	0	1	0	1	
			52	0	0	1	0	1	
		Mountain whitefish							
			12	0	0	0	2	2	
			18	0	0	1	0	1	98.91
			22	0	0	2	0	2	
			25	0	0	1	0	1	89.53
			26	0	0	1	0	1	76.76
			27	0	0	2	0	2	75.77
			28	0	0	3	0	3	78.64
			29	0	0	1	0	1	
			30	0	0	1	0	1	75.42
			36	0	0	1	0	1	76.10
		Northern squawfish							
			14	0	0	1	0	1	
			16	0	0	0	1	1	
			17	0	0	0	1	1	
			18	0	0	2	1	3	
			19	0	0	6	0	6	
			20	0	0	15	3	18	
			21	0	0	10	3	13	
			22	0	0	1	1	2	
			23	0	0	2	0	2	
			24	0	0	8	0	8	
			25	0	0	19	1	20	
			26	0	0	19	1	20	
			27	0	0	29	0	29	
			28	0	0	16	0	16	
			29	0	0	18	1	19	
			30	0	0	4	0	4	
			31	0	0	14	0	14	
			32	0	0	5	1	6	
			33	0	0	5	1	6	
			36	0	0	2	0	2	
			38	0	0	1	0	1	
			39	0	0	1	0	1	
		Rainbow X cutthroat hybrid							
			18	0	0	0	1	1	
			32	0	0	1	0	1	
		Redside shiner							
			9	0	0	0	2	2	
			13	0	0	0	3	3	
			14	0	0	2	2	4	
			15	0	0	8	8	16	
			16	0	0	0	1	1	
			17	0	0	0	1	1	
			27	0	0	1	0	1	
		Wild rainbow/redband trout							
			19	0	0	1	0	1	76.52
			22	0	0	0	1	1	70.68
			23	0	0	0	1	1	87.47
		Yellow perch							
			13	0	0	1	0	1	116.45
			15	0	0	0	2	2	76.26
			16	0	0	0	1	1	104.42

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
				18	0	0	0	1	1
				80.84					
BROWNLEE RES	5/3/95								
		Black crappie							
			6	0	1	0	0	1	
			9	0	1	0	0	1	
			10	0	3	0	0	3	
			11	0	13	0	0	13	
			12	0	5	0	0	5	
			13	0	7	0	0	7	
			14	0	5	0	0	5	
			18	0	1	0	0	1	113.63
			22	0	1	0	0	1	106.45
			23	0	3	0	0	3	110.88
			24	0	6	0	0	6	106.32
			25	0	5	0	0	5	103.46
			26	0	2	0	0	2	112.87
			27	0	6	0	0	6	109.54
			28	0	1	0	0	1	
			29	0	1	0	0	1	95.89
		Bluegill							
			4	0	3	0	0	3	
			5	0	3	0	0	3	
			10	0	2	0	0	2	
			11	0	1	0	0	1	
			12	0	6	0	0	6	
			13	0	2	0	0	2	
			14	0	1	0	0	1	126.38
			15	0	1	0	0	1	
			16	0	3	0	0	3	115.27
			17	0	2	0	0	2	115.56
			19	0	1	0	0	1	107.75
		Bridgelip sucker							
			15	0	1	0	0	1	
			17	0	1	0	0	1	
			20	0	1	0	0	1	
			21	0	2	0	0	2	
			22	0	1	0	0	1	
			23	0	1	0	0	1	
			29	0	1	0	0	1	
			30	0	1	0	0	1	
			31	0	1	0	0	1	
			32	0	2	0	0	2	
			33	0	1	0	0	1	
			34	0	1	0	0	1	
		Channel Catfish							
			43	0	1	0	0	1	64.94
			51	0	1	0	0	1	
		Chiselmouth							
			12	0	1	0	0	1	
			14	0	1	0	0	1	
			15	0	1	0	0	1	
			16	0	1	0	0	1	
			21	0	1	0	0	1	
			27	0	1	0	0	1	
			31	0	1	0	0	1	
			32	0	1	0	0	1	

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
		Common carp							
	22			0	1	0	0	1	
	24			0	1	0	0	1	
	71			0	1	0	0	1	
	79			0	1	0	0	1	
		Largemouth bass							
	19			0	1	0	0	1	112.02
		Largescale sucker							
	16			0	3	0	0	3	
	17			0	3	0	0	3	
	23			0	2	0	0	2	
	28			0	1	0	0	1	
	30			0	1	0	0	1	
	31			0	1	0	0	1	
	39			0	2	0	0	2	
	48			0	1	0	0	1	
	53			0	1	0	0	1	
		Smallmouth bass							
	6			0	2	0	0	2	
	7			0	6	0	0	6	
	8			0	9	0	0	9	
	9			0	5	0	0	5	
	10			0	4	0	0	4	86.66
	11			0	5	0	0	5	102.77
	12			0	1	0	0	1	90.60
	13			0	2	0	0	2	92.51
	14			0	2	0	0	2	99.81
	15			0	4	0	0	4	104.33
	16			0	10	0	0	10	95.28
	17			0	9	0	0	9	103.24
	18			0	11	0	0	11	96.35
	19			0	16	0	0	16	94.35
	20			0	7	0	0	7	98.89
	21			0	7	0	0	7	95.95
	22			0	9	0	0	9	92.58
	23			0	2	0	0	2	98.92
	24			0	5	0	0	5	96.21
	25			0	6	0	0	6	94.48
	26			0	14	0	0	14	101.13
	27			0	20	0	0	20	100.04
	28			0	37	0	0	37	97.97
	29			0	49	0	0	49	102.66
	30			0	30	0	0	30	104.80
	31			0	22	0	0	22	104.96
	32			0	13	0	0	13	105.85
	33			0	7	0	0	7	105.33
	34			0	5	0	0	5	110.74
	35			0	1	0	0	1	104.14
		White crappie							
	4			0	1	0	0	1	
	9			0	1	0	0	1	
	10			0	2	0	0	2	
	11			0	1	0	0	1	
	12			0	2	0	0	2	
	13			0	1	0	0	1	
	14			0	2	0	0	2	
	17			0	1	0	0	1	
	25			0	3	0	0	3	124.74
	26			0	3	0	0	3	110.11

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			27	0	10	0	0	10	107.30
			28	0	20	0	0	20	101.61
			29	0	16	0	0	16	105.29
			30	0	7	0	0	7	102.43
			31	0	1	0	0	1	104.54
			32	0	3	0	0	3	107.78
		Wild rainbow/redband trout							
			9	0	1	0	0	1	
		Yellow perch							
			9	0	1	0	0	1	
			18	0	1	0	0	1	
			20	0	1	0	0	1	98.04
BYBEE RES									
	5/26/95								
		Bridgelip sucker							
			13	0	0	0	1	1	
			27	0	0	1	0	1	
			33	0	0	1	0	1	
		Redside shiner							
			13	0	0	0	1	1	
			15	0	0	1	0	1	
C.J. STRIKE RES									
	3/25/95								
		Largemouth bass							
			33	1	0	0	0	1	117.88
			36	2	0	0	0	2	120.14
		Smallmouth bass							
			29	3	0	0	0	3	115.43
			30	18	0	0	0	18	110.01
			31	12	0	0	0	12	110.91
			32	11	0	0	0	11	115.53
			33	9	0	0	0	9	106.97
			34	2	0	0	0	2	121.69
			35	2	0	0	0	2	120.17
			36	4	0	0	0	4	111.62
			37	3	0	0	0	3	108.39
			39	1	0	0	0	1	116.11
			42	2	0	0	0	2	113.52
	4/2/95								
		Largemouth bass							
			31	1	0	0	0	1	100.47
			46	1	0	0	0	1	122.74
		Smallmouth bass							
			30	19	0	0	0	19	104.35
			31	23	0	0	0	23	101.00
			32	17	0	0	0	17	109.78
			33	9	0	0	0	9	106.64
			34	8	0	0	0	8	111.15
			35	3	0	0	0	3	125.98
			36	4	0	0	0	4	116.03
			37	4	0	0	0	4	113.98
			38	2	0	0	0	2	105.80
			39	1	0	0	0	1	120.17
			40	1	0	0	0	1	
			41	1	0	0	0	1	128.47
			44	1	0	0	0	1	124.85
	4/17/95								
		Black crappie							
			10	0	6	1	0	7	179.91

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			11	0	4	0	1	5	422.04
			24	0	0	1	0	1	115.54
		Bluegill	4	0	2	0	0	2	
			5	0	2	0	0	2	
			6	0	3	0	0	3	
			11	0	1	0	0	1	
			13	0	1	0	0	1	132.66
			15	0	1	0	0	1	103.26
			17	0	1	0	0	1	103.58
		Bridgelip sucker	11	0	1	0	0	1	
			13	0	1	0	0	1	
			20	0	1	0	0	1	
			21	0	3	0	0	3	
			22	0	1	0	0	1	
			29	0	1	0	0	1	
			31	0	1	0	0	1	
		Brown bullhead	19	0	0	1	0	1	
		Channel Catfish	42	0	0	1	0	1	93.56
			45	0	0	2	0	2	102.09
			46	0	0	2	0	2	108.36
			47	0	0	3	0	3	100.34
			49	0	0	1	0	1	93.56
			50	0	0	1	0	1	106.31
			52	0	0	1	0	1	98.81
			55	0	0	1	0	1	106.95
			56	0	0	1	0	1	106.33
			61	0	0	1	0	1	115.70
		Chiselmouth	11	0	1	0	0	1	
			29	0	0	0	1	1	
		Largemouth bass	9	0	1	0	0	1	
			11	0	3	0	0	3	137.96
			18	0	1	0	0	1	99.25
			19	0	1	0	0	1	94.67
			21	0	1	0	0	1	96.31
			22	0	1	0	0	1	
			23	0	3	0	0	3	106.28
			25	0	2	0	0	2	118.71
			26	0	3	0	0	3	110.20
			27	0	1	0	0	1	99.83
			28	0	2	0	0	2	109.22
			31	0	1	0	0	1	104.35
			34	0	1	0	0	1	114.85
			35	0	1	0	0	1	120.57
			45	0	1	0	0	1	123.66
			47	0	1	0	0	1	113.79
			48	0	2	0	0	2	141.91
		Largescale sucker	11	0	1	0	0	1	
			12	0	1	0	0	1	
			13	0	2	0	0	2	
			14	0	1	0	0	1	
			15	0	3	0	0	3	

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			16	0	2	0	0	2	
			17	0	1	0	0	1	
			22	0	2	0	0	2	
			23	0	3	0	0	3	
			24	0	2	0	0	2	
			26	0	1	0	0	1	
			28	0	1	0	0	1	
			57	0	0	0	1	1	
			60	0	0	0	1	1	
		Northern squawfish							
			11	0	1	0	0	1	
			15	0	3	0	0	3	
			16	0	3	0	1	4	
			17	0	1	0	0	1	
			18	0	1	0	0	1	
			24	0	1	0	0	1	
		Peamouth							
			12	0	1	0	0	1	
			20	0	1	0	0	1	
			21	0	0	1	0	1	
			27	0	1	0	0	1	
			29	0	0	1	0	1	
		Smallmouth bass							
			9	0	1	0	0	1	
			10	0	1	0	0	1	96.46
			20	0	4	0	0	4	86.14
			21	0	1	0	0	1	
			22	0	3	0	0	3	98.24
			24	0	1	0	0	1	
			25	0	2	0	0	2	95.39
			31	0	0	1	0	1	121.08
			32	0	2	1	0	3	123.54
			33	0	0	1	0	1	135.62
			34	0	0	1	0	1	118.87
			35	0	0	1	0	1	120.60
		White crappie							
			12	0	0	1	0	1	129.45
			19	0	0	1	0	1	123.25
			22	0	0	1	0	1	109.26
		Yellow perch							
			8	0	1	0	0	1	
			9	0	14	0	4	18	
			10	0	21	0	18	39	126.50
			11	0	11	0	12	23	123.97
			12	0	9	1	10	20	140.40
			13	0	5	4	7	16	117.30
			14	0	3	10	8	21	45.38
			15	0	0	16	11	27	
			16	0	11	3	12	26	82.17
			17	0	8	6	15	29	86.78
			18	0	4	3	31	38	78.52
			19	0	7	6	40	53	86.52
			20	0	7	10	75	92	73.39
			21	0	1	20	47	68	67.36
			22	0	5	24	32	61	81.52
			23	0	1	43	19	63	101.44
			24	0	0	46	11	57	84.78
			25	0	0	48	10	58	69.28

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			26	0	0	16	3	19	72.22
			27	0	0	9	3	12	79.18
			28	0	0	6	1	7	
			29	0	0	1	0	1	
			30	0	0	1	1	2	64.40
	6/10/95								
		Largemouth bass							
			32	2	0	0	0	2	109.31
			34	1	0	0	0	1	120.07
			35	1	0	0	0	1	114.24
			36	2	0	0	0	2	118.65
			38	1	0	0	0	1	115.93
			47	1	0	0	0	1	99.11
			50	1	0	0	0	1	105.91
		Smallmouth bass							
			29	2	0	0	0	2	102.44
			30	29	0	0	0	29	112.89
			31	26	0	0	0	26	94.95
			32	21	0	0	0	21	102.02
			33	11	0	0	0	11	98.15
			34	8	0	0	0	8	113.02
			35	4	0	0	0	4	95.70
			36	3	0	0	0	3	100.02
			37	6	0	0	0	6	105.34
			38	6	0	0	0	6	107.96
			39	4	0	0	0	4	101.62
			40	3	0	0	0	3	117.27
			41	3	0	0	0	3	115.25
			42	2	0	0	0	2	109.40
			44	1	0	0	0	1	101.44
			45	1	0	0	0	1	98.03
			50	1	0	0	0	1	98.09
			52	1	0	0	0	1	
	8/26/95								
		Largemouth bass							
			30	1	0	0	0	1	110.74
			32	2	0	0	0	2	107.66
			33	2	0	0	0	2	117.45
			34	1	0	0	0	1	129.80
			36	2	0	0	0	2	110.31
			39	1	0	0	0	1	110.09
			40	1	0	0	0	1	
		Smallmouth bass							
			29	2	0	0	0	2	102.51
			30	29	0	0	0	29	111.92
			31	25	0	0	0	25	96.80
			32	19	0	0	0	19	100.00
			33	18	0	0	0	18	97.33
			34	16	0	0	0	16	96.89
			35	13	0	0	0	13	102.54
			36	8	0	0	0	8	102.99
			37	6	0	0	0	6	105.31
			38	6	0	0	0	6	96.38
			39	3	0	0	0	3	105.12
			40	5	0	0	0	5	101.24
			41	5	0	0	0	5	73.54
			42	6	0	0	0	6	
			43	4	0	0	0	4	

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			44	2	0	0	0	2	
			45	1	0	0	0	1	
			46	1	0	0	0	1	
			47	1	0	0	0	1	
			50	2	0	0	0	2	
CRANE CREEK RES	6/13/95								
		Black crappie							
			12	0	2	0	1	3	138.31
			13	0	1	0	1	2	130.31
			14	0	1	0	3	4	107.85
			15	0	1	0	3	4	120.04
			18	0	1	1	2	4	114.16
			20	0	0	0	1	1	125.07
			22	0	0	0	1	1	72.74
			23	0	0	0	2	2	90.12
			24	0	0	0	1	1	77.03
		Bridgelip sucker							
			7	0	1	0	0	1	
			9	0	2	0	0	2	
			10	0	4	0	0	4	
			11	0	5	0	0	5	
			12	0	4	0	0	4	
			13	0	1	0	0	1	
			14	0	1	0	1	2	
			15	0	1	0	0	1	
			16	0	2	0	0	2	
			17	0	1	0	0	1	
			18	0	1	0	0	1	
			19	0	2	0	0	2	
			21	0	2	0	1	3	
			22	0	3	0	0	3	
			23	0	1	1	0	2	
			25	0	2	0	0	2	
			34	0	1	0	0	1	
		Brown bullhead							
			18	0	0	0	1	1	
			19	0	0	0	1	1	
			20	0	1	1	0	2	
			21	0	1	1	6	8	
			22	0	1	0	6	7	
			23	0	0	0	4	4	
		Channel Catfish							
			53	0	0	1	0	1	260.76
		Common carp							
			16	0	0	1	0	1	
			23	0	0	1	0	1	
			27	0	1	0	0	1	
			30	0	0	0	1	1	
			31	0	2	0	2	4	
			32	0	1	0	0	1	
			33	0	5	0	0	5	
			34	0	0	0	1	1	
			35	0	2	0	1	3	
			36	0	1	0	0	1	
			37	0	1	0	0	1	
			38	0	3	0	0	3	
			39	0	3	0	0	3	

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			40	0	1	0	0	1	
			41	0	2	0	0	2	
			42	0	1	0	1	2	
			43	0	2	0	1	3	
			46	0	1	0	0	1	
			47	0	1	0	0	1	
			50	0	1	0	0	1	
		Largemouth bass							
			14	0	1	0	0	1	126.89
			18	0	1	0	0	1	105.46
		White crappie							
			11	0	0	0	2	2	
			12	0	0	2	18	20	156.57
			13	0	5	8	30	43	148.41
			14	0	8	7	36	51	138.13
			15	0	1	2	37	40	121.89
			16	0	2	2	17	21	131.97
			17	0	2	6	17	25	126.58
			18	0	0	5	3	8	124.61
			19	0	0	1	1	2	123.25
			20	0	0	2	10	12	116.11
			21	0	0	3	27	30	109.83
			22	0	0	6	0	6	108.43
			23	0	3	9	0	12	118.30
			24	0	2	7	0	9	98.73
			25	0	1	3	1	5	98.26
			26	0	3	3	0	6	88.37
			27	0	3	0	2	5	85.08
			28	0	1	0	4	5	79.99
			29	0	0	0	1	1	82.11
			30	0	0	0	1	1	75.79
		Yellow perch							
			12	0	1	0	0	1	163.80
DEADWOOD RES									
	9/20/95								
		Atlantic salmon							
			24	0	0	1	0	1	
			25	0	0	3	0	3	
			26	0	0	1	0	1	
			29	0	0	1	0	1	
			31	0	0	1	0	1	
		Kokanee salmon							
			18	0	0	1	0	1	
			19	0	0	1	0	1	
			20	0	0	2	0	2	
			22	0	0	1	0	1	
			25	0	0	1	0	1	
			26	0	0	1	0	1	
			27	0	0	1	0	1	
			29	0	0	2	0	2	
			31	0	0	1	0	1	
		Mountain whitefish							
			9	0	0	1	0	1	905.09
			18	0	0	3	0	3	92.82
			19	0	0	9	0	9	97.11
			20	0	0	2	0	2	103.16
			21	0	0	9	0	9	97.26
			22	0	0	5	0	5	93.98

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			23	0	0	1	0	1	77.17
			25	0	0	2	0	2	94.33
			26	0	0	2	0	2	89.75
			27	0	0	4	0	4	101.25
			28	0	0	4	0	4	104.52
			29	0	0	7	0	7	100.43
			30	0	0	11	0	11	98.79
			31	0	0	22	0	22	99.56
			32	0	0	14	0	14	99.11
			33	0	0	15	0	15	99.36
			34	0	0	13	0	13	99.75
			35	0	0	11	0	11	96.53
			36	0	0	2	0	2	88.69
			37	0	0	2	0	2	88.99
			38	0	0	5	0	5	94.84
			39	0	0	2	0	2	89.94
			40	0	0	2	0	2	88.27
			41	0	0	3	0	3	89.02
		Rainbow X cutthroat hybrid							
			16	0	0	1	0	1	
			19	0	0	2	0	2	
			22	0	0	1	0	1	
			25	0	0	1	0	1	
			28	0	0	1	0	1	
			29	0	0	1	0	1	
			35	0	0	1	0	1	
		Wild rainbow/redband trout							
			15	0	0	1	0	1	128.03
			16	0	0	1	0	1	105.49
			17	0	0	3	0	3	111.82
			18	0	0	5	0	5	101.32
			19	0	0	5	0	5	110.57
			20	0	0	2	0	2	106.59
			23	0	0	1	0	1	90.48
			24	0	0	1	0	1	82.61
			26	0	0	1	0	1	74.78
			28	0	0	1	0	1	73.79
			29	0	0	1	0	1	80.89
			31	0	0	1	0	1	74.00
			39	0	0	1	0	1	81.17
GRASMERE RES									
	5/23/95	Bridgelip sucker							
			16	0	0	2	0	2	
			17	0	0	2	0	2	
			18	0	0	1	0	1	
			20	0	0	1	0	1	
			24	0	0	1	0	1	
			26	0	0	1	0	1	
			29	0	0	2	0	2	
			35	0	0	1	0	1	
			36	0	0	1	0	1	
		Redside shiner							
			12	0	0	2	0	2	
			13	0	0	3	0	3	
			14	0	0	2	0	2	
LAKE LOWELL									
	4/10/95								

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
		Black crappie							
			8	0	1	0	0	1	
			10	0	1	0	0	1	
			12	0	1	0	0	1	
		Bluegill							
			5	0	1	0	0	1	
		Bridgelip sucker							
			12	0	3	0	0	3	
		Brown bullhead							
			25	0	1	0	0	1	
			26	0	1	0	0	1	
		Common carp							
			13	0	1	0	0	1	
			14	0	1	0	0	1	
			45	0	1	0	0	1	
			47	0	1	0	0	1	
			48	0	1	0	0	1	
			49	0	2	0	0	2	
			52	0	1	0	0	1	
			55	0	1	0	0	1	
			57	0	1	0	0	1	
			58	0	1	0	0	1	
			61	0	1	0	0	1	
		Largemouth bass							
			6	0	2	0	0	2	
			7	0	32	0	0	32	
			8	0	19	0	0	19	
			9	0	18	0	0	18	
			10	0	17	0	0	17	
			11	0	8	0	0	8	
			12	0	5	0	0	5	
			13	0	6	0	0	6	
			14	0	3	0	0	3	
			15	0	7	0	0	7	
			16	0	3	0	0	3	77.08
			18	0	3	0	0	3	106.77
			35	0	1	0	0	1	106.29
			36	0	1	0	0	1	
		Largescale sucker							
			8	0	1	0	0	1	
			9	0	4	0	0	4	
			10	0	11	0	0	11	
			11	0	24	0	0	24	
			12	0	18	0	0	18	
			13	0	8	0	0	8	
			14	0	3	0	0	3	
			45	0	4	0	0	4	
			47	0	9	0	0	9	
			48	0	4	0	0	4	
			49	0	2	0	0	2	
			50	0	5	0	0	5	
			51	0	6	0	0	6	
			52	0	4	0	0	4	
			53	0	1	0	0	1	
		Smallmouth bass							
			6	0	3	0	0	3	
			7	0	7	0	0	7	
			8	0	6	0	0	6	

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			9	0	11	0	0	11	
			10	0	14	0	0	14	
			11	0	4	0	0	4	
			12	0	2	0	0	2	
			13	0	1	0	0	1	
			22	0	1	0	0	1	104.05
			24	0	1	0	0	1	
		White crappie							
			10	0	2	0	0	2	
			11	0	1	0	0	1	
			12	0	1	0	0	1	
		Yellow perch							
			9	0	4	0	0	4	
			10	0	13	0	0	13	
			11	0	7	0	0	7	
			12	0	4	0	0	4	
			20	0	1	0	0	1	74.69
	4/11/95								
		Bluegill							
			6	0	1	0	0	1	
		Brown bullhead							
			23	0	2	0	0	2	
		Common carp							
			14	0	1	0	0	1	
			15	0	2	0	0	2	
			16	0	1	0	0	1	
			17	0	2	0	0	2	
			40	0	1	0	0	1	
			43	0	5	0	0	5	
			44	0	6	0	0	6	
			45	0	8	0	0	8	
			47	0	1	0	0	1	
			48	0	1	0	0	1	
			49	0	3	0	0	3	
			52	0	1	0	0	1	
		Largescale sucker							
			10	0	1	0	0	1	
			11	0	1	0	0	1	
			12	0	6	0	0	6	
			13	0	2	0	0	2	
			14	0	1	0	0	1	
			22	0	1	0	0	1	
			24	0	1	0	0	1	
			26	0	1	0	0	1	
			44	0	1	0	0	1	
			45	0	4	0	0	4	
			46	0	1	0	0	1	
			47	0	2	0	0	2	
			48	0	1	0	0	1	
			49	0	3	0	0	3	
			50	0	2	0	0	2	
	4/29/95								
		Largemouth bass							
			33	2	0	0	0	2	127.93
			34	5	0	0	0	5	123.20
			35	5	0	0	0	5	133.17
			36	8	0	0	0	8	125.68
			37	6	0	0	0	6	132.06

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			38	1	0	0	0	1	108.86
			40	4	0	0	0	4	111.78
			41	4	0	0	0	4	117.97
			42	4	0	0	0	4	127.48
			43	3	0	0	0	3	114.89
			44	3	0	0	0	3	109.46
			45	4	0	0	0	4	119.87
			46	1	0	0	0	1	121.78
			47	1	0	0	0	1	114.60
		Smallmouth bass							
			35	1	0	0	0	1	102.38
			41	1	0	0	0	1	100.22
	8/22/95								
		Bridgelip sucker							
			19	0	1	0	0	1	
			21	0	1	0	0	1	
			22	0	2	0	0	2	
			35	0	1	0	0	1	
			38	0	1	0	0	1	
		Brown bullhead							
			10	0	1	0	0	1	
			23	0	1	0	0	1	
		Common carp							
			9	0	1	0	0	1	
			10	0	3	0	0	3	
			11	0	2	0	0	2	
			45	0	1	0	0	1	
			46	0	1	0	0	1	
		Largemouth bass							
			6	0	4	0	0	4	0.00
			7	0	5	0	0	5	0.00
			8	0	3	0	0	3	0.00
			9	0	3	0	0	3	0.00
			10	0	1	0	0	1	0.00
			12	0	2	0	0	2	0.00
			13	0	1	0	0	1	56.95
		Largescale sucker							
			8	0	4	0	0	4	
			9	0	2	0	0	2	
			24	0	1	0	0	1	
		White crappie							
			5	0	1	0	0	1	0.00
			6	0	5	0	0	5	0.00
			7	0	1	0	0	1	0.00
			8	0	1	0	0	1	0.00
			9	0	1	0	0	1	0.00
		Yellow perch							
			7	0	2	0	0	2	0.00
			8	0	4	0	0	4	0.00
	10/24/95								
		Black crappie							
			8	0	1	0	0	1	
			10	0	1	0	0	1	
			12	0	1	0	0	1	
		Bluegill							
			5	0	1	0	0	1	
		Bridgelip sucker							
			12	0	4	0	0	4	
		Brown bullhead							

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			25	0	1	0	0	1	
			26	0	1	0	0	1	
		Common carp							
			13	0	1	0	0	1	
			14	0	1	0	0	1	
			45	0	1	0	0	1	
			47	0	1	0	0	1	
			48	0	1	0	0	1	
			49	0	2	0	0	2	
			52	0	1	0	0	1	
			55	0	1	0	0	1	
			57	0	1	0	0	1	
			58	0	1	0	0	1	
			61	0	1	0	0	1	
		Largemouth bass							
			6	0	2	0	0	2	
			7	0	32	0	0	32	
			8	0	19	0	0	19	
			9	0	18	0	0	18	
			10	0	17	0	0	17	
			11	0	8	0	0	8	
			12	0	5	0	0	5	
			13	0	6	0	0	6	
			14	0	3	0	0	3	
			15	0	7	0	0	7	
			16	0	3	0	0	3	77.08
			18	0	3	0	0	3	106.77
			35	0	1	0	0	1	106.29
		Largescale sucker							
			8	0	1	0	0	1	
			9	0	4	0	0	4	
			10	0	11	0	0	11	
			11	0	24	0	0	24	
			12	0	18	0	0	18	
			13	0	8	0	0	8	
			14	0	3	0	0	3	
			45	0	4	0	0	4	
			47	0	9	0	0	9	
			48	0	4	0	0	4	
			49	0	2	0	0	2	
			50	0	5	0	0	5	
			51	0	6	0	0	6	
			52	0	4	0	0	4	
			53	0	1	0	0	1	
		Smallmouth bass							
			6	0	3	0	0	3	
			7	0	7	0	0	7	
			8	0	6	0	0	6	
			9	0	11	0	0	11	
			10	0	14	0	0	14	
			11	0	4	0	0	4	
			12	0	2	0	0	2	
			13	0	1	0	0	1	
			22	0	1	0	0	1	104.05
			24	0	1	0	0	1	
		White crappie							
			10	0	2	0	0	2	
			11	0	1	0	0	1	

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			12	0	1	0	0	1	
		Yellow perch							
			9	0	4	0	0	4	
			10	0	13	0	0	13	
			11	0	7	0	0	7	
			12	0	4	0	0	4	
			20	0	2	0	0	2	74.69
LITTLE BLUE CREEK	5/24/95								
		Bridgelip sucker							
			15	0	0	1	0	1	
			19	0	0	1	0	1	
			20	0	0	0	1	1	
			21	0	0	0	2	2	
			23	0	0	0	2	2	
			24	0	0	1	1	2	
			25	0	0	2	0	2	
			28	0	0	0	2	2	
		Redside shiner							
			12	0	0	0	1	1	
			13	0	0	2	0	2	
			14	0	0	2	0	2	
LUCKY PEAK RES	5/16/95								
		Bridgelip sucker							
			5	0	1	0	0	1	
			6	0	1	0	0	1	
			7	0	2	0	0	2	
			8	0	1	0	0	1	
			9	0	1	0	0	1	
			10	0	1	0	0	1	
			11	0	1	0	0	1	
			12	0	2	0	0	2	
			13	0	1	0	0	1	
			14	0	2	0	0	2	
			15	0	2	0	0	2	
			16	0	2	0	0	2	
			17	0	1	0	0	1	
			18	0	6	0	0	6	
			19	0	2	0	0	2	
			20	0	12	0	0	12	
			21	0	2	0	0	2	
			22	0	5	0	0	5	
			23	0	2	0	0	2	
			24	0	1	0	0	1	
			25	0	2	0	0	2	
			26	0	4	0	0	4	
			29	0	2	0	0	2	
			32	0	1	0	0	1	
			33	0	2	0	0	2	
			34	0	1	0	0	1	
			35	0	1	0	0	1	
			36	0	1	0	0	1	
			41	0	1	0	0	1	
		Chiselmouth							
			6	0	2	0	0	2	
			7	0	3	0	0	3	
			11	0	5	0	0	5	

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			12	0	2	0	0	2	
			13	0	5	0	0	5	
			14	0	4	0	0	4	
			15	0	8	0	0	8	
			16	0	3	0	0	3	
			17	0	2	0	0	2	
			18	0	5	0	0	5	
			19	0	2	0	0	2	
			20	0	2	0	0	2	
			26	0	2	0	0	2	
			27	0	3	0	0	3	
			28	0	3	0	0	3	
			29	0	2	0	0	2	
			39	0	1	0	0	1	
		Largescale sucker							
			13	0	2	0	0	2	
			14	0	1	0	0	1	
			15	0	1	0	0	1	
			16	0	2	0	0	2	
			20	0	1	0	0	1	
			30	0	2	0	0	2	
			31	0	4	0	0	4	
			33	0	9	0	0	9	
			34	0	7	0	0	7	
			35	0	8	0	0	8	
			36	0	7	0	0	7	
			37	0	11	0	0	11	
			38	0	14	0	0	14	
			39	0	5	0	0	5	
			40	0	8	0	0	8	
			41	0	6	0	0	6	
			42	0	2	0	0	2	
			44	0	3	0	0	3	
			45	0	1	0	0	1	
		Mountain whitefish							
			29	0	1	0	0	1	
			30	0	1	0	0	1	
			32	0	1	0	0	1	
		Northern squawfish							
			4	0	1	0	0	1	
			13	0	1	0	0	1	
			16	0	1	0	0	1	
			17	0	1	0	0	1	
			19	0	2	0	0	2	
			22	0	2	0	0	2	
			25	0	1	0	0	1	
			27	0	1	0	0	1	
			28	0	2	0	0	2	
			29	0	5	0	0	5	
			30	0	6	0	0	6	
			31	0	3	0	0	3	
			32	0	4	0	0	4	
			33	0	2	0	0	2	
			34	0	1	0	0	1	
			35	0	2	0	0	2	
			36	0	1	0	0	1	
			38	0	1	0	0	1	
			40	0	4	0	0	4	

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			43	0	1	0	0	1	
			44	0	1	0	0	1	
			45	0	1	0	0	1	
			46	0	1	0	0	1	
			47	0	1	0	0	1	
			53	0	1	0	0	1	
		Redside shiner							
			4	0	4	0	0	4	
			5	0	6	0	0	6	
			8	0	13	0	0	13	
			9	0	12	0	0	12	
			10	0	2	0	0	2	
			11	0	1	0	0	1	
			13	0	2	0	0	2	
		Smallmouth bass							
			12	0	1	0	0	1	129.47
			14	0	1	0	0	1	117.50
			15	0	1	0	0	1	97.84
			16	0	4	0	0	4	104.26
			17	0	1	0	0	1	102.58
			18	0	3	0	0	3	101.95
			19	0	3	0	0	3	113.81
			20	0	5	0	0	5	104.74
			21	0	6	0	0	6	107.49
			22	0	2	0	0	2	99.02
			23	0	1	0	0	1	106.17
			24	0	3	0	0	3	106.16
			25	0	4	0	0	4	101.99
			26	0	2	0	0	2	102.71
			27	0	1	0	0	1	103.21
			28	0	1	0	0	1	109.08
			45	0	1	0	0	1	128.20
		Yellow perch							
			4	0	1	0	0	1	
			12	0	1	0	0	1	
			13	0	1	0	0	1	
			14	0	1	0	0	1	
			15	0	1	0	0	1	
			16	0	2	0	0	2	
			19	0	1	0	0	1	
MANN'S CREEK RES	6/12/95	Black crappie							
			7	0	1	0	0	1	
			9	0	2	0	1	3	158.85
			12	0	1	0	1	2	124.51
			15	0	2	0	0	2	81.64
			16	0	0	3	1	4	115.85
			17	0	8	11	1	20	110.54
			18	0	22	27	7	56	106.84
			19	0	25	16	6	47	101.56
			20	0	17	11	2	30	102.03
			21	0	9	2	4	15	103.31
			22	0	3	2	0	5	98.46
		Largemouth bass							
			11	0	1	0	0	1	95.51
			15	0	1	0	0	1	95.95
			16	0	0	1	0	1	104.80

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			17	0	6	0	0	6	133.01
			18	0	3	0	0	3	115.78
			19	0	8	0	0	8	111.14
			20	0	4	0	0	4	110.26
			21	0	2	0	0	2	103.19
			22	0	1	0	0	1	104.66
			23	0	2	0	0	2	95.35
			25	0	4	0	0	4	93.13
			26	0	6	0	0	6	93.06
			27	0	5	0	0	5	88.00
			28	0	3	0	0	3	95.22
			30	0	3	0	0	3	90.96
			37	0	3	0	0	3	103.33
			38	0	1	0	0	1	31.60
			40	0	1	0	0	1	121.36
			42	0	1	0	0	1	90.46
		Wild rainbow/redband trout							
			11	0	2	0	0	2	126.12
			12	0	6	0	0	6	121.31
			13	0	7	0	0	7	123.64
			14	0	7	0	0	7	100.97
			15	0	7	1	0	8	155.89
			16	0	2	1	0	3	109.74
			17	0	2	0	0	2	
			18	0	0	1	0	1	145.56
			20	0	1	1	0	2	93.00
			21	0	1	0	0	1	
			22	0	1	0	0	1	
			24	0	1	1	0	2	105.74
			30	0	0	1	0	1	91.21
PADDOCK RES									
	4/3/95								
		Black crappie							
			21	0	0	0	5	5	140.67
			22	0	0	0	5	5	124.47
			23	0	0	0	1	1	135.83
			27	0	0	2	2	4	111.50
			28	0	0	1	4	5	118.37
			29	0	0	0	2	2	109.67
			30	0	0	1	0	1	120.29
		Bluegill							
			5	0	2	0	0	2	
			17	0	1	0	0	1	153.64
			21	0	1	0	0	1	141.73
			22	0	1	0	0	1	141.19
		Brown bullhead							
			20	0	0	2	0	2	
			22	0	0	1	0	1	
			23	0	0	1	0	1	
			24	0	1	3	1	5	
			25	0	0	2	0	2	
			26	0	0	2	0	2	
			27	0	1	3	0	4	
			29	0	1	1	0	2	
			30	0	1	1	0	2	
			31	0	0	7	0	7	
			32	0	0	3	0	3	
			33	0	0	3	0	3	

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
		Largemouth bass	34	0	0	1	0	1	
			11	0	1	0	0	1	445.91
			15	0	2	0	0	2	
			16	0	3	0	0	3	112.20
			17	0	3	0	0	3	
			18	0	12	3	0	15	100.77
			19	0	28	11	0	39	99.96
			20	0	20	10	1	31	97.75
			21	0	30	9	0	39	106.26
			22	0	36	25	0	61	94.03
			23	0	51	43	3	97	98.89
			24	0	62	54	6	122	98.20
			25	0	83	53	13	149	100.18
			26	0	65	48	12	125	96.71
			27	0	54	50	2	106	98.48
			28	0	17	33	3	53	95.66
			29	0	4	11	0	15	101.24
			30	0	0	4	1	5	83.01
			31	0	0	1	0	1	
			32	0	0	0	1	1	103.46
			33	0	3	0	1	4	91.61
			34	0	3	1	1	5	93.15
			35	0	1	0	0	1	95.52
			36	0	1	0	0	1	
			37	0	0	0	1	1	91.66
			40	0	2	0	0	2	100.32
			42	0	0	1	0	1	192.14
			43	0	0	1	0	1	185.10
			44	0	1	0	0	1	69.07
			47	0	0	1	0	1	
SAGE HEN RES									
	6/1/95	Wild rainbow/redband trout							
			15	0	0	0	1	1	90.37
			16	0	0	0	3	3	81.58
			17	0	0	0	3	3	79.56
			18	0	0	0	4	4	74.37
			19	0	0	0	6	6	76.48
			20	0	0	0	2	2	80.65
			21	0	0	0	10	10	81.12
			22	0	0	0	4	4	83.18
			23	0	0	0	2	2	80.02
			25	0	0	0	2	2	87.15
			26	0	0	0	1	1	76.33
			29	0	0	0	1	1	94.16
			30	0	0	0	2	2	75.48
			31	0	0	0	1	1	74.77
			32	0	0	0	1	1	82.67
			33	0	0	0	1	1	77.62
			37	0	0	0	1	1	79.52
SHOOFLY RES									
	5/25/95	Bluegill							
			16	0	0	0	1	1	105.92
SQUAW CREEK RES									
	5/23/95	Bridgelip sucker							

Appendix B. (Continued)

Water	Date	Species	CM Group	Number Caught Angling	Number Caught Electrofishing	Number Caught in Gill Nets	Number Caught in Trap Nets	Total Caught	Relative Weight
			18	0	0	2	0	2	
			19	0	0	1	0	1	
			22	0	0	1	0	1	
			23	0	0	1	0	1	
			30	0	0	2	0	2	
			32	0	0	1	0	1	
			33	0	0	2	0	2	
			34	0	0	1	0	1	
			36	0	0	1	0	1	
		Northern squawfish							
			20	0	0	1	0	1	
			21	0	0	3	0	3	
			23	0	0	1	0	1	
			24	0	0	1	0	1	
			25	0	0	1	0	1	
			31	0	0	2	0	2	
			32	0	0	1	0	1	
			39	0	0	1	0	1	
			45	0	0	1	0	1	

1995 ANNUAL PERFORMANCE REPORT

State of: Idaho

Program: Fisheries Management F-71-R-20

Project I: Surveys and Inventories

Sub-Project I-D: Southwest Region

Job No.: c

Title: Rivers and Streams Investigations

Contract Period: July 1, 1995 to June 30, 1996

ABSTRACT

Seventeen stream segments were sampled by electrofishing for redband trout *Oncorhynchus mykiss gairdneri* in stream drainages in southern Owyhee County, Idaho. Stream surveys were conducted on the South Fork Owyhee, Little Owyhee, Owyhee, West Fork Bruneau and Jarbidge rivers and Marys, Blue, Little Blue, Shoofly and Sheep creeks. Seven of the 17 stream segments sampled contained redband trout. Redband trout densities for all size classes of trout ranged from 0.08 to 1.82 trout/100 m².

Habitat data were also collected on the sampled stream segments. Data collected included stream depth, stream width, stream gradient and substrate composition. Measurements of bank stability, percent of stream shading and available trout habitat were also collected.

Basic water quality parameters of water temperature, pH, conductivity, hardness and alkalinity were all within acceptable ranges for trout survival. Recording thermographs were placed in Jordan Creek from June until November 1995. Maximum water temperature recorded was 24.6°C on July 16, 1995.

Routine electrofishing sampling was conducted on six stations on the Boise River within the City of Boise. Densities (fish/100 m²) increased in all areas for all gamefish from 1994 to 1995.

An electrofishing survey of the Snake River within the Southwest Region IDFG was conducted in the summer of 1995. The catch in 1995 was generally lower than 1974. Differences in species composition and percent of gamefish were noted.

Electrofishing was conducted on the South Fork Boise River below Anderson Ranch Dam on April 4, 1995. Rainbow trout *O. mykiss* and mountain whitefish *Prosopium williamsoni* were collected and taken for testing for whirling disease. Both rainbow trout and mountain whitefish tested positive for the disease.

Seventy-three rainbow trout were collected by angling to test for whirling disease on the South Fork Payette River below the Deadwood River. Most fish were sacrificed for disease testing. Whirling disease testing was negative for this fish sample.

A creel survey was conducted on the Boise River on an 17.6 km stretch within the city limits of Boise, Idaho. The survey covered the period March 1, 1994 through February 28, 1995. A total of 77,881 h of angling was estimated to have occurred. Anglers were estimated to have caught (kept or released) a total of 52,406 fish during the survey period. Rainbow trout represented 69.7%

of the fish/h this catch. Estimated total catch for all fish species for all sections was 0.67 fish per h. Harvest rate was estimated to be 0.21 fish/h. Harvest of hatchery trout *O. mykiss* was estimated to have been 27% of total trout planted; total catch of hatchery trout was estimated to be 68% of total planted. An survey from 1986 estimated that 81 % of the hatchery trout planted were harvested in the Boise River. Average angler completed trip length was 1.44 h for all areas combined.

Middle Fork Boise River anglers were estimated to have fished 9,287 h between July 1 and September 30, 1995. A total of 7,885 fish were estimated to have been caught (kept and released) during the survey. A total of 1,839 wild rainbow trout, hatchery trout, and mountain whitefish were harvested in the period. Average trip length was estimated to be 2.1 h and the estimated fishing days was 4,422. Exploitation of hatchery trout was low and varied from 9.6% to 15.6% depending on stream section.

Standard stream surveys were conducted in the Southwest Region to document the status of redband trout. Thirty-five surveys were completed. A database was developed in ACCESS to allow a standard report to be easily produced.

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OWYHEE COUNTY REDBAND TROUT SURVEYS

Introduction

This report presents redband trout *Oncorhynchus mykiss gairdneri* population and stream habitat data collected on the Owyhee and Bruneau Resource Areas of the Bureau of Land Management (BLM) lands in Owyhee County, Idaho. Data was collected by Idaho Department of Fish and Game (IDFG) Southwest region fisheries management staff in a cooperative project with the Boise District BLM. This report documents the third field season of stream and habitat surveys conducted by Southwest region IDFG. Previous survey data were reported in Allen et al. (1993) and Allen et al. (1995).

Redband trout historically occupied perennial drainages in Owyhee County, Idaho (Behnke, 1992). Sampling of these redband trout populations by BLM staff from 1976-1991 documented fragmented populations composed of small numbers of redband trout. Drought conditions experienced from 1987 to 1994 likely negatively impacted these redband trout populations. Unfortunately, accurate distribution maps documenting the presence or absence of redband trout in Owyhee County streams were not available to document changes in redband distributions. The main objectives of this third year of investigation remain constant:

- (1) To determine redband trout density estimates for previously sampled stream segments;
- (2) To establish trout density estimates for unsurveyed stream segments;
- (3) To measure stream substrate, bank stability, instream fish cover, solar input, composition of greenline plant communities, and water quality.

Study Area

Stream surveys were conducted on South Fork Owyhee River, Little Owyhee River and the Owyhee River in the Owyhee Resource Area. Surveys were also conducted on the Bruneau River, Jarbidge River, Marys Creek, Little Blue, Blue, Shoofly and Sheep creeks in the Bruneau Resource Area. Locations and descriptions of the survey sites are presented in Table 1, Figures 1-3 and Appendix A.

Methods

Fish Populations

The 1995 sample sites were selected to document the presence of redband trout within drainages in previously unsampled areas of Owyhee County, Idaho. The streams were selected in the southern part of the county because little was documented about the resident fish populations.

The topography of these stream drainages somewhat limited access especially by vehicle and sometimes even by foot.

Sample segments were a minimum of 61 m in length, with the preferred length being increased to 100 m in 1995. The upstream and downstream sample segment boundaries were located at stream constrictions to minimize fish migration during electrofishing.

A Smith-Root Model 15-B backpack electrofishing unit was utilized by two people electrofishing from the lower to the upper sample segment boundaries. In some sample areas two backpack electrofishing units and four personnel were utilized to provide a larger effective sampling field. All fish species encountered were netted and placed in small net pens placed in the stream. We made two or three electrofishing passes, removing and segregating the fish from each pass. If no redband trout were encountered on the first pass and collection conditions were considered good, no further electrofishing passes were completed. All trout collected were measured to the nearest mm, weighed to the nearest g, a scale sample was collected from all trout captured, and then the trout were released. All other fish species were identified to species, counted, and released.

Collected trout scales were mounted on acetate sheets and pressed with a Carver Heat Press to create a readable impression in the acetate. The acetate impressions were then used in a microfiche reader where the focus, annuli and margin were identified and marked on a slip of paper. The annuli marks were entered on a digitizing pad and the DisBCal 89 V1.0 Program in the Fishery Analysis Tools software of the Missouri Department of Conservation. This program produced average back-calculated lengths for each age-class of trout.

Redband trout population estimates and confidence intervals were calculated by utilizing the MicroFish 3.0 program developed by Van Deventer and Platts (1989). Population estimates were calculated for all trout captured and for all trout greater than 100 mm in length, giving two estimates for sites where trout were collected. Trout densities were calculated by dividing the population estimate by sampled area and reported as trout/100 m².

Whirling Disease Sample Collection

Redband trout were collected near Black Rock Crossing to test for the presence of whirling disease. Redbands captured larger than 350 mm were released. Trout were stored on ice in whole body condition and delivered to the IDFG fish health laboratory for analysis for *Myxobolus cerebralis*.

Stream Habitat

Each stream segment was divided into 10 equal length sections starting from the bottom. At each cross section, depth measurements were taken at 1/4, 1/2 and 3/4 widths across the channel. Average depth was calculated by dividing the 3 cross sectional depth measurements by 4 and then calculating a mean of the 10 cross sections. Previous reports used an average of the 30 measurements as a mean depth. Substrate composition was determined with standard IDFG methods, categorizing the substrate into size classes (Petrosky and Holubetz, 1988).

Instream fish cover was a subjective visual assessment of several parameters and was recorded for each cross-section as the percentage of the stream width defined as cover. For this study cover was defined as areas where redband trout were likely to be found: (1) pools >0.45 m in

depth, (2) overhanging bank vegetation, (3) instream vegetation, (4) near large instream rocks, (5) velocity breaks i.e. broken water surface, (6) pocket water behind or beside large rocks, (7) near large woody debris.

Stream gradient was measured using an ocular hand level and a stadia rod. Gradient is the vertical drop between the upstream and downstream boundaries divided by the stream segment length and reported as a percentage.

Streambank stability measurements were a visual assessment to determine the vulnerability of the bank slopes to erosion (Platts, et al., 1983). Four classes were used to rate the stability of the streambanks. Covered and Stable: over 50% of banks in healthy vegetation and/or anchoring rocks. The banks did not show signs of erosion. Covered and Unstable: more than 50 % of streambank covered by vegetation but signs of erosion were present. Uncovered and Stable: less than 50 % of stream bank covered by vegetation or anchoring rock. Does not show signs of erosion, ie. banks were bare but not vertical or slumped. Uncovered and Unstable: less than 50 % covered with vegetation. Banks show some erosion, ie. slumped or vertical bare banks.

Thermal input to the stream waters was measured using a Solar Pathfinder™ following Platts, et al. (1987). Percent stream shading was reported as the average percent of shading on the stream surface during June through September at 10 cross sections.

The "greenline" is the first continuous cover of perennial vegetation above the stable low water level (USDA, 1992). We determined the composition of plant communities along the greenline on both banks for each stream transect. Streambank distances were summed for each community type and the percentage of the total greenline made up by each community type was calculated for each stream segment.

Water Quality

Several water quality parameters were measured at each stream segment. Conductivity and pH measurements were taken with hand held conductivity and pH meters. Alkalinity and hardness measurements were taken with Hach Company field titration kits. Water temperature was recorded with a pocket thermometer at each site.

Recording thermographs (HOBOS) were placed in Jordan Creek at five locations from near the headwaters to the confluence of Flint Creek. Locations of the thermographs are provided in Appendix B, Table B1. Thermographs were placed in the stream on June 7, 1995 and retrieved on November 4, 1995.

Results

Trout Densities

Of 17 stream segments sampled, seven contained redband trout. None of these segments had been previously sampled by BLM or IDFG. Redband trout population estimates (95%CI) and

densities of trout per 100 m² are presented in Table 2. Densities of all size classes of trout ranged from 0.08 to 1.82 trout/100 m² and 0.08 to 1.70 trout/100 m² for trout greater than 100 mm.

Little Owyhee River-The Little Owyhee River was dry except for a few scattered pools, when observed on September 11, 1995. No redband or other fish were observed in the remaining pools. A resident of the Star Valley Ranch near the Nevada border stated that the river typically dries up by late summer.

South Fork Owyhee River-No redband trout were captured in the three sample sections completed in the South Fork Owyhee River. Electrofishing conditions were considered good at all three sites.

Owyhee River-Redband trout density was 0.32 trout/100 m² in a segment of the Owyhee River just above Crutchers Crossing. Three sample sites from 1994 sampling from upstream on the Owyhee River found no redband trout. Redband trout densities in the Owyhee River are probably rather low.

West Fork Bruneau River-Five sites were sampled in the West Fork Bruneau River in 1995 and all contained redband trout in low densities. Densities ranged from 0.08 to 0.84 trout/100 m² for all size classes. The absence of age 0 and age 1 fish in all five sample sites was disturbing. Juvenile redbands had been collected relatively consistently when sampling other areas; if juveniles were present we were confident we would have collected them in these reaches of the Bruneau River. Absence of age 0 and age 1 redbands was likely indicator of year class failures.

Jarbidge River-One site was sampled slightly upstream from the river mouth. Sampled densities of all size classes of redbands was 1.82 trout/100 m².

Sheep Creek-No redband trout were sampled at this site. This site was probably dry in the fall of 1994. Redband trout were sampled at SHEEP027.5 and SHEEP029.0 upstream of this site near Rough Mt. in the 1994 inventory (Allen et al. 1995).

Marys Creek-No redband trout were sampled. This stream section was dry in the fall of 1994. The BLM data records no redband trout sampled in 1990 at the next road crossing south.

Blue, Little Blue, and Shoofly Creeks-No redband trout were found in one sample site on each of these three streams. Only electrofishing was conducted to sample fish populations; no habitat sampling was done. Shoofly Creek was dry in May on the road crossing above Bybee Reservoir. Blue Creek was sampled above Blue Reservoir and Little Blue Creek was sampled above Little Blue Reservoir.

Redband Trout Length Frequency and Age and Growth

As in previous sampling of redband populations, missing year classes of trout were observed in samples or no trout were captured at all. Figure 4 depicts the length frequency of captured redbands in the Owyhee River upstream of the mouth of the South Fork Owyhee River. The West Fork Bruneau River length frequencies and average growth at annulus are presented in Figures 5-8. The sample site in the lower Jarbidge River (Figure 9) does seem to contain all redband year classes. One age 1 redband was collected in the sample taken for whirling disease near Black Rock

Crossing on the West Fork Bruneau River (Figure 10). One age 1 redband was an extremely low catch for over a km of electrofishing effort.

Whirling Disease Sampling

The length frequency of additional redband trout collected to test for whirling disease near Black Rock Crossing on the Bruneau River is presented in Figure 10. Laboratory pathology on the 24 collected redband specimens detected no observable *Myxobolus cerebralis* spores. This was an indication that the drainage may not contain whirling disease, but not statistically confirmed.

Nongame Fish Species Collected

Several nongame species were collected at sample sites. Species observed were: speckled dace *Rhinichthys osculus*, longnose dace *R. cataractae*, redband shiner *Richardsonius balteatus*, chiselmouth *Acrocheilus alutaceus*, northern squawfish *Ptychocheilus oregonensis*, smallmouth bass *Micropterus dolomieu*, bridgelip sucker *Catostomus columbianus*, mountain whitefish *Prosopium williamsoni*, mountain sucker *C. platyrhynchus*, largescale sucker *C. macrocheilus* and Sculpin *Cottus spp.* A table of species occurrence and location is presented in Table 3.

Habitat

Habitat variables were collected consistent with the 1993 and 1994 surveys (Allen, et al. 1993). The data were collected to provide baseline riparian habitat conditions. Habitat variables of stream sample length, mean stream width, mean depth, substrate composition and gradient are presented in Table 4. Assessment of instream fish cover and percent habitat type is provided by sample site in Table 5. Percent of streambank stability is presented in Table 6. Percent of stream shading derived from the Solar Pathfinder™ is summarized in Table 7. The percentage of vegetative community types, "greenline" for each stream segment are presented in Appendix A.

Water Quality

Water quality variables measured during 1995 are presented in Table 8. The parameters measured were all acceptable to trout survival at the time of sample.

Recording thermographs documented summer water temperatures at three sites in Jordan Creek from above the town of Silver City to near the confluence of Flint Creek (Appendix B). A fourth temperature recorder was vandalized and data was not recovered, a fifth thermograph was slightly exposed to air temperatures by the end of the season and its data was considered compromised and thus not used. The water temperature peaks in the summer months generally increase as the elevation decreases. Trout populations also generally decrease as the elevation decreases in Jordan Creek (Allen et al., 1993). Redband trout were easily observable in the upper two thermograph sites when the thermographs were retrieved, but no trout were observed at the lower

site when the recorders were retrieved. Maximum water temperatures were 21.6°C at the upper two sites on August 16, 1995 and 24.6°C on July 16, 1995 at the bridge on Triangle Road.

Discussion

Seven stream sites of 17 sampled contained redband trout during 1995. No record of previous sampling on these drainages was found. Data collected contribute to the presence/absence database of Owyhee County streams for redband trout. Water quality was not limiting to trout at the time stream sections were sampled.

A methodology is needed to assess the potential of Owyhee County redband trout populations. Maximum historical redband trout population levels are unknown. Some data exists from BLM surveys in the 1970s, but it is unlikely these data are true maximum production levels for the desert redbands.

We suggest using a series of riparian exclosures in scattered drainages and elevations within the county to assess the redband trout production potential of these desert streams. Obviously this would be a relatively long-term process, but this method would allow the riparian and stream channels to become fully functioning and the trout populations to develop to full potential. Many of these exclosures already exist and others would have to be constructed. Some of these test exclosures would need to be seeded with redband trout from other drainages and left to develop.

Recommendations

1. Complete the survey of major Owyhee County stream drainages. Increase intensity of sampling to positively identify the presence/absence and develop population estimates of redband trout populations on a drainage basis county wide.
2. Monitor seasonal stream temperatures with recording thermographs placed into stream segments to be sampled.
3. Establish a series of 5-20 ha stream and riparian exclosures spread around the county and monitor the changes to the riparian area, stream channel, and fish populations over time.

BOISE RIVER

Introduction

Routine fishery sampling was conducted on the Boise River within the city limits of Boise, Idaho during March 1995. The Boise River is managed as a basic yield fishery through most of Boise and a heavy stocking program using hatchery catchable rainbow trout creates a very popular fishery. This sampling was the second year of trend sampling utilizing the same equipment.

Methods

Six electrofishing stations were sampled in March 1995; Four of these stations had been sampled previously; One was moved slightly upstream from a previous site; and one was a new sampling station. Stream flow was approximately $150 \text{ ft}^3 \text{ sec}^{-1}$ during sampling.

Electrofishing equipment used was very similar to 1994. A Coffelt VVP-15 electrofishing control box was used with a 5 kw generator and the crew carried five hand-held positive electrodes to shock fish. The hand-held probes were wired about 10 m apart with the first probe in the series controlling the power output with a safety on-off switch. The generator, VVP-15, and a 303 l fish tank were placed on a small cataraft which was pushed upstream behind the line of workers.

Sample sites were placed between a lower and upper riffle to constrict movement of fish. Three passes of the electrode gang were conducted starting from the lower boundary to the upper boundary. All fish encountered were collected and segregated into live pens and all three passes were kept separate. Fish were measured and weighted and released. Population estimates were generated and density of species were calculated on a basis of number of fish per 100 m^2 . Densities were compared to previous samples taken in 1988, 1992 and 1994. Standard habitat measurements were taken at each of five sample sites.

Results

A general rebound in fish densities was observed at all sample sites in 1995 (Table 9). Winter flows were $240 \text{ ft}^3 \text{ sec}^{-1}$ and $150 \text{ ft}^3 \text{ sec}^{-1}$ in 1994 and 1995, respectively. Please note that different electrofishing methodologies were used in 1988 and 1992 versus 1994 and 1995 (Table 9) 1988 and 1992 electrofishing was conducted from a drift boat with one hand-held probe. Densities of fish (number/ 100 m^2) generally increased at all stations in 1995. Redband trout and mountain whitefish densities were higher at all sites in 1995. Wild brown trout *Salmo trutta* had slightly increased densities in the two stations where they were captured. Hatchery produced rainbow trout densities were higher at 3 of 4 stations than in 1994. Nongame fish densities increased at all stations from 1994 to 1995. Summaries of fish data from all sample stations are included in the Standard Stream Survey Reports in Appendix C.

The development of the five gang probe electrofishing equipment has provided an appropriate tool to investigate the assumed relationship between low winter flows and low fish densities seen in the lower Boise River. Yearly trend data collection will be necessary for several more years to better define a flow and fish density relationship. Data from 1994 and 1995 on redband and mountain whitefish indicate an increase in survival for age 2 and 3 year old fish (Figures 11 and 12). Winter flows are the main factor that has changed in the lower Boise River from previous years and is likely contributing to these population increases. Electrofishing will be done each March to collect trend data in the lower Boise River. Trend data will not be collected at flows above $240 \text{ ft}^3/\text{s}$ because sampling becomes difficult at higher flows.

Table 10 presents substrate measurements taken at sample stations.

SNAKE RIVER

Introduction

A simple electrofishing survey to identify species composition and compare against past survey data was conducted from July 17 to August 3, 1995. Eight days were spent electrofishing on the Snake River from C.J. Strike Dam to above Brownlee Reservoir. The survey was similar to extensive surveys done by Gibson (1974 and 1975). Since the mid 1970s little survey work was conducted on the river.

Methods

Sampling in 1995 was intended to be a reconnaissance of the fishery accomplished by sampling various habitats along the river. The river was separated into three sections for this study two of which corresponded to Gibson (1974 and 1975). Sections this report is based on include: C.J. Strike Dam downstream to Swan Falls Reservoir, Swan Falls Dam downstream to Walter's Ferry, Walters Ferry downstream to below Weiser, Idaho.

Individual sample sites were chosen at random. A site was chosen for its ease of electrofishing, usually defined by slope of bank, substrate, and current velocity. Sites were approximately 300 to 400 m in length. Sampling on the Snake River tends to be difficult because of swift currents and low water clarity. Sites were electrofished downstream while trying to maintain maneuverability with the boat.

Fish data collected was grouped into the three reaches identified previously for analysis. Energized electrical field time was recorded for each sample run, except for the river reach from Swan Falls Dam to Walter's Ferry where only distance was collected. Linear shoreline distance was measured at each site by use of a metered hip chain string box where a biodegradable string was run over the entire sampled distance. All fish were measured for total length (mm) and most were weighed to the nearest g. Scale samples were taken from smallmouth bass and pectoral fin spines were taken from channel catfish *Ictalurus punctatus* for ageing.

Results

Fish Species and Relative Abundance

C.J. Strike Dam to Swan Falls-We captured 44 fish in 1,925 m of shoreline at a total catch rate of 32.4 fish/h of shocking. Gibson (1975) captured 1,812 fish in 2,812 m of shoreline for a total of 45.1 fish/h. In 1995 25% of the catch was gamefish compared to 14.4% in 1974. Seven fish species were captured in 1995 versus 14 in 1974. Comparison of species catch rates is presented in Table 11. The biggest difference between years is in the huge numbers of carp *Cyprinus carpio*, suckers, and northern squawfish captured in 1974 (Table 11).

Swan Falls Dam to Walter's Ferry-We captured 270 fish in 2,550 m, in this previously unsampled section. Nine fish species were captured, 73.3% were gamefish for a rate of 0.1 fish/m of shoreline (Table 12). The time recorder did not function for this section of the river. Smallmouth bass was the dominant species captured.

Walter's Ferry to Below Weiser-We captured 473 fish in 9,095 m of shoreline in 1995, in 1973 Gibson (1974) captured 4,245 fish in 17,132 m. Nineteen species were captured in 1995 versus 15 species in 1973 (Table 13). Catch rate for all species was 79.8 fish/h for 1995 and 39 fish/h in 1973. Gamefish comprised 60.3% of the 1995 catch while comprising only 28.9% of the 1973 catch. Again the largest difference in catch was accounted for in carp and sucker species (Table 13).

Age and Growth

Table 14 presents average age for smallmouth bass collected below Swan Falls to Walters Ferry and between Walter's Ferry to Brownlee. Table 15 presents average age of a group of channel catfish collected below Walter's Ferry.

Discussion

The difference in numbers of fish captured from 1973 versus 1995 seems extreme and needs to be explained. More hours of effort were expended in the earlier studies. Secondly there must be a difference in efficiency between the gears used. Our survey used a front fixed boom versus a hand held anode net in the previous study. Also the electrical waveform between years was quite different. We were not happy with the performance of the electrofishing boat used in 1995; we did not capture the numbers of fish we expected to. Another possibility is a large change in the numbers of carp and sucker species in the 20 years between sampling. The recent long-term drought may have reduced biomass on the Snake River as was documented on the Boise River in Boise, Idaho (this report).

SOUTH FORK BOISE RIVER

Methods

The South Fork Boise River was electrofished to collect rainbow trout for whirling disease analysis. Electrofishing occurred on April 4, 1995 from the Village access boat launch downstream for approximately 2 km. Electrofishing and fish processing took 2 h.

Electrofishing took place using a boom mounted electrofishing raft powered by a 5 kw Honda generator and VVP-15. The crew consisted of a netter and a boat operator.

Electrofishing activities were concentrated along the shoreline and near vegetation to maximize collection of small trout and to minimize disruption to spawning adults. Attempts were made to net all trout and whitefish.

All trout and whitefish were netted and placed in a live car. After collection of several fish, fish were individually measured to the nearest mm, larger trout were evaluated as to sex (male/female) and condition (green, ripe, spent), and either released or killed and placed on ice for whirling disease analysis.

The South Fork Boise River was fished August 23, 1995 from a raft from Danskin Bridge to Neal Bridge. Total fishing time was approximately 6 h.

Results

A total of 101 trout and 61 whitefish were netted in two h of electrofishing. Mean length (s.e.) of trout and whitefish was 214 mm (2.3) and 301 mm (4.8), respectively.

Sex and condition were determined for 30 rainbow trout greater than 300 mm. Sixteen were green females, 1 was a ripe female, 1 was a green male, and 12 were ripe males.

Rainbow trout and whitefish both tested positive for whirling disease. This disease does not appear to be affecting population size or growth at this time.

A total of 31 rainbow trout between 160 and 420 mm were caught and released between Danskin and the Neal Bridge take out. Mean length of captured trout was 259 mm.

SOUTH FORK PAYETTE RIVER

Methods

Five anglers and three boatmen floated from the mouth of the Deadwood River to the Danskin takeout and attempted to catch (hook and line) as many trout as possible on August 14, 1995. Trout were sacrificed and taken to the fish health lab for whirling disease analysis.

Results

River flow was $691 \text{ ft}^3\text{sec}^{-1}$ in the SFPR above Deadwood River; Deadwood River was $711 \text{ ft}^3\text{sec}^{-1}$. Water temperature was 10°C at 11:00 a.m.

A total of 73 rainbow and 1 westslope cutthroat *O. c. lewisi* were caught in 27.5 h of fishing. Mean length (s.e.), weight (s.e.), and condition factor (s.e.) of rainbow trout was 213 mm (6.16), 99 g (5.96), and 0.87 (0.013), respectively. The single cutthroat caught was 184mm and 50 g. Size of rainbow ranged from 125 to 295 mm. The number of fish collected by cm size group was 1, 1, 0, 3, 1, 7, 7, 7, 6, 8, 10, 5, 4, 6, 4, 1, 1 and 2 for cm groups 12 to 29, respectively.

Laboratory analysis for presence of whirling disease was negative.

BOISE RIVER CREEL SURVEY

Methods

A creel survey was conducted on the 17.6 km section of the Boise River from Eckert Road bridge near Barber Park downstream to Glenwood Road Bridge through Boise. The survey covered the period March 1, 1994 through February 28, 1995.

The river was stratified into five sections. Section 1 included the Boise River from Eckert Road Bridge to Broadway Bridge; Section 2 included Park Center Pond; Section 3 included the Boise River from Broadway Bridge to Veterans Park Bridge; Section 4 included Veterans Park Pond; and Section 5 included the Boise River from Veterans Park Bridge to Glenwood Road Bridge.

Four weekdays and four weekend days were randomly selected per month to conduct angler counts and to interview anglers. Two angler counts were scheduled on sample days. The time of the first angler count was determined by randomly selecting the count start time from the first half of the angler day. A second count was scheduled one-half the angler day later. Angler counts were conducted by starting at the upper or lower end of the section and counting all anglers within the section. Angler counts were generally conducted in less than 1 h.

Angler interviews were conducted on the same days angler counts were conducted. On days with few anglers, angler interviews were conducted as anglers were encountered. On days with many anglers, angler interviews were conducted after angler counts were completed. Angler interviews consisted of determining number of anglers in the party, length of time spent fishing, terminal tackle, whether the angler was through fishing for the day, and number and species of fish kept and released. Fish kept were examined and determined to be of hatchery or wild origin based on physical appearance and presence or absence of frayed or worn fins.

Angler counts and interviews were conducted by volunteers. Volunteers were instructed on how to count anglers and conduct interviews.

Angler hour estimates were made by first calculating the mean angler count per day. The mean angler count per day per strata (weekend/weekday, month and section) was calculated as the mean of daily angler counts within each strata. The mean angler count per strata was multiplied by days in the strata and fishing day length to estimate angler hours within each strata. Strata estimates were summed to estimate total fishing hours by section. Section totals were summed to calculate total fishing hours.

Number of fish kept per hour and number of fish released per hour of fishing were calculated by dividing total fish kept or released by hours fished from angler interviews. Harvest and total estimated number of fish released were estimated by multiplying estimated fishing hours by number of fish kept per hour and number of fish released per hour, respectively.

Results

Deviations from sample day and count time schedules preclude the estimation of standard errors of estimates in this survey.

Angling Hours

A total of 77,881 h of angling was estimated to have occurred on the Boise River and Veterans Park Pond between March 1, 1994 and February 28, 1995 (Table 16). Boise River sections 1,3, and 5 had 29,091, 14,594 and 25,972 h, respectively, for a total of 69,657 h. Fishing effort at Veterans Park Pond was 8,224 h.

Attempts to conduct angler counts on section 1 and Park Center Pond on the same day by the same volunteer were unsuccessful. Angler counts at Park Center Pond were discontinued and no estimate of angler use was made.

Catch and Harvest

Anglers reported catching rainbow and brown trout, whitefish, bluegill, largemouth bass, suckers and carp. Rainbow trout, brown trout, whitefish, largemouth bass and bluegill are classified as gamefish. Carp and suckers are classified as nongame fish.

Anglers were estimated to have caught (kept or released) a total of 52,406 fish during this survey. Rainbow trout represented 69.68% of the total fish caught during this survey. Whitefish, brown trout, suckers, largemouth bass, bluegill, and carp represented 19.53, 2.60, 5.09, 0.09, 0.34 and 2.67% of the total fish caught, respectively (Table 16).

Sections 1, 3, 4, and 5 produced 37.9, 17.4, 8.0 and 36.8% of the estimated total fish caught in this survey, respectively (Table 16).

Anglers were estimated to have harvested a total of 14,449 rainbow, 346 whitefish, 219 brown trout, 311 suckers, and 771 carp (Table 17). Anglers were estimated to have released a total of 22,067 rainbow trout, 9,891 whitefish, 1,142 brown trout, 2,358 suckers, 48 largemouth bass, 178 bluegill and 626 carp (Table 17). Rainbow trout represented 89.8% of all fish harvested.

The percentage of all fish caught that were released varied between sections. Only 16.7% of the fish caught in section 1 were reported harvested, while 66.2% of the fish caught in section 4 were reported harvested. For rainbows, 25.7% of the section 1 catch was harvested, while in section 4, 93.3% of the catch was harvested. Difference in percentage of fish harvested between sections is reflective of differences in types of anglers and angler preferences between sections.

Harvest and Release Rate

Monthly and total harvest and release rates (fish/h) are included in Table 17. Estimated total catch rate for all fish for all sections during this survey was 0.67 fish/h. Harvest rate (fish harvested per hour) was 0.21 fish/h. Estimated release rate was 0.46 fish/h.

Harvest rate ranged from a low of 0.11 fish/h in section 1 to 0.34 fish/h in section 4. Total catch rate (harvested + released) ranged from 0.49 fish/h in section 3 to 0.74 fish/h in section 5 (Table 17).

Origin of Rainbow Trout

A total of 209 rainbow in the harvest were examined for origin. Sixty-six percent were determined to be of hatchery origin. In section 1, 33 of 60 (55%) rainbow trout were classified as hatchery origin. Rainbows were not classified as hatchery or wild origin in sections 3 and 4. In section 5, 105 of 149 (70%) rainbows were classified as hatchery origin.

Terminal Tackle

During angler interviews, type of terminal tackle used by anglers was recorded. Interviewed anglers fished a total of 2,521 h. Bait, lure and fly terminal tackle represented 64.5%, 17.4% and 18.1% of the total h interviewed (Table 18).

Table 18 shows terminal tackle type by section. Differences between sections is reflective of differences in angler preferences between sections. Data from Reid and Mabbott (1987) are included for comparison.

Harvest and Catch of Hatchery Rainbow

A total of 35,215 rainbow trout were stocked in sections 1, 3, 4 and 5 of the Boise River between March 1, 1994 and February 28, 1995. Harvest of hatchery trout was estimated to be 9,537, or 27% of the total planted. Total catch (kept plus released) of hatchery rainbow was estimated to have been 24,102 (66% of 36,518), or 68.4% of the number planted. Reid and Mabbott (1987) estimated 81% of the hatchery rainbow planted were harvested in a 1986-1987 survey of the Boise River.

Exploitation of Wild Rainbow

Data in Allen, et al. (1996) estimated the wild rainbow population in the Boise River in March, 1994 to be 46 per km. Estimated harvest of wild rainbow from this section of the Boise River was 284 per km. Estimated exploitation of 618% is unrealistic. Either population estimates are too low, harvest estimates are too high, or a immigration into this section from outside is occurring. Misidentification of wild or hatchery origin could also contribute to this unrealistic exploitation estimate. Regardless of the biases involved, these data suggest that exploitation of wild trout in the Boise River is very high.

Angler Trips

A total of 290 anglers were interviewed who reported they had completed fishing for that day. Average length of fishing trip for completed trip anglers was 1.44 h. Average length of completed trip was 1.3, 1.8, 1.5 and 2.0 h for sections 1,3,4 and 5, respectively.

Total estimated angler trips per year for all sections was 54,084.

The U.S.F.W.S. reported anglers spent \$23.50 per day of fishing in Idaho. Angler expenditures to fish in the Boise River from Eckert Road Bridge to Glenwood Road Bridge is estimated to be \$1,270,974 annually.

Recommendations

1. Implement restricted harvest regulation upstream from Broadway Bridge and reduce stocking of hatchery trout in that section. Attempt to better utilize naturally produced trout to provide a fishery with high catch rates for naturally produced trout.
2. Attempt to determine the discrepancy between the 1986-87 hatchery trout exploitation rate of 81% and the 1994-1995 survey exploitation rate for hatchery rainbow of 27%.

MIDDLE FORK BOISE RIVER CREEL SURVEY

Introduction

Prior to 1990 fishing regulations on the Middle Fork Boise River upstream from Arrowrock Reservoir were general fishing regulations. Anglers were allowed to harvest six trout per day during the open fishing season. In addition, up to 30,000 catchable rainbow trout were planted in the river. In an effort to improve the quality of fishing, increase the return of planted hatchery trout and provide a diversity of angling opportunity, new fishing regulations were implemented in 1990. Beginning in 1990, catchable rainbow trout were planted in the lower section of the river between Arrowrock Reservoir and the confluence with the North Fork Boise River, and the upper section of the river upstream from Atlanta Dam. Anglers were allowed to keep six trout per day in these areas. Between the confluence with the North Fork Boise River and Atlanta Dam new regulations implemented required anglers to fish with artificial flies and lures with single barbless hooks, release all trout less than 14" in total length and only two trout per day could be harvested.

A creel survey was conducted on the Middle Fork Boise River from July 1 through September 30, 1995 to estimate angler use and catch and harvest rates. Comparison of 1995 estimates with previous use and catch estimates provide clues as to the impacts of regulation changes on angler use patterns.

Methods

The Middle Fork Boise River from Willow Creek campground upstream to the end of the road was divided into five sections (Figure 1., Rohrer, 1989). Sections included (1) Willow Creek to mouth North Fork Boise River, (2) mouth North Fork Boise River to mouth Alexander Creek, (3) mouth Alexander Creek to Dutch Creek, (4) mouth Dutch Creek to Atlanta Dam and (5) Atlanta Dam upstream to the end of the road. At full pool, Arrowrock Reservoir extends to Willow Creek campground. Angler use and harvest data was stratified by section. Separate estimates of angler use, catch and harvest rates, and harvest and catch were calculated.

The survey sample design called for randomly sampling four weekend and four weekdays per month from July 1 through September 30, 1995. On sample days, two angler counts were scheduled. The start time for the first count was randomly selected from the first half of the day and the second count was systematically scheduled one-half day after the first count. Counts generally required between one and two hours to complete.

Survey personnel interviewed anglers as they were encountered. All data was collected by volunteers.

Results

Angler use and harvest data was collected for six days in July, 8 days in August, and five days in September. On some sample days, counts were made at other than pre-scheduled times. Due to deviations from the predetermined sample schedule, variance estimates are not calculated for this report.

Fishing Hours

Anglers were estimated to have fished a total of 9,287 h from July 1 through September 30, 1995 on the Middle Fork Boise River (Table 19). Section 1 received more angling pressure than the other sections with 3602 h. Sections 2-5 received 1,983, 1,276, 1,004 and 1,422 h, respectively (Table 19).

Rohrer (1989, 1990) conducted creel surveys on sections 1 and 2 in 1988 and 1989, prior to the regulation change. Rohrer's surveys covered the period from Memorial Day through October 28 in 1988 and through September 29 in 1989. Fishing hours estimates were also provided for the periods from July 8 through September 29, 1988 and from July 9 through September 30, 1989. Fishing hours estimates for sections 1 and 2 for these time periods were 3,215 and 2,375 h, respectively in 1988, and 4,311 and 1,178 h, respectively in 1989 (Table 20). In section 1 in 1995, anglers expended 4.5% fewer h than the mean number of h for 1988 and 1989. In section 2, in 1995 anglers expended 10.5% more hours than the mean number of hours for 1988 and 1989. However, due to sampling variability and the sample period was longer in 1995 than 1988 or 1989, differences in fishing h between years is not thought to be significant.

Initially, angler use does not appear to have changed significantly as a result of special regulations. However, landslides in the North Fork Boise River in mid-August created muddy water fishing conditions in the Middle Fork Boise River below the confluence. Turbid water conditions likely reduced angling use in Section 1, and may have displaced anglers to sections 2-5 in 1995.

Harvest and Catch Estimate

A total of 7,885 wild rainbow, hatchery rainbow, whitefish, bull trout *Salvelinus confluentus*, cutthroat trout and other species were estimated caught (including harvest and released fish) during this survey. Harvested fish represented 23.3% and released fish, 76.7% of the fish estimated caught

in this survey. For all sections, wild rainbow and hatchery rainbow contributed 68.5 and 16%, respectively, of the total fish caught. Whitefish contributed 12.7%. Bull trout, cutthroat trout and brook trout *S. fontinalis* contributed 0.45, 1.34 and 1.1%, respectively (Table 21).

A total of 1,839 wild rainbow, hatchery rainbow and whitefish were estimated harvested in this survey. Wild rainbow, hatchery rainbow, and whitefish represented 65%, 30% and 5% of the harvest, respectively (Table 21).

In sections 1 and 5 where hatchery trout are planted and general regulations are in place, 67% of the catch and 66% of the harvest was wild rainbow trout (Table 21). Hatchery rainbow made up 23% of the catch and 31% of the harvest (Table 21) in sections 1 and 5 combined.

In section 1, hatchery rainbow made up 21% of all fish caught and 18% of all fish harvested. In section 5, hatchery rainbow made up 45% of all fish caught and 61% of all fish harvested.

Harvest and Catch Rate

Total fish catch rate (fish caught per hour) including fish harvested and fish released for the July 1 to September 30 for all sections was 0.85 fish/h (Table 22). Total catch rate for wild rainbow, hatchery rainbow, bull trout, whitefish, cutthroat and brook trout were 0.58, 0.14, 0.004, 0.11, 0.01 and 0.009 per h, respectively.

Total catch rate in sections 1 and 5, managed under general fishing regulations was 0.69 fish/h. Catch rate for wild and hatchery rainbow was .62 trout /h. Total catch rate in section 2, 3 and 4 managed under special regulations was 1.04 fish/h. Catch rate for wild and hatchery rainbow in sections 2, 3 and 4 combined was 0.72 and 0.12 trout/h, respectively.

Total harvest rates for wild rainbow, hatchery rainbow and whitefish were 0.13, 0.06, and 0.01, respectively. Total harvest rate was 0.20 fish/h. Harvest rate in sections 1 and 5 under general regulations was 0.30 and 0.31, respectively. Harvest rate for wild and hatchery rainbow was 0.23 and 0.05 trout/h in section 1, respectively, and 0.12 and 0.19 trout/h, respectively in section 5.

Exploitation and Catch of Hatchery Trout

Between July 1 and September 30, 5,219 and 2,995 hatchery rainbow were planted in sections 1 and 5, respectively. Harvest of hatchery trout in section 1 was 197. In addition, 92 were estimated to have been harvested in section 2. Hatchery trout harvested in section 2 were likely migrants from section 1. Exploitation of hatchery trout in sections 1 and 2 was 5.5% (289 of 5,219). Harvest of hatchery trout in section 5 was 268. Exploitation of hatchery trout in section 5 was 8.9% (268 of 2,995).

In addition to harvest, hatchery trout provide recreational opportunity for anglers releasing fish. An additional 538 hatchery trout were reported released in section 1 and 2. In section 5, 20 hatchery trout were reported released. Including harvest and released hatchery rainbow 15.6% stocked in Section 1, and 9.6% stocked in section 5 were estimated to have been caught by anglers.

Angler Trips

During angler interviews, 17 angler parties were contacted at the completion of their angling day. The 17 parties represented 33 anglers who had fished 69.25 h. Average length of completed angler day was 2.1 h. Estimated number of fishing days for this survey was 4,422.

Discussion

Angler use in 1995 appeared similar to angler use in 1988 and 1989. Fishermen use estimates do not indicate implementation of special regulations has shifted angler use. This is in spite of increased numbers of 300mm and larger trout within the special regulations section following the regulation change (Allen and Yundt, In press), relative to pre-regulation numbers (Rohrer, 1989).

Rohrer (1989) reported stream section lengths of 15.7, 15.7, 16.6 and 19.2 km for sections 1 - 4, respectively. Mean width of snorkel transects was 34.2, 23.2, 201 and 17.1 m, respectively for sections 1 - 4. Anglers fished 67.1 h/ha in section 1 (general regulations) and 54.4, 38.2 and 26.3 h/ha in sections 2, 3 and 4 (special regulations), respectively. This occurred in spite of turbid water conditions that occurred for approximately half of the fishing season. Overall, angler use was light relative to many Idaho streams (Schill, 1991), but similar to non-productive batholith streams.

Fish were caught at the rate of 0.85 fish/h. Wild rainbow were caught at the rate of 0.58 fish/h. Catch rate of hatchery rainbow trout were 0.14 trout/h. Catch rate in general regulations sections 1 and 5 (0.69 fish/h) was less than catch rate in special regulations sections 2, 3 and 4 (1.03 fish/h).

In general regulation sections (1 and 5) hatchery rainbow provided 23% of the total fish catch and 31% of the harvest, while wild rainbow provided 67% of the catch and 66% of the harvest.

Percentage of the catch and harvest made up of hatchery rainbow varied greatly between sections 1 and 5. In section 1, hatchery rainbow made up 21% of the catch and 18% of the harvest and wild rainbow made up 64% of the catch and 77% of the harvest. In section 5, hatchery rainbow made up 27% of the catch and 61% of the harvest, while wild rainbow made up 73% of the catch and 39% of the harvest.

Exploitation of hatchery trout was low. Of the 5,219 hatchery trout stocked in section 1, 15.6% were caught and kept or caught and released. Of the 2,995 stocked in section 5, 9.6% were caught and kept or caught and released.

Return rates of hatchery rainbow are low and do not meet Idaho Fish Management Plan standards. In section 1, catch rates for wild rainbow are greater than 0.5 rainbow/h which meet management plan standards. Adequate catch rates combined with inadequate return rates for hatchery trout suggest (1) hatchery trout could be better utilized in areas with greater return rates, and (2) an adequate fishery can be provided without hatchery catchables.

In section 5, 61% of the harvest is provided by hatchery rainbow. Although return rates are low, the high percentage of hatchery rainbow in the catch suggests they may be necessary to provide an adequate fishery in this area. However, catch rates for wild trout in section 5 are 0.76

fish/h. High catch rates with low harvest of wild trout indicate this section of river is not capable of producing enough large trout to meet angler demand. The dilemma is that wild trout are too small to satisfy angler needs but hatchery trout return at rates that do not meet state standards.

Recommendations

1. Reduce hatchery catchables in section 1 by 75%. Catch rates for wild rainbow in section 1 currently meet management objectives. A portion of these catchables should be transferred to areas not meeting management objectives for catch rates.
2. Investigate other hatchery stocking sites for section 5 catchables. A 9.6% return rate is unacceptable. Attempt to find a pond in the Atlanta area for catchable rainbow.

GENERAL STREAM SURVEYS

Methods

Electrofishing

Surveyed stream transects were established in areas which were felt to best represent the stream reach. Top and bottom transect boundaries were selected at locations which would curtail fish escapement and allow the lengths of sample sections to reach 100 m when possible.

A Smith-Root model 15-B backpack electrofishing unit was utilized for three-pass depletion sampling. Fish from each pass were kept separate and alive in holding pens. Each fish was measured to the nearest mm and weighed to the nearest g. Five scale samples were removed from each cm group for age analysis.

Habitat

Ten equally spaced cross-sections were created perpendicular to stream flow within each transect. At each cross-section substrate, water depth, and stream width were measured.

Substrate composition and water depths were measured at the same three points across each cross section, $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$ of the streams width. Water depths were measured with a graduated staff and substrate composition was estimated using a one foot square viewing box. Substrate composition was subjectively estimated and reported as percent sand, gravel, rubble, boulder and bedrock. Each cross-section was measured from waters edge to waters edge to the nearest tenth of the meter. The overall length of each transect was measured by placing a metric tape in and following the thalweg from upper to lower boundary. Stream gradient was measured using a hand-held monocular and a graduated staff.

Water Quality

Parameters measured included temperature with a pocket thermometer, alkalinity and hardness with Hach field titration kits, pH and conductivity with hand held pens.

Documentation of Sites

G.P.S. was utilized to record altitude, latitude, and longitude of each site. A brief map was sketched of each study area noting identifiable landmarks and sample area boundaries. Color photographs were taken of each site.

Results

Thirty-five stream sections were sampled to better define redband trout distribution in the Southwest Region IDFG. Results of surveys have been entered into a database and a standard report was developed. Standard stream reports for 1995 are presented in Appendix C.

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TABLES

Table 1. Location of Owyhee County stream sites sampled in 1995.

SITE	LOCATION	LATITUDE/ LONGITUDE	SITE DESCRIPTION
LOWYH000.2	T14SR5WNWSE	N/A	ABOVE ROAD ABOVE MOUTH
LOWYH013.0	T16SR5WS9SWSW	N/A	BELOW STAR VALLEY RANCH
SFOUY0003.0	T14SR5WS2NWN	N 42° 14.77' W 116° 54.25'	JUNIPER BASIN
SFOUY019.0	T15SR4WS9SWSW	N 42° 07.89' W 116° 49.25'	PACKTRAIL
SFOUY029.0	T16SR4WS12SWNE	N 42° 02.68' W 116° 45.49'	ABOVE COYOTE HOLE
OWYHE184.0	T13SR5WS25SENE	N 42° 15.72' W 116° 51.90'	ABOVE CRUTCHER CROSSING
WFBRU059.2	T12SR7ES33NWSW	N 42° 20.50' W 115° 38.72'	BELOW INDIAN HOT TUB
WFBRU060.8	T13SR7ES5NENE	N 42° 19.61' W 115° 39.20'	ABOVE JARBRIDGE R
WFBRU078.4	T15SR7ES6SESE	N 42° 08.68' W 115° 40.30'	TRIGUERO ROAD ACCESS
WFBRU085.0	T15SR7ES30SESE	N 42° 04.36' W 116° 39.06'	BELOW BLACK ROCK CROSSING
WFBRUN87.0	T16SR7ES8NESE	N 42° 03.36' W 115° 39.06'	ABOVE BLACK ROCK CROSSING
JARBI000.2	T13SR7ES4NWNW	N 42° 19.71' W 115° 39.07'	JUST ABOVE MOUTH
SHEEP035.2	T14SR6ES21NESE	N 42° 11.91' W 115° 45.08'	ABOVE GRASMERE ROAD
MARYS004.2	T13SR5ES12NWSW	N 42° 18.74' W 115° 49.55'	BELOW GRASMERE ROAD
BLUE031.0	T12SR2ES34NENE	N/A	ABOVE BLUE CR RESERVOIR
LBLUE004.6	T13SR3ES15NWSE	N/A	ABOVE LITTLE BLUE RES.
SHOOF019.0	T13SR2ES6NWSW	N/A	ROAD CROSSING ABOVE BYBEE

Table 2. Redband trout population estimates and densities of stream sites sampled in 1995, in Owyhee County, Idaho.

SITE	DATE COLLECTED	POPULATION ESTIMATE (95%CI)	DENSITY TROUT/100 m ²	DENSITY SIZE>100 mm /100 m ²
LOWYH000.2	9/11/95	0 (DRY)		
LOWYH013.0	9/11/95	0 (DRY)		
SFOWY003.0	9/13/95	0		
SFOWY019.0	9/12/95	0		
SFOWY029.0	9/12/95	0		
OWYHE184.0	9/14/95	4 (<u>+3.1</u>)	0.32	0.24
WFBRU059.2	10/14/95	1	0.08	0.08
WFBRU060.8	10/3/95	9 (<u>+2.9</u>)	0.83	0.83
WFBRU078.4	10/6/95	4 (<u>+1.9</u>)	0.50	0.50
WFBRU085.0	10/5/95	6	0.80	0.80
WFBRU087.0	10/5/95	8 (<u>+2.01</u>)	0.84	0.84
JARBI000.2	10/3/95	16 (<u>+2.6</u>)	1.82	1.70
SHEEP035.2	10/2/95	0		
MARYS004.2	10/2/95	0		
BLUE031.0	5/24/95	0		
LBLUE004.6	5/24/95	0		
SHOOF019.0	5/23/95	0 (DRY)		

Table 3. Presence (X) of fish species at sample sites in 1995 in Owyhee County, Idaho.

SITE	RBT	MWF	SMB	RSS	SPD	BLS	LND	MTS	CSM	SQF	SCP	LSS
SFOWY 003.0			X							X	X	X
SFOWY 019.0			X			X	X			X		
SFOWY 029.0			X				X				X	
OWYHEE 184.0	X		X				X			X	X	X
WFBRU 059.2	X	X		X	X	X	X	X	X	X		
WFBRU 060.8	X	X		X	X	X			X	X	X	
WFBRU 078.4	X	X		X	X	X	X	X	X	X		X
WFBRU 085.0	X	X		X	X	X	X	X	X	X		
WFBRU 087.0	X	X		X	X	X		X	X	X		
JARBI 000.2	X	X		X	X	X	X	X	X	X	X	
SHEEP 035.2				X	X	X				X		
MARYS 004.2				X	X	X				X		

RBT = REDBAND RAINBOW TROUT, MWF = MOUNTAIN WHITEFISH, SMB = SMALLMOUTH BASS, RSS = REDSIDE SHINER, SPD = SPECKLED DACE, BLS = BRIDGELIP SUCKER, LND = LONGNOSE DACE, MTS = MOUNTAIN SUCKER, CSM = CHISLEMOUTH, SQF = NORTHERN SQUAWFISH, SCP = SCULPIN SPP, LSS = LARGESCALE SUCKER.

Table 4. Stream sample length, average width, average depth, percent gradient, and percent composition of substrate in sampled stream sections in 1995 in Owyhee County, Idaho.

SITE	LENGTH (m)	AVE. WIDTH (m)	AVE. DEPTH (m)	% GRADIENT	% SAND	% GRAVEL	% RUBBLE	% BOULDER
SFOWY 003.0	100	8.2	0.33	0.82	14.2	36.0	43.5	6.3
SFOWY 019.0	100	15.7	0.25	0.66	10.3	13.7	46.7	29.3
SFOWY 029.0	93	13.0	0.39	0.54	29.7	3.0	30.3	37.0
OWYHEE 184.0	100	12.4	0.27	0.32	24.0	10.7	58.3	7.0
WFBRU 059.2	84	14.4	0.41	0.36	12.2	19.5	57.0	11.3
WFBRU 060.8	100	7.7	0.33	0.43	42.9	46.8	10.3	0
WFBRU 078.4	100	7.9	0.28	1.62	21.7	18.3	51.3	8.7
WFBRU 085.0	86	8.7	0.33	0.44	21.3	37.3	35.0	6.4
WFBRU 087.0	100	9.6	0.31	0.29	32.3	22.3	28.0	17.3
JARBI 000.2	100	8.8	0.27	0.52	18.7	32.0	47.7	1.6
SHEEP 035.2	100	5.7	0.28	0.75	23.3	32.0	34.7	10.0
MARYS 004.2	61.5	4.4	0.13	0.76	15.8	14.3	57.8	12.0

Table 5. Percent habitat type and percent trout cover at stream sample sites in 1995 in Owyhee County, Idaho.

SITE	% POOL	% RIFFLE	% RUN	% POCKET WATER	% TROUT COVER
SFOWY003.0	0	16.7	83.3	0	78.5
SFOWY019.0	3.3	33.3	63.3	0	88.0
SFOWY029.0	0	20.0	80.0	0	76.5
OWYHE184.0	0	30.0	70.0	0	50.5
WFBRU059.2	3.8	15.4	80.8	0	68.0
WFBRU060.8	13.3	13.3	73.4	0	46.0
WFBRU078.4	10.0	13.3	73.3	3.3	35.0
WFBRU085.0	6.7	26.7	66.6	0	74.0
WFBRU087.0	6.7	16.7	76.6	0	53.0
JARBI000.2	10.0	30.0	60.0	0	36.5
SHEEP035.2	40.0	10.0	50.0	0	60.5
MARYS004.2	0	40.0	60.0	0	46.5

Table 6. Streambank stability rating in percent on stream samples in 1995 in Owyhee County, Idaho.

SITE	COVERED/ STABLE	COVERED/ UNSTABLE	UNCOVERED/ STABLE	UNCOVERED/ UNSTABLE
SFOWY003.0	41.0	51.0	4.0	4.0
SFOWY019.0	96.5	0	3.5	0
SFOWY029.0	77.0	10.0	11.5	1.5
OWYHE184.0	42.0	4.0	54.0	0
WFBRU059.2	36.3	5.0	53.7	5.0
WFBRU060.8	18.0	4.0	51.5	26.5
WFBRU078.4	66.5	19.0	14.0	0.5
WFBRU085.0	49.4	17.5	9.4	23.7
WFBRU087.0	59.5	9.5	12.5	18.5
JARBI000.2	12.5	13.5	45.5	28.5
SHEEP035.2	29.0	26.5	4.0	40.5
MARYS004.2	62.3	6.3	17.6	13.8

Table 7. Percent of stream shading on stream samples in 1995 in Owyhee County, Idaho.

SITE	PERCENT SHADE
SFOWY003.0	11.8
SFOWY019.0	11.2
SFOWY029.0	8.7
OWYHE184.0	15.6
WFBRU059.2	4.3
WFBRU060.8	19.1
WFBRU078.4	24.6
WFBRU085.0	16.1
WFBRU087.0	21.6
JARBI000.2	19.8
SHEEP035.2	12.1
MARYS004.2	8.1

Table 8. Water quality sampling results from stream sampling in 1995 in Owyhee County, Idaho.

SITE	DATE	WATER TEMP C	pH	CONDUCTIVITY Us/cm	HARDNESS mg/l as CaCO ₃	ALKALINITY mg/l as CaCO ₃
SFOWY	9/13/95	19.4	8.9	220	120	140
SFOWY	9/12/95	21.1	8.7	210	120	160
SFOWY	9/12/95	16.1	8.4	230	100	115
OWYHE	9/14/95	17.2	8.2	190	60	110
WFBRU	10/4/95	11.7	9.5	200	60	80
WFBRU	10/3/95	11.1	8.6	220	80	120
WFBRU	10/6/95	13.3	9.4	240	100	120
WFBRU	10/5/95	7.7	9.3	190	120	180
WFBRU	10/5/95	7.7	9.6	230	100	140
JARBI000.2	10/3/95	10.0	N/A	80	40	80
SHEEP	10/2/95	11.7	9.5	120	80	140
MARYS	10/2/95	9.4	8.3	120	80	200

Table 9. Fish densities in the Boise River in Boise, Idaho. Densities of fish estimated by 3-pass removal electrofishing.

Station No. 0
Municipal Park

Species	Density No./100 m ²			
	1988	1992	1994	1995
Wild Rainbow	0.27	1.20	0.47	1.48
Hatchery Rainbow	0.11	0	0.02	0.09
Wild Brown	0.08	0.20	0.09	0.49
Mountain Whitefish	4.08	11.3	0.8	14.78
Nongame Spp.	0.54	15.9	0	4.60

Station No. 2
Les Bois Park

Species	Density No./100 m ²			
	1988	1992	1994*	1995
Wild Rainbow	0.01	0	0	0.30
Hatchery Rainbow	0.06	0.02	0	0
Wild Brown	0	0	0	0.08
Mountain Whitefish	5.64	4.20	0.52	0.81
Nongame Spp.	72.4	23.3	0.52	8.22

* Station was moved approximately 100 m upstream after 1992.

Table 9. Continued.

Station No. 5
Eagle Island at Eagle Road on the South Channel

Density No./100 m²

Species	1988	1992	1994*	1995**
Wild Rainbow	0.67	0.20	nd	0.72
Hatchery Rainbow	0.87	0.08	nd	0.87
Wild Brown	0.12	0	nd	0
Mountain Whitefish	10.49	1.50	nd	9.90
Nongame Spp.	19.24	16.60	nd	4.30

* Station not used in 1994.

** Station is upstream approximately 400 m from 1992 station.

Station No. 6
Eagle Island North Channel; Monrock Property

Density No./100 m²

Species	1988	1992	1994*	1995
Wild Rainbow	nd	nd	0.09	0.40
Hatchery Rainbow	nd	nd	0.24	0.32
Wild Brown	nd	nd	0	0
Mountain Whitefish	nd	nd	9.40	13.44
Nongame Spp.	nd	nd	4.46	6.80

* New station in 1994.

Table 9. Continued.

Station No. 7
Eagle Island south Channel; Eagle Hatchery Access

Density No./100 m²

Species	1988	1992	1994*	1995
Wild Rainbow	nd	nd	0.09	0.76
Hatchery Rainbow	nd	nd	0.90	0.26
Wild Brown	nd	nd	0	0
Mountain Whitefish	nd	nd	0.82	3.46
Nongame Spp.	nd	nd	0.82	6.37

* New station in 1994.

Station No. 8
Below Diversion Dam

Density No./100 m²

Species	1988	1992	1994	1995
Wild Rainbow	nd	nd	nd	0.04
Hatchery Rainbow	nd	nd	nd	0
Wild Brown	nd	nd	nd	0
Mountain Whitefish	nd	nd	nd	7.07
Nongame Spp.	nd	nd	nd	0.69

* New station in 1995.

Table 10. Length, average width, average depth, and substrate composition of six sites on the Boise River in Boise, Idaho.

SITE	LENGTH (m)	AVE. WIDTH (m)	AVE. DEPTH (m)	% SAND	% GRAVEL	% RUBBLE	% BOULD- ER
Eagle Hatchery	125	24.3	0.57	46.7	23.3	30.0	0
Eagle Road	100	13.8	0.62	12.7	25.0	61.0	1.3
Monroc	144.5	17.2	0.49	21.3	31.0	44.7	3.0
Les Bois	121.6	19.2	0.35	27.9	23.8	48.3	0
Municiple Park	180	19.2	0.47	27.4	10.3	60.3	2.0
Diversion Dam	164	30.6	0.53	72.3	4.0	20.7	3.0

Table 11. Comparison of 1995 and 1973 electrofishing catch per hour and catch per shoreline distance (100 m) for fish species captured below C J Strike Dam to Swan Falls Reservoir on the Snake River.

SPECIES ^a	1995 FISH/HOUR	1973 FISH/HOUR	1995 FISH/100 m	1973 FISH/100 yd
Black crappie	0.7	13.8	0.05	2.1
Bluegill	0	1.1	0	0.16
Carp	18.5	138.7	1.3	21.2
Chiselmouth	0.7	0.2	0.05	0.03
Largemouth bass	0	2.9	0	0.5
Largescale sucker	3.7	119.9 ^b	0.3	17.1 ^b
Mountain whitefish	0	23.6	0	3.6
Northern squawfish	1.5	11.5	0.1	1.8
Peamouth	0	4.3	0	0.6
Pumpkinseed sunfish	0	1.3	0	0.2
Rainbow trout (hatchery)	0	1.1	0	0.16
Rainbow trout (wild)	0	0.4	0	0.06
Redside shiner	0	0.2	0	0.03
Sculpin	0	0.2	0	0.03
Smallmouth bass	2.2	0	0.2	0
White crappie	5.2	0	0.3	0
Yellow perch	0	0.8	0	0.1

^a Black crappie *Pomoxis nigromaculatus*, bluegill *Lepomis macrochirus*, carp *Cyprinus carpio*, chiselmouth *Acrocheilus alutaceus*, largemouth bass *Micropterus salmoides*, largescale sucker *Catostomus macrocheilus*, mountain whitefish *Prosopium williamsoni*, northern squawfish *Ptychocheilus oregonensis*, peamouth *Mylocheilus caurinus*, pumpkinseed *L. gibbosus*, rainbow trout *Oncorhynchus mykiss*, redside shiner *Richardsonius balteatus*, sculpin *Cottus spp.*, smallmouth bass *M. dolomieu*, white crappie *P. annularis*, and yellow perch *Perca flavescens*.

^b Suckers not identified to species in 1973.

Note: 1973 distance data expressed in 100 yards versus 100 m in 1995.

Table 12. Catch per shoreline distance (100 m) for electrofishing on the stretch of the Snake River from below Swan Falls Dam to Walter's Ferry.

<u>SPECIES</u>	<u>FISH/100 M</u>
Bluegill (<i>Lepomis macrochirus</i>)	0.04
Bridgelip sucker (<i>Catostomus columbianus</i>)	1.02
Channel catfish (<i>Ictalurus punctatus</i>)	0.16
Common carp (<i>Cyprinus carpio</i>)	0.55
Chiselmouth (<i>Acrocheilus alutaceus</i>)	0.51
Largescale sucker (<i>C. macrocheilus</i>)	0.71
Mountain whitefish (<i>Prosopium williamsoni</i>)	0.51
Northern squawfish (<i>Ptychocheilus oregonensis</i>)	0.04
Smallmouth bass (<i>Micropterus dolomieu</i>)	7.02

Table 13. Comparison of 1995 and 1973 electrofishing catch per hour and catch per shoreline distance (100 m) for fish species captured below Swan Falls Dam to above Brownlee Reservoir.

SPECIES ^a	1995 FISH/HOUR	1973 FISH/HOUR	1995 FISH/100 m	1973 FISH/100 yd
Black crappie	0.2	4.8	0.01	0.8
Bluegill	9.3	4.8	0.6	0.8
Bridgelip sucker	5.3	0	0.3	0
Channel catfish	7.0	6.0	0.5	1.0
Carp	9.3	51.7	0.6	8.8
Chiselmouth	4.6	7.6	0.3	1.3
Oriental	0.2	0	0.01	0
Flathead catfish	0.5	0.1	0.03	0.01
Largemouth	1.5	2.5	0.1	0.4
Largescale	11.4	33.1 ^b	0.7	5.6 ^b
Misquito fish	0.3	0	0.02	0
Mountain	2.9	2.4	0.2	0.4
Northern	0.7	1.1	0.04	0.2
Peamouth	0	0.1	0	0.02
Pumpkinseed	4.2	0.2	0.3	0.03
Redside shiner	0	1.6	0	0.3
Smallmouth	21.5	18.5	1.4	3.2
Speckled dace	0.2	0	0.01	0
White crappie	0.2	0	0.01	0
Warmmouth	0.2	0.1	0.01	0.02
Yellow perch	0.8	0	0.05	0

^a Black crappie *Pomoxis nigromaculatus*, bluegill *Lepomis macrochirus*, bridgelip sucker *Catostomous columbianus*, carp *Cyprinus carpio*, channel catfish *Ictalurus punctatus*, chiselmouth *Acrocheilus alutaceus*, flathead catfish *Pylodictus olivaris*, largemouth bass *Micropterus salmoides*, largescale sucker *C. acrocheilus*, mountain whitefish *Prosopium williamsoni*, mosquitofish *Gambusia affinis*, northern squawfish *Ptychocheilus oregonensis*, oriental weatherloach *Misgurnus anguillicaudatus*, peamouth *Mylocheilus caurinus*, pumpkinseed *L. gibbosus*, rainbow trout *Oncorhynchus mykiss*, redside shiner *Richardsonius balteatus*, sculpin *Cottus spp.*, smallmouth bass *M. dolomieu*, speckled dace *Rhinichthys osculus*, warmouth *L. gulosus*, white crappie *P. annularis*, and yellow perch *Perca flavescens*.

^b Suckers not identified to species in 1973.

Note: 1973 distance data expressed in 100 yards versus 100 m in 1995.

Table 14. Average length at age of smallmouth bass collected between Swan Falls Dam and Walters Ferry and below Walters Ferry to Payette River.

Swan Falls Dam to Walters Ferry

AGE	1+	2+	3+	4+	5+
Length (mm)	90.6	130.1	177.3	225.7	267.5
Number	52	19	17	12	4

Walters Ferry to Payette River

AGE	1+	2+	3+	4+	5+	6+	7+
Length (mm)	94.8	137.4	193.1	229.7	273.3	332.8	391.6
Number	51	24	14	10	4	2	1

Table 15. Average length at age (mm) for channel catfish captured in the Snake River below Walters Ferry in 1995.

AGE	1+	2+	3+	4+	5+	6+	7+	8+	9+	10+
Length (mm)	136.6	200.1	247.9	291.9	341.2	373.3	414.4	440.0	524.2	574.7
N	17	17	17	17	16	15	14	8	2	1

Table 16. Boise River, estimated fishing hours and number of fish released and kept by section, by species and by month, March 1994 through February 1995.

Section	Month	Estimated Hours	Released							Kept						
			rbt	wf	bnt	sucker	lmb	bluegill	carp	rbt	wf	bnt	sucker	lmb	bluegill	carp
1	1	425	243	0	0	0	0	0	0	0	0	0	0	0	0	0
1	2	1083	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	3	7274	347	4648	0	0	0	0	347	27	0	0	0	0	0	0
1	4	846	33	67	0	0	0	0	84	17	0	0	0	0	0	0
1	5	3767	1341	2064	0	0	0	0	310	0	0	0	0	0	0	0
1	6	2734	789	146	58	0	0	0	351	29	29	0	0	0	0	175
1	7	1580	872	51	51	0	0	0	513	51	0	0	0	0	0	0
1	8	2373	1220	225	0	0	0	0	289	0	32	0	0	0	0	0
1	9	3864	1878	0	0	0	0	0	179	0	0	0	0	0	0	0
1	10	3827	1611	307	153	0	0	0	767	0	0	0	0	0	0	0
1	11	1141	207	156	52	0	0	0	52	0	0	0	0	0	0	0
1	12	179	0	0	0	0	0	0	56	0	0	0	0	0	0	0
total		29091	8543	7664	315	0	0	32	2947	124	61	0	0	0	0	175
3	1	457	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2	393	60	0	0	0	0	121	60	0	0	0	0	0	0	0
3	3	5044	289	212	77	19	0	0	251	39	0	19	0	0	0	0
3	4	677	0	85	42	0	0	0	381	42	0	0	0	0	0	0
3	5	1523	476	0	0	143	0	0	381	0	0	0	0	0	0	0
3	6	852	0	0	0	119	0	0	119	0	0	0	0	0	0	0
3	7	1849	0	0	0	275	0	0	0	0	0	0	0	0	0	0
3	8	1302	330	0	0	73	0	0	37	0	0	0	0	0	0	0
3	9	852	757	0	0	28	0	0	168	0	0	0	0	0	0	0
3	10	924	1745	57	29	0	0	0	200	114	86	0	0	0	0	0
3	11	591	315	1418	473	0	0	0	0	0	0	0	0	0	0	0
3	12	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0
total		14594	3973	1772	621	657	0	121	60	1597	195	86	19	0	0	0
4	1	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2	298	0	0	0	0	0	0	0	0	0	0	0	0	0	596
4	3	1604	53	26	0	26	0	0	53	395	0	0	0	0	0	0
4	4	842	0	0	0	73	0	0	36	0	0	73	0	0	0	0
4	5	1320	46	0	0	0	0	0	116	324	0	46	0	0	0	0
4	6	885	0	0	0	0	0	0	833	0	0	0	0	0	0	0
4	7	1049	0	0	0	420	0	0	0	0	0	0	0	0	0	0
4	8	708	0	0	0	51	0	0	0	228	0	0	0	0	0	0
4	9	792	48	0	0	0	48	0	240	48	0	0	0	0	0	0
4	10	385	0	0	0	88	0	0	88	0	0	0	0	0	0	0
4	11	204	0	0	0	0	0	0	0	136	0	0	0	0	0	0
4	12	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
total		8224	147	26	0	658	48	0	533	2052	0	46	73	0	0	596

Table 16, continued

Section	Month	Estimated Hours	Released rbt	Released wf	Released bnt	Released sucker	Released lmb	Released bluegill	Released carp	Kept rbt	Kept wf	Kept bnt	Kept sucker	Kept lmb	Kept bluegill	Kept carp
5	1	302	26	0	0	0	0	0	0	26	0	26	0	0	0	0
5	2	456	0	15	45	83	0	0	0	0	0	0	0	0	0	0
5	3	8956	1532	0	0	681	0	57	0	1022	0	0	0	0	0	0
5	4	1926	767	0	32	0	0	0	0	1007	0	0	16	0	0	0
5	5	2021	639	128	0	51	0	0	0	511	0	0	26	0	0	0
5	6	1792	232	0	66	66	0	0	0	299	0	0	33	0	0	0
5	7	1573	1042	0	0	0	0	0	0	379	0	0	95	0	0	0
5	8	1999	569	25	25	49	0	0	0	1064	0	0	49	0	0	0
5	9	3385	3139	113	38	38	0	0	0	1551	0	0	0	0	0	0
5	10	2765	1405	148	0	74	0	0	0	1700	0	0	0	0	0	0
5	11	542	53	0	0	0	0	0	0	212	26	0	0	0	0	0
5	12	255	0	0	0	0	0	0	0	84	0	0	0	0	0	0
total		25972	<u>9405</u>	429	206	1043	0	57	0	<u>7854</u>	26	26	219	0	0	0

Table17. Hours of angler interviews, estimated number of fish released and estimated number of fish kept per hour by month and section, Boise River, March 1994 through February 1995.

Section	Month	Interview Hours	Released Rainbow	Released Whitefish	Released Brown	Released Sucker	Released L.mouth Bass	Released Bluegill	Released Carp	Kept Rainbow	Kept Whitefish	Kept Brown	Kept Sucker	Kept L.mouth Bass	Kept Bluegill	Kept Carp
1	1	3.50	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	2															
1	3	272.30	0.05	0.64	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
1	4	50.50	0.04	0.08	0.00	0.00	0.00	0.00	0.00	0.10	0.02	0.00	0.00	0.00	0.00	0.00
1	5	36.50	0.36	0.55	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
1	6	93.50	0.29	0.05	0.02	0.00	0.00	0.00	0.00	0.13	0.01	0.01	0.00	0.00	0.00	0.06
1	7	30.80	0.55	0.03	0.03	0.00	0.00	0.00	0.00	0.32	0.03	0.00	0.00	0.00	0.00	0.00
1	8	73.90	0.51	0.09	0.00	0.00	0.00	0.00	0.01	0.12	0.00	0.01	0.00	0.00	0.00	0.00
1	9	43.20	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
1	10	49.90	0.42	0.08	0.04	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00
1	11	22.00	0.18	0.14	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
1	12	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00
1	Total		0.29	0.26	0.01	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.01
3	1	13.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	2	6.50	0.15	0.00	0.00	0.00	0.00	0.31	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00
3	3	261.70	0.06	0.04	0.02	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.00	0.00	0.00	0.00
3	4	16.00	0.00	0.13	0.06	0.00	0.00	0.00	0.00	0.56	0.06	0.00	0.00	0.00	0.00	0.00
3	5	32.00	0.31	0.00	0.00	0.09	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00
3	6	21.50	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00
3	7	20.20	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	8	35.50	0.25	0.00	0.00	0.06	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
3	9	30.40	0.89	0.00	0.00	0.03	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00
3	10	32.30	1.89	0.06	0.03	0.00	0.00	0.00	0.00	0.22	0.12	0.09	0.00	0.00	0.00	0.00
3	11	15.00	0.53	2.40	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	12	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Total		0.27	0.12	0.04	0.05	0.00	0.01	0.00	0.11	0.01	0.01	0.00	0.00	0.00	0.00
4	1															
4	2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
4	3	60.90	0.03	0.02	0.00	0.02	0.00	0.00	0.03	0.25	0.00	0.00	0.00	0.00	0.00	0.00
4	4	23.10	0.00	0.00	0.00	0.09	0.00	0.00	0.04	0.00	0.00	0.00	0.09	0.00	0.00	0.00
4	5	57.00	0.04	0.00	0.00	0.00	0.00	0.00	0.09	0.25	0.00	0.04	0.00	0.00	0.00	0.00

Table 17. (continued)

4	6	25.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00
4	7	7.50	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	8	28.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00
4	9	33.00	0.06	0.00	0.00	0.00	0.06	0.00	0.30	0.06	0.00	0.00	0.00	0.00	0.00	0.00
4	10	13.10	0.00	0.00	0.00	0.23	0.00	0.00	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00
4	11	19.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00
4	12															
4	Total		0.02	0.00	0.00	0.08	0.01	0.00	0.06	0.25	0.00	0.01	0.01	0.00	0.00	0.07
5	1	11.70	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.00	0.00	0.00
5	2	60.25	0.00	0.03	0.10	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	3	157.80	0.17	0.00	0.00	0.08	0.00	0.01	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00
5	4	120.50	0.40	0.00	0.02	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.01	0.00	0.00	0.00
5	5	79.10	0.32	0.06	0.00	0.03	0.00	0.00	0.00	0.25	0.00	0.00	0.01	0.00	0.00	0.00
5	6	54.00	0.13	0.00	0.04	0.04	0.00	0.00	0.00	0.17	0.00	0.00	0.02	0.00	0.00	0.00
5	7	16.60	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.06	0.00	0.00	0.00
5	8	80.80	0.28	0.01	0.01	0.02	0.00	0.00	0.00	0.53	0.00	0.00	0.02	0.00	0.00	0.00
5	9	89.50	0.93	0.03	0.01	0.01	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00
5	10	37.40	0.51	0.05	0.00	0.03	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.00
5	11	41.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.05	0.00	0.00	0.00	0.00	0.00
5	12	9.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00
5	Total		0.36	0.02	0.01	0.04	0.00	0.00	0.00	0.30	0.00	0.00	0.01	0.00	0.00	0.00
TOTAL	TOTAL		0.28	0.13	0.01	0.03	0.00	0.00	0.01	0.19	0.00	0.00	0.00	0.00	0.00	0.01

Table 18. Hours fished and percent of total by terminal tackle type and section, Boise River, March 1, 1994 through February 28, 1995.

Section	Bait Hours	Percent Bait	Lure Hours	Percent Lures	Fly Hours	Percent Fly
1	404	52.4	145	18.7	222	28.8
3	279	55.1	101	20.0	126	24.9
4	260	82.8	50	15.9	4	1.3
5	684	73.5	143	15.3	103	11.1
Total 1994-1995	1627	64.5	439	17.4	455	18.1
Total 1986		73		17		10

Table 19. Estimated fishing hours on the Middle Fork Boise River, sections 1-5, from July 1 through September 30, 1995.

Month	Section 1 Hours	Section 2 Hours	Section 3 Hours	Section 4 Hours	Section 5 Hours	Total
July	1650	671	70	467	490	3348
August	1783	723	827	492	706	4531
Sept	169	589	379	45	225	1407
Total	3602	1983	1276	1004	1421	9286

Table 20. Comparison of fishing hours on the Middle Fork Boise River, sections 1 and 2, 1988, 1989, and 1995.

Time Period	Hours Section 1	Hours Section 2
July 9 - September 30, 1988	3215	2375
July 8 - September 29, 1989	4311	1178
July 1- September 30, 1995	3602	1983

Table 21. Number of wild rainbow, hatchery rainbow, bull trout, whitefish, cutthroat, and brook trout harvested and released from the Middle Fork Boise River, section 1-5, between July 1 and September 30, 1995.

Section	Month	Wild rainbow harvest	hatchery rainbow harvest	bull trout harvest	whitefish harvest	cutthroat harvest	brook trout harvest	wild rainbow released	hatchery rainbow released	bull trout released	whitefish released	cutthroat released	brook trout released
1	July	450	150	0	50	0	0	400	0	0	150	0	0
1	August	181	40	0	0	0	0	281	301	0	60	20	60
1	Septe	188	6	0	0	0	0	19	0	0	13	0	0
1	Total	819	197	0	50	0	0	701	301	0	223	20	60
2	July	62	0	0	0	0	0	0	0	0	250	0	0
2	August	33	34	0	0	0	0	505	101	0	34	0	0
2	Septe	97	58	0	45	0	0	356	136	0	91	13	6
2	Total	193	92	0	45	0	0	860	236	0	374	13	6
3	July	0	0	0	0	0	0	152	0	0	3	9	0
3	August	0	0	0	0	0	0	931	127	36	0	63	18
3	Septe	0	0	0	0	0	0	439	13	0	306	0	0
3	Total	0	0	0	0	0	0	1522	140	36	309	72	18
4	July	0	0	0	0	0	0	69	0	0	0	0	0
4	August	0	0	0	0	0	0	381	0	0	0	0	0
4	Septe	0	0	0	0	0	0	68	0	0	0	0	0
4	Total	0	0	0	0	0	0	518	0	0	0	0	0
5	July	0	0	0	0	0	0	0	0	0	0	0	0
5	August	164	184	0	0	0	0	615	020	0	0	0	0
5	Septe	10	84	0	0	0	0	0	0	0	0	0	0
5	Total	174	268	0	0	0	0	615	20	0	0	0	0
Grand	Total	1187	557	0	95	0	0	4216	698	36	906	105	85

Table 22. Catch and harvest rates for wild rainbow (wrbt), hatchery rainbow (hrbt), bull trout (bult), whitefish (wf), cutthroat trout,(cutt), and other species (oth) on the Middle Fork Boise River from July 1 through September 30, 1995.

Section	Month	Wrbt Hvst rate	Hrbt Hvst rate	Bult Hvst rate	WF Hvst rate	Cutt Hvst rate	Oth Hvst rate	Wrbt Rel rate	Hrbt Rel rate	Bult Rel rate	WF Rel rate	Cutt Rel rate	Oth Rel rate
1	July	.273	.091	0.00	.030	0.00	0.00	.242	0.00	0.00	.091	0.00	0.00
1	Aug	.101	.023	0.00	0.00	0.11	0.00	.158	.169	0.00	.034	.011	.034
1	Sept	1.12	.038	0.00	0.00	0.00	0.00	.115	0.00	0.00	.077	0.00	0.00
2	July	.093	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.372	0.00	0.00
2	Aug	.047	.047	0.00	0.00	0.00	0.00	.698	.140	0.00	.047	0.00	0.00
2	Sept	.165	.099	0.00	.077	0.00	0.00	.604	.231	0.00	.154	.022	.011
3	July	0.00	0.00	0.00	0.00	0.00	0.00	2.17	0.00	0.00	.043	.130	0.00
3	Aug	0.00	0.00	0.00	0.00	0.00	0.00	1.13	.153	.044	0.00	.077	.022
3	Sept	0.00	0.00	0.00	0.00	0.00	0.00	1.16	0.00	0.00	.807	0.00	0.00
4	July	0.00	0.00	0.00	0.00	0.00	0.00	.148	0.00	0.00	0.00	0.00	0.00
4	Aug	0.00	0.00	0.00	0.00	0.00	0.00	.774	0.00	0.00	0.00	0.00	0.00
4	Sept	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.00	0.00	0.00	0.00	0.00
5	July	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Aug	.232	.261	0.00	0.00	0.00	0.00	.870	.029	0.00	0.00	0.00	0.00
5	Sept	.047	.372	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		.130	.06	0.00	.01	0.00	0.00	.45	.07	.004	.10	.01	.01

FIGURES

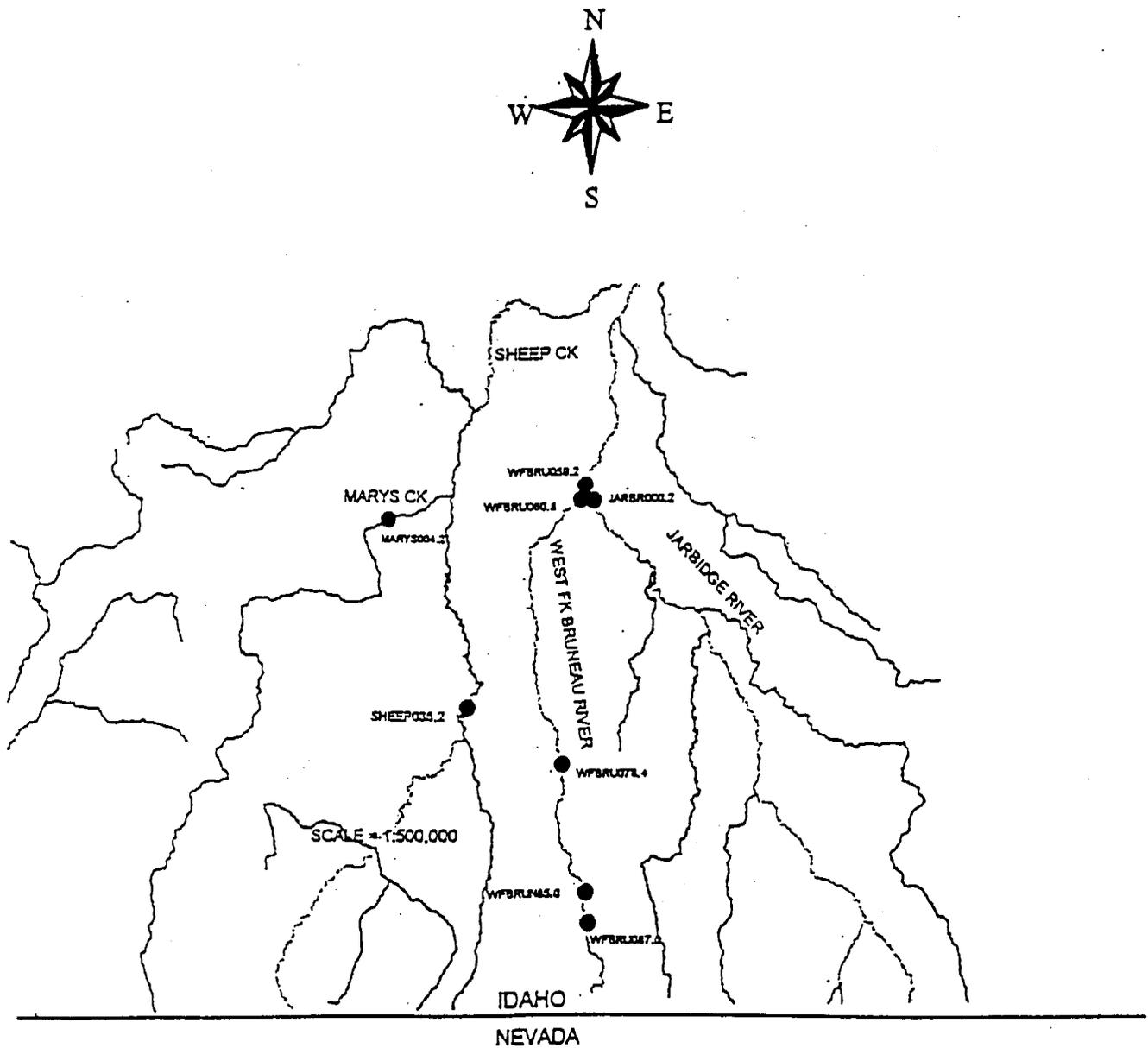


Figure 1. Location of sample sites for redband trout on the West Fork Bruneau River, Jarbidge River, Sheep and Marys Creeks, Owyhee County, Idaho.

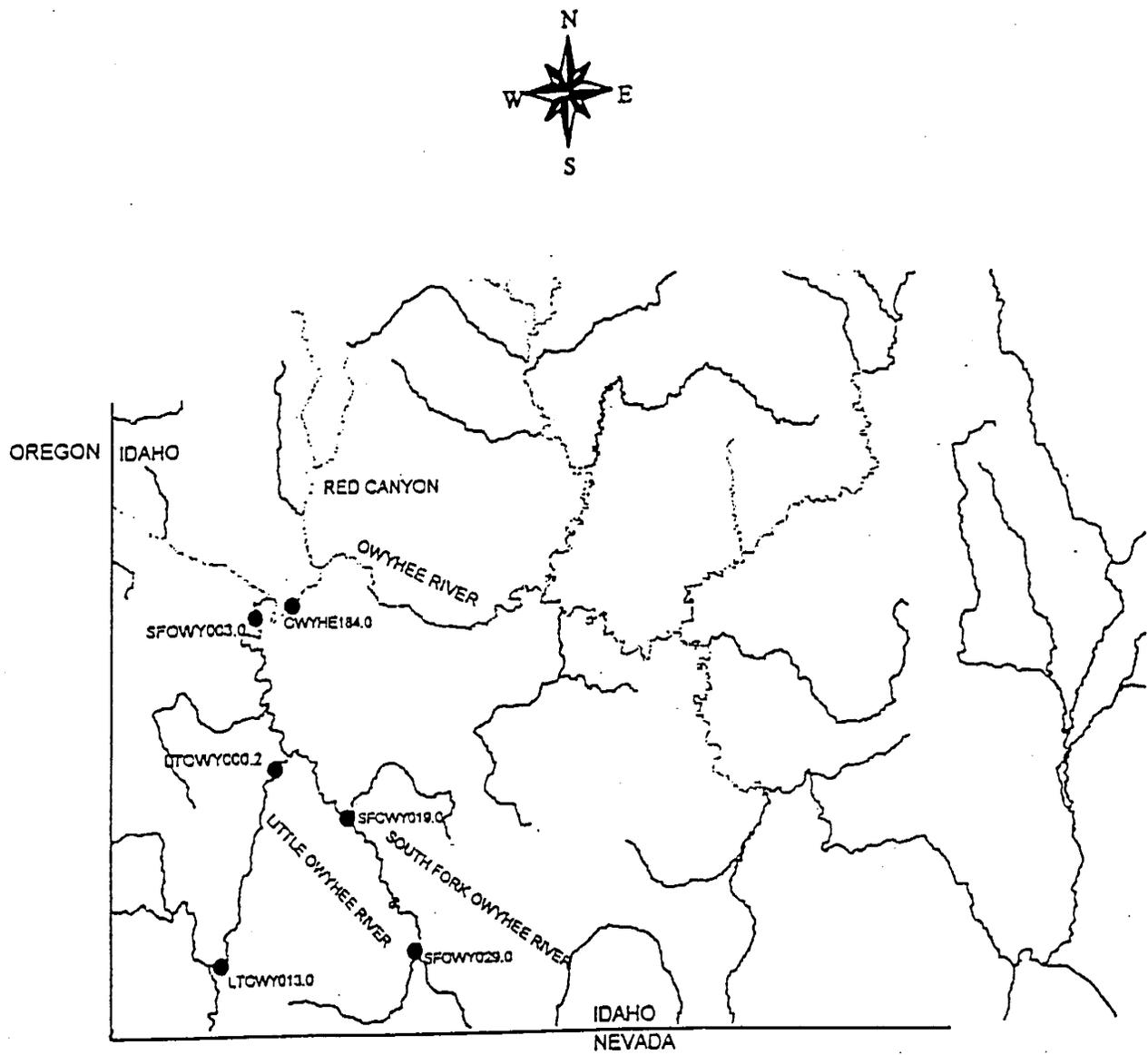


Figure 2. Location of sample sites for redband trout on the South Fork Owyhee River and Owyhee River, Owyhee County, Idaho.

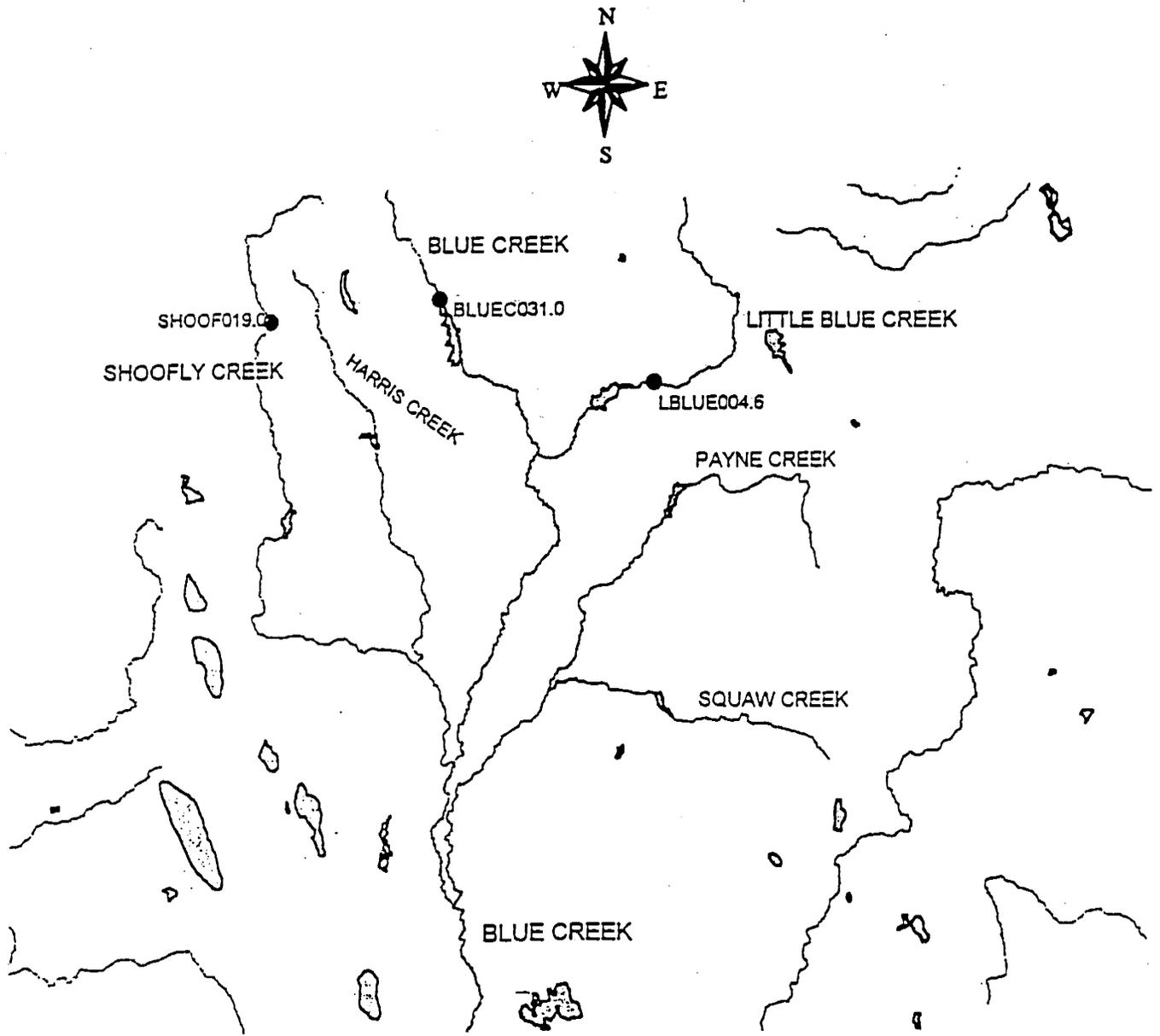
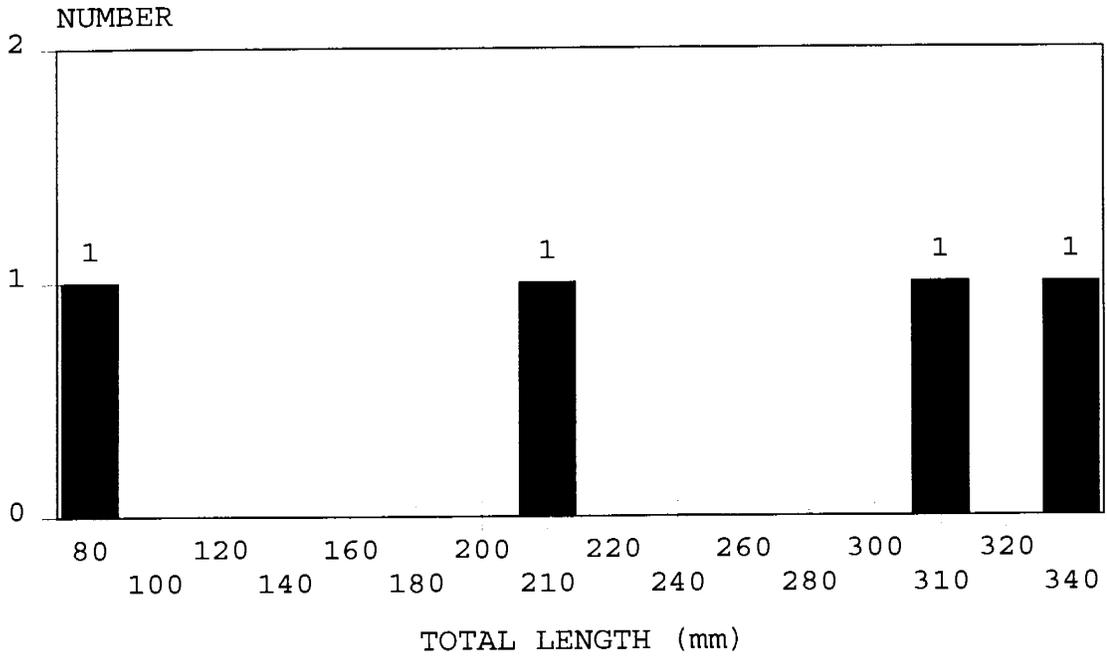


Figure 3. Location of sample sites for redband trout on Blue, Little Blue, and Shoofly Creeks, Owyhee County, Idaho.

REDBAND TROUT LENGTH FREQUENCY

OWYHEE RIVER ABOVE CRUTCHER'S CROSSING

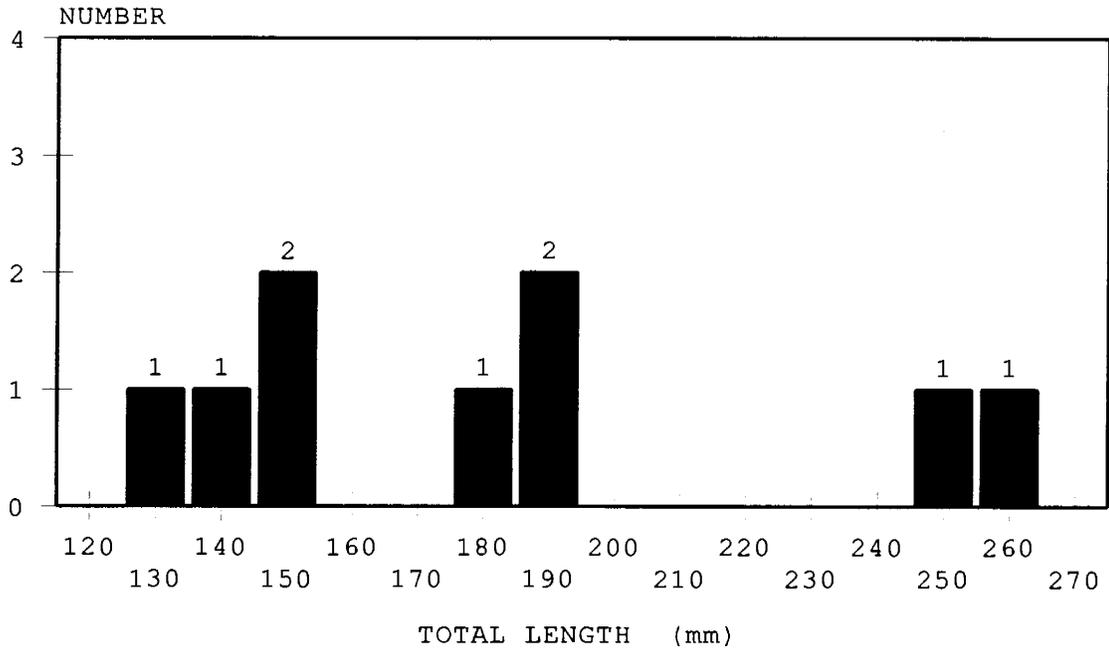


STATION: OWYHEE184.0 9/14/95

Figure 4. Length frequency of redband trout captured by electrofishing in sample site OWYHE184.0 in the Owyhee River, Owyhee County, Idaho.

REDBAND TROUT LENGTH FREQUENCY

BRUNEAU RIVER ABOVE JARBIDGE RIVER MOUTH

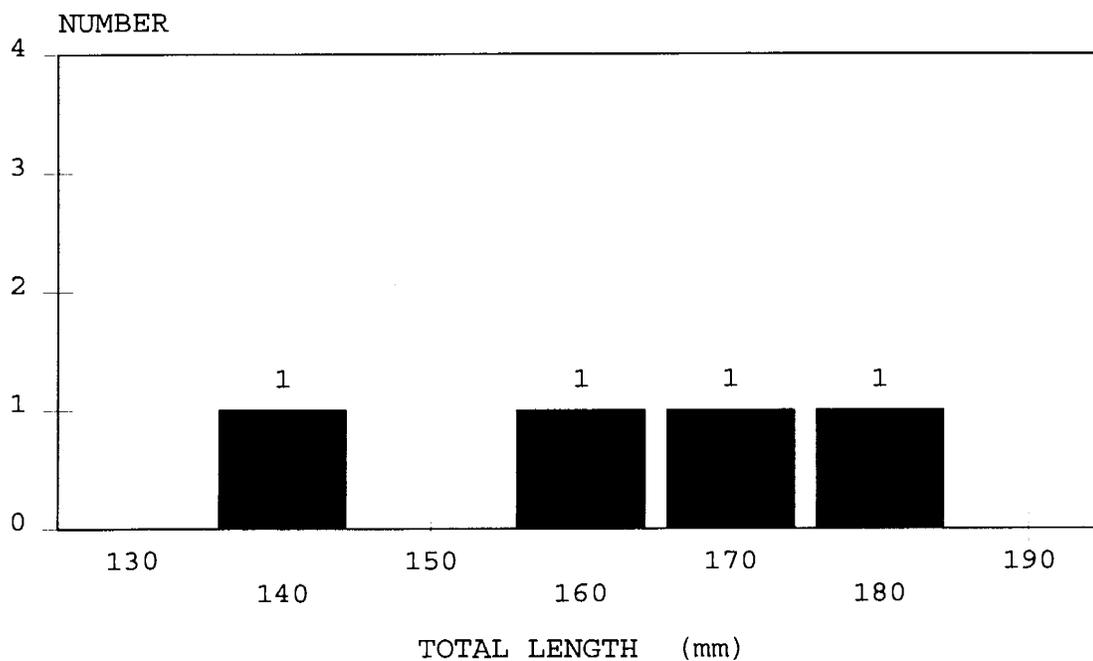


STATION: WFBRUN60.8 10/3/95

Figure 5. Length frequency of redband trout captured by electrofishing in sample site WFBRU060.8 in the West Fork Bruneau River, Owyhee County, Idaho.

REDBAND TROUT LENGTH FREQUENCY

BRUNEAU RIVER TRIGUERO LAKE ROAD

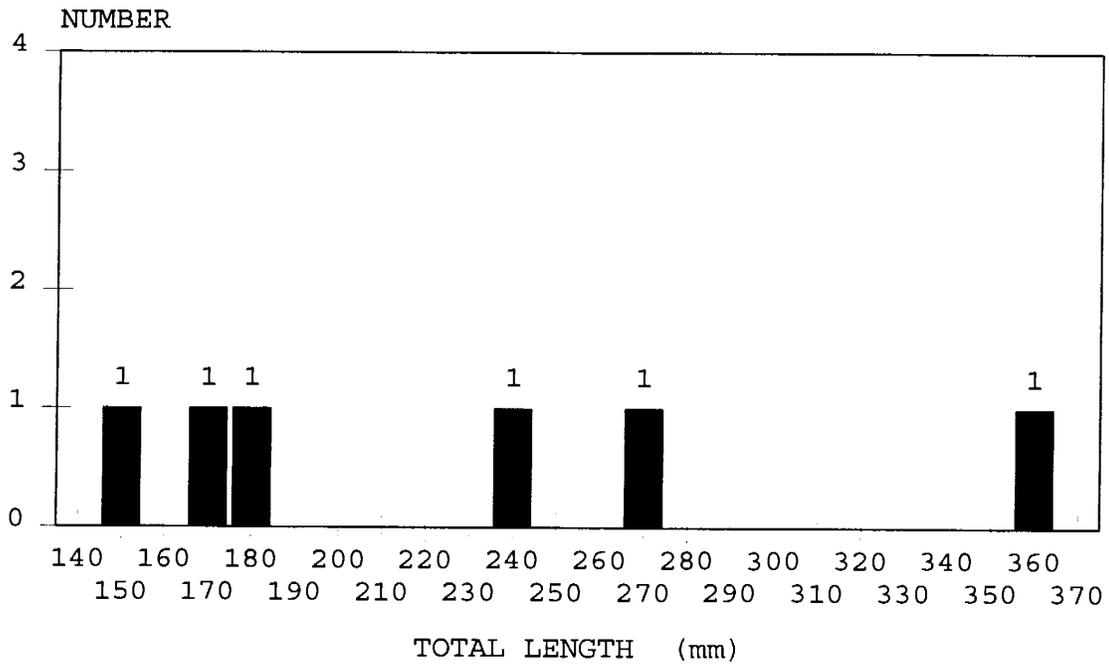


STATION: WFBRUN78.4 10/6/95

Figure 6. Length frequency of redband trout captured by electrofishing in sample site WFBRU078.4 in the West Fork Bruneau River, Owyhee County, Idaho.

REDBAND TROUT LENGTH FREQUENCY

BRUNEAU RIVER BELOW BLACK ROCK CROSSING



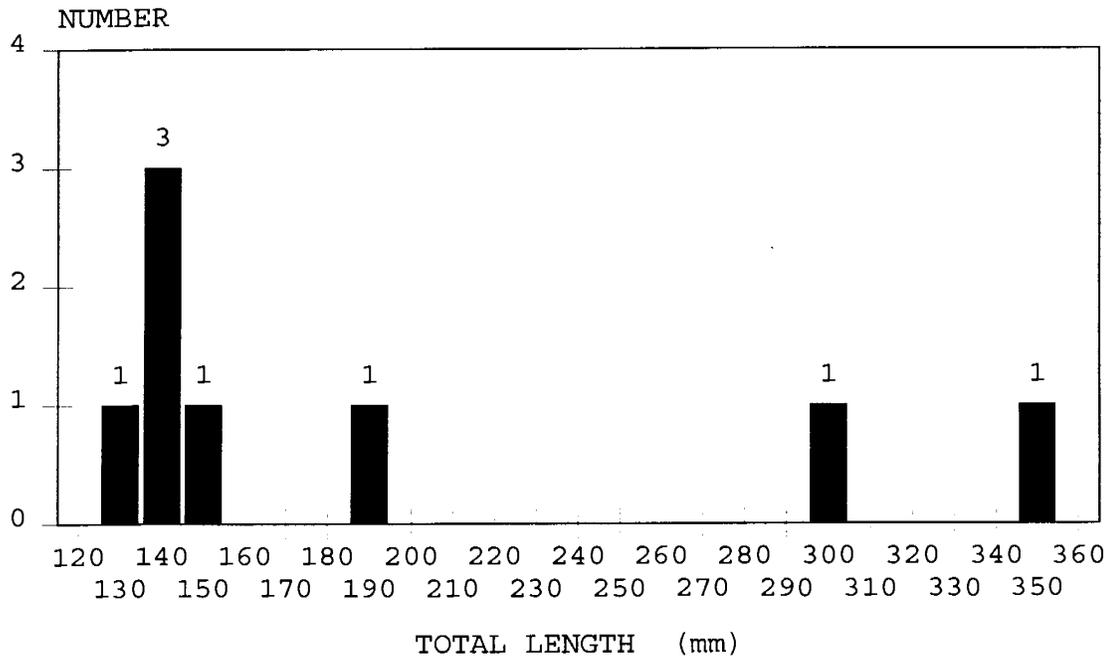
STATION: WFBRUN85.0 10/5/95

AGE	I+	II+	III+	IV+	V+
Average length (mm)	98.9	128.3	157.1	249.9	323.0
number=5	5	5	5	2	1

Figure 7. Length frequency and average age at annulus of redband trout captured by electrofishing in sample site WFBRU085.0 in the West Fork Bruneau River, Owyhee County, Idaho.

REDBAND TROUT LENGTH FREQUENCY

BRUNEAU RIVER ABOVE BLACK ROCK CROSSING



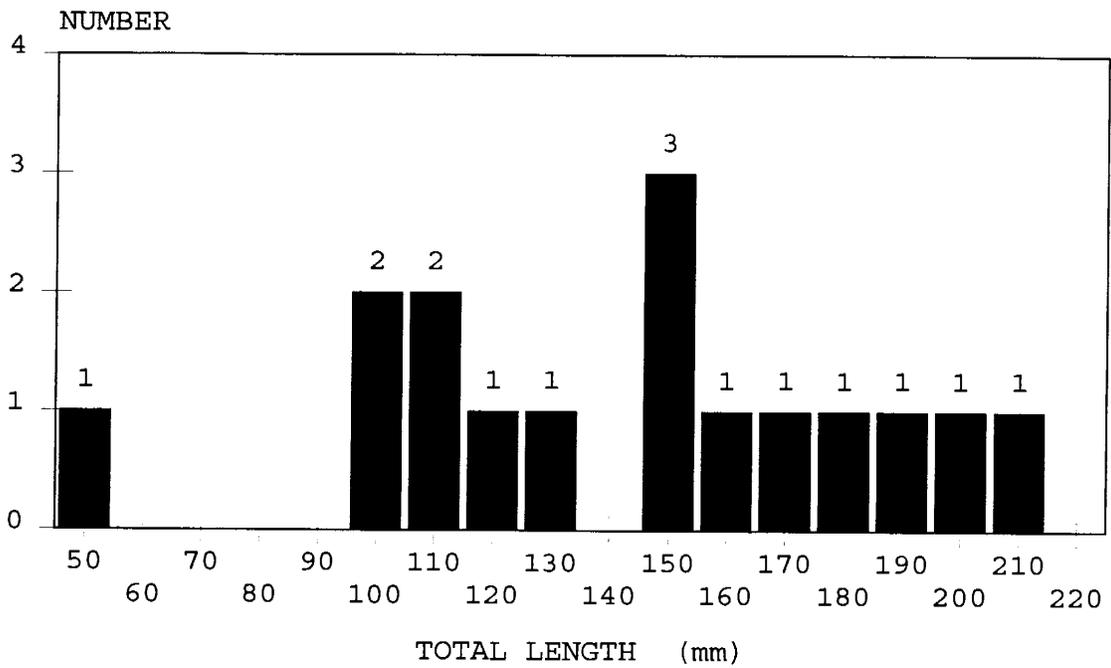
STATION: WFBRUN87.0 10/5/95

AGE	I+	II+	III+	IV+	V+
Average length (mm)	87.1	119.4	144.3	205.3	285.2
number=8	8	8	7	2	2

Figure 8. Length frequency and average age at annulus of redband trout captured by electrofishing in sample site WFBRU087.0 in the West Fork Bruneau River, Owyhee County, Idaho.

REDBAND TROUT LENGTH FREQUENCY

JARBIDGE RIVER NEAR MOUTH



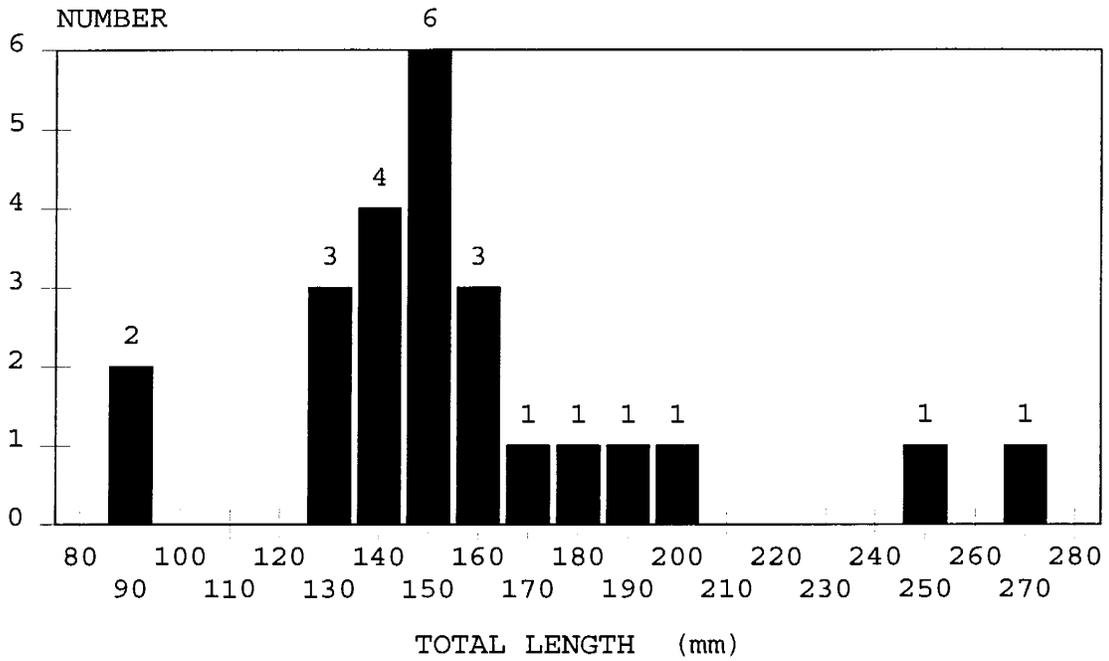
STATION: JARBIDGE00.2 10/3/95

AGE	I+	II+	III+	IV+	V+
Average length (mm)	80.9	103.4	134.6	163.1	193.1
number=15	15	15	9	4	1

Figure 9. Length frequency and average age at annulus of redband trout captured by electrofishing in sample site JARBI000.2 in the Jarbidge River, Owyhee County, Idaho.

REDBAND TROUT LENGTH FREQUENCY

BRUNEAU RIVER WHIRLING DISEASE SAMPLING



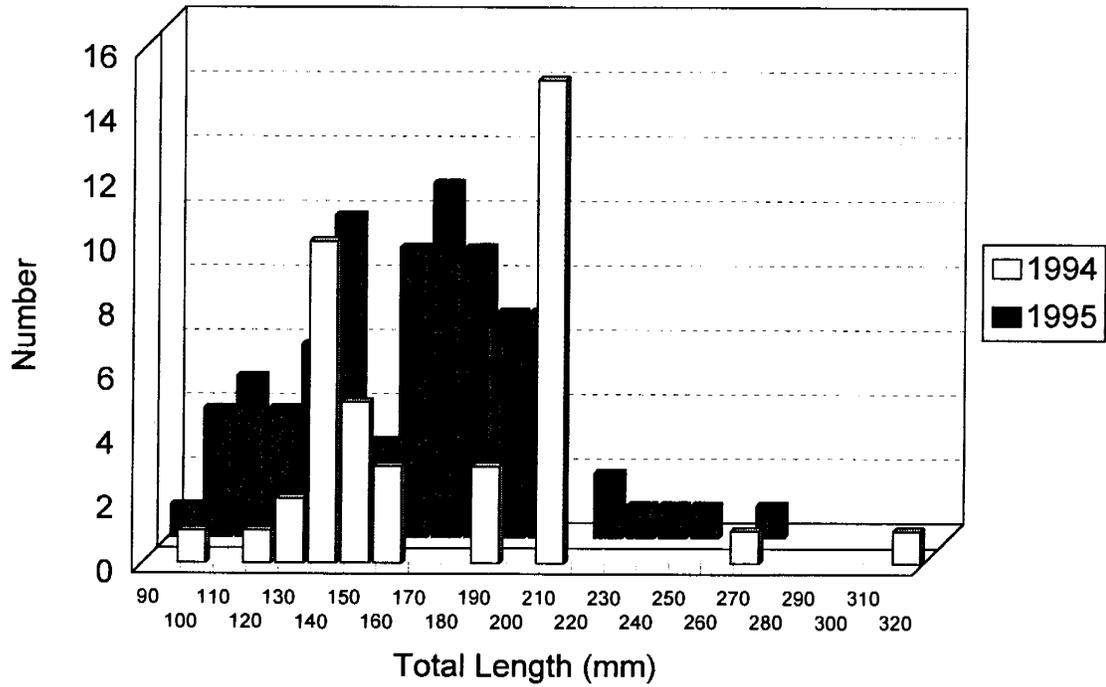
COLLECTED NEAR BLACK ROCK CROSSING 10/5/95

AGE	I+	II+	III+	IV+	V+
Average length (mm)	86.8	115.7	142.1	190.2	228.5
number=24	24	22	18	6	2

Figure 10. Length frequency and average age at annulus of redband trout captured by electrofishing in West Fork Bruneau River near Black Rock Crossing for whirling disease testing.

REDBAND TROUT

BOISE RIVER, CITY OF BOISE

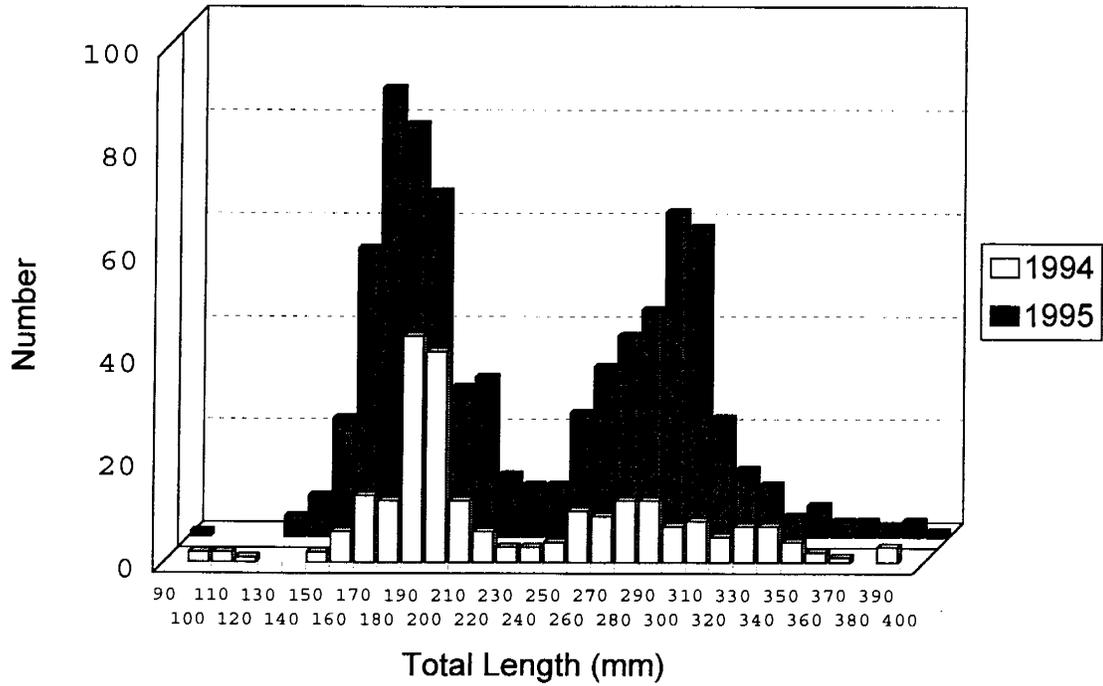


Electrofishing, same 5 stations, 3/94 and 3/95

Figure 11 Length frequency comparison of redband trout captured in the Boise River in 1994 versus 1995.

MOUNTAIN WHITEFISH

BOISE RIVER, CITY OF BOISE



Electrofishing same 5 stations. 3/94 and 3/95

Figure 12. Length frequency comparison of mountain whitefish in the Boise River 1994 versus 1995.

APPENDICES

Appendix A. Stream sampling synopsis of sample sections of South Fork Owyhee River, Owyhee River, West Fork Bruneau River, Jarbidge River, Sheep and Marys creeks in Owyhee County, Idaho.

REDBAND TROUT STREAM SAMPLING SYNOPSIS

STREAM SEGMENT NAME: SFOWY003.0

DATE: 9/13/95

LOCATION: T14S R5W S2 NW NE

LAT/LONG: N 42 14.77' W 116 54.25'

SITE DESCRIPTION: Cross SF Owyhee at 45 Ranch drive to Juniper Basin. Walk about 2 miles skirting ridge to canyon. Tough scramble down, section was south side split channel.

TROUT POPULATION ESTIMATE: 0

DENSITY/100 m²:

DENSITY TROUT >100 mm/100 m²:

WATER QUALITY MEASUREMENTS:

TEMP: 19.4

pH: 8.9

CONDUCTIVITY uS/cm: 220

HARDNESS mg/l: 120

ALKALINITY mg/l: 140

HABITAT VARIABLES:

SAMPLE LENGTH (m): 100

AVERAGE WIDTH (m): 8.2

AVERAGE DEPTH (m): 0.33

PERCENT GRADIENT: 0.82

SUBSTRATE COMPOSITION:

% SAND: 14.2

% GRAVEL: 36.0

% RUBBLE: 43.5

% BOULDER: 6.3

PERCENT STREAM SHADE: 11.8

PERCENT STREAM FISH HABITAT: 78.5

GREENLINE--PERCENT VEGETATIVE COMMUNITY TYPES:

2.0% Scirpus americanus/ Salix exigua

73.5% Scirpus americanus

12.5% Scirpus americanus/Forb

5.0% Scirpus americanus/ Eleocharis

2.0% Grass

5.0% Forb

Appendix A. (Continued)

REDBAND TROUT STREAM SAMPLING SYNOPSIS

STREAM SEGMENT NAME: SFOWY019.0 DATE: 9/12/95

LOCATION: T15S R4W S9 SW SW
LAT/LONG: N 42 07.89' W 116 49.25'

SITE DESCRIPTION: Site lies at the mouth of drainage from the Upper and Lower John G. Reservoirs. Quad map shows a packtrail down the canyon, all we found was a cairn, last 200 foot is extremely steep. Sample section starts at the riffle above the pool at large rock face at mouth of side drainage.

TROUT POPULATION ESTIMATE: 0
DENSITY/100 m²: DENSITY TROUT >100 mm/100 m²:

WATER QUALITY MEASUREMENTS:
TEMP: 21.1
pH: 8.7
CONDUCTIVITY uS/cm: 210
HARDNESS mg/l: 120
ALKALINITY mg/l: 160

HABITAT VARIABLES:
SAMPLE LENGTH (m): 100
AVERAGE WIDTH (m): 15.7
AVERAGE DEPTH (m): 0.25
PERCENT GRADIENT: 0.66

SUBSTRATE COMPOSITION:
% SAND: 10.3
% GRAVEL: 13.7
% RUBBLE: 46.7
% BOULDER: 29.3

PERCENT STREAM SHADE: 11.2
PERCENT STREAM FISH HABITAT: 88.0
GREENLINE--PERCENT VEGETATIVE COMMUNITY TYPES:
0.5% Salix exigua
84.5% Scirpus americanus
6.0% Scirpus americanus/Forb
2.0% Scirpus americanus/Grass
0.5% Salix exigua/Scirpus americanus
6.5% Eleocharis

Appendix A. (Continued)

REDBAND TROUT STREAM SAMPLING SYNOPSIS

STREAM SEGMENT NAME: WFBRU059.2 DATE: 10/4/95

LOCATION: T12S R7E S33 NW SW
LAT/LONG: N 42 20.50' W 115 38.72'

SITE DESCRIPTION: Site lies downstream of Indian Hot Springs bridge crossing approx. 400 m. Take mining road that runs on west side of river across flats by river and park where 4x4 road starts to climb the side hill. Sample site starts downstream at top of long riffle and ends at gravel bar beside where you parked.

TROUT POPULATION ESTIMATE: 1

DENSITY/100 m²: 0.08 DENSITY TROUT >100 mm/100 m²: 0.08

WATER QUALITY MEASUREMENTS:

TEMP: 11.7
pH: 9.5
CONDUCTIVITY uS/cm: 200
HARDNESS mg/l: 60
ALKALINITY mg/l: 80

HABITAT VARIABLES:

SAMPLE LENGTH (m): 84
AVERAGE WIDTH (m): 14.4
AVERAGE DEPTH (m): 0.41
PERCENT GRADIENT: 0.36

SUBSTRATE COMPOSITION:

% SAND: 12.2
% GRAVEL: 19.5
% RUBBLE: 57.0
% BOULDER: 11.3

PERCENT STREAM SHADE: 4.3

PERCENT STREAM FISH HABITAT: 68.0

GREENLINE--PERCENT VEGETATIVE COMMUNITY TYPES:

15.6% *Salix exigua*
58.1% *Salix exigua*/*Equisetum*/*Leersia oryzoides*
13.1% *Eleocharis*/*Leersia oryzoides*
4.4% *Equisetum*
8.8% *Leersia oryzoides* / *Equisetum*

Appendix A. (Continued)

REDBAND TROUT STREAM SAMPLING SYNOPSIS

STREAM SEGMENT NAME: WFBRU060.8 DATE: 10/3/95

LOCATION: T13S R7E S5 NE NE
LAT/LONG: N 42 19.61' W 115 39.20'

SITE DESCRIPTION: Site lies upstream of Jarbidge River mouth and below where 4x4 road goes down to river above the Indian Hot Springs area. Top of section is at large gravel bar about 200 m below old pack bridge.

TROUT POPULATION ESTIMATE: 9 (\pm 2.9)
DENSITY/100 m²: 0.83 DENSITY TROUT >100 mm/100 m²: 0.83

WATER QUALITY MEASUREMENTS:
TEMP: 11.1
pH: 8.6
CONDUCTIVITY uS/cm: 220
HARDNESS mg/l: 80
ALKALINITY mg/l: 120

HABITAT VARIABLES:
SAMPLE LENGTH (m): 100
AVERAGE WIDTH (m): 7.7
AVERAGE DEPTH (m): 0.33
PERCENT GRADIENT: 0.43

SUBSTRATE COMPOSITION:
% SAND: 42.9
% GRAVEL: 46.8
% RUBBLE: 10.3
% BOULDER: 0.0

PERCENT STREAM SHADE: 19.1
PERCENT STREAM FISH HABITAT: 46.0
GREENLINE--PERCENT VEGETATIVE COMMUNITY TYPES:
22.5% *Salix exigua*
8.0% *Cornus sericea*/ *Clematis ligusticifolia*/ *Rosa woodsii*
4.5% *Eleocharis*/ *Leersia oryzoides*
14.5% *Equisetum*
7.0% *Cornus sericea*
4.0% *Apocynum cannabinum*/ *Equisetum*/ *Conium maculatum*
11.5% *Leersia oryzoides* 25.0% Rock Cliff 3.0% *Eleocharis*

Appendix A. (Continued)

REDBAND TROUT STREAM SAMPLING SYNOPSIS

STREAM SEGMENT NAME: WFBRU078.4 DATE: 10/6/95
LOCATION: T15S R7E S6 SE SE
LAT/LONG: N 42 08.68' W 115 40.30'

SITE DESCRIPTION: Site lies upstream at bottom where the road drops down canyon near what's called Triguero Lake. A side road takes off just past the two stone foundations and deadends near the river. The lower end of site lies about 40 m from big hole in the bend.

TROUT POPULATION ESTIMATE: 4 (\pm 1.9)
DENSITY/100 m²: 0.50 DENSITY TROUT >100 mm/100 m²: 0.50

WATER QUALITY MEASUREMENTS:

TEMP: 13.3
pH: 9.4
CONDUCTIVITY uS/cm: 240
HARDNESS mg/l: 100
ALKALINITY mg/l: 120

HABITAT VARIABLES:

SAMPLE LENGTH (m): 100
AVERAGE WIDTH (m): 7.9
AVERAGE DEPTH (m): 0.28
PERCENT GRADIENT: 1.62

SUBSTRATE COMPOSITION:

% SAND: 21.7
% GRAVEL: 18.3
% RUBBLE: 51.3
% BOULDER: 8.7
PERCENT STREAM SHADE: 50.8
PERCENT STREAM FISH HABITAT: 35.0

GREENLINE--PERCENT VEGETATIVE COMMUNITY TYPES:

3.5% *Salix exigua*
6.0% *Salix exigua*/ *Equisetum*
12.0% *Juniperus occidentalis*/ *Poa*/ *Equisetum*
2.0% *Rhus radicans*/ *Apocynum cannabinum*
10.5% *Apocynum cannabinum*/ *Eleocharis*/ *Leersia oryzoides* / *Equisetum*
11.0% *Eleocharis*
34.0% *Equisetum*/ *Leersia oryzoides* / *Eleocharis*/ *Conium maculatum*
3.0% *Solidago*/ *Poa*/ *Equisetum*
10.5% *Conium maculatum*
1.5% *Leersia* 6.0% Rock Cliff/ *Agropyron spicatum*/ *Bromus tectorum*

Appendix A. (Continued)

REDBAND TROUT STREAM SAMPLING SYNOPSIS

STREAM SEGMENT NAME: WFBRU085.0 DATE: 10/5/95
LOCATION: T15S R7E S30 SE SE
LAT/LONG: N 42 04.36' W 115 39.06'

SITE DESCRIPTION: The site is located in canyon below private ground at black rock crossing. Cross river and drive past old buildings all the way to end of old hay field, walk about half mile downstream.

TROUT POPULATION ESTIMATE: 6
DENSITY/100 m²: 0.80 DENSITY TROUT >100 mm/100 m²: 0.80

WATER QUALITY MEASUREMENTS:

TEMP: 7.7
pH: 9.3
CONDUCTIVITY uS/cm: 190
HARDNESS mg/l: 120
ALKALINITY mg/l: 180

HABITAT VARIABLES:

SAMPLE LENGTH (m): 86
AVERAGE WIDTH (m): 8.7
AVERAGE DEPTH (m): 0.33
PERCENT GRADIENT: 0.44

SUBSTRATE COMPOSITION:

% SAND: 21.3
% GRAVEL: 37.3
% RUBBLE: 35.0
% BOULDER: 6.4

PERCENT STREAM SHADE: 16.1

PERCENT STREAM FISH HABITAT: 74.0

GREENLINE--PERCENT VEGETATIVE COMMUNITY TYPES:

4.4% *Salix exigua*
7.5% *Salix exigua*/ Forb/ Grass
16.3% *Salix exigua*/ *Equisetum*/ *Eleocharis*
6.2% *Salix exigua*/ *Rosa woodsii*
6.2% *Salix exigua*/ *Rosa woodsii*/ *Cornus sericea*
2.5% *Salix lutea* 10.0% *Cornus sericea*
1.9% Forb/ Grass, 36.3% *Equisetum*/ *Eleocharis*
3.7% *Eleocharis*, 5.7% *Phalaris arundinacea*

Appendix A. (Continued)

REDBAND TROUT STREAM SAMPLING SYNOPSIS

STREAM SEGMENT NAME: WFBRU087.0 DATE: 10/5/95
LOCATION: T16S R7E S8 NE SE
LAT/LONG: N 42 03.36' W 115 39.06'

SITE DESCRIPTION: The site is located in canyon above private ground at black rock crossing. Cross river and hike upstream not quite half mile above crossing. Site lies against where the east bank first becomes very steep and ends at gravel bar just above very large boulder with large wood debris jam on top.

TROUT POPULATION ESTIMATE: 8 (+2.01)
DENSITY/100 m²: 0.84 DENSITY TROUT >100 mm/100 m²: 0.84

WATER QUALITY MEASUREMENTS:

TEMP: 7.7
pH: 9.6
CONDUCTIVITY uS/cm: 230
HARDNESS mg/l: 100
ALKALINITY mg/l: 140

HABITAT VARIABLES:

SAMPLE LENGTH (m): 100
AVERAGE WIDTH (m): 9.6
AVERAGE DEPTH (m): 0.31
PERCENT GRADIENT: 0.29

SUBSTRATE COMPOSITION:

% SAND: 32.3
% GRAVEL: 22.3
% RUBBLE: 28.0
% BOULDER: 17.3

PERCENT STREAM SHADE: 21.6

PERCENT STREAM FISH HABITAT: 53.0

GREENLINE--PERCENT VEGETATIVE COMMUNITY TYPES:

4.0% *Salix exigua*, 4.0% *Salix exigua*/ *Apocynum cannabinum*
8.0% *Salix exigua*/ *Eleocharis*/ *Equisetum*
12.0% *Cornus sericea*
4.5% *Juniperus occidentalis*, 0.5% *Artemisia tridentata*
5.0% *Rosa woodsii*, 30.0% *Equisetum*, 19.0% *Eleocharis*,
8.0% *Conium maculatum*/ *Solidago occidentalis*/ *Eleocharis*
5.0% *Phalaris arundinacea*

Appendix A. (Continued)

REDBAND TROUT STREAM SAMPLING SYNOPSIS

STREAM SEGMENT NAME: SHEEP35.2 DATE: 10/2/95
LOCATION: T14S R6E S21 NE SE
LAT/LONG: N 42 11.91' W 115 45.08'

SITE DESCRIPTION: From Sheep Creek crossing of Grasmere Road go upstream past private ground to fence line. Lower end of sample section starts at fence line.

TROUT POPULATION ESTIMATE: 0

DENSITY/100 m²: 0 DENSITY TROUT >100 mm/100 m²:

WATER QUALITY MEASUREMENTS:

TEMP: 11.7
pH: 9.5
CONDUCTIVITY uS/cm: 120
HARDNESS mg/l: 80
ALKALINITY mg/l: 140

HABITAT VARIABLES:

SAMPLE LENGTH (m): 100
AVERAGE WIDTH (m): 5.7
AVERAGE DEPTH (m): 0.28
PERCENT GRADIENT: 0.75

SUBSTRATE COMPOSITION:

% SAND: 23.3
% GRAVEL: 32.0
% RUBBLE: 34.7
% BOULDER: 10.0

PERCENT STREAM SHADE: 12.1

PERCENT STREAM FISH HABITAT: 60.5

GREENLINE—PERCENT VEGETATIVE COMMUNITY TYPES:

31.5% *Salix exigua*
9.0% *Salix exigua*/ *Eleocharis*
7.0% *Salix exigua*/ *Clematis ligusticifolia*/ *Rosa Woodsii*
1.0% *Salix lutea*, 1.0% *Ribes aureum*, 1.5% *Cornus stolonifera*
7.0% *Rosa woodsii*/ *Ribes aureum*/ *Clematis ligusticifolia*
27.5% *Eleocharis*
3.5% *Leersia oryzoides*, 11.0% *Bromus tectorum*

Appendix A. (Continued)

REDBAND TROUT STREAM SAMPLING SYNOPSIS

STREAM SEGMENT NAME: MARYS04.2 DATE: 10/2/95

LOCATION: T13S R5E S12 NW SW
LAT/LONG: N 42 18.74' W 115 49.55'

SITE DESCRIPTION: From crossing of Grasmere Road of Marys Creek go downstream to the rock outcropping at the first bend. About 200 m below where you can park your vehicle.

TROUT POPULATION ESTIMATE: 0

DENSITY/100 m²: 0 DENSITY TROUT >100 mm/100 m²:

WATER QUALITY MEASUREMENTS:

TEMP: 9.4
pH: 8.3
CONDUCTIVITY uS/cm: 120
HARDNESS mg/l: 80
ALKALINITY mg/l: 200

HABITAT VARIABLES:

SAMPLE LENGTH (m): 61.5
AVERAGE WIDTH (m): 4.4
AVERAGE DEPTH (m): 0.13
PERCENT GRADIENT: 0.76

SUBSTRATE COMPOSITION:

% SAND: 15.8
% GRAVEL: 14.3
% RUBBLE: 57.8
% BOULDER: 12.0

PERCENT STREAM SHADE: 8.1
PERCENT STREAM FISH HABITAT: 46.5

GREENLINE--PERCENT VEGETATIVE COMMUNITY TYPES:

74.0% *Salix exigua*
5.3% *Salix exigua*/ *Eleocharis*
1.0% *Salix exigua*/ *Poa*
19.7% *Eleocharis*

Appendix B. Water temperatures recorded by electronic water temperature recorders in three sites in upper Jordan Creek, Owyhee County, Idaho.

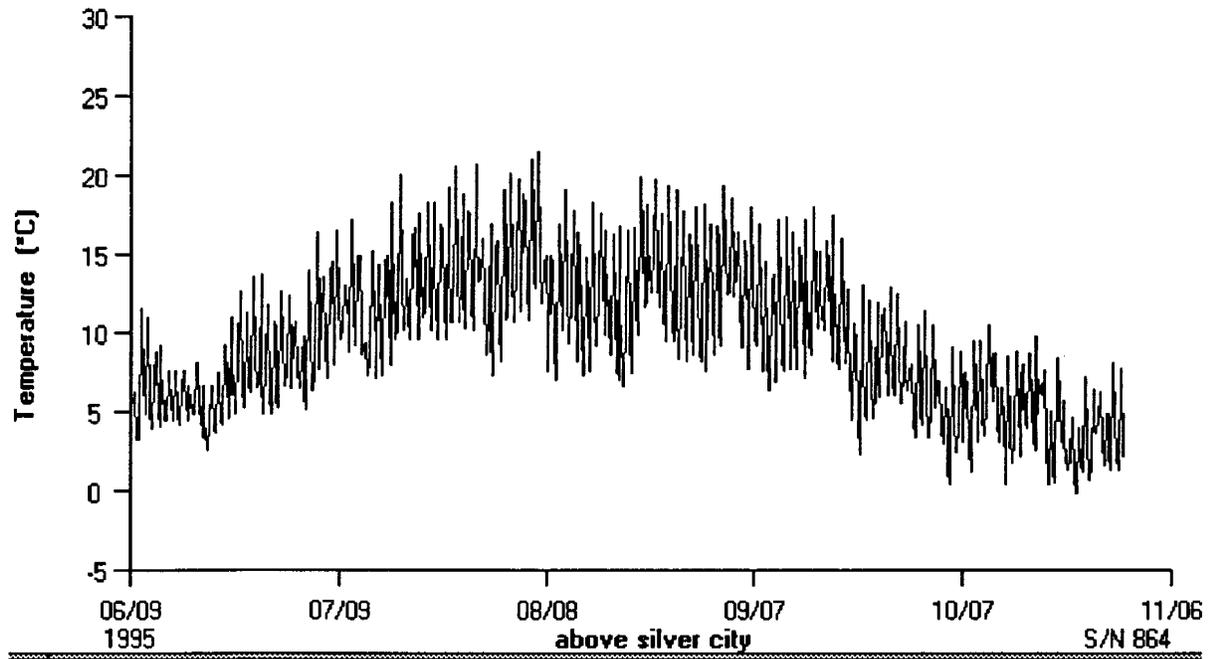


Figure B1. Recording thermograph data from upstream Silver City on Jordan Creek, Owyhee County, Idaho.

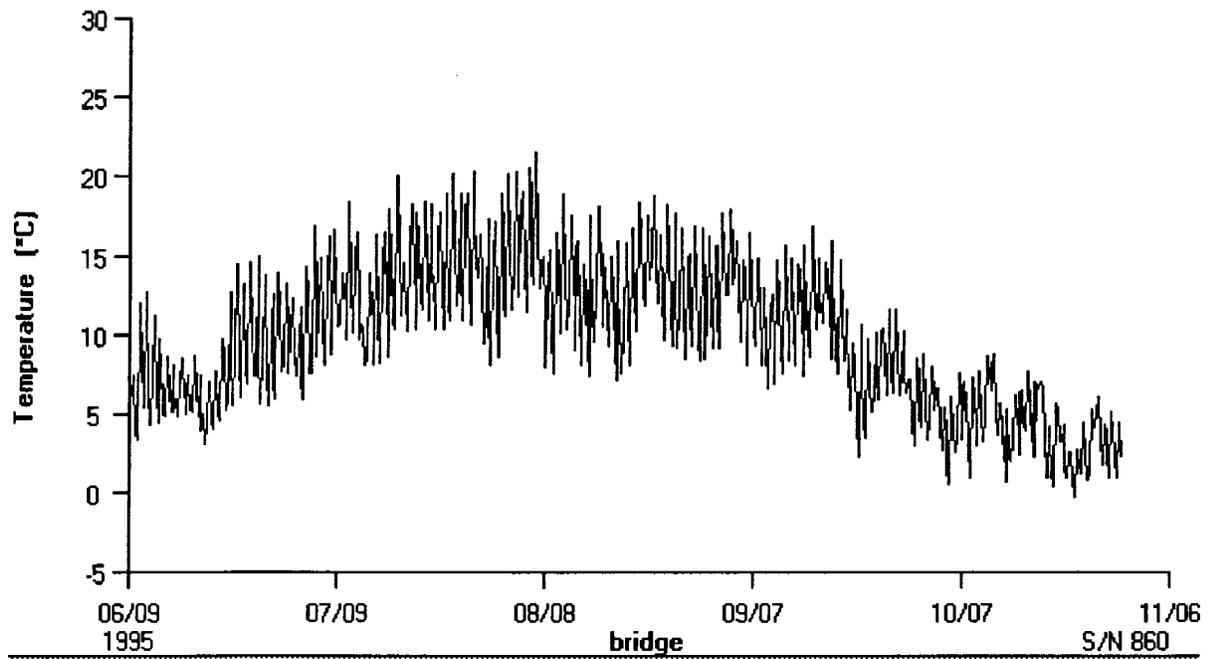


Figure B2. Recording thermograph data from below Silver City on Jordan Creek in Owyhee County, Idaho.

Appendix B. (Continued)

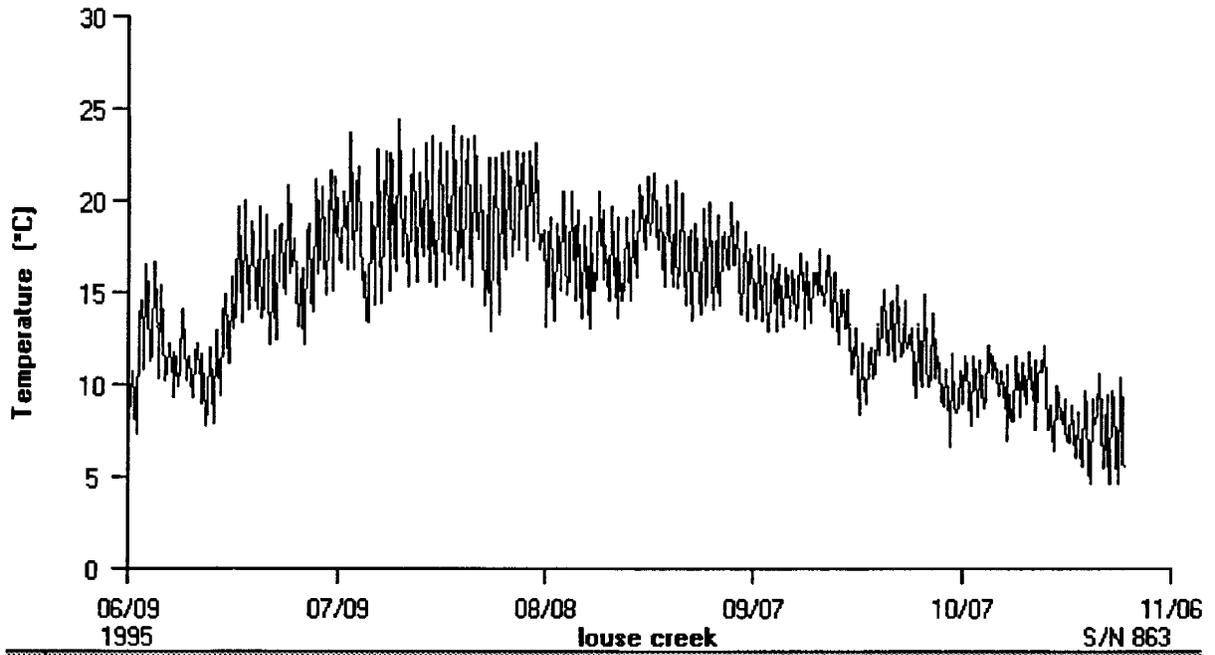


Figure B3. Recording thermograph data from near the confluence with Flint Creek and Jordan Creek, Owyhee County, Idaho.

Table B1. Site location of recording thermographs in Jordan Creek, Owyhee County, Idaho.

SITE DESCRIPTION	LEGAL DESCRIPTION	STREAM MILEAGE	ELEVATION (m)
No. 1 Upstream of Silver City	T4S R3W S7	JORDA97.6	1902
No. 2 Bridge crossing below Silver City	T4S R3W S31	JORDA95.4	1814
No. 3 Bridge crossing on Triangle road	T6S R4W S19	JORDA70.8	1414

Appendix C. 1995 STANDARD STREAM SURVEY REPORTS.

STREAM: CANYON CREEK 040 SAMPLE DATE: 6/2/95
 EPA REACH: 17050101 QUAD MAP: Mountain Home North
 RTS: R6E, T2S, S25-26 LAT/LONG: ;
 SECTION DESCRIPTION: Powerline section.

Length Frequency

Species	CM Group	Method	Number Measured
BLS		EF	0.00
RSS		EF	0.00
SPD		EF	0.00
WRB	15	EF	2.00
WRB	18	EF	1.00

Transect Information:

Section Length (m):	60
Elevation (m):	1075
Gradient (%):	1.13%
Population Est:	S.E(popest):
Shade (%):	
Mean Width (m):	6.5
Mean Depth (m):	1.6
Cover (%):	78

Habitat Type:

Pool:	6.1 %
Riffle:	24.2 %
Run:	54.5 %
Pocket:	15.2 %

Substrate

Organic:	0 %
Sand:	9 %
Gravel:	21 %
Rubble:	49 %
Boulder:	21 %
Bedrock:	0 %

Water Chemistry

Time:	12:20 PM
H2O Temp(C):	15
Air Temp(C):	24.4
pH:	9.4
Alkalinity(mg/l CaCO3):	40
Hardness(uS/cm3):	20
Conductivity(mg/l CaCO3):	40

Appendix C. (Continued)

STREAM: CANYON CREEK 04001 SAMPLE DATE: 6/2/95
 EPA REACH: 17050101 QUAD MAP: Mountain Home North
 RTS: R6E, T2S, S14-15 LAT/LONG: ;
 SECTION DESCRIPTION: Near washed out bridge.

Length Frequency

Species	CM Group	Method	Number Measured
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Transect Information:

Section Length (m):	60
Elevation (m):	
Gradient (%):	1.21%
Population Est:	S.E(popest):
Shade (%):	
Mean Width (m):	8.2
Mean Depth (m):	1.7
Cover (%):	81

Habitat Type:

Pool:	9.1 %
Riffle:	18.2 %
Run:	51.5 %
Pocket:	18.2 %

Substrate

Organic:	0 %
Sand:	14 %
Gravel:	30 %
Rubble:	25 %
Boulder:	20 %
Bedrock:	9 %

Water Chemistry

Time:	03:25 PM
H2O Temp(C):	15.6
Air Temp(C):	22.8
pH:	
Alkalinity(mg/l CaCO3):	40
Hardness(uS/cm3):	20
Conductivity(mg/l CaCO3):	40

Appendix C. (Continued)

STREAM: RATTLESNAKE CREEK 065 SAMPLE DATE: 6/1/95
 EPA REACH: 17050101 QUAD MAP: Teapot Dome
 RTS: R7E, T2S, S36 LAT/LONG: ;
 SECTION DESCRIPTION: Radio tower, starts 1/2 mile down from road crossing.

Length Frequency

Species	CM Group	Method	Number Measured
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Transect Information:

Section Length (m):	69.9
Elevation (m):	1250
Gradient (%):	2.00%
Population Est:	S.E(popest):
Shade (%):	
Mean Width (m):	0.8
Mean Depth (m):	0.3
Cover (%):	45

Habitat Type:

Pool:	0.0 %
Riffle:	54.5 %
Run:	45.5 %
Pocket:	0.0 %

Substrate

Organic:	2 %
Sand:	19 %
Gravel:	57 %
Rubble:	17 %
Boulder:	7 %
Bedrock:	0 %

Water Chemistry

Time:	11:05 AM
H2O Temp(C):	17.8
Air Temp(C):	22.2
pH:	9.8
Alkalinity(mg/l CaCO3):	40
Hardness(uS/cm3):	20
Conductivity(mg/l CaCO3):	50

Appendix C. (Continued)

STREAM: LOWER RATTLESNAKE SAMPLE DATE: 6/1/95
 EPA REACH: 17050101 QUAD MAP: Teapot Dome
 RTS: R7E, T3S, S9 LAT/LONG: 43 15.87 ; 115 34.01
 SECTION DESCRIPTION: Near powerline, substation off Highway 20.

Length Frequency

Species	CM Group	Method	Number Measured
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Transect Information:

Section Length (m):	60	
Elevation (m):	1040	
Gradient (%):	2.67%	
Population Est:		S.E.(popest):
Shade (%):		
Mean Width (m):	4.1	
Mean Depth (m):	0.7	
Cover (%):	82	

Habitat Type:

Pool:	42.4 %
Riffle:	24.2 %
Run:	30.3 %
Pocket:	3.0 %

Substrate

Organic:	0 %
Sand:	20 %
Gravel:	28 %
Rubble:	8 %
Boulder:	39 %
Bedrock:	0 %

Water Chemistry

Time:	02:00 PM
H2O Temp(C):	23.3
Air Temp(C):	21.1
pH:	10.9
Alkalinity(mg/l CaCO3):	60
Hardness(uS/cm3):	40
Conductivity(mg/l CaCO3):	60

Appendix C. (Continued)

STREAM: LITTLE JACKS CREEK009 SAMPLE DATE: 9/22/95
 EPA REACH: 17050102 QUAD MAP: Big Horse Basin Gap
 RTS: R3E, T8S, S16 LAT/LONG: 42 43.77 ; 116 6.21
 SECTION DESCRIPTION: Mouth of main canyon, from cattle fence on stream up.

Length Frequency			
Species	CM Group	Method	Number Measured
WRB	6	EF	2.00
WRB	7	EF	17.00
WRB	8	EF	8.00
WRB	9	EF	11.00
WRB	10	EF	3.00
WRB	11	EF	10.00
WRB	12	EF	12.00
WRB	13	EF	10.00
WRB	14	EF	11.00
WRB	15	EF	8.00
WRB	16	EF	7.00
WRB	17	EF	6.00
WRB	18	EF	3.00
WRB	20	EF	1.00
WRB	21	EF	2.00
WRB	24	EF	1.00

Transect Information:

Section Length (m): 55
 Elevation (m): 1143
 Gradient (%): 1.70%
 Population Est: 112.0 S.E(popest):
 Shade (%): 42.8
 Mean Width (m):
 Mean Depth (m):
 Cover (%):

Habitat Type:

Pool: %
 Riffle: %
 Run: %
 Pocket: %

Substrate

Organic: %
 Sand: %
 Gravel: %
 Rubble: %
 Boulder: %
 Bedrock: %

Water Chemistry

Time: 03:00 PM
 H2O Temp(C): 15.6
 Air Temp(C):
 pH: 8.2
 Alkalinity(mg/l CaCO3): 90
 Hardness(uS/cm3): 60
 Conductivity(mg/l CaCO3): 100

Appendix C. (Continued)

STREAM: ROBIE CREEK 046 SAMPLE DATE: 6/6/95
 EPA REACH: 17050112 QUAD MAP: Robie Creek
 RTS: R3E, T4N, S36NWS LAT/LONG: ;
 SECTION DESCRIPTION: Very close to Ada/Boise county line, 0.8 mi from turnout which crosses creek.

Length Frequency

Species	CM Group	Method	Number Measured
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Transect Information:

Section Length (m):	60	
Elevation (m):	1296	
Gradient (%):	11.10%	
Population Est:		S.E(popest):
Shade (%):		
Mean Width (m):	0.6	
Mean Depth (m):	0.1	
Cover (%):	1	

Habitat Type:

Pool:	9.1 %
Riffle:	81.8 %
Run:	9.1 %
Pocket:	0.0 %

Substrate

Organic:	0 %
Sand:	87 %
Gravel:	8 %
Rubble:	6 %
Boulder:	0 %
Bedrock:	0 %

Water Chemistry

Time:	01:30 PM
H2O Temp(C):	6.1
Air Temp(C):	9.4
pH:	7.9
Alkalinity(mg/l CaCO3):	80
Hardness(uS/cm3):	40
Conductivity(mg/l CaCO3):	90

Appendix C. (Continued)

STREAM: ROCK CREEK 082 SAMPLE DATE: 7/28/95
 EPA REACH: 17050113 QUAD MAP: Olds Ferry NW
 RTS: R7W, T13N, S26 LAT/LONG: 44 25.92 ; 117 8.73
 SECTION DESCRIPTION: At 1st road crossing, upstream side.

Length Frequency

Species	CM Group	Method	Number Measured
WRB	5	EF	3.00
WRB	6	EF	21.00
WRB	7	EF	11.00
WRB	8	EF	6.00
WRB	12	EF	1.00
WRB	14	EF	3.00
WRB	15	EF	3.00
WRB	16	EF	1.00
WRB	17	EF	3.00
WRB	18	EF	1.00
WRB	19	EF	1.00
WRB	21	EF	1.00

Transect Information:

Section Length (m):	30
Elevation (m):	829
Gradient (%):	0.95%
Population Est:	56.0
Shade (%):	41.1
Mean Width (m):	2.9
Mean Depth (m):	0.6
Cover (%):	67

S.E(popest): 1

Habitat Type:

Pool:	50.0 %
Riffle:	43.3 %
Run:	6.7 %
Pocket:	0.0 %

Substrate

Organic:	0 %
Sand:	16 %
Gravel:	13 %
Rubble:	55 %
Boulder:	16 %
Bedrock:	0 %

Water Chemistry

Time:	04:00 PM
H2O Temp(C):	21
Air Temp(C):	
pH:	8.0
Alkalinity(mg/l CaCO3):	385
Hardness(uS/cm3):	180
Conductivity(mg/l CaCO3):	220

Appendix C. (Continued)

STREAM: ROCK CREEK-SPRING **SAMPLE DATE:** 8/23/95
EPA REACH: 17050113 **QUAD MAP:** Olds Ferry NW
RTS: R7W, T13N, S35 **LAT/LONG:** ;
SECTION DESCRIPTION: N Henley Basin Rd , section is located from mouth of last spring on east side of road before crossing Rock Creek section.

Length Frequency

Species	CM Group	Method	Number Measured
WRB	8	EF	4.00
WRB	9	EF	3.00
WRB	10	EF	1.00
WRB	18	EF	1.00
WRB	22	EF	1.00
WRB	23	EF	1.00
WRB	25	EF	1.00

Transect Information:

Section Length (m):	33		
Elevation (m):	857		
Gradient (%):	3.42%		
Population Est:	12.0	S.E(popest):	0
Shade (%):	40.8		
Mean Width (m):	1.8		
Mean Depth (m):	0.4		
Cover (%):	53		

Habitat Type:

Pool:	30.0 %
Riffle:	40.0 %
Run:	30.0 %
Pocket:	0.0 %

Substrate

Organic:	0 %
Sand:	16 %
Gravel:	15 %
Rubble:	38 %
Boulder:	10 %
Bedrock:	21 %

Water Chemistry

Time:	12:45 PM
H2O Temp(C):	21
Air Temp(C):	
pH:	8.0
Alkalinity(mg/l CaCO3):	385
Hardness(uS/cm3):	240
Conductivity(mg/l CaCO3):	320

Appendix C. (Continued)

STREAM: ROCK CREEK- NEAR
 EPA REACH: 17050113
 RTS: R7W, T13N, S17
 SECTION DESCRIPTION:

SAMPLE DATE: 9/6/95
 QUAD MAP: Olds Ferry NW
 LAT/LONG: 44 27.84 ; 117 11.92

Length Frequency

Species	CM Group	Method	Number Measured
WRB	11	EF	1.00

Transect Information:

Section Length (m):	75
Elevation (m):	704
Gradient (%):	2.46%
Population Est:	
Shade (%):	23.2
Mean Width (m):	5.7
Mean Depth (m):	0.5
Cover (%):	51

S.E(popest):

Habitat Type:

Pool:	13.3 %
Riffle:	60.0 %
Run:	26.7 %
Pocket:	0.0 %

Substrate

Organic:	0 %
Sand:	2 %
Gravel:	26 %
Rubble:	46 %
Boulder:	22 %
Bedrock:	5 %

Water Chemistry

Time:	
H2O Temp(C):	
Air Temp(C):	
pH:	8.6
Alkalinity(mg/l CaCO3):	220
Hardness(uS/cm3):	200
Conductivity(mg/l CaCO3):	290

Appendix C. (Continued)

STREAM: TRAIL CREEK - BROWNLEE SAMPLE DATE: 9/7/95
 EPA REACH: 17050113 QUAD MAP: Connor Creek
 RTS: R7W, T14S, S27 LAT/LONG: 44 30.97 ; 117 9.79
 SECTION DESCRIPTION: Above road to Mountain Man Lodge, fence upstream.

Length Frequency

Species	CM Group	Method	Number Measured
HRB	25	EF	1.00
HRB	26	EF	1.00
WRB	17	EF	1.00

Transect Information:

Section Length (m):
 Elevation (m): 703
 Gradient (%):
 Population Est: S.E.(popest):
 Shade (%):
 Mean Width (m):
 Mean Depth (m):
 Cover (%):

Habitat Type:

Pool: %
 Riffle: %
 Run: %
 Pocket: %

Substrate

Organic: %
 Sand: %
 Gravel: %
 Rubble: %
 Boulder: %
 Bedrock: %

Water Chemistry

Time:
 H2O Temp(C):
 Air Temp(C):
 pH:
 Alkalinity(mg/l CaCO3):
 Hardness(uS/cm3):
 Conductivity(mg/l CaCO3):

Appendix C. (Continued)

STREAM: BOISE RIVER 0257
 EPA REACH: 17050114
 RTS: R1E, T4N, S21
 SECTION DESCRIPTION: Eagle Hatchery.

SAMPLE DATE: 3/21/95
 QUAD MAP: Eagle
 LAT/LONG: ;

Length Frequency			
Species	CM Group	Method	Number Measured
BLS	49	EF	1.00
HRB	26	EF	1.00
HRB	28	EF	3.00
HRB	29	EF	1.00
HRB	31	EF	1.00
HRB	33	EF	1.00
HRB	52	EF	1.00
LSS	44	EF	1.00
LSS	47	EF	1.00
LSS	49	EF	1.00
LSS	50	EF	2.00
LSS	51	EF	2.00
LSS	52	EF	1.00
MWF	14	EF	3.00
MWF	15	EF	6.00
MWF	16	EF	16.00
MWF	17	EF	11.00
MWF	18	EF	13.00
MWF	19	EF	13.00
MWF	20	EF	4.00
MWF	21	EF	9.00
MWF	22	EF	2.00
MWF	23	EF	4.00
MWF	24	EF	2.00
MWF	25	EF	5.00
MWF	27	EF	4.00
MWF	28	EF	2.00
MWF	29	EF	3.00
MWF	30	EF	2.00
MWF	31	EF	3.00
MWF	32	EF	1.00
MWF	33	EF	2.00
WBR	20	EF	1.00
WRB	16	EF	1.00
WRB	17	EF	2.00
WRB	18	EF	4.00
WRB	19	EF	3.00
WRB	20	EF	5.00
WRB	21	EF	3.00
WRB	22	EF	2.00
WRB	24	EF	1.00
WRB	27	EF	1.00

Transect Information:			
Section Length (m):	125		
Elevation (m):	780		
Gradient (%):			
Population Est:	23.0	S.E(popest):	1
Shade (%):			
Mean Width (m):	24.3		
Mean Depth (m):	1.7		
Cover (%):	0		

Habitat Type:	
Pool:	0.0 %
Riffle:	25.0 %
Run:	75.0 %
Pocket:	0.0 %

Substrate	
Organic:	0 %
Sand:	47 %
Gravel:	23 %
Rubble:	30 %
Boulder:	0 %
Bedrock:	0 %

Water Chemistry	
Time:	
H2O Temp(C):	7
Air Temp(C):	
pH:	8
Alkalinity(mg/l CaCO3):	100
Hardness(uS/cm3):	80
Conductivity(mg/l CaCO3):	300

Appendix C. (Continued)

STREAM: BOISE RIVER 0260
 EPA REACH: 17050114
 RTS: R2E, T3N, S14
 SECTION DESCRIPTION: Municipal Park.

SAMPLE DATE: 3/23/95
 QUAD MAP: Boise South
 LAT/LONG: ;

Length Frequency			
Species	CM Group	Method	Number Measured
HRB	21	EF	1.00
HRB	24	EF	2.00
LSS	47	EF	2.00
LSS	54	EF	1.00
LSS	55	EF	1.00
MWF	17	EF	1.00
MWF	20	EF	1.00
MWF	21	EF	6.00
MWF	22	EF	3.00
MWF	23	EF	2.00
MWF	25	EF	2.00
MWF	26	EF	10.00
MWF	27	EF	15.00
MWF	28	EF	34.00
MWF	29	EF	52.00
MWF	30	EF	49.00
MWF	31	EF	17.00
MWF	32	EF	7.00
MWF	33	EF	3.00
MWF	35	EF	2.00
MWF	36	EF	1.00
MWF	37	EF	2.00
MWF	38	EF	2.00
MWF	39	EF	2.00
MWF	40	EF	1.00
MWF	393	EF	1.00
WBN	11	EF	1.00
WBN	12	EF	2.00
WBN	13	EF	3.00
WBN	14	EF	5.00
WBN	15	EF	3.00
WBN	16	EF	2.00
WBN	42	EF	1.00
WRB	9	EF	1.00
WRB	10	EF	4.00
WRB	11	EF	5.00
WRB	12	EF	4.00
WRB	13	EF	6.00
WRB	14	EF	8.00
WRB	15	EF	11.00
WRB	16	EF	5.00
WRB	17	EF	1.00
WRB	20	EF	1.00
WRB	25	EF	1.00

Transect Information:			
Section Length (m):	180		
Elevation (m):	823		
Gradient (%):			
Population Est:	51.0	S.E(popest):	4
Shade (%):			
Mean Width (m):	19.2		
Mean Depth (m):	1.4		
Cover (%):	0		

Habitat Type:	
Pool:	20.0 %
Riffle:	20.0 %
Run:	20.0 %
Pocket:	0.0 %

Substrate	
Organic:	0 %
Sand:	27 %
Gravel:	15 %
Rubble:	55 %
Boulder:	1 %
Bedrock:	0 %

Water Chemistry	
Time:	
H2O Temp(C):	6.7
Air Temp(C):	
pH:	
Alkalinity(mg/l CaCO3):	60
Hardness(uS/cm3):	40
Conductivity(mg/l CaCO3):	

Appendix C. (Continued)

STREAM: BOISE RIVER 0262
 EPA REACH: 17050114
 RTS: R2E, T3N, S30
 SECTION DESCRIPTION: Les Bois Park.

SAMPLE DATE: 3/22/95
 QUAD MAP: Eagle
 LAT/LONG: ;

Length Frequency			
Species	CM Group	Method	Number Measured
MWF	5	EF	1.00
MWF	15	EF	2.00
MWF	16	EF	3.00
MWF	17	EF	3.00
MWF	18	EF	3.00
MWF	19	EF	2.00
MWF	21	EF	1.00
MWF	28	EF	1.00
MWF	29	EF	1.00
MWF	30	EF	2.00
WBN	16	EF	1.00
WBN	18	EF	1.00
WRB	4	EF	1.00
WRB	14	EF	1.00
WRB	15	EF	1.00
WRB	17	EF	1.00
WRB	18	EF	2.00
WRB	19	EF	1.00

Transect Information:		
Section Length (m):	121.6	
Elevation (m):	797	
Gradient (%):		
Population Est:	0.0	S.E(popest):
Shade (%):		
Mean Width (m):	19.2	
Mean Depth (m):	1.1	
Cover (%):	0	

Habitat Type:	
Pool:	25.0 %
Riffle:	25.0 %
Run:	50.0 %
Pocket:	0.0 %

Substrate	
Organic:	0 %
Sand:	28 %
Gravel:	24 %
Rubble:	48 %
Boulder:	0 %
Bedrock:	0 %

Water Chemistry	
Time:	
H2O Temp(C):	8.9
Air Temp(C):	
pH:	
Alkalinity(mg/l CaCO3):	80
Hardness(uS/cm3):	60
Conductivity(mg/l CaCO3):	170

Appendix C. (Continued)

STREAM: BOISE RIVER 0265 SAMPLE DATE: 3/21/95
 EPA REACH: 17050114 QUAD MAP: Eagle
 RTS: R1E, T3N, S17 LAT/LONG: ;
 SECTION DESCRIPTION: Downstream from Eagle Road Bridge, south channel.

Length Frequency			
Species	CM Group	Method	Number Measured
BLG	8	EF	1.00
BLG	9	EF	2.00
HRB	18	EF	1.00
HRB	19	EF	1.00
HRB	21	EF	3.00
HRB	22	EF	2.00
HRB	23	EF	2.00
HRB	24	EF	1.00
HRB	27	EF	1.00
HRB	29	EF	1.00
LMB	7	EF	4.00
LMB	8	EF	1.00
LMB	9	EF	1.00
LMB	10	EF	2.00
LMB	12	EF	1.00
LSS	47	EF	1.00
MWF	9	EF	1.00
MWF	13	EF	1.00
MWF	14	EF	2.00
MWF	15	EF	6.00
MWF	16	EF	18.00
MWF	17	EF	13.00
MWF	18	EF	12.00
MWF	19	EF	15.00
MWF	20	EF	18.00
MWF	21	EF	12.00
MWF	22	EF	5.00
MWF	24	EF	3.00
MWF	25	EF	3.00
MWF	26	EF	1.00
MWF	27	EF	4.00
MWF	28	EF	3.00
MWF	29	EF	4.00
MWF	30	EF	3.00
MWF	31	EF	1.00
MWF	34	EF	2.00
MWF	35	EF	2.00
WRB	15	EF	1.00
WRB	16	EF	3.00
WRB	17	EF	3.00
WRB	18	EF	1.00
WRB	19	EF	1.00
WRB	23	EF	1.00

Transect Information:			
Section Length (m):	100		
Elevation (m):	777		
Gradient (%):			
Population Est:	10.0	S.E(popest):	1
Shade (%):			
Mean Width (m):	13.8		
Mean Depth (m):	1.9		
Cover (%):	0		
Habitat Type:			
Pool:	0.0 %		
Riffle:	0.0 %		
Run:	0.0 %		
Pocket:	0.0 %		
Substrate			
Organic:	0 %		
Sand:	13 %		
Gravel:	25 %		
Rubble:	61 %		
Boulder:	1 %		
Bedrock:	0 %		
Water Chemistry			
Time:			
H2O Temp(C):	8.3		
Air Temp(C):			
pH:	8.8		
Alkalinity(mg/l CaCO3):	100		
Hardness(uS/cm3):	80		
Conductivity(mg/l CaCO3):	310		

Appendix C. (Continued)

STREAM: BOISE RIVER 0266
 EPA REACH: 17050114
 RTS: R, T, S
 SECTION DESCRIPTION: Monroc.

SAMPLE DATE: 3/22/95
 QUAD MAP:
 LAT/LONG: ;

Length Frequency			
Species	CM Group	Method	Number Measured
HRB	27	EF	1.00
HRB	28	EF	4.00
HRB	30	EF	1.00
HRB	36	EF	2.00
MWF	13	EF	3.00
MWF	14	EF	3.00
MWF	15	EF	8.00
MWF	16	EF	28.00
MWF	17	EF	59.00
MWF	18	EF	52.00
MWF	19	EF	37.00
MWF	20	EF	6.00
MWF	21	EF	3.00
MWF	22	EF	3.00
MWF	23	EF	3.00
MWF	24	EF	5.00
MWF	25	EF	14.00
MWF	26	EF	22.00
MWF	27	EF	16.00
MWF	28	EF	4.00
MWF	29	EF	4.00
MWF	30	EF	4.00
MWF	31	EF	2.00
MWF	32	EF	5.00
MWF	33	EF	5.00
MWF	34	EF	2.00
MWF	35	EF	2.00
MWF	36	EF	2.00
MWF	37	EF	1.00
WRB	17	EF	4.00
WRB	18	EF	2.00
WRB	19	EF	2.00
WRB	21	EF	2.00

Transect Information:	
Section Length (m):	144.5
Elevation (m):	
Gradient (%):	
Population Est:	S.E(popest):
Shade (%):	
Mean Width (m):	17.2
Mean Depth (m):	1.5
Cover (%):	0

Habitat Type:	
Pool:	0.0 %
Riffle:	20.0 %
Run:	40.0 %
Pocket:	0.0 %

Substrate	
Organic:	0 %
Sand:	21 %
Gravel:	31 %
Rubble:	45 %
Boulder:	3 %
Bedrock:	0 %

Water Chemistry	
Time:	
H2O Temp(C):	9
Air Temp(C):	
pH:	9.4
Alkalinity(mg/l CaCO3):	80
Hardness(uS/cm3):	60
Conductivity(mg/l CaCO3):	150

Appendix C. (Continued)

STREAM: BOISE RIVER 0268
 EPA REACH: 17050114
 RTS: R3E, T3N, S29
 SECTION DESCRIPTION: Diversion Dam.

SAMPLE DATE: 4/7/95
 QUAD MAP: Boise South
 LAT/LONG: ;

Length Frequency			
Species	CM Group	Method	Number Measured
BLS		EF	0.00
LSS		EF	0.00
MTS		EF	0.00
MWF	26	EF	1.00
MWF	27	EF	4.00
MWF	28	EF	4.00
MWF	29	EF	8.00
MWF	30	EF	3.00
MWF	31	EF	19.00
MWF	32	EF	20.00
MWF	33	EF	40.00
MWF	34	EF	41.00
MWF	35	EF	32.00
MWF	36	EF	17.00
MWF	37	EF	3.00
MWF	38	EF	3.00
MWF	39	EF	1.00
MWF	42	EF	1.00
WRB	28	EF	1.00
WRB	34	EF	1.00

Transect Information:	
Section Length (m):	154
Elevation (m):	836
Gradient (%):	
Population Est:	S.E(popest):
Shade (%):	
Mean Width (m):	30.6
Mean Depth (m):	1.6
Cover (%):	0

Habitat Type:	
Pool:	0.0 %
Riffle:	0.0 %
Run:	0.0 %
Pocket:	0.0 %

Substrate	
Organic:	0 %
Sand:	72 %
Gravel:	4 %
Rubble:	21 %
Boulder:	3 %
Bedrock:	0 %

Water Chemistry

Time:
 H2O Temp(C):
 Air Temp(C):
 pH:
 Alkalinity(mg/l CaCO3):
 Hardness(uS/cm3):
 Conductivity(mg/l CaCO3):

Appendix C. (Continued)

STREAM: LOGGERS CREEK 050 SAMPLE DATE: 3/10/95
 EPA REACH: 17050114 QUAD MAP: Boise South
 RTS: R2E, T3N, S14 LAT/LONG: ;
 SECTION DESCRIPTION: Down from ParkCenter Blvd bridge

Length Frequency			
Species	CM Group	Method	Number Measured
CRP		EF	0.00
CSM		EF	0.00
HBN	14	EF	1.00
HBN	15	EF	1.00
HBN	16	EF	1.00
HBN	17	EF	1.00
HBN	18	EF	1.00
HRB	9	EF	2.00
HRB	10	EF	12.00
HRB	11	EF	19.00
HRB	12	EF	11.00
HRB	13	EF	18.00
HRB	14	EF	18.00
HRB	15	EF	20.00
HRB	16	EF	23.00
HRB	18	EF	4.00
HRB	19	EF	2.00
HRB	20	EF	2.00
HRB	21	EF	2.00
LMB	8	EF	5.00
LMB	9	EF	6.00
LMB	10	EF	1.00
LMB	11	EF	1.00
LMB	12	EF	1.00
LSS		EF	0.00
MTS		EF	0.00
MWF		EF	0.00
NSF		EF	0.00
RSS		EF	0.00
SPD		EF	0.00
WBN	11	EF	7.00
WBN	12	EF	1.00
WBN	13	EF	20.00
WBN	14	EF	12.00
WBN	15	EF	7.00
WBN	16	EF	5.00
WBN	17	EF	2.00
WBN	18	EF	2.00
WBN	20	EF	1.00
WBN	21	EF	2.00
WBN	22	EF	2.00
WBN	24	EF	1.00
WBN	25	EF	1.00
WBN	28	EF	1.00
WBN	32	EF	1.00
YLP	7	EF	2.00
YLP	8	EF	1.00

Transect Information:			
Section Length (m):	102		
Elevation (m):	826		
Gradient (%):			
Population Est:	68.0	S.E.(popest):	1
Shade (%):			
Mean Width (m):	10.9		
Mean Depth (m):	1.0		
Cover (%):	0		
Habitat Type:			
Pool:	60.0 %		
Riffle:	0.0 %		
Run:	40.0 %		
Pocket:	0.0 %		
Substrate			
Organic:	0 %		
Sand:	78 %		
Gravel:	14 %		
Rubble:	8 %		
Boulder:	0 %		
Bedrock:	0 %		
Water Chemistry			
Time:	12:00 PM		
H2O Temp(C):	10		
Air Temp(C):			
pH:			
Alkalinity(mg/l CaCO3):			
Hardness(uS/cm3):			
Conductivity(mg/l CaCO3):			

Appendix C. (Continued)

STREAM: LOGGERS CREEK 051 SAMPLE DATE: 3/10/95
 EPA REACH: 17050114 QUAD MAP: Boise South
 RTS: R2E, T3N, S14 LAT/LONG: ;
 SECTION DESCRIPTION: End of Park Center Blvd.

Length Frequency

Species	CM Group	Method	Number Measured
HRB	10	EF	1.00
HRB	13	EF	1.00
HRB	16	EF	1.00
LSS	5	EF	1.00
MSP	4	EF	1.00
MSP	5	EF	7.00
MSP	6	EF	3.00
MSP	8	EF	2.00
MSP	9	EF	6.00
MSP	10	EF	5.00
MSP	11	EF	2.00
NSF	9	EF	1.00
RSS	5	EF	2.00
RSS	6	EF	3.00
RSS	7	EF	7.00
RSS	8	EF	8.00
RSS	9	EF	5.00
SPD	7	EF	2.00
SPD	9	EF	1.00
WBN	10	EF	1.00

Transect Information:

Section Length (m): 91.6
 Elevation (m): 826
 Gradient (%):
 Population Est: 3.0 S.E(popest): 0
 Shade (%):
 Mean Width (m):
 Mean Depth (m):
 Cover (%):

Habitat Type:

Pool: %
 Riffle: %
 Run: %
 Pocket: %

Substrate

Organic: %
 Sand: %
 Gravel: %
 Rubble: %
 Boulder: %
 Bedrock: %

Water Chemistry

Time:
 H2O Temp(C): 7
 Air Temp(C):
 pH:
 Alkalinity(mg/l CaCO3):
 Hardness(uS/cm3):
 Conductivity(mg/l CaCO3):

Appendix C. (Continued)

STREAM: FOURMILE CREEK 056 SAMPLE DATE: 7/5/95
 EPA REACH: 17050122 QUAD MAP: Hog Cove Butte
 RTS: R1W, T9N, S19 LAT/LONG: 44 5.75 ; 116 29.56
 SECTION DESCRIPTION: STATE LANDS SECTION.

Length Frequency

Species	CM Group	Method	Number Measured
BLS	17	EF	1.00
SPD		EF	0.00
WRB	4	EF	1.00
WRB	5	EF	1.00
WRB	7	EF	1.00
WRB	16	EF	2.00

Transect Information:

Section Length (m):	36.5	
Elevation (m):	990	
Gradient (%):	1.74%	
Population Est:	5.0	S.E(popest): 1
Shade (%):	48.2	
Mean Width (m):	1.6	
Mean Depth (m):	0.5	
Cover (%):	46	

Habitat Type:

Pool:	57.1 %
Riffle:	42.9 %
Run:	0.0 %
Pocket:	0.0 %

Substrate

Organic:	5 %
Sand:	40 %
Gravel:	10 %
Rubble:	43 %
Boulder:	2 %
Bedrock:	0 %

Water Chemistry

Time:	12:21 PM
H2O Temp(C):	15
Air Temp(C):	32
pH:	7.6
Alkalinity(mg/l CaCO3):	120
Hardness(uS/cm3):	
Conductivity(mg/l CaCO3):	140

Appendix C. (Continued)

STREAM: DRY CREEK 057 SAMPLE DATE: 6/20/95
 EPA REACH: 17050122 QUAD MAP: Hog Cove Butte
 RTS: R2W, T9N, S24 LAT/LONG: ;
 SECTION DESCRIPTION: Powerline intersection, upstream from road.

Length Frequency

Species	CM Group	Method	Number Measured
WRB	4	EF	1.00
WRB	5	EF	13.00
WRB	6	EF	4.00
WRB	12	EF	2.00
WRB	13	EF	1.00
WRB	14	EF	1.00
WRB	16	EF	3.00
WRB	17	EF	5.00
WRB	18	EF	3.00
WRB	20	EF	3.00
WRB	21	EF	4.00
WRB	22	EF	2.00

Transect Information:

Section Length (m):	60
Elevation (m):	920
Gradient (%):	3.85%
Population Est:	45.0
Shade (%):	73.2
Mean Width (m):	2.5
Mean Depth (m):	0.3
Cover (%):	30

S.E.(popest): 2

Habitat Type:

Pool:	27.3 %
Riffle:	54.5 %
Run:	18.2 %
Pocket:	0.0 %

Substrate

Organic:	0 %
Sand:	1 %
Gravel:	37 %
Rubble:	46 %
Boulder:	12 %
Bedrock:	4 %

Water Chemistry

Time:	03:36 PM
H2O Temp(C):	12.8
Air Temp(C):	15.6
pH:	8.1
Alkalinity(mg/l CaCO3):	30
Hardness(uS/cm3):	
Conductivity(mg/l CaCO3):	190

Appendix C. (Continued)

STREAM: INDIAN CREEK 059 SAMPLE DATE: 6/27/95
 EPA REACH: 17050122 QUAD MAP: Paddock Valley Reservoir
 RTS: R2W, T9N, S1 LAT/LONG: 44 8.78 ; 116 31.75
 SECTION DESCRIPTION: State Lands corner of Section 1.

Length Frequency			
Species	CM Group	Method	Number Measured
SPD	7	EF	8.00
SPD	8	EF	5.00
SPD	9	EF	1.00
WRB	4	EF	3.00
WRB	5	EF	18.00
WRB	6	EF	2.00
WRB	8	EF	1.00
WRB	9	EF	1.00
WRB	10	EF	14.00
WRB	11	EF	14.00
WRB	12	EF	5.00
WRB	13	EF	6.00
WRB	14	EF	4.00
WRB	15	EF	10.00
WRB	16	EF	2.00
WRB	17	EF	2.00
WRB	18	EF	3.00
WRB	20	EF	1.00
WRB	21	EF	1.00
WRB	22	EF	1.00
WRB	24	EF	1.00

Transect Information:			
Section Length (m):	60		
Elevation (m):	994		
Gradient (%):	1.52%		
Population Est:	90.0	S.E(popest):	1
Shade (%):	73.6		
Mean Width (m):	2.7		
Mean Depth (m):	0.5		
Cover (%):	44		

Habitat Type:		
Pool:	27.3	%
Riffle:	54.5	%
Run:	18.2	%
Pocket:	0.0	%

Substrate		
Organic:	0	%
Sand:	11	%
Gravel:	29	%
Rubble:	55	%
Boulder:	4	%
Bedrock:	0	%

Water Chemistry	
Time:	12:36 PM
H2O Temp(C):	16.7
Air Temp(C):	23
pH:	9.8
Alkalinity(mg/l CaCO3):	140
Hardness(uS/cm3):	-
Conductivity(mg/l CaCO3):	130

Appendix C. (Continued)

STREAM: LITTLE WILLOW CREEK 060 SAMPLE DATE: 6/19/95
 EPA REACH: 17050122 QUAD MAP: Paddock Valley Reservoir
 RTS: R2W, T10N, S31 LAT/LONG: 0 0 ; 0 0
 SECTION DESCRIPTION: In canyon below Linson Creek mouth, 1/8 mile below private land.

Length Frequency

Species	CM Group	Method	Number Measured
WRB	7	EF	2.00
WRB	18	EF	1.00
WRB	19	EF	1.00
WRB	20	EF	2.00
WRB	21	EF	1.00

Transect Information:

Section Length (m):	60
Elevation (m):	826
Gradient (%):	3.47%
Population Est:	S.E(popest):
Shade (%):	
Mean Width (m):	6.9
Mean Depth (m):	1.5
Cover (%):	93

Habitat Type:

Pool:	27.3 %
Riffle:	39.4 %
Run:	24.2 %
Pocket:	9.1 %

Substrate

Organic:	0 %
Sand:	7 %
Gravel:	26 %
Rubble:	27 %
Boulder:	25 %
Bedrock:	15 %

Water Chemistry

Time:	04:42 PM
H2O Temp(C):	16.7
Air Temp(C):	14.4
pH:	9.3
Alkalinity(mg/l CaCO3):	20
Hardness(uS/cm3):	60
Conductivity(mg/l CaCO3):	130

Appendix C. (Continued)

STREAM: LITTLE WILLOW CREEK 061 SAMPLE DATE: 6/19/95
 EPA REACH: 17050122 QUAD MAP: Paddock Valley Res
 RTS: R2W, T10N, S29NW LAT/LONG: ;
 SECTION DESCRIPTION: Below Flag Spring.

Length Frequency

Species	CM Group	Method	Number Measured
WRB	45	EF	1.00

Transect Information:

Section Length (m):	60	
Elevation (m):	855	
Gradient (%):	1.92%	
Population Est:		S.E(popest):
Shade (%):		
Mean Width (m):	6.4	
Mean Depth (m):	1.3	
Cover (%):	74	

Habitat Type:

Pool:	15.2 %
Riffle:	57.6 %
Run:	27.3 %
Pocket:	0.0 %

Substrate

Organic:	0 %
Sand:	7 %
Gravel:	21 %
Rubble:	61 %
Boulder:	11 %
Bedrock:	0 %

Water Chemistry

Time:	01:00 PM
H2O Temp(C):	16.7
Air Temp(C):	18.9
pH:	9.1
Alkalinity(mg/l CaCO3):	20
Hardness(uS/cm3):	60
Conductivity(mg/l CaCO3):	

Appendix C. (Continued)

STREAM: UPPER FOURTH OF JULY SAMPLE DATE: 7/17/95
 EPA REACH: 17050124 QUAD MAP: Sturgill Peak
 RTS: R5W, T14N, S18 LAT/LONG: 44 32.94 ; 116 59.35
 SECTION DESCRIPTION: Section below SILICA mine.

Length Frequency

Species	CM Group	Method	Number Measured
WRB	7	EF	1.00
WRB	8	EF	8.00
WRB	9	EF	8.00
WRB	10	EF	7.00
WRB	11	EF	1.00
WRB	12	EF	3.00
WRB	13	EF	3.00
WRB	15	EF	2.00
WRB	16	EF	2.00
WRB	18	EF	1.00

Transect Information:

Section Length (m):	30		
Elevation (m):	1450		
Gradient (%):	5.83%		
Population Est:	36.0	S.E.(popest):	0
Shade (%):	70.9		
Mean Width (m):	2.6		
Mean Depth (m):	0.4		
Cover (%):	33		

Habitat Type:

Pool:	10.0 %
Riffle:	70.0 %
Run:	20.0 %
Pocket:	0.0 %

Substrate

Organic:	0 %
Sand:	12 %
Gravel:	52 %
Rubble:	33 %
Boulder:	3 %
Bedrock:	0 %

Water Chemistry

Time:	05:30 PM
H2O Temp(C):	15.6
Air Temp(C):	17.2
pH:	8.3
Alkalinity(mg/l CaCO3):	160
Hardness(uS/cm3):	160
Conductivity(mg/l CaCO3):	240

Appendix C. (Continued)

STREAM: UPPER MANN'S CREEK 002 SAMPLE DATE: 7/18/95
 EPA REACH: 17050124 QUAD MAP: Sturgill Peak
 RTS: R5W, T14N, S4 LAT/LONG: 44 34.63 ; 116 57.09
 SECTION DESCRIPTION: Spring Creek Campground.

Length Frequency

Species	CM Group	Method	Number Measured
WRB	6	EF	2.00
WRB	7	EF	3.00
WRB	8	EF	9.00
WRB	9	EF	6.00
WRB	10	EF	5.00
WRB	11	EF	6.00
WRB	12	EF	7.00
WRB	13	EF	2.00
WRB	14	EF	4.00
WRB	15	EF	2.00
WRB	16	EF	3.00
WRB	17	EF	1.00
WRB	18	EF	2.00

Transect Information:

Section Length (m):	35
Elevation (m):	1500
Gradient (%):	3.80%
Population Est:	53.0
Shade (%):	41.7
Mean Width (m):	3.7
Mean Depth (m):	0.5
Cover (%):	52

S.E(popest): 2

Habitat Type:

Pool:	6.7 %
Riffle:	46.7 %
Run:	46.7 %
Pocket:	0.0 %

Substrate

Organic:	0 %
Sand:	4 %
Gravel:	26 %
Rubble:	60 %
Boulder:	11 %
Bedrock:	0 %

Water Chemistry

Time:	05:06 PM
H2O Temp(C):	15.6
Air Temp(C):	25.6
pH:	7.9
Alkalinity(mg/l CaCO3):	100
Hardness(uS/cm3):	120
Conductivity(mg/l CaCO3):	110

Appendix C. (Continued)

STREAM: BEAR CREEK 002 SAMPLE DATE: 7/20/95
 EPA REACH: 17050124 QUAD MAP: Sturgill Peak
 RTS: R5W, T14N, S8 LAT/LONG: 44 33.31 ; 116 57.42
 SECTION DESCRIPTION: Culvert off Bear Creek Road.

Length Frequency

Species	CM Group	Method	Number Measured
WRB	7	EF	2.00
WRB	8	EF	7.00
WRB	9	EF	8.00
WRB	10	EF	2.00
WRB	11	EF	4.00
WRB	12	EF	4.00
WRB	13	EF	4.00
WRB	14	EF	5.00
WRB	17	EF	2.00
WRB	18	EF	1.00
WRB	19	EF	1.00
WRB	20	EF	1.00

Transect Information:

Section Length (m):	30		
Elevation (m):	1470		
Gradient (%):	4.07%		
Population Est:	40.0	S.E.(popest):	0
Shade (%):	40.2		
Mean Width (m):	3.7		
Mean Depth (m):	0.3		
Cover (%):	32		

Habitat Type:

Pool:	23.3 %
Riffle:	73.3 %
Run:	3.3 %
Pocket:	0.0 %

Substrate

Organic:	0 %
Sand:	6 %
Gravel:	28 %
Rubble:	57 %
Boulder:	9 %
Bedrock:	0 %

Water Chemistry

Time:	01:30 PM
H2O Temp(C):	20
Air Temp(C):	27.8
pH:	8.2
Alkalinity(mg/l CaCO3):	120
Hardness(uS/cm3):	100
Conductivity(mg/l CaCO3):	120

Appendix C. (Continued)

STREAM: HITT CREEK 002

SAMPLE DATE: 7/19/95

EPA REACH: 17050124

QUAD MAP: Sturgill Peak

RTS: R5W, T14N, S25

LAT/LONG: 44 31.78 ; 116 55.89

SECTION DESCRIPTION: Culvert section.

Length Frequency			
Species	CM Group	Method	Number Measured
WRB	7	EF	3.00
WRB	8	EF	5.00
WRB	9	EF	4.00
WRB	10	EF	5.00
WRB	11	EF	9.00
WRB	12	EF	9.00
WRB	13	EF	4.00
WRB	14	EF	3.00
WRB	15	EF	6.00
WRB	16	EF	2.00
WRB	18	EF	1.00

Transect Information:			
Section Length (m):	29.5		
Elevation (m):	1475		
Gradient (%):	4.90%		
Population Est:	53.0	S.E(popest):	0
Shade (%):	65.1		
Mean Width (m):	2.7		
Mean Depth (m):	0.4		
Cover (%):	47		

Habitat Type:	
Pool:	13.3 %
Riffle:	70.0 %
Run:	13.3 %
Pocket:	3.3 %

Substrate

Organic:	0 %
Sand:	13 %
Gravel:	36 %
Rubble:	47 %
Boulder:	4 %
Bedrock:	0 %

Water Chemistry

Time:	09:00 AM
H2O Temp(C):	14.4
Air Temp(C):	21.1
pH:	7.9
Alkalinity(mg/l CaCO3):	100
Hardness(uS/cm3):	80
Conductivity(mg/l CaCO3):	140

Appendix C. (Continued)

STREAM: MULMICK CONFLUENCE, SAMPLE DATE: 7/23/95
 EPA REACH: 17050124 QUAD MAP: Sturgill Peak
 RTS: R5W, T14N, S9 LAT/LONG: 44 33.42 ; 116 56.84
 SECTION DESCRIPTION: Starts at Mulnick gulch, goes upstream Mann's Creek 36 m.

Length Frequency

Species	CM Group	Method	Number Measured
WRB	7	EF	2.00
WRB	8	EF	4.00
WRB	9	EF	5.00
WRB	10	EF	2.00
WRB	11	EF	7.00
WRB	12	EF	5.00
WRB	13	EF	3.00
WRB	14	EF	1.00
WRB	15	EF	1.00
WRB	16	EF	1.00
WRB	17	EF	2.00

Transect Information:

Section Length (m):	36
Elevation (m):	
Gradient (%):	4.58%
Population Est:	33.0
Shade (%):	43.3
Mean Width (m):	4.1
Mean Depth (m):	0.6
Cover (%):	92
Habitat Type:	
Pool:	20.0 %
Riffle:	40.0 %
Run:	40.0 %
Pocket:	0.0 %

S.E(popest): 1

Substrate

Organic:	0 %
Sand:	6 %
Gravel:	24 %
Rubble:	39 %
Boulder:	32 %
Bedrock:	0 %

Water Chemistry

Time:	10:17 AM
H2O Temp(C):	14.4
Air Temp(C):	21.1
pH:	8.7
Alkalinity(mg/l CaCO3):	100
Hardness(uS/cm3):	100
Conductivity(mg/l CaCO3):	130

Appendix C. (Continued)

STREAM: LOWER FOURTH of JULY SAMPLE DATE: 7/22/95
 EPA REACH: 17050124 QUAD MAP: Sturgill Peak
 RTS: R5W, T14N, S33 LAT/LONG: 44 30.69 ; 116 57.32
 SECTION DESCRIPTION: Starts at confluence with Mann's Creek, goes upstream for 30 m.

Length Frequency

Species	CM Group	Method	Number Measured
WRB	8	EF	1.00
WRB	9	EF	2.00
WRB	10	EF	1.00
WRB	11	EF	2.00
WRB	12	EF	2.00
WRB	13	EF	5.00
WRB	14	EF	2.00
WRB	15	EF	2.00

Transect Information:

Section Length (m):	30		
Elevation (m):	1170		
Gradient (%):	4.82%		
Population Est:	17.0	S.E(popest):	0
Shade (%):	69.1		
Mean Width (m):	3.4		
Mean Depth (m):	0.5		
Cover (%):	80		

Habitat Type:

Pool:	20.0 %
Riffle:	50.0 %
Run:	30.0 %
Pocket:	0.0 %

Substrate

Organic:	1 %
Sand:	2 %
Gravel:	24 %
Rubble:	38 %
Boulder:	35 %
Bedrock:	0 %

Water Chemistry

Time:	06:00 PM
H2O Temp(C):	17
Air Temp(C):	19
pH:	8.2
Alkalinity(mg/l CaCO3):	160
Hardness(uS/cm3):	120
Conductivity(mg/l CaCO3):	190

Appendix C. (Continued)

STREAM: ADAMS CREEK 002
 EPA REACH: 17050124
 RTS: R5W, T13N, S4

SAMPLE DATE: 7/21/95
 QUAD MAP: Mann Creek NW
 LAT/LONG: 44 29.69 ; 116 57.06

SECTION DESCRIPTION: Culvert section, one mile from Mann's Creek to first crossing of road on Adam's Creek.

Length Frequency			
Species	CM Group	Method	Number Measured
WRB	8	EF	11.00
WRB	9	EF	18.00
WRB	10	EF	5.00
WRB	11	EF	6.00
WRB	12	EF	11.00
WRB	13	EF	2.00
WRB	14	EF	2.00
WRB	15	EF	3.00

Transect Information:			
Section Length (m):	34		
Elevation (m):	1240		
Gradient (%):	735.00%		
Population Est:	62.0	S.E.(popest):	4
Shade (%):	70.3		
Mean Width (m):	3.0		
Mean Depth (m):	0.7		
Cover (%):	64		

Habitat Type:	
Pool:	30.0 %
Riffle:	50.0 %
Run:	20.0 %
Pocket:	0.0 %

Substrate	
Organic:	0 %
Sand:	15 %
Gravel:	23 %
Rubble:	34 %
Boulder:	28 %
Bedrock:	0 %

Water Chemistry	
Time:	12:45 PM
H2O Temp(C):	14.4
Air Temp(C):	21.1
pH:	8.6
Alkalinity(mg/l CaCO3):	140
Hardness(uS/cm3):	180
Conductivity(mg/l CaCO3):	230

Appendix C. (Continued)

STREAM: SOUTH CRANE CREEK 010 SAMPLE DATE: 7/11/95
 EPA REACH: 17050124 QUAD MAP: Crane Creek Reservoir
 RTS: R2W, T11N, S16NESW LAT/LONG: ;
 SECTION DESCRIPTION: State lands section 3 miles NE of Paddock Valley Reservoir.

Length Frequency

Species	CM Group	Method	Number Measured
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Transect Information:

Section Length (m):	
Elevation (m):	1025
Gradient (%):	
Population Est:	S.E(popest):
Shade (%):	
Mean Width (m):	
Mean Depth (m):	
Cover (%):	

Habitat Type:

Pool:	%
Riffle:	%
Run:	%
Pocket:	%

Substrate

Organic:	%
Sand:	%
Gravel:	%
Rubble:	%
Boulder:	%
Bedrock:	%

Water Chemistry

Time:	
H2O Temp(C):	
Air Temp(C):	
pH:	
Alkalinity(mg/l CaCO3):	
Hardness(uS/cm3):	
Conductivity(mg/l CaCO3):	

Appendix C. (Continued)

STREAM: N CRANE CREEK 013 SAMPLE DATE: 7/13/95
 EPA REACH: 17050124 QUAD MAP: Granger Butte
 RTS: R1W, T12N, S10 LAT/LONG: ;
 SECTION DESCRIPTION: Above N Crane Road bridge crossing, all private land in area.

Length Frequency
 Species CM Method Number
 Group Measured

Transect Information:

Section Length (m):
 Elevation (m): 1000
 Gradient (%):
 Population Est: S.E(popest):
 Shade (%):
 Mean Width (m):
 Mean Depth (m):
 Cover (%):

Habitat Type:

Pool: %
 Riffle: %
 Run: %
 Pocket: %

Substrate

Organic: %
 Sand: %
 Gravel: %
 Rubble: %
 Boulder: %
 Bedrock: %

Water Chemistry

Time:
 H2O Temp(C):
 Air Temp(C):
 pH:
 Alkalinity(mg/l CaCO3):
 Hardness(uS/cm3):
 Conductivity(mg/l CaCO3):

Appendix C. (Continued)

STREAM: N CRANE CR, just below SAMPLE DATE: 7/12/95
 EPA REACH: 17050124 QUAD MAP: Riley Butte
 RTS: R1W, T12N, S36 LAT/LONG: 44 20.34 ; 116 24.71
 SECTION DESCRIPTION: Various int spring tribs to Crane Creek, transect on Crane below Sheep Creek.

Length Frequency

Species	CM Group	Method	Number Measured
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Transect Information:

Section Length (m):	56	
Elevation (m):	1075	
Gradient (%):	1.29%	
Population Est:		S.E(popest):
Shade (%):	3.3	
Mean Width (m):	5.3	
Mean Depth (m):	0.3	
Cover (%):	3	

Habitat Type:

Pool:	0.0 %
Riffle:	46.7 %
Run:	53.3 %
Pocket:	0.0 %

Substrate

Organic:	0 %
Sand:	30 %
Gravel:	24 %
Rubble:	38 %
Boulder:	7 %
Bedrock:	0 %

Water Chemistry

Time:	10:42 AM
H2O Temp(C):	18
Air Temp(C):	
pH:	8.4
Alkalinity(mg/l CaCO3):	80
Hardness(uS/cm3):	
Conductivity(mg/l CaCO3):	160

Appendix C. (Continued)

STREAM: KEITHLY CREEK 065 SAMPLE DATE: 7/27/95
 EPA REACH: 17050124 QUAD MAP: Hooper Creek
 RTS: R4W, T14N, S19 LAT/LONG: 44 31.98 ; 116 52.12
 SECTION DESCRIPTION: Transect is 2.4 miles from cattle guard, next to wide turnout in road.

Length Frequency

Species	CM Group	Method	Number Measured
WRB	8	EF	4.00
WRB	9	EF	8.00
WRB	10	EF	5.00
WRB	11	EF	4.00
WRB	12	EF	4.00
WRB	13	EF	1.00
WRB	14	EF	4.00
WRB	15	EF	2.00
WRB	16	EF	1.00
WRB	17	EF	2.00
WRB	18	EF	1.00

Transect Information:

Section Length (m):	40
Elevation (m):	1225
Gradient (%):	3.54%
Population Est:	41.0
Shade (%):	60.5
Mean Width (m):	4.7
Mean Depth (m):	0.5
Cover (%):	77

S.E(popest): 5

Habitat Type:

Pool:	0.0 %
Riffle:	70.0 %
Run:	30.0 %
Pocket:	0.0 %

Substrate

Organic:	0 %
Sand:	7 %
Gravel:	11 %
Rubble:	70 %
Boulder:	12 %
Bedrock:	0 %

Water Chemistry

Time:	06:34 PM
H2O Temp(C):	15.6
Air Temp(C):	20
pH:	8.0
Alkalinity(mg/l CaCO3):	80
Hardness(uS/cm3):	60
Conductivity(mg/l CaCO3):	100

Appendix C. (Continued)

STREAM: BROWNLEE CREEK-EAST SAMPLE DATE: 10/12/95
 EPA REACH: 17050201 QUAD MAP:
 RTS: R4W, T16N, S7 LAT/LONG: ;
 SECTION DESCRIPTION: 50 yds. downstream Nat. Forest Boundary sign. Downstream from mile marker 11.

Length Frequency

Species	CM Group	Method	Number Measured
WRB	5	EF	1.00
WRB	6	EF	2.00
WRB	9	EF	4.00
WRB	11	EF	3.00
WRB	12	EF	3.00
WRB	13	EF	4.00
WRB	14	EF	5.00
WRB	15	EF	2.00
WRB	16	EF	6.00
WRB	17	EF	3.00
WRB	18	EF	1.00
WRB	19	EF	1.00
WRB	20	EF	2.00

Transect Information:

Section Length (m):	50
Elevation (m):	
Gradient (%):	6.00%
Population Est:	42.0
Shade (%):	
Mean Width (m):	2.6
Mean Depth (m):	0.6
Cover (%):	40

S.E(popest): 5

Habitat Type:

Pool:	10.0 %
Riffle:	20.0 %
Run:	70.0 %
Pocket:	0.0 %

Substrate

Organic:	0 %
Sand:	5 %
Gravel:	48 %
Rubble:	33 %
Boulder:	15 %
Bedrock:	0 %

Water Chemistry

Time:	02:53 PM
H2O Temp(C):	8
Air Temp(C):	
pH:	9.2
Alkalinity(mg/l CaCO3):	
Hardness(uS/cm3):	120
Conductivity(mg/l CaCO3):	190

Appendix C. (Continued)

STREAM: BROWNLEE CREEK-MIDDLE SAMPLE DATE: 10/11/95
 EPA REACH: 17050201 QUAD MAP: Neil Gulch
 RTS: R5W, T16N, S23 LAT/LONG: 44 42.28 ; 116 54.39
 SECTION DESCRIPTION: Section located below first road crossing.

Length Frequency

Species	CM Group	Method	Number Measured
WRB	4	EF	1.00
WRB	5	EF	6.00
WRB	6	EF	12.00
WRB	8	EF	2.00
WRB	9	EF	7.00
WRB	10	EF	6.00
WRB	11	EF	8.00
WRB	12	EF	7.00
WRB	13	EF	12.00
WRB	14	EF	4.00
WRB	15	EF	4.00
WRB	16	EF	3.00
WRB	17	EF	1.00
WRB	18	EF	2.00

Transect Information:

Section Length (m):	51
Elevation (m):	
Gradient (%):	0.00%
Population Est:	36.0
Shade (%):	
Mean Width (m):	3.1
Mean Depth (m):	0.4
Cover (%):	0

S.E.(popest): 1

Habitat Type:

Pool:	11.1 %
Riffle:	59.3 %
Run:	22.2 %
Pocket:	7.4 %

Substrate

Organic:	0 %
Sand:	28 %
Gravel:	24 %
Rubble:	36 %
Boulder:	13 %
Bedrock:	0 %

Water Chemistry

Time:	02:00 PM
H2O Temp(C):	9
Air Temp(C):	
pH:	10.1
Alkalinity(mg/l CaCO3):	140
Hardness(uS/cm3):	100
Conductivity(mg/l CaCO3):	180

Appendix C. (Continued)

STREAM: BROWNLEE CREEK-EAST SAMPLE DATE: 10/11/95
 EPA REACH: 17050201 QUAD MAP: Advent Gulch
 RTS: R4W, T17N, S10NWSW LAT/LONG: ;
 SECTION DESCRIPTION: Starts upstream of culvert at Brownlee Campground.

Length Frequency			
Species	CM Group	Method	Number Measured
WRB	4	EF	1.00
WRB	8	EF	3.00
WRB	9	EF	5.00
WRB	10	EF	1.00
WRB	11	EF	1.00
WRB	12	EF	5.00
WRB	13	EF	4.00
WRB	14	EF	4.00
WRB	15	EF	1.00
WRB	16	EF	2.00
WRB	17	EF	1.00
WRB	18	EF	3.00
WRB	19	EF	2.00
WRB	21	EF	2.00
WRB	24	EF	1.00

Transect Information:			
Section Length (m):	54		
Elevation (m):	1250		
Gradient (%):	8.10%		
Population Est:	81.0	S.E(popest):	1
Shade (%):			
Mean Width (m):	2.9		
Mean Depth (m):	0.5		
Cover (%):	0		

Habitat Type:	
Pool:	3.3 %
Riffle:	46.7 %
Run:	16.7 %
Pocket:	33.3 %

Substrate	
Organic:	0 %
Sand:	4 %
Gravel:	23 %
Rubble:	37 %
Boulder:	33 %
Bedrock:	3 %

Water Chemistry	
Time:	11:10 AM
H2O Temp(C):	8
Air Temp(C):	
pH:	8.1
Alkalinity(mg/l CaCO3):	80
Hardness(uS/cm3):	80
Conductivity(mg/l CaCO3):	180

Appendix C. (Continued)

STREAM: BROWNLEE CREEK-MIDDLE SAMPLE DATE: 10/13/95
 EPA REACH: 17050201 QUAD MAP: Brownlee Dam
 RTS: R5W, T16N, S1 LAT/LONG: 44 45.35 ; 116 53.97
 SECTION DESCRIPTION: Bugle Basin, left up Middle Fork. Section starts approx. 50 ft. past pipe culvert.

Length Frequency

Species	CM Group	Method	Number Measured
WRB	6	EF	3.00
WRB	7	EF	7.00
WRB	8	EF	5.00
WRB	14	EF	1.00
WRB	20	EF	2.00

Transect Information:

Section Length (m):	50		
Elevation (m):	841		
Gradient (%):	4.50%		
Population Est:	19.0	S.E(popest):	2
Shade (%):			
Mean Width (m):	2.4		
Mean Depth (m):	0.4		
Cover (%):	0		

Habitat Type:

Pool:	13.3 %
Riffle:	36.7 %
Run:	43.3 %
Pocket:	6.7 %

Substrate

Organic:	0 %
Sand:	20 %
Gravel:	28 %
Rubble:	39 %
Boulder:	13 %
Bedrock:	0 %

Water Chemistry

Time:	10:15 AM
H2O Temp(C):	4
Air Temp(C):	0
pH:	9.3
Alkalinity(mg/l CaCO3):	140
Hardness(uS/cm3):	100
Conductivity(mg/l CaCO3):	340

Appendix C. (Continued)

STREAM: GRADE CREEK 050

SAMPLE DATE: 10/12/95

EPA REACH: 17050201

QUAD MAP: Brownlee Dam

RTS: R4W, T17N, S31

LAT/LONG: 44 46.09 ; 116 52.27

SECTION DESCRIPTION: Starts immediatly upstream of road crossing, about 2 miles from Grade creek gate.

Length Frequency			
Species	CM Group	Method	Number Measured
WRB	9	EF	2.00
WRB	10	EF	6.00
WRB	11	EF	4.00
WRB	12	EF	1.00
WRB	13	EF	3.00
WRB	14	EF	3.00
WRB	15	EF	1.00
WRB	16	EF	2.00
WRB	17	EF	1.00
WRB	18	EF	1.00
WRB	22	EF	1.00

Transect Information:			
Section Length (m):	50		
Elevation (m):	1036		
Gradient (%):	6.86%		
Population Est:	26.0	S.E(popest):	0
Shade (%):			
Mean Width (m):	2.1		
Mean Depth (m):	0.3		
Cover (%):	0		

Habitat Type:	
Pool:	0.0 %
Riffle:	53.3 %
Run:	36.7 %
Pocket:	10.0 %

Substrate	
Organic:	10 %
Sand:	13 %
Gravel:	25 %
Rubble:	37 %
Boulder:	15 %
Bedrock:	0 %

Water Chemistry	
Time:	03:24 PM
H2O Temp(C):	
Air Temp(C):	
pH:	
Alkalinity(mg/l CaCO3):	160
Hardness(uS/cm3):	180
Conductivity(mg/l CaCO3):	440

1995 ANNUAL PERFORMANCE REPORT

State of: Idaho

Program: Fisheries Management F-71-R-20

Project I: Surveys and Inventories

Subproject I-D: Southwest Region

Job No.: d

Title: Salmon and Steelhead Investigations

Contract Period: July 1, 1995 to June 30, 1996

ABSTRACT

Regional fisheries staff conducted snorkel surveys for chinook parr monitoring in Bearskin, Elk, and Sulphur creeks in 1995. A total of 0, 68, and 0 chinook parr were observed in the parr monitoring sites of Bearskin, Elk, and Sulphur creeks, respectively.

Salmon spawning ground surveys were conducted in Bear Valley, Elk and Sulphur creek trend areas on August 28-31 and September 1, 1995. Redds numbered 9, 0 and 1 in Bear Valley, Elk and Sulphur creek trend areas, respectively. Redd count trend areas in 1995 were 90%, 0% and 200% of trend data area counts in 1994 for Bear Valley, Elk and Sulphur Creeks, respectively.

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METHODS

Snorkel Counts

Parr monitoring snorkel counts were conducted with two snorkelers moving upstream through the trend section identifying fish species and sizes, and recording information on waterproof tablets. Snorkel sections were then measured for area, (length and minimum of four widths), of the area snorkeled.

Redd Counts

Redds were enumerated according criteria described in the Idaho Redd Counting Manual. Carcasses encountered were identified as to sex, and measured (fork length) where possible. Live fish observed were visually classified as to sex and ocean age (jacks, II, or III, IV).

RESULTS

Snorkel Counts

Four snorkel transects were completed in Bearskin, three in Elk Creek and three in Sulphur Creek. Numbers of chinook juveniles counted and areas measured are provided in Table 1.

Redd Counts

Salmon redds were counted in trend areas Idaho Redd Counting Manual in Bear Valley, Elk, creeks on August 28-31, 1995. Redds were counted on Sulphur Creek on September 1, 1995. Redds counted, dates of counts, live fish observed and carcasses encountered by area are reported in Table 2.

TABLES

Table 1. Number of age 0 chinook (Z) in general parr monitoring sections, August, 1995 in Bearskin, Elk and Sulphur creeks.

BEARSKIN CREEK 8/14 and 8/16/95

STRATA/ SECTION	NUMBER OF 'Z'	AREA SAMPLED (m)	DENSITY 'Z' IN 100M2
2A	0	867.9	0
ANDREWS/ OXBOW	0	1401.7	0
3A	0	478.4	0
3B	0	545.2	0

NOTE: Strata 1, sections A and B were not sampled do to flooding of valley caused by beaver dams. This is the third year of too much water caused by many beaver dams. This strata will be dropped from now on.

ELK CREEK 8/16/95

STRATA/ SECTION	NUMBER OF 'Z'	AREA SAMPLED (m)	DENSITY 'Z' IN 100M2
1A	31	1081.6	2.86
1B	8	1249.5	0.64
2B	29	2459.8	1.18

NOTE: One adult chinook seen at 1B could not identify sex or size because fish disappeared rapidly.

SULPHUR CREEK 8/15/95

STRATA/ SECTION	NUMBER OF 'Z'	AREA SAMPLED (m)	DENSITY 'Z' IN 100M2
2A(footbridge)	0	599.5	0
2B	0	1252.2	0
2C(ranch)	0	1104.1	0

NOTE: To better define strata and sections 1995 sampling all sections were put into strata 2 which conforms to the chinook supplementation project strata for Sulphur creek. Before there were two A monitoring sites in the same strata. Also note site 2C has been moved approximately 100m downstream from Holubetz's old site. There has been a major channel change and the old site is dry.

Table 2. Number of salmon redds, carcasses and live salmon counted in Bear Valley, Elk and Sulphur creeks during salmon redd counts, August, 1995.

Bear Valley Creek					
STREAM	SECTION	DATE	REDDS	LIVE FISH	CARCASSES
Mine Enclosure	WS- 9a	8/28	0	0	0
Mine-Cub Creek	WS- 9b	8/28	0	0	0
Cub-Sack Creek	WS- 9c	8/28	1	0	0
Sack-Elk Creek	WS- 9d	8/29	4	0	1
Elk-Poker Br.	WS-10a	8/31	4	1-20c-unk	0
Poker Br.- Fir Creek	WS010b	8/31	0	0	0

Elk Creek					
STREAM	SECTION	DATE	REDDS	LIVE FISH	CARCASSES
WF-Twin Br.	WS-11a	8/29	0	0	0
Twin Br.- Guard Sta.	WS-11b	8/30	0	0	0
Guard Sta.- Mouth	WS-11c	8/30	0	1-Jack	0

Sulphur Creek					
STREAM	SECTION	DATE	REDDS	LIVE FISH	CARCASSES
Below Ranch	WS-12	9/1	0	0	0
Above Ranch	OS- 4	9/1	1	1-30C-♀	0

1995 ANNUAL PERFORMANCE REPORT

State of: Idaho

Name: Fisheries Management F-71-R-20

Project II: Technical Guidance

Subproject II-D: Southwest Region

Period Covered: July 1, 1995 to June 30, 1996

ABSTRACT

Regional fisheries staff continue to provide a large amount of information about regional and statewide fisheries to the general public. Staff coordinated with the Natural Resource Policy Bureau Staff Biologist on comment letters on various topics. Regional staff presented the Governor' Bull Trout Plan at several open houses. One paper was published:

Allen, D.B., B.J. Flatter and K. Fite. 1996. Redband Trout *Oncorhynchus mykiss gairdneri* Population and Habitat Surveys in Southern Owyhee County, Idaho. Idaho Bureau of Land Management, February, 1996.

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1995 ANNUAL PERFORMANCE REPORT

State of: Idaho

Name: Fisheries Management F-71-R-20

Project III: Habitat Management

Subproject IV-D: Southwest Region

Period Covered: July 1, 1995 to June 30, 1996

ABSTRACT

Habitat type and substrate measurements, part of standard stream surveys, were made on stream sections in Owyhee County and on the Boise River in Boise. Results are reported in Project I, Job C of this report.

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1995 ANNUAL PERFORMANCE REPORT

State of: Idaho

Name: Fisheries Management F-71-R-20

Project IV: Population Management

Subproject IV-D: Southwest Region

Period Covered: July 1, 1995 to June 30, 1996

ABSTRACT

Fish populations and fishing in the Southwest Region (including the McCall Subregion) were enhanced by stocking approximately 898,300 fry and fingerling fish and 770,100 catchable trout. Additionally, approximately 500 largemouth bass (*Micropterus salmoides*) were removed from Paddock Valley Reservoir and transported to Lake Lowell to enhance bass spawning potential.

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