

FINAL REPORT
JOSEPH CREEK WATERSHED IMPROVEMENT
PROJECT # 98-54

Completed by:
Joe Platz

Introduction: The overall objective of this project is to improve the water quality within perennial fish-bearing streams by inputting LWM (Large Woody Material) and constructing enclosure fencing on headwater and mainstem stream systems. These projects have all been identified within Timber Sale analysis, Watershed Analysis, and stream surveys. More specific objectives include improving streambank stability, increasing riparian vegetation, increasing pool development, increasing sediment trapping, and improving the capture, storage, and safe release of water within the watershed.

Project Location: Joseph Creek Section 7 Watershed (Refer to attached map for location of projects).

Results: The following projects were completed by December 2000.

(1) Miller Spring Enclosure and Trough Installation

Livestock were excluded from one acre at Miller Spring (T 3N, R 45E, S 16) and associated perennial nonfish-bearing stream (3/16 mile of fence). In addition, one trough and two powder river gates were installed at the site. This project provides water for big game, livestock and recreation use. It protects the wetland/headwater stream and reduces livestock pressure on Elk and Little Elk Creeks (steelhead and redband trout streams). The project was funded by Grande Ronde Model Watershed and anadromous improvement (NFAF) money from the USFS.

The project was completed in 10 person days. Materials needed were one trough, treated 4x4s, PVC pipe, escape ramp, fittings, chainsaw, pulaskis, shovels, digging bar, fence materials, two powder river gates, and fencing tools.

Project cost:

10 person days x \$200 per person (cost to government)	= \$2,000
Materials	= \$1,800
Vehicle	= \$ 350
Overhead and miscellaneous	= \$ 250
Total	= \$4,400

(2) Gould Gulch Enclosure

Livestock were excluded from .25 acres at Gould Gulch (1/16 mile of fence) (T 2N, R 45E, S 15). This project protects the headwaters of this perennial fish-bearing stream (steelhead and redband trout) and promotes riparian vegetation growth. The project was funded by Grande Ronde Model Watershed and anadromous improvement (NFAF) money from the USFS.

The project was completed in 6 person days. Materials needed were chainsaw, fence materials, and fencing tools.

Project cost:

6 person days x \$200 per person (cost to government)	= \$1,200
Materials	= \$ 250
Vehicle	= \$ 200
Overhead and miscellaneous	= \$ 200
Total	= \$1,850

(3) Twin Spring Exclosure and Trough/Spring Box Installation

Livestock were excluded from .25 acres at Twin Springs (1/16 mile of fence) (T 3N, R 45E, S 28). In addition, one spring box and trough was installed at the site. This project provides water for big game and livestock, protects the wetland/upland water source, and reduces livestock pressure on Swamp, Elk and Little Elk Creeks (steelhead and redband trout streams). The project was funded by Grande Ronde Model Watershed and anadromous improvement (NFAF) money from the USFS.

The project was completed in 8 person days. Materials needed were one spring box, two troughs, treated 4x4s, PVC pipe, escape ramp, fittings, chainsaw, pulaskis, shovels, digging bar, fence materials, and fencing tools.

Project cost:

7 person days x \$200 per person (cost to government)	= \$1,400
Materials	= \$1,600
Vehicle	= \$ 250
Overhead and miscellaneous	= \$ 250
Total	= \$3,100

(4) Tamarack Spring Exclosure and Trough/Spring Box Installation

Livestock were excluded from .5 acres at Tamarack Spring (1/8 mile of fence) (T 3N, R 46E, S 6). In addition, two spring boxes and one trough were installed at the site. This project provides water for big game and livestock, protects the wetland/perennial nonfish-bearing stream and reduces livestock pressure on Peavine Creek (steelhead and redband trout streams). The project was funded by Grande Ronde Model Watershed and anadromous improvement (NFAF) money from the USFS.

The project was completed in 7 person days. Materials needed were two spring boxes, one trough, treated 4x4s, PVC pipe, escape ramp, fittings, chainsaw, pulaskis, shovels, digging bar, fence materials, and fencing tools.

Project cost:

8 person days x \$200 per person (cost to government)	= \$1,600
Materials	= \$1,400
Vehicle	= \$ 250
Overhead and miscellaneous	= \$ 250
Total	= \$3,500

(5) Poison Spring Exclosure and Trough/Spring Box Installation

Livestock were excluded from .5 acres at Poison Spring (1/8 mile of fence) (T 4N, R 47E, S 20). In addition, a new spring box and trough were installed and an old trough was reinstalled at the site. This project provides water for big game and livestock, protects the wetland/intermittent stream and reduces livestock pressure on Devils Run Creek (steelhead and redband trout streams). The project was funded by Grande Ronde Model Watershed and anadromous improvement (NFAF) money from the USFS.

The project was completed in 8 person days. Materials needed were one spring box, two troughs, treated 4x4s, PVC pipe, fittings, chainsaw, pulaskis, shovels, digging bar, fence materials, and fencing tools.

Project cost:

8 person days x \$200 per person (cost to government)	= \$1,600
Materials	= \$1,350
Vehicle	= \$ 300
Overhead and miscellaneous	= \$ 250

Total

= \$3,750

(6) West Fork Peavine Exclosures

Livestock were excluded from one acre of West Fork Peavine Creek (3/16 mile of fence) (T 4N, R 46E, S 29). This project protects a perennial fish-bearing stream and promotes increased bank stability and riparian vegetation growth. The project was funded by Grande Ronde Model Watershed and anadromous improvement (NFAF) money from the USFS.

The project was completed in 9 person days. Materials needed were chainsaw, fence materials, and fencing tools.

Project cost:

9 person days x \$200 per person (cost to government)	= \$1,800
Materials	= \$ 500
Vehicle	= \$ 300
Overhead and miscellaneous	= \$ 250
Total	= \$2,850

(7) Upper Devils Run Headwater Exclosures

Livestock were excluded from two exclosures (total of 1/2 mile of fence) for a total of 5 acres on Upper Devils Run Creek near Rice Corral Spring (T 3N, R 47&48E, S 1&6). This project protects the headwaters of this perennial nonfish-bearing stream and promotes increased bank stability and riparian vegetation growth. The project was funded by Grande Ronde Model Watershed and anadromous improvement (NFAF) money from the USFS.

The project was completed in 6 person days. Materials needed were chainsaw, fence materials, and fencing tools.

Project cost:

9 person days x \$200 per person (cost to government)	= \$1,800
Materials	= \$1,350
Vehicle	= \$ 300
Overhead and miscellaneous	= \$ 250
Total	= \$3,700

(8) Fairchild Spring Exclosure and Spring Box Installation

Livestock were excluded from .2 acres at Fairchild Spring (1/16 mile of fence) (T 4N, R 47E, S 17). In addition, a new spring box was installed at the site. This project provides water for big game and livestock, protects the wetland/perennial nonfish-bearing stream and reduces livestock pressure on Billy and Devils Run Creeks (steelhead and redband trout streams). The project was funded by Grande Ronde Model Watershed and anadromous improvement (NFAF) money from the USFS.

The project was completed in 6 person days. Materials needed were one spring box, PVC pipe, fittings, chainsaw, pulaskis, shovels, digging bar, fence materials, and fencing tools.

Project cost:

6 person days x \$200 per person (cost to government)	= \$1,200
Materials	= \$ 450
Vehicle	= \$ 200
Overhead and miscellaneous	= \$ 200
Total	= \$2,050

(9) Parls Spring Exclosure and Trough/Spring Box Installation

Livestock were excluded from one acre at Fairchild Spring (3/16 mile of fence) (T 3N, R 46E, S 9). In addition, a new spring box and trough were installed at the site. This project provides water for big game and livestock, protects the wetland/intermittent stream and reduces livestock pressure on Peavine Creek (steelhead and redband trout streams). The project was funded by Grande Ronde Model Watershed and anadromous improvement (NFAF) money from the USFS.

The project was completed in 10 person days. Materials needed were one spring box, one trough, PVC pipe, fittings, escape ramp, chainsaw, pulaskis, shovels, digging bar, fence materials, and fencing tools.

Project cost:

10 person days x \$200 per person (cost to government)	= \$2,000
Materials	= \$1,700
Vehicle	= \$ 350
Overhead and miscellaneous	= \$ 250
Total	= \$4,300

(10) Little Elk Spring Trough and Spring Box Installation

Little Elk Spring (T 3N, R 45E, S 32) was fenced in 1969 and expanded in 1978. The spring box and trough were present at the site but were not functioning. Therefore, a new spring box and trough were installed and an old trough was reinstalled (0.3 acres were treated). This project provides water for big game and livestock, protects the wetland/upland water source and reduces livestock pressure on Elk and Little Elk Creeks (steelhead and redband trout streams). The project was funded by Grande Ronde Model Watershed and anadromous improvement (NFAF) money from the USFS.

The project was completed in 4 person days. Materials needed were one spring box, two troughs, treated 4x4s, PVC pipe, chainsaw, escape ramp, pulaskis, shovels, digging bar and fittings.

For location of this project and all of the projects listed, refer to the attached map.

4 person days x \$200 per person (cost to government)	= \$ 800
Materials	= \$ 900
Vehicle	= \$ 150
Overhead and miscellaneous	= \$ 200
Total	= \$2,050

(11) Cutout Reservoir Exclosure Construction

Cutout Reservoir Exclosure (T 3N, R 47E, S 9) was originally constructed in 1972 and enlarged in 1990. Since that time, livestock were breaching the structure. This portion of the fence was reconstructed (3/8 mile of fence). In addition, the exclosure was enlarged to include the entire pond (1/8 mile of fence). Presently, the exclosure is approximately four acres. The project was funded through Grande Ronde Model Watershed and materials were bought by USFS funds.

This project was completed in 8 person days. Materials needed were chainsaw, fence materials, and fencing tools.

Project cost:

8 person days x \$200 per person (cost to government)	= \$1,600
Materials	= \$ 400
Vehicle	= \$ 250
Overhead and miscellaneous	= \$ 250
Total	= \$2,500

(12) Davis Creek Exclosure

Livestock were excluded from Davis Creek for a total of 30 acres on Davis Creek (2.5 miles of four strand barb wire fence) (T 2&3N, R 44E, S 1&35)6. This project protects this perennial fish-bearing stream (steelhead and redband trout) and promotes increased bank stability and riparian vegetation growth. The project was funded by Ruffed Grouse Society, Grande Ronde Model Watershed and anadromous improvement (NFAF) money from the USFS. *at this time not including in this project, already reported for project # 1454 and this wasnt in proposal*

The project was completed in 50 person days. Materials needed were chainsaw, fence materials, and fencing tools.

Project cost:

50 person days x \$200 per person (cost to government)	= \$10,000
Materials	= \$ 6,500
Vehicle	= \$ 1,750
Overhead and miscellaneous	= \$ 500
Total	= \$18,750

(13) Elk Creek Machine LWM Placement

Elk Creek is an important steelhead stream. Improvement projects in Elk Creek (T 2N, R 45E S 4) began in 1982. Log sills were the primary structures installed. Unfortunately, these sills began to fail and more LWM was needed to stabilize and allow the channel to meander. LWM structures were machine placed into .5 miles of Elk Creek. Logs were pinned into old structures and adjoining logs and notches in existing sill logs were deepened and/or moved. Machine placement involved the following structures: (1) LWM complexes; (2) deflectors; and (3) root wad placement. Benefits include: increased pool formation; increased fish cover, increased bank stability, increased capture, storage and safe release of water; and increased capture of sediment needed to build floodplains. Bonneville Power Administration (GRWM) dollars funded the project.

The project was completed in 18 person days. Materials needed were an excavator, chainsaw, chokers, gas-powered drill, rebar, pulaski and a sledge hammer.

Project cost:

18 person days x \$225 per person	= \$4,050
Excavator: 35 hrs x \$70/hr	= \$2,450
Materials	= \$ 750
Vehicle	= \$ 300
Overhead and miscellaneous	= \$ 400
Total	= \$7,950

(14) Upper Joseph Creek NFS Watershed LWM Placment

Large Woody Material was hand placed into 65 miles of Upper Joseph Creek NFS Watershed (Refer to attached map). LWM was placed primarily in ephemeral, intermittent and perennial nonfish-bearing streams. The above streams were in the following major drainages: Elk Creek, Peavine Creek, Chesnimus Creek, Alder Creek and Devils Run Creek (steelhead/redband trout streams). Hand placement involved: (1) felling trees or snags directly into the stream or streambank; and (2) placement of down LWM into the stream by hand. Benefits include: increased pool formation; increased capture, storage and safe release of water; and increased capture of sediment needed to build floodplains. Bonneville Power Administration, anadromous improvement (NFAF), and KV dollars from Bugcheck, Hotel, Wapiti, Reservoir, Haypen and Thomason Salvage Timber Sales funded the project.

The project was completed in 225 person days. Materials needed were chainsaws and able bodies.

Project cost:

225 person days x \$200 per person (cost to government)	= \$45,000
Materials	= \$ 2,000
Vehicle	= \$ 4,000
Overhead and miscellaneous	= \$ 1,000
Total	= \$52,000

(15) Billy Creek Drainage LWM Placement

Large Woody Material was hand placed into 7 miles of Tributaries to Billy Creek (T 4N, R 46E, S 2,11,12,13,14,15,23). Hand placement involved: (1) felling trees or snags directly into the stream or streambank; and (2) placement of down LWM into the stream by hand. Benefits include: increased pool formation; increased capture, storage and safe release of water; and increased capture of sediment needed to build floodplains. Bonneville Power Administration (GRWM) dollars funded the project.

The project was completed in 21 person days. Materials needed were chainsaws and able bodies.

Project cost:

21 person days x \$200 per person (cost to government)	= \$ 4,200
Materials	= \$ 250
Vehicle	= \$ 350
Overhead and miscellaneous	= \$ 250
Total	= \$ 5,050

(16) West Fork Peavine LWM Placement

LWM was hand placed directly into 4.5 miles of West Fork Peavine Creek (steelhead stream) (T 4N, R 46E, S 7,8,17,18,19,29). Hand placement involved: (1) felling trees or snags directly into the stream or streambank; and (2) placement of down LWM into the stream by hand. Benefits include: increased pool formation; increased capture, storage and safe release of water; and increased capture of sediment needed to build floodplains. Bonneville Power Administration (GRWM) dollars funded the project.

The project was completed in 12 person days. Materials needed were chainsaws and able bodies.

Project cost:

12 person days x \$200 per person (cost to government)	= \$ 3,000
Materials	= \$ 250
Vehicle	= \$ 250
Overhead and miscellaneous	= \$ 250
Total	= \$ 3,750

Overall Distance Totals:

LWM machine placement	.5 mile
LWM hand placement	76.5 miles
Fence construction	4.5 miles
Reinstalled troughs	2
New trough installations	6
New Spring Box installations	7

Project Maintenance: The exclosure fencing is being maintained annually by the USFS. Troughs and Spring Boxes are being maintained by the permittees. This maintenance will occur at least 10 years into the future.

Monitoring: Photo points are established and ocular observations indicate improving trends.

← calculated from sub project costs

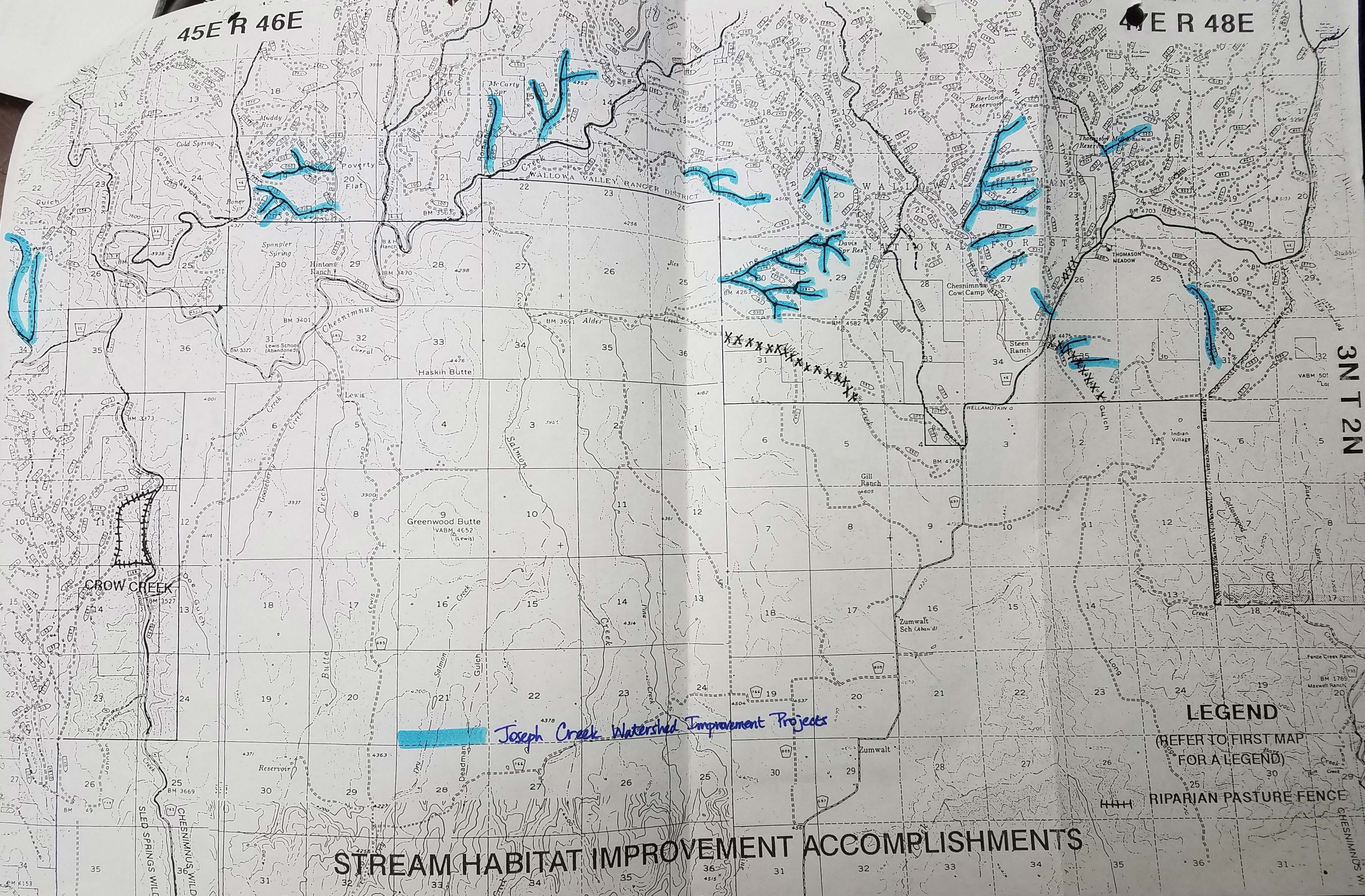
Overall Budget Totals:

Fence and trough installations	\$52,800	39,050	(- Davis Crk Fence)
LWM machine placement	\$7,950	7,950	
LWM hand placement	\$14,000	60,800	
Total:	\$74,750	<u>102,800</u>	
Project Supervision	\$4,800		
Final Report (25 hrs)	\$ 500		
Annual monitoring (1yr @ 16hrs)	\$ 320		
Fence Maintenance (4.5 mi. @ \$100/Mi/1yr)	\$ 450		
Spring Maintenance (7troughs @ \$50/1yr)	\$ 350		
Total:	\$6,420	<u>6,420</u>	
Grande Total:	\$81,170	<u>109,220</u>	

LEGEND

45E R 46E

47E R 48E



XXXXXXXXXXXX
 XXXXXXXXXXXX
 XXXXXXXXXXXX
 XXXXXXXXXXXX

Joseph Creek Watershed Improvement Projects

LEGEND

(REFER TO FIRST MAP FOR A LEGEND)

||||| RIPARIAN PASTURE FENCE

STREAM HABITAT IMPROVEMENT ACCOMPLISHMENTS

STREAM HABITAT IMPROVEMENT ACCOMPLISHMENTS

43E R 44E

44E R 45E

NORGAARD

SWAMP CREEK

MILLER SPRING

TWIN SPRING

ELK SPRING

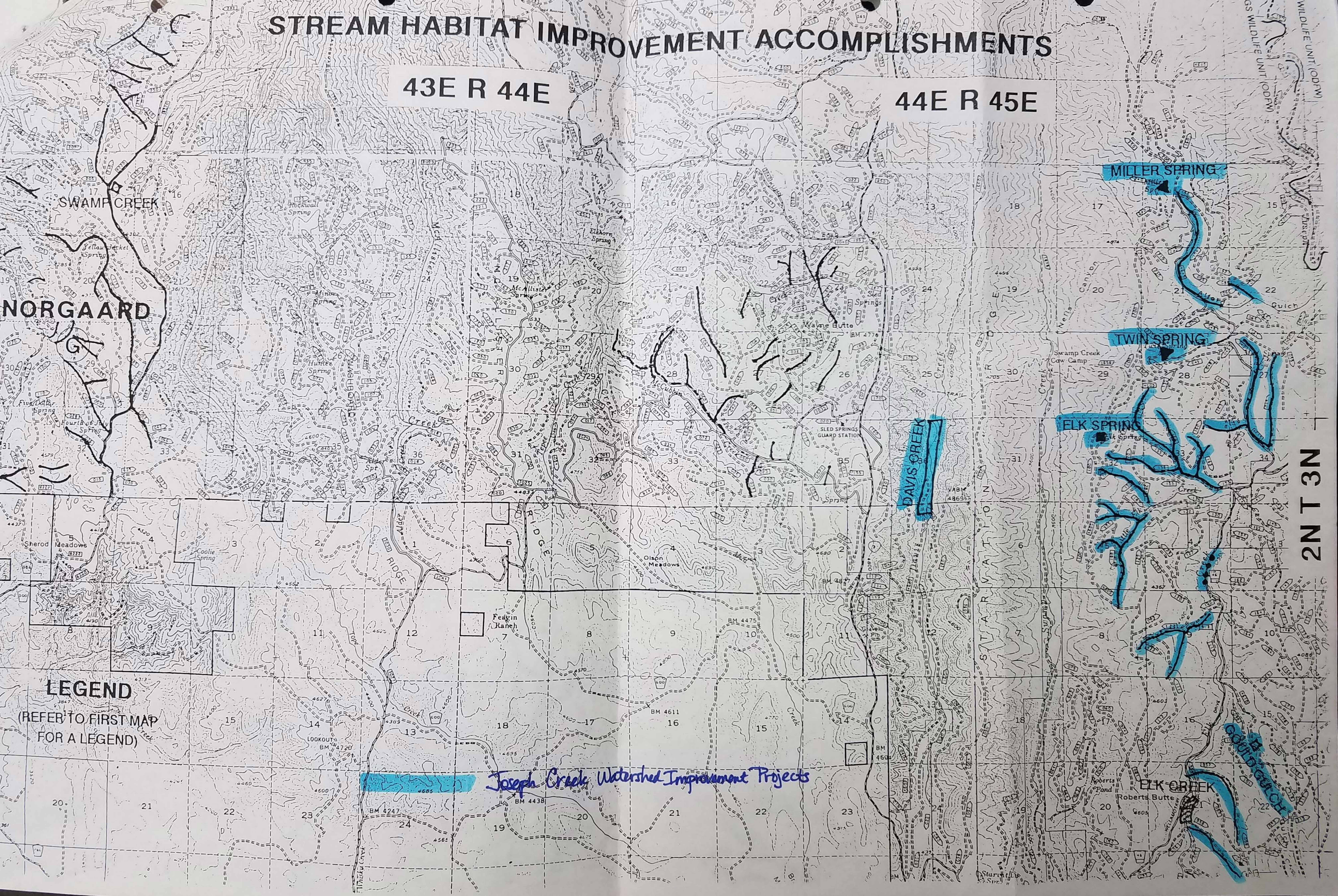
DAVIS CREEK

2N T 3N

LEGEND

(REFER TO FIRST MAP FOR A LEGEND)

Joseph Creek Watershed Improvement Projects






Joseph Creek Watershed Improvement Projects

STREAM HABITAT IMPROVEMENT ACCOMPLISHMENTS

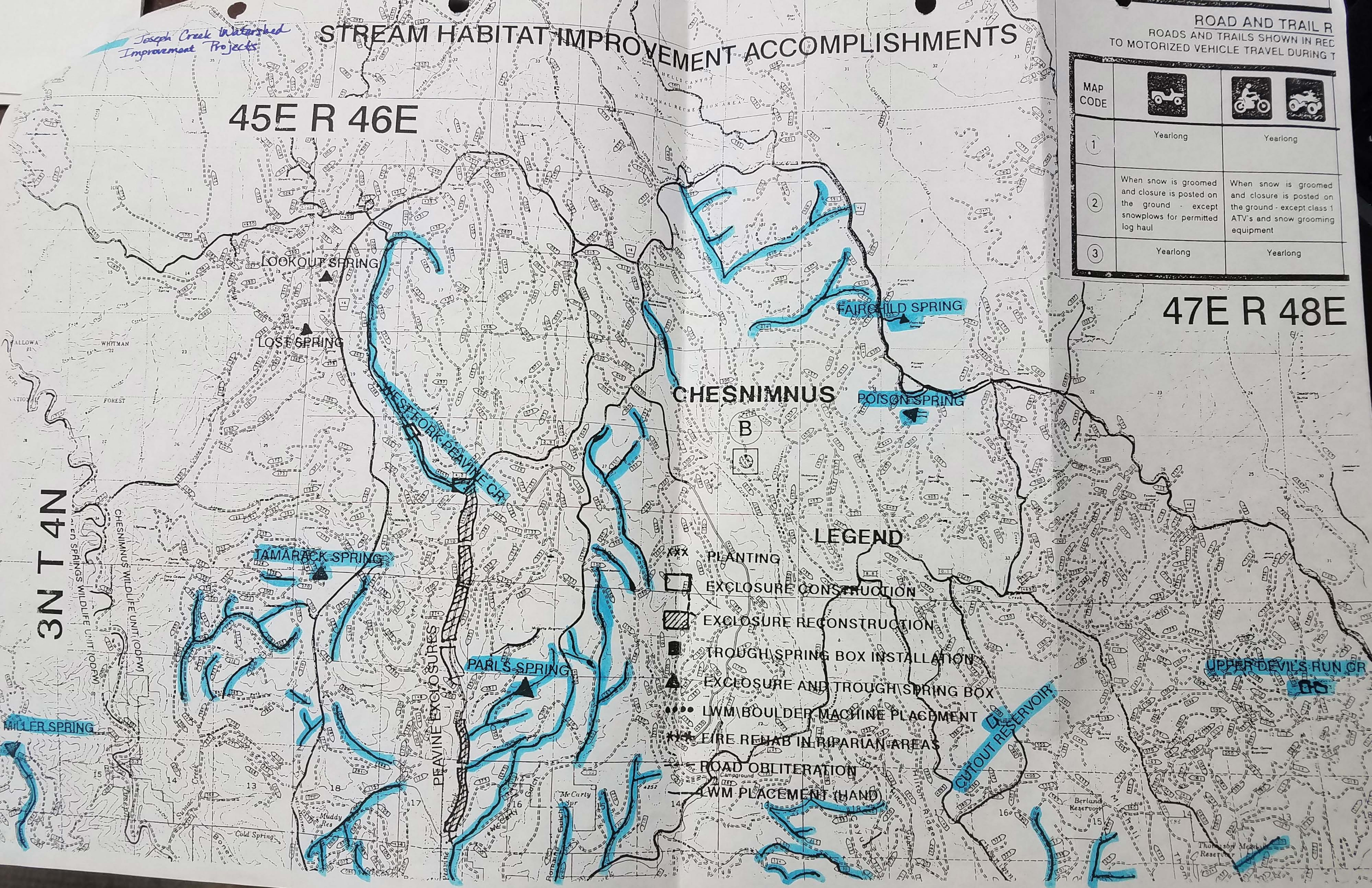
45E R 46E

ROAD AND TRAIL R
ROADS AND TRAILS SHOWN IN RED
TO MOTORIZED VEHICLE TRAVEL DURING T

MAP CODE			
1	Yearlong	Yearlong	
2	When snow is groomed and closure is posted on the ground - except snowplows for permitted log haul	When snow is groomed and closure is posted on the ground - except class 1 ATV's and snow grooming equipment	
3	Yearlong	Yearlong	










47E R 48E

3N T 4N



CHESNIMNUS

LEGEND

-  PLANTING
-  ENCLOSURE CONSTRUCTION
-  ENCLOSURE RECONSTRUCTION
-  TROUGH/SRING BOX INSTALLATION
-  ENCLOSURE AND TROUGH/SRING BOX
-  LWM/BOULDER MACHINE PLACEMENT
-  FIRE REHAB IN RIPARIAN AREAS
-  ROAD OBLITERATION
-  LWM PLACEMENT (HAND)

UPPER DEVIL'S RUN CR

CUTOUT RESERVOIR

Berland Reservoir

Thurston Reservoir