



FOREST PRACTICE COMMITTEE

Class II-L Watercourse Regulations

June 3, 2013

LOCATION AND PURPOSE OF THE FIELD VISITS

Field Visit Locations:

- **May 16, 2013 - JDSF and CTM lands, Coast Forest District, Mendocino County**
- **May 28, 2013 – Michigan-California Timberlands, Northern Forest District, Siskiyou County**

Purpose of Field Visits:

- **Evaluate the three criteria (drainage area, stream order, active channel width) provided in draft regulation for determination of their accuracy and utility.**
- **Examine a representative sample of the range of Class II watercourse attributes of drainage area, stream order, and active channel widths.**

THREE PROPOSED REGULATORY CRITERIA

A Class II-L watercourse is defined as a Class II watercourse having one or more of the following characteristics:

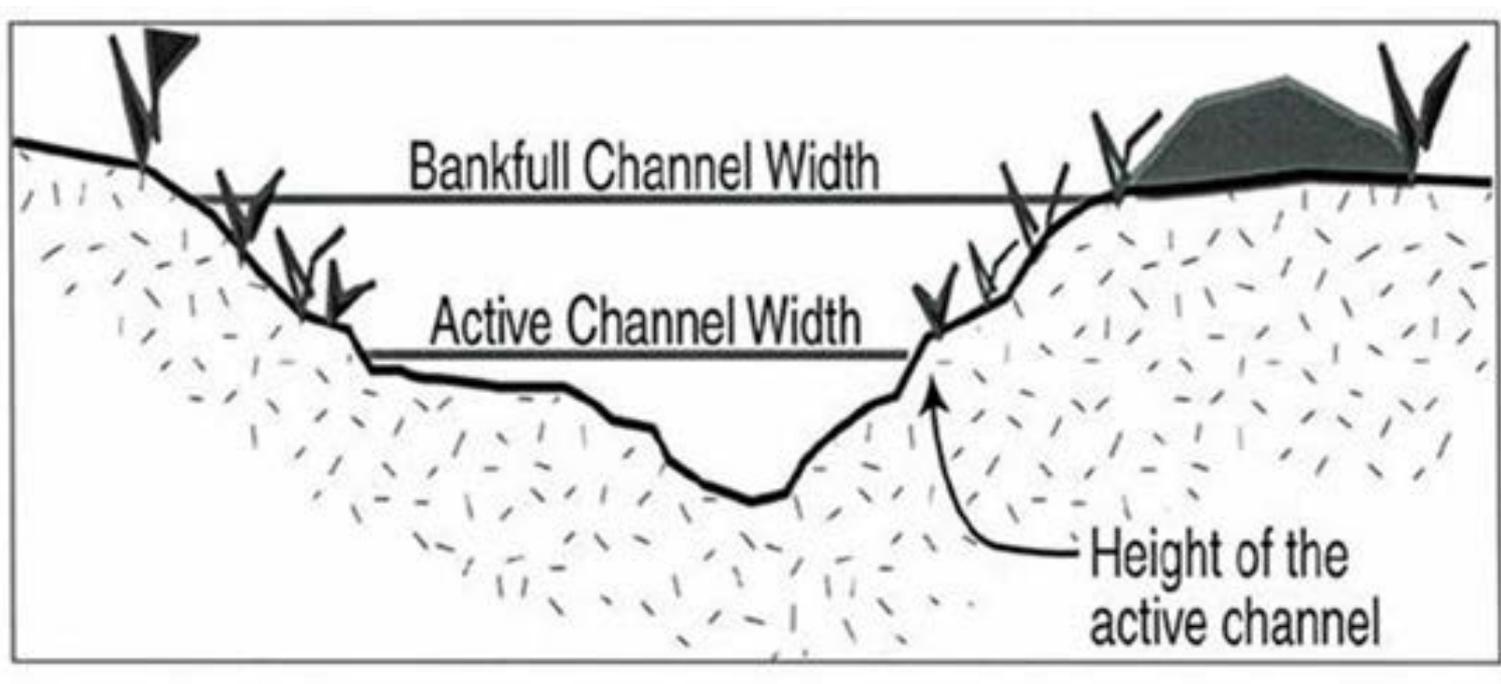
- Contributing drainage area of ≥ 100 acres as measured from the Class I and Class II confluence;
- Meets the FPR 895.1 definition of a third order or larger watercourse;
- An *average active channel width* of five feet or greater near the confluence with the receiving Class I watercourse. Where field measurements are necessary to make this determination, active channel width measurements shall be taken at 50 foot intervals starting at the where the Class II watercourse intersects the Class I WLPZ boundary and moving up the Class II watercourse approximately 200 feet. The combined average of these five measurements shall be used to establish the average active channel width.

ACTIVE CHANNEL WIDTH

Active Channel Width refers to 'non-vegetated width' of channel also indicated by presence of 'actively scoured sediment.' A definition of the term should be included in § 895.1 for draft rule proposal.

The diagram below from Taylor and Love, 2003 was excerpted from the Federal Highway Administration website, **Design For Fish Passage at Roadway - Stream Crossings: Synthesis Report.**

See: <http://www.fhwa.dot.gov/engineering/hydraulics/pubs/07033/6.cfm>



Coast Forest District-Clark Fork of Ten Mile River



Photo CD-1

Drainage Area=88 ac.

Stream Order=2nd

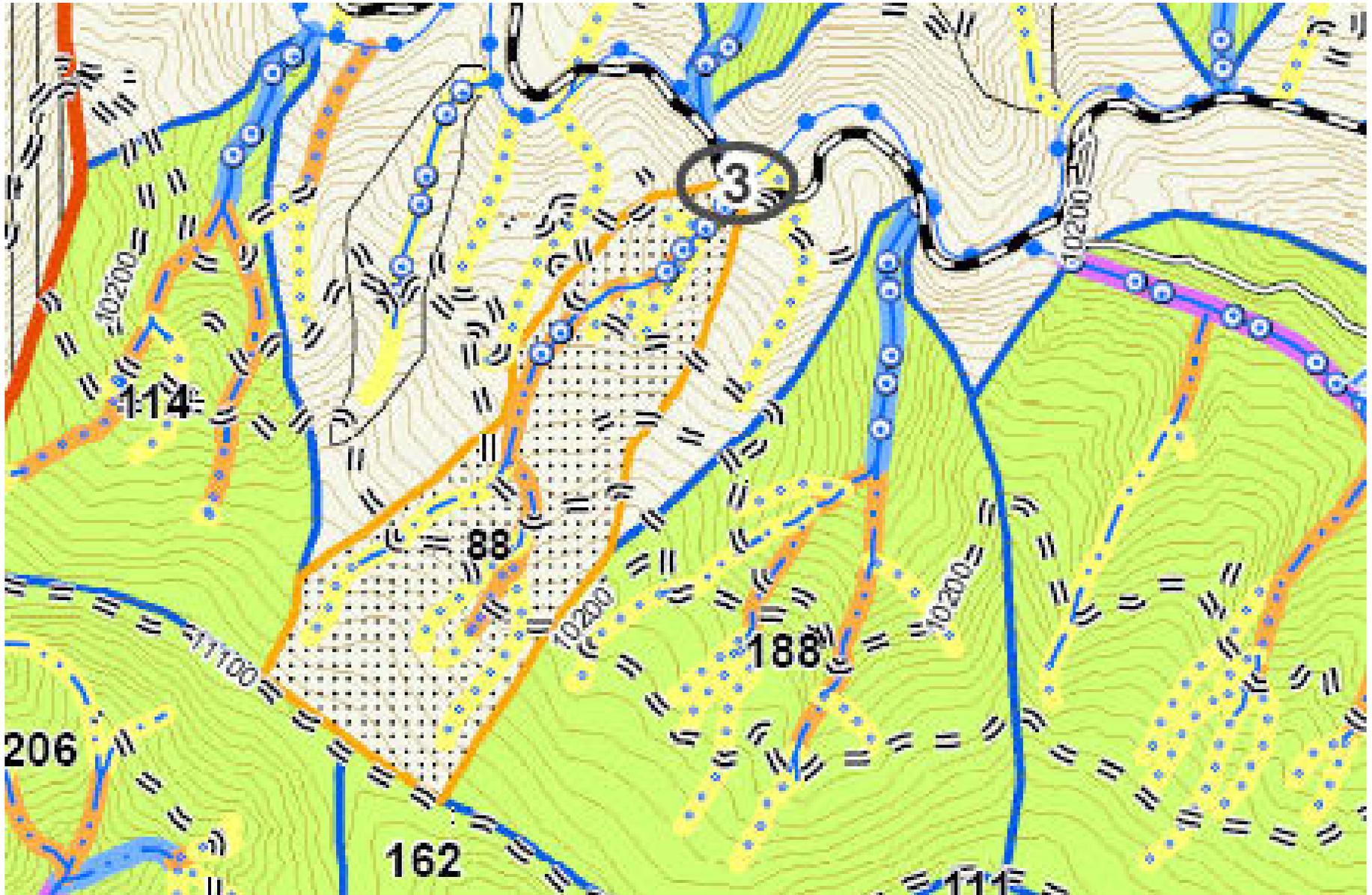
ACW=5.2 ft.

Width of Class I at
Class II Confluence
=34 ft.

Exhibits flow into Clark
Fork

New 66" CMP to
replace existing 60"
CMP in 2013

Coast Forest District-Clark Fork of Ten Mile River



CD-1: Clark Fork of Ten Mile River



CD-1: Clark Fork of Ten Mile River



CD-1: Clark Fork of Ten Mile River



CD-1: Clark Fork of Ten Mile River



CD-2: Clark Fork of Ten Mile River



Photo CD-2

Drainage Area=71 ac.

Stream Order=2nd

ACW=3.3 ft.

Width of Class I at
Class II Confluence
=43 ft.

Exhibits minor flow into
Clark Fork

Flows across seasonal
road via rocked ford
xing

CD-2: Clark Fork of Ten Mile River



CD-2: Clark Fork of Ten Mile River



CD-2: Clark Fork of Ten Mile River



CD-2: Clark Fork of Ten Mile River



CD-3: North Fork of Ten Mile River



Photo CD-3

Drainage Area=80 ac.

Stream Order=2nd

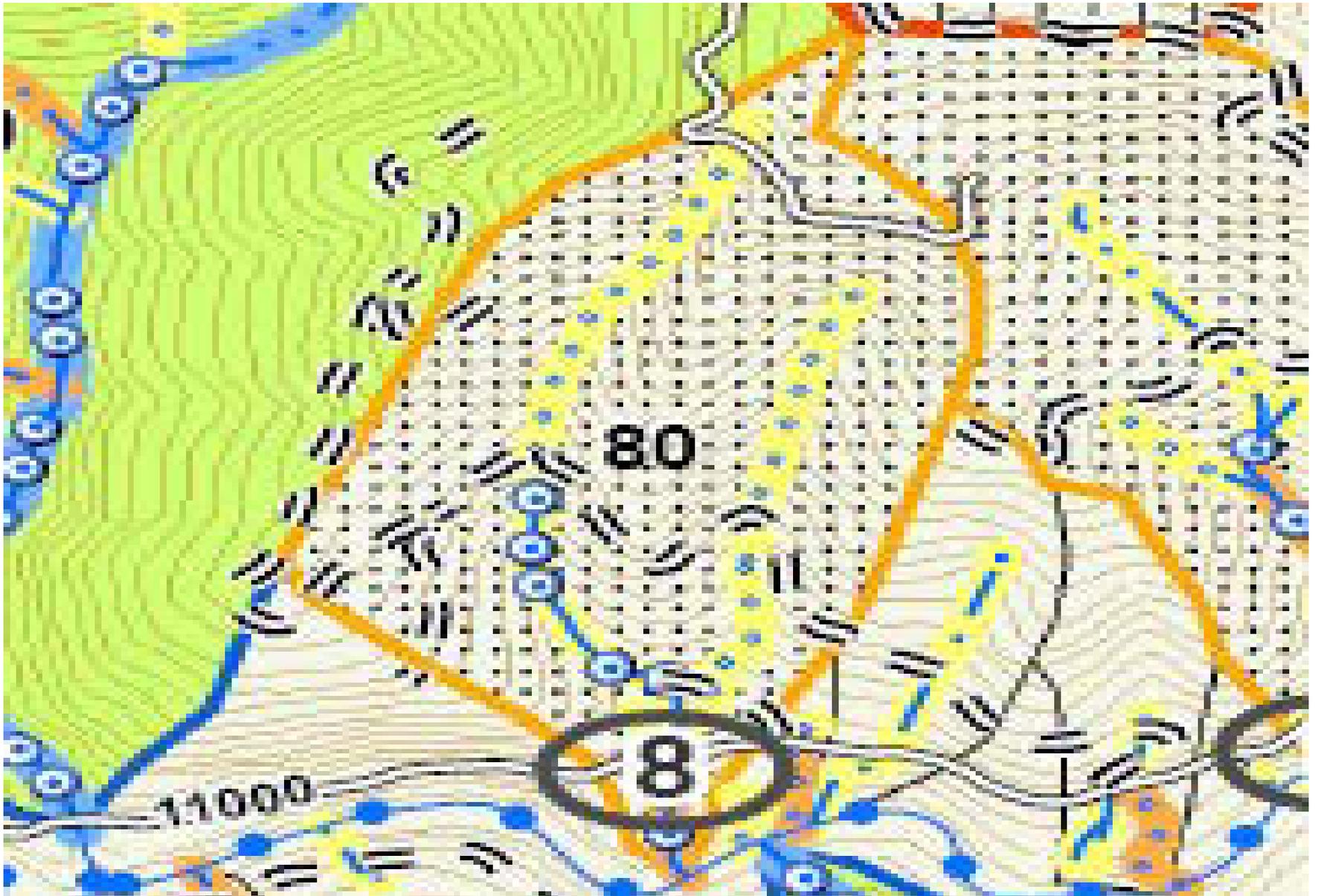
ACW=4.3 ft.

Width of Class I at
Class II Confluence
=72 ft.

Exhibits minor flow into
North Fork.

Flows across main
haul road.

CD-3: North Fork of Ten Mile River



CD-3: North Fork of Ten Mile River



CD-3: North Fork of Ten Mile River



CD-3: North Fork of Ten Mile River



CD-4: North Fork of Ten Mile River



Photo CD-4

Drainage Area=52 ac.

Stream Order=2nd

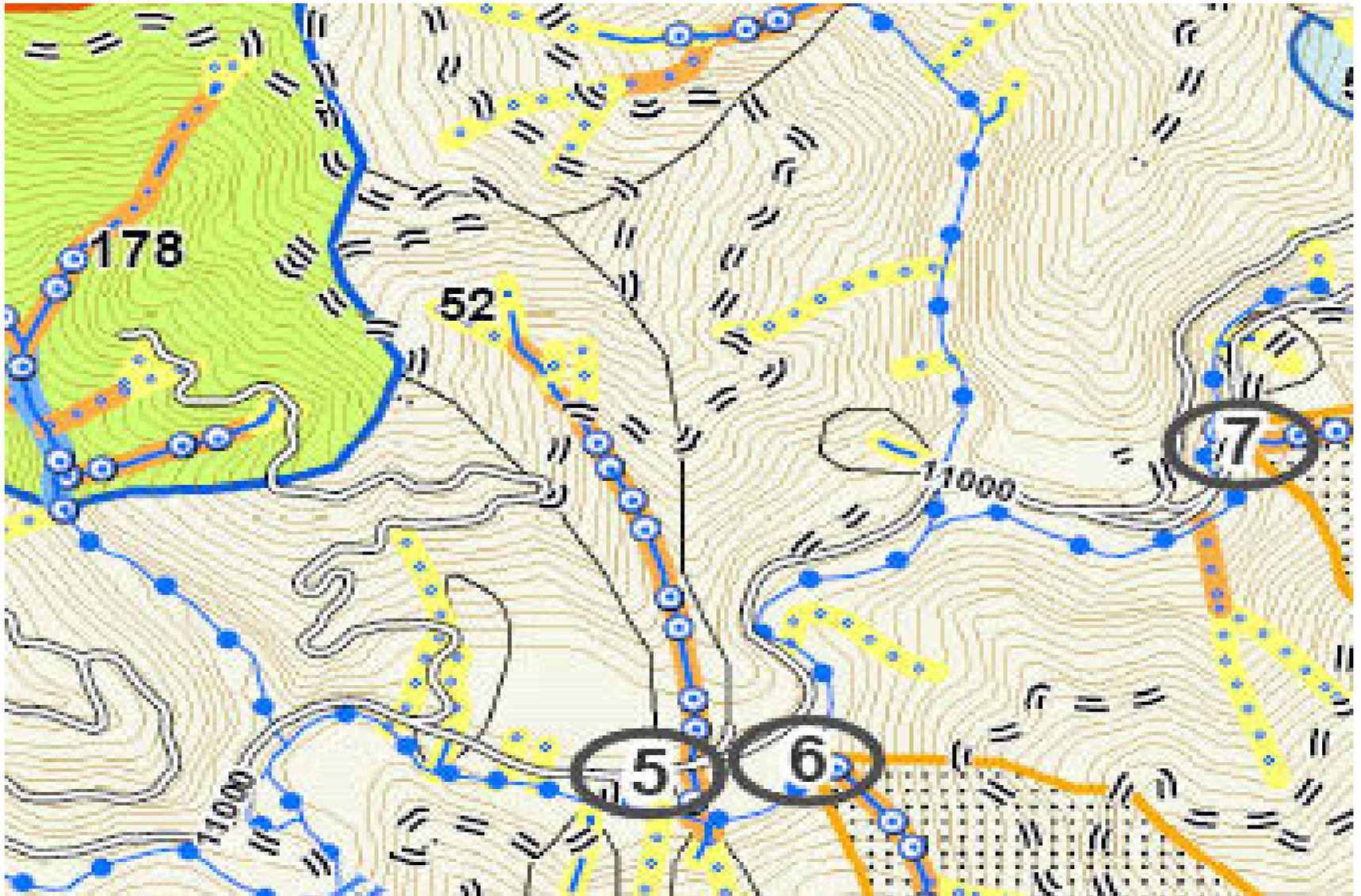
ACW=3.0 ft.

Width of Class I at
Class II Confluence
=73 ft.

No surface flow into
North Fork.

Flows across main
haul road onto
terrace/flood prone
area.

CD-4: North Fork of Ten Mile River



CD-4: North Fork of Ten Mile River



CD-4: North Fork of Ten Mile River



CD-5: Clark Fork of Ten Mile River



Photo CD-5

Drainage Area=118 ac.

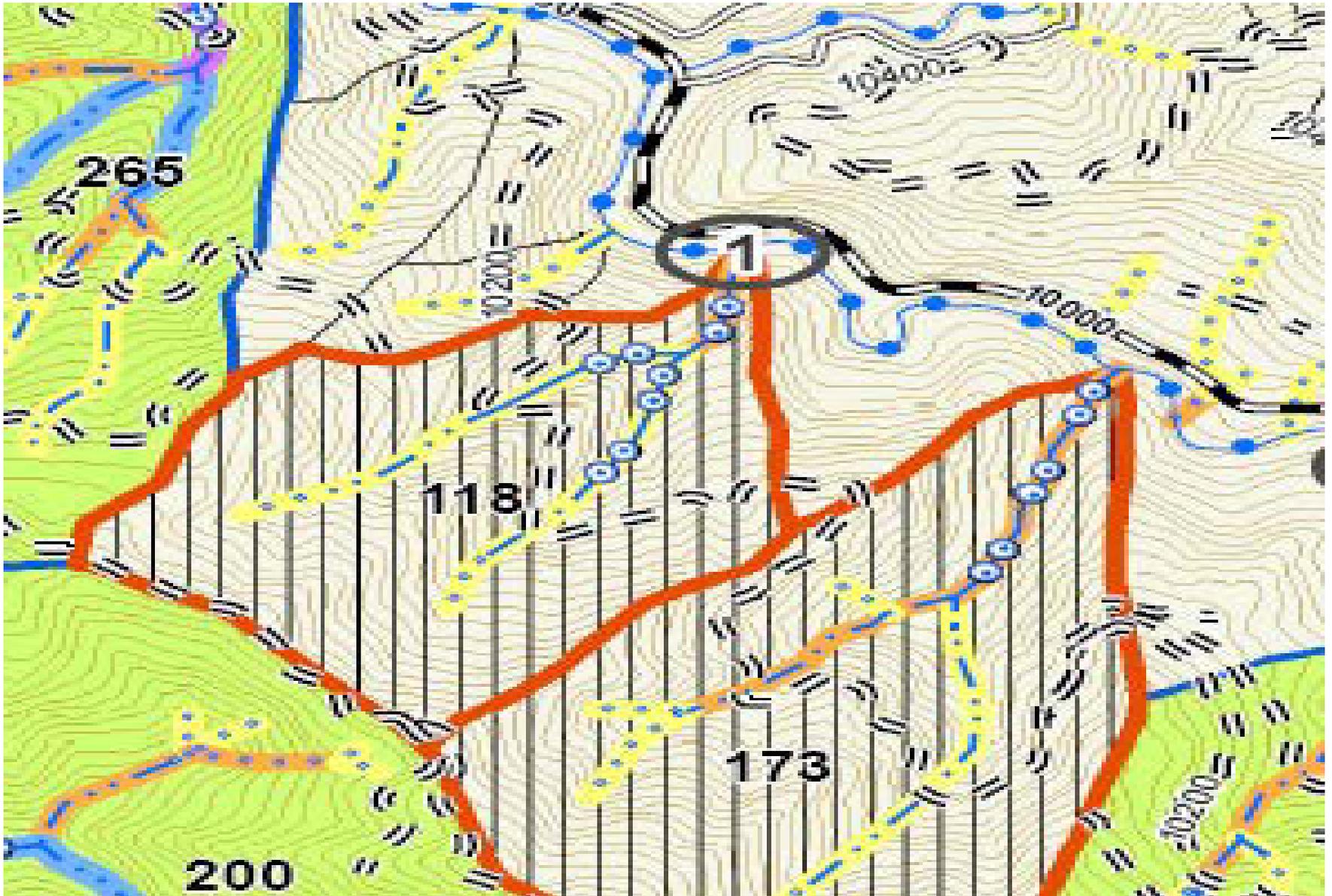
Stream Order=2nd

ACW=5.5 ft.

Width of Class I at
Class II Confluence
=40 ft (39.7').

Exhibits flow into Clark
Fork

CD-5: Clark Fork of Ten Mile River



CD-5: Clark Fork of Ten Mile River



Northern District



ND-1: Etna Creek 01



Photo ND-1

Drainage Area=150 ac.

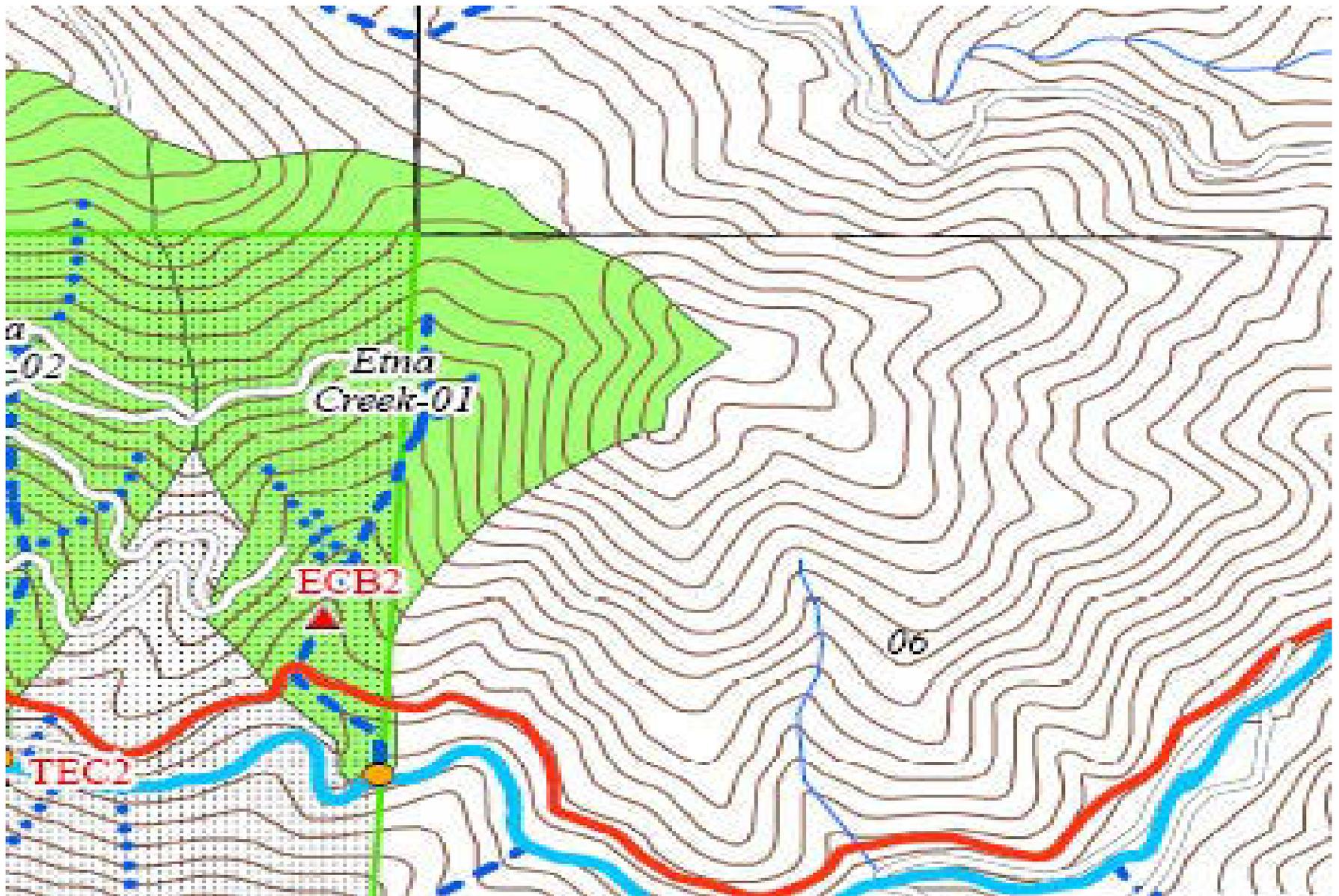
Stream Order=2nd

ACW=3.5 ft.

Width of Class I at
Class II Confluence
=Approx. 36 ft.

Perennial flow

ND-1: Etna Creek



ND-1: Etna Creek



ND-1: Etna Creek



ND-1: Etna Creek



ND-2: Etna Creek 02



Photo ND-2

Drainage Area=164 ac.

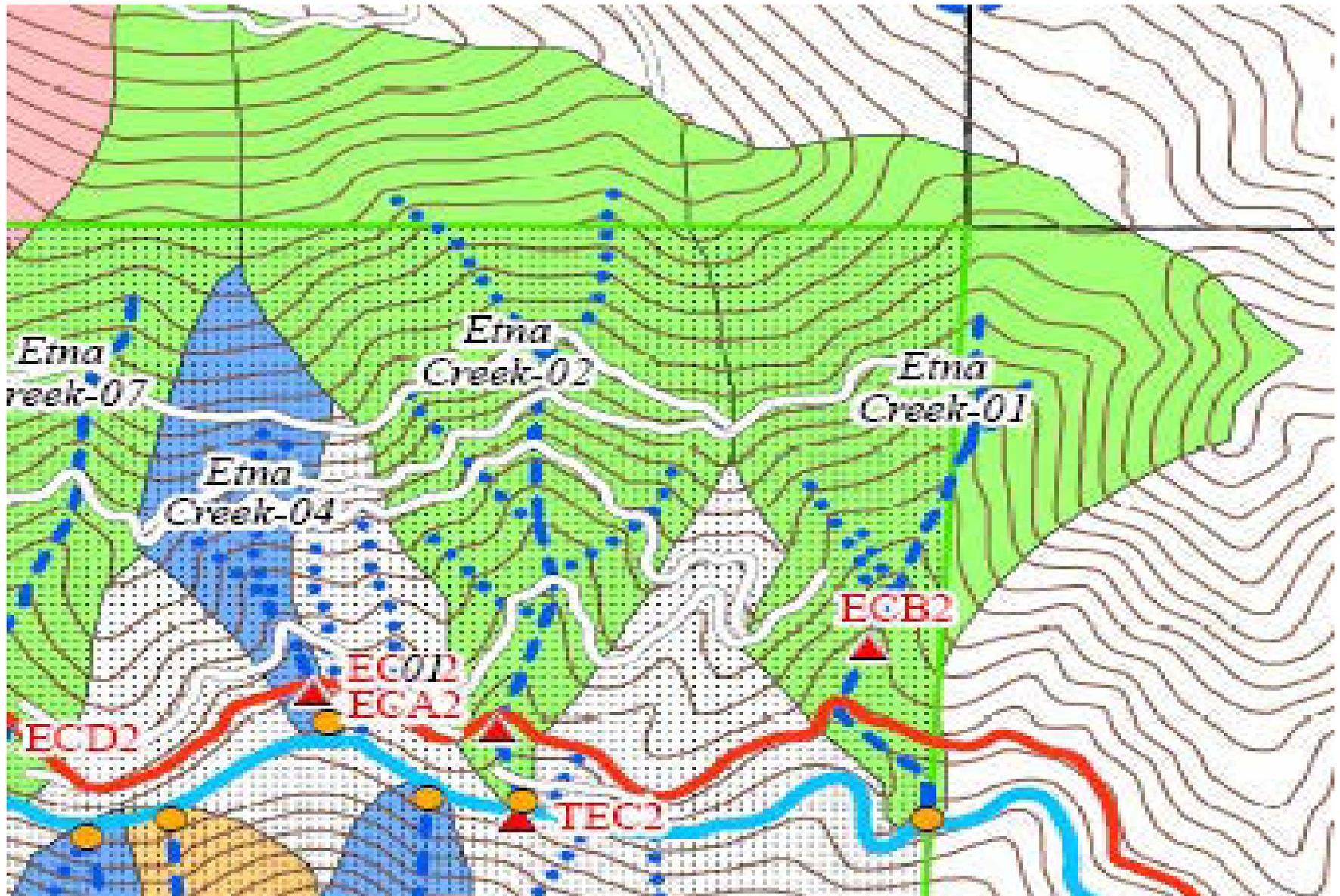
Stream Order=2nd

ACW=3.0 ft.

Width of Class I at
Class II Confluence
=Approx. 48 ft.

Perennial flow

ND-2: Etna Creek



ND-2: Etna Creek



ND-2: Etna Creek



ND-2: Etna Creek



ND-2: Etna Creek



ND-3: Etna Creek 04



Photo ND-3

Drainage Area=34 ac.

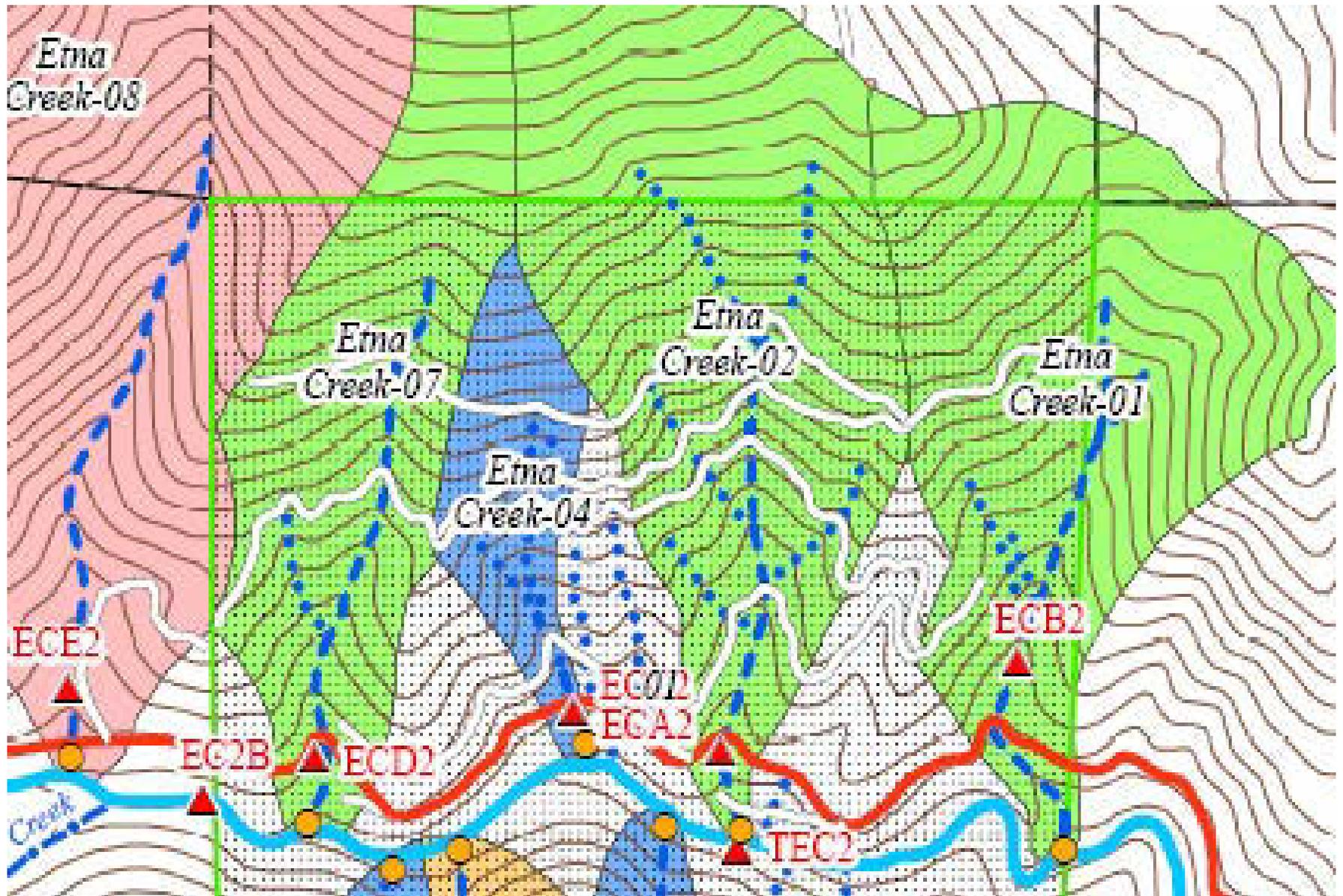
Stream Order=2nd

ACW=2.4 ft.

Width of Class I at
Class II Confluence
=Approx. 60 ft.

Low flows

ND-3: Etna Creek 04



ND-3: Etna Creek 04



ND-3: Etna Creek 04



ND-3: Etna Creek 04



ND-4: Etna Creek 07



Photo ND-4

Drainage Area=108 ac.

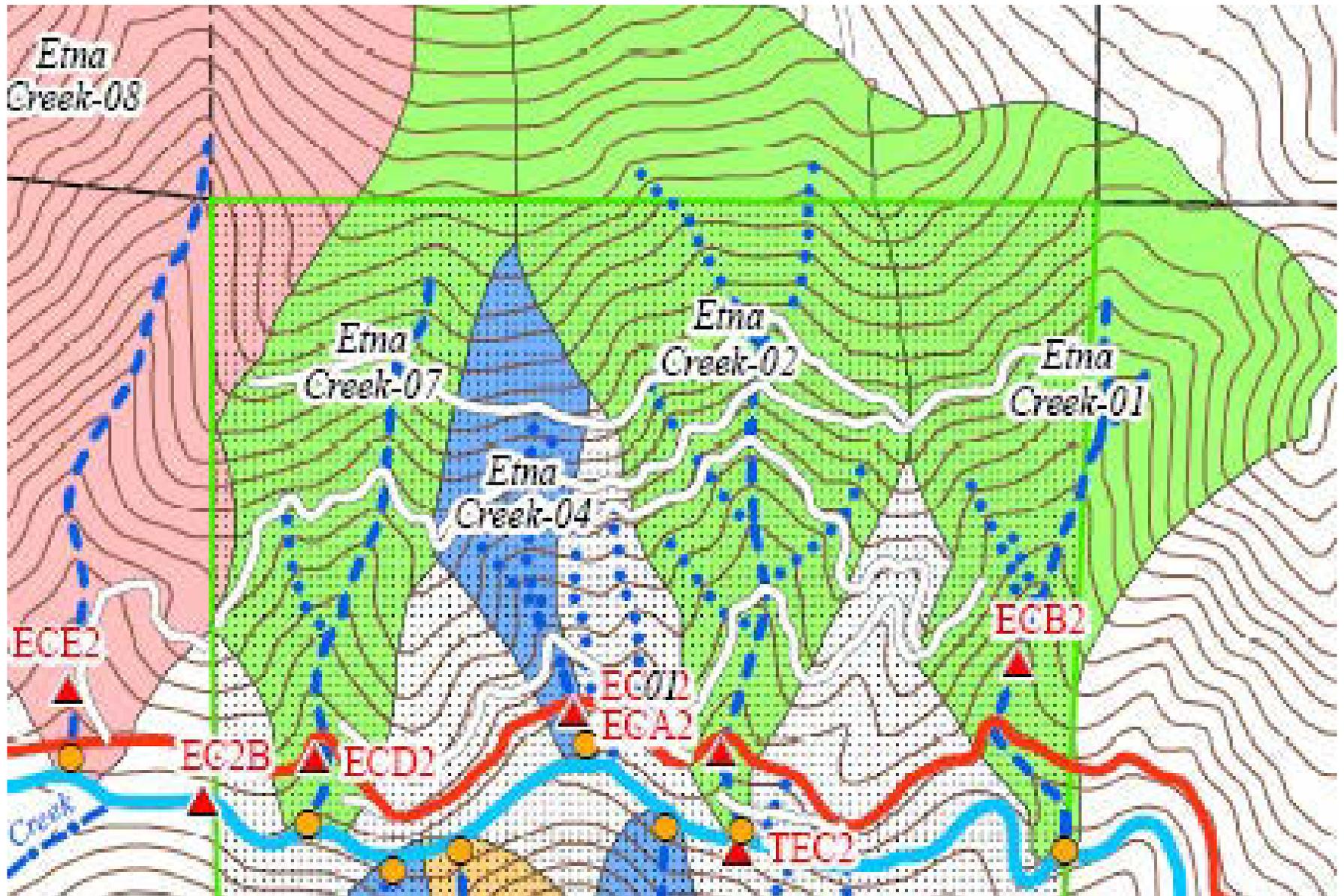
Stream Order=2nd

ACW=2.5 ft.

Width of Class I at
Class II Confluence
=Approx. 60 ft.

County road crossing-
undersized culvert
(partially obstructed)

ND-4: Etna Creek 07



ND-4: Etna Creek 07



ND-4: Etna Creek 07



ND-4: Etna Creek 07



ND-4: Etna Creek 07



ND-5: Etna Creek 08



Photo ND-5

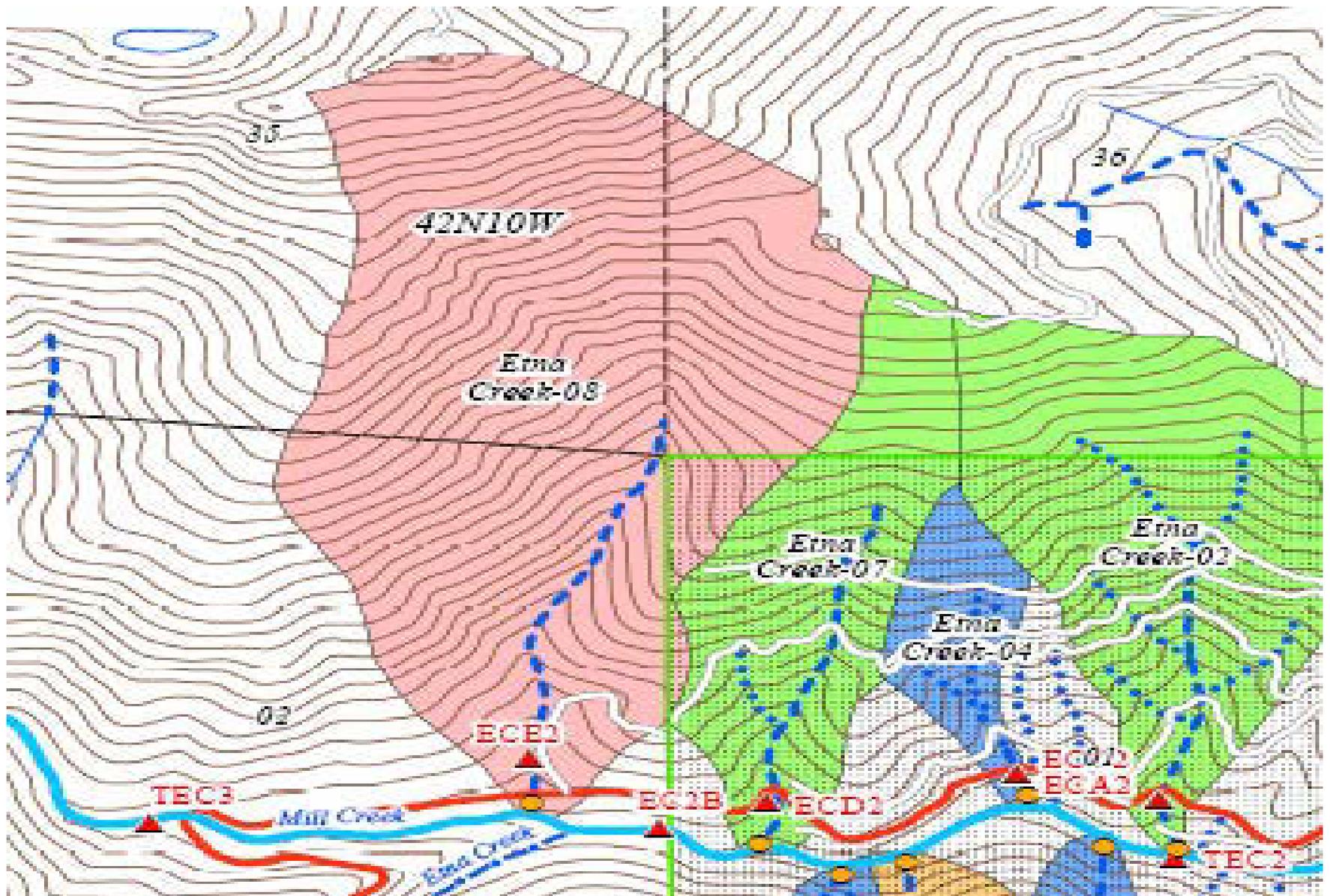
Drainage Area=373 ac.

Stream Order=1st

ACW=7.8 ft.

Width of Class I at
Class II Confluence
=Approx. 30 ft.

ND-5: Etna Creek 08



ND-5: Etna Creek 08



ND-5: Etna Creek 08



ND-5: Etna Creek 08



ND-5: Etna Creek 08



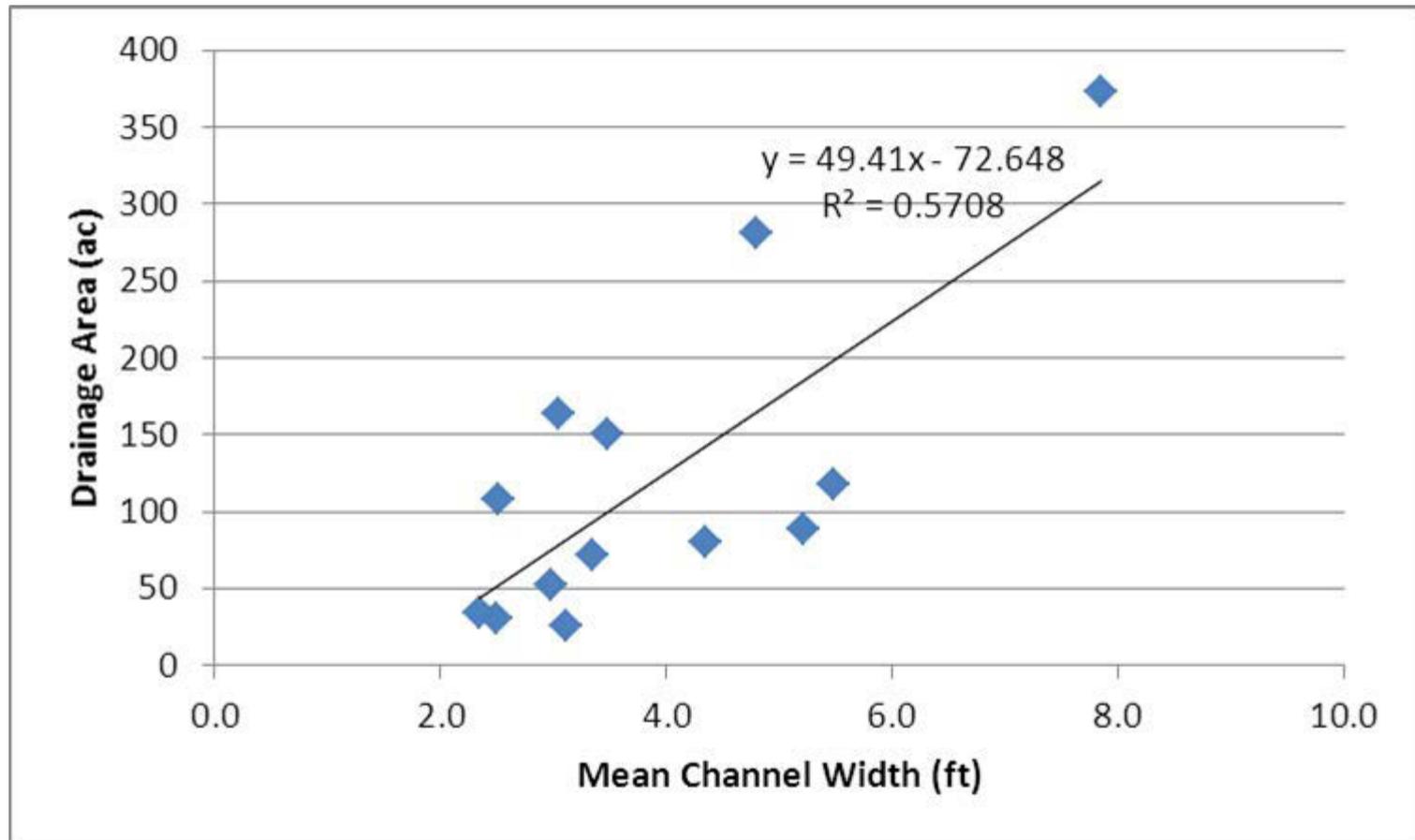
ND-5: Etna Creek 08



REGRESSION ANALYSIS:

Correlation of Drainage Area to Mean Active Channel Width

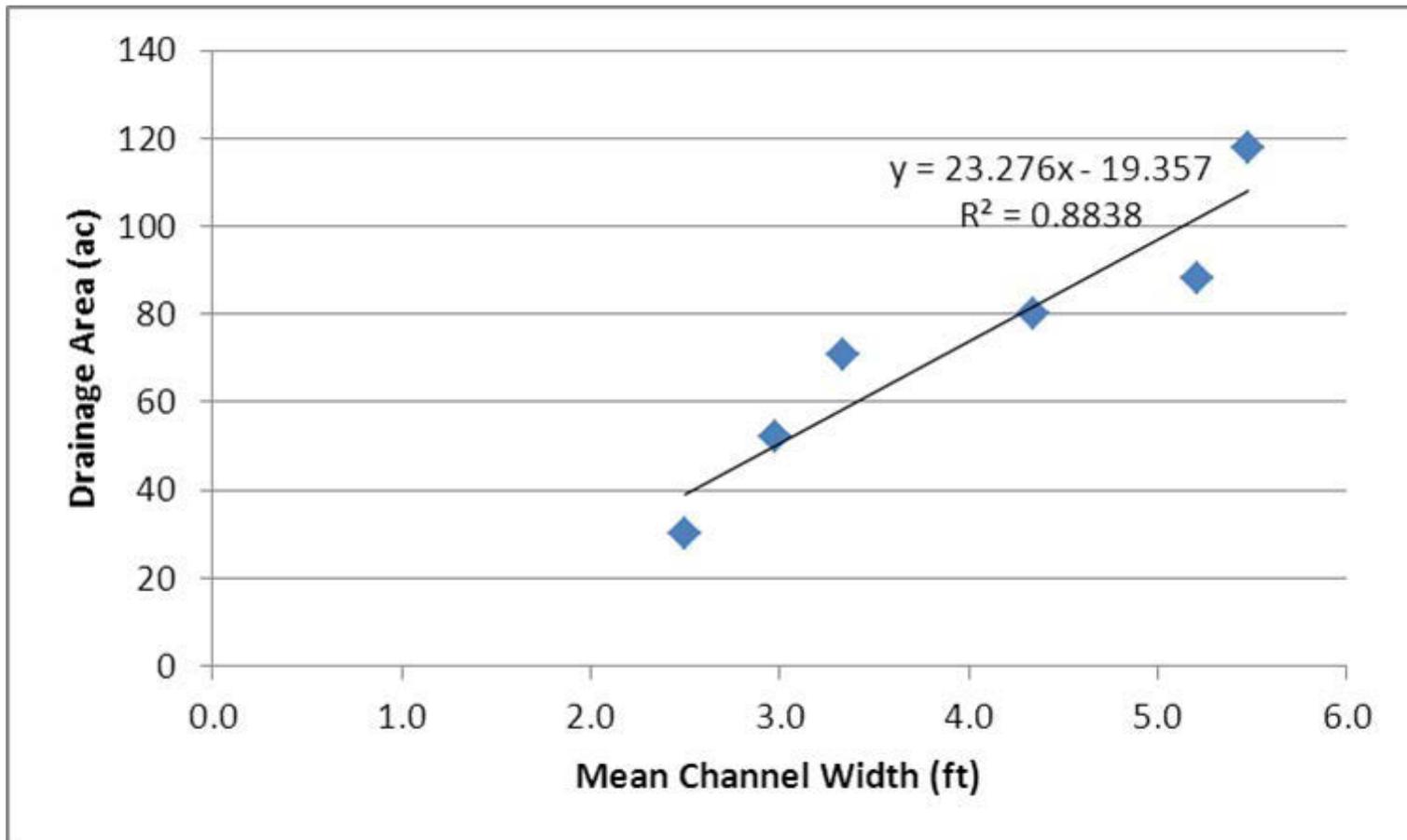
Line Plot for Combined Coast and Northern Forest District Sites



REGRESSION ANALYSIS:

Correlation of Drainage Area to Mean Active Channel Width

Line Plot for Coast Forest District Sites



REGRESSION ANALYSIS:

Correlation of Drainage Area to Mean Active Channel Width

Line Plot for Northern Forest District Sites

