

# **STREAM INVENTORY REPORT**

## **North Fork Ten Mile River**

### WATERSHED OVERVIEW

North Fork Ten Mile River is a tributary to Ten Mile River. Elevations range from about 40 feet at the mouth of the creek to 2,200 feet in the headwater areas. North Fork Ten Mile River's legal description at the confluence with the Ten Mile River is T20N R17W S25. Its location is 39° 33'53"N. latitude and 123°42'30"W longitude according to the USGS Sherwood Peak 7.5 minute quadrangle.

### HABITAT INVENTORY RESULTS

The habitat inventory of September 13 through October 2, 1995, was conducted by Diana Hines and David Lundby. The total length of stream in North Fork Ten Mile River surveyed was 83,424 feet (16.0 miles) with an additional 1,299 feet of side channel (Table 1).

Flow measured at the mouth of North Fork Ten Mile River on September 13, 1995 was 4.01 cubic feet per second (cfs).

North Fork Ten Mile River is comprised of two reaches; Reach 1 is a B4 channel type for the first 43,613 feet while Reach 2, a B2 channel type, makes up the remaining 38,999 feet.

Table 1 summarizes the Level II riffle, flatwater, and pool habitat types. By percent occurrence, riffles comprised 23%, flatwater 33% and pools 45% of the habitat types (Graph 1). By percent total length, riffles comprised 16%, flatwater 37% and pools 47% (Graph 2).

Eighteen Level IV habitat types were identified in North Fork Ten Mile River. The data are summarized in Table 2. The most frequently occurring habitat types were low gradient riffles, 21%, mid-channel pools, 18%, and runs, 15% (Graph 3). The most prevalent habitat types by percent total length were mid-channel pools 18%, low gradient riffles 15%, and lateral scour bedrock pools as well as glides, each at 14% (Table 2).

Table 3 summarizes main channel, scour and backwater pools, which are Level III pool types. Scour pools were most often encountered at 57% occurrence and comprised 60% of the total length of pools.

Table 4 is a summary of maximum pool depths by pool habitat types. Pools with depths of two feet or greater are considered optimal for fish habitat. In North Fork Ten Mile River, 415 of the 497 pools (84%) had a depth of two feet or greater (Graph 4).

The depth of cobble embeddedness was estimated at pool tail-outs. Of the 497 pool tail-outs measured, 2% had a value of 1, 9% had a value of 2, 16% had a value of 3 and 72% had a value of 4 (Graph 5).

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Of the Level II habitat types, pools had the highest mean shelter rating at 36 (Table 1). Of the Level III pool types, scour pools had the highest mean shelter rating at 40 (Table 3).

Of the 497 Pools, 19% were formed by large woody debris (LWD): 8% by logs and 11% by root wads (calculated from Table 4).

Table 6 summarizes dominant substrate by Level IV habitat types. Of the low gradient riffles measured, 63% had gravel as the dominant substrate (Graph 6).

Mean percent closed canopy was 70%: 15% coniferous trees and 55% deciduous trees. Mean percent open was 30% (Graph 7).

Table 7 summarizes the mean percent substrate/vegetation types found along the banks of the stream. The mean percent right bank vegetated in North Fork Ten Mile River was 64% while the mean percent left bank vegetated was 66%. Deciduous trees were the dominant bank vegetation type observed in 81% of the units fully measured. Coniferous trees were dominant in 12% of the units fully measured. The dominant substrate composing the structure of the stream banks was sand/silt/clay, found in 58% of the units fully measured.

### COMMENTS AND LANDMARKS

The following landmarks and possible problem sites were noted. All distances are approximate and taken from the beginning of the survey reach.

| Position<br>(ft): | Comments:   |
|-------------------|---|
| 417               | Five redds observed.  |
| 937               | Clark Fork bridge crossing.                                       |
| 1541              | Five redds observed.  |
| 1641              | Three redds observed.   |
| 2347              | Eight redds observed.   |
| 2931              | Left bank failure measures 15' x 40', contributing fine sediment. |
| 3260              | LWD on left bank measures 70' long x 40' wide x 9' high.          |
| 3345              | Three redds observed.   |

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|       |  |
|-------|--|
| 3709  | Eight redds observed.                                      |
| 4148  | Two redds observed.  |
| 5808  | Seven redds observed. Tributary enters on right bank.      |
| 7449  | Six redds observed in tailout.                             |
| 7782  | Three redds observed.                                      |
| 8407  | Large root wad enhancing scour.                            |
| 8771  | One redd observed in tailout.                              |
| 9032  | Five redds observed.                                       |
| 10395 | Large root wad on right bank enhancing scour.              |
| 10714 | Six redds in tailout.                                      |
| 11392 | Little North Fork Ten Mile River enters on right bank.     |
| 11649 | Two redds observed in tailout of pool.                     |
| 13027 | Eight redds observed in tailout.                           |
| 13295 | Four redds observed in tailout.                            |
| 14028 | Four redds observed in tailout.                            |
| 14380 | Five redds observed in tailout.                            |
| 14479 | Redds observed in tailout.                                 |
| 14630 | Two redds observed in tailout.                             |
| 14660 | Three redds observed.                                      |
| 14912 | Enormous rootwad, four redds observed in tailout.          |
| 15156 | 10 redds observed.   |
| 15299 | Scour caused by large and small woody debris accumulation. |
| 15803 | Six redds observed.  |

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|       |   |
|-------|---|
| 16449 | Site of old creek crossing.   |
| 16583 | 15 redds observed.  |
| 16715 | Three redds observed.   |
| 16838 | RBA site NFT # 2.   |
| 16952 | Nine redds here in tail, hobo temperature monitor site.   |
| 16999 | Tributary enters on right bank.   |
| 17418 | 10 redds observed in tailout.   |
| 18337 | Three redds observed in tailout.  |
| 18521 | Four redds observed in tailout.   |
| 18905 | Old wet crossing.   |
| 19231 | Four redds observed in tailout.   |
| 19327 | Three redds observed in tailout.  |
| 19886 | Two redds observed. Right bank failure measures 50' long x 40' high. Road in jeopardy of erosion. |
| 21371 | Road is about 10 linear feet from creek, but about 20' above it.                                  |
| 21516 | Four redds observed in tailout.   |
| 21604 | Five redds observed in tailout.   |
| 21908 | Left bank failure.  |
| 21985 | Left bank failure contributing fine sediment to the channel.                                      |
| 22233 | One western toad adult observed.  |
| 22426 | One sharp tailed snake observed, three redds observed.  |
| 22796 | Two redds observed.   |
| 22915 | Four redds observed.  |
| 23154 | 10 redds observed in tailout.   |

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|       |  |
|-------|--|
| 23291 | Five redds observed.   |
| 23771 | Three redds observed in tailout.   |
| 23827 | One redd observed in tailout.  |
| 24633 | Four redds observed.   |
| 25737 | Five redds observed.   |
| 26536 | Railroad crossing.   |
| 26752 | Four redds observed.   |
| 27313 | Left bank failure.   |
| 27835 | 3-4 redds observed.  |
| 29341 | King fisher observed.  |
| 29642 | Main road bridge, Two redds observed.  |
| 30288 | Two redds observed.  |
| 31202 | Second main road bridge.   |
| 31965 | Three redds observed.  |
| 32221 | Two redds observed. 4' undercut bank.  |
| 32540 | Right bank buttressed with LWD approximately 60 -70 yrs old, still holding.  |
| 32648 | This pool is complex, scours associated with boulders, log, and bedrock. Hobo temperature monitor in pool. Four redds observed in tailout. |
| 32873 | Three redds in tailout.  |
| 33597 | Two redds in tailout.  |
| 33785 | Three redds observed in tailout.   |
| 33927 | Five redds here, small seep on left bank. Great STS salamander site.   |
| 34228 | O'Conner Creek enters on right bank.   |

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34574 Left bank seep. Good STS salamander site

34802 Four redds observed.

35061 Three redds observed.

36539 Four redds in tailout. Tributary enters on left bank. Possible STS site.

36986 Eight redds observed.

37273 One redd observed in tailout.

37591 Left bank seep.

37770 Two redds observed.

37958 One redd observed.

38215 Two dippers, seven redds observed.

38520 Left bank seep.

38637 Tributary enters on right bank.

38880 Two redds observed.

39075 One redd observed.

39249 Six redds observed in tailout.

39884 Trib enters on left bank. Good STS site.

40261 Three redds observed in tailout.

40513 Five redds at tailout.

41600 Six redds in tailout.

42198 Seven redds. Confluence with Bald Hill Creek on right bank

43210 Five redds in tailout.

43251 Small tributary entering on left bank. Good STS site.

44041 Eight redds in tailout.

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|       |  |
|-------|--|
| 44419 | Channel type measured.   |
| 44944 | Trib enters on right bank.   |
| 45184 | One redd in tailout.   |
| 45215 | Left bank failure measures 40' long x 50' high, contributing fine sediment to the channel. |
| 45292 | Nine redds.  |
| 45802 | Four redds.  |
| 45921 | 12 redds in tailout.   |
| 45965 | One redd.  |
| 47302 | Four redds.  |
| 48718 | Eight redds.   |
| 50194 | Four redds.  |
| 50589 | 13 redds.  |
| 51058 | Three redds.   |
| 51470 | Five redds in tailout.   |
| 51712 | 10 redds in tailout.   |
| 51939 | Two redds.   |
| 52169 | Three redds in tailout.  |
| 52655 | Nine redds in tailout.   |
| 52820 | Three redds.   |
| 53635 | Gulch 8 enters on right bank.  |
| 54232 | Four redds.  |
| 54429 | Four redds.  |
| 55432 | Six redds.   |

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|       |   |
|-------|---|
| 55510 | Three redds.  |
| 55645 | Six redds.  |
| 56095 | Seven redds.  |
| 56330 | Seven redds.  |
| 57242 | Tributary enters on left bank.  |
| 57772 | These units are about 10' from road, but about 30' below it                         |
| 58759 | Gulch Eleven enters on right bank.  |
| 59835 | Two redds.  |
| 60549 | Tributary enters on left bank.  |
| 60994 | One redd.3  |
| 61087 | Bullfrog observed.  |
| 61293 | Three redds.  |
| 62700 | Five to six redds.  |
| 62819 | Four redds.   |
| 63596 | Three redds.  |
| 64044 | Three redds.  |
| 64428 | Three redds.  |
| 65032 | Tributary enters on left bank. Good STS site.                                       |
| 65660 | Two redds.  |
| 66660 | Very big pool measures 120' long x 70' wide, mixed left scour and mid-channel pool. |
| 68633 | Wooden bridge measures 50' high x 81' long x 115' wide.                             |
| 68828 | Tributary enters on left bank.  |



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|-------|--|
| 68881 | Gulch 19 enters on right bank.   |
| 69653 | Two redds in tailout.  |
| 69690 | Two redds in tailout.  |
| 69952 | Tributary enters on left bank.   |
| 70122 | Three redds.   |
| 70518 | Two redds.   |
| 71104 | Six redds.   |
| 71175 | Left bank failure measures 80' long x 15' high, contributing fine sediment to the channel. |
| 71907 | Four redds.  |
| 71952 | RBA site NFTM # 5.   |
| 72044 | Hobo temperature monitor site.   |
| 72154 | 10 redds scattered.  |
| 72580 | Five redds.  |
| 72811 | Patsy Creek enters on left bank.   |
| 73197 | Bullfrog observed. Bridge crossing 13' x 36'.  |
| 73435 | Five redds observed in tailout.  |
| 75327 | Three redds.   |
| 75527 | Bullfrog observed.   |
| 75672 | Four redds in tailout.   |
| 76030 | Four redds in tailout.   |
| 76282 | Left bank failure contributing fine sediment and redwood tree to channel.                  |
| 76401 | Three redds in tailout.  |
| 77855 | Four redds in tailout.   |

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|       |   |
|-------|---|
| 77966 | Six redds.  |
| 78588 | Six redds.  |
| 78622 | Four redds.   |
| 78957 | Three redds in unit.  |
| 79821 | Tributary enters on right bank. Fish observed in the tributary.                         |
| 80019 | Five redds. Hobo temperature monitor in pool. NFT #9.                                   |
| 80479 | Four redds in tailout.  |
| 80867 | Tributary enters on right bank.   |
| 81448 | Dry tributary on left bank.   |
| 82778 | Tributary enters on left bank.  |
| 83165 | End of survey at Georgia-Pacific property line. Standley Creek enters on the left bank. |