

## **Appendix B**

### **Channel Stability Class**

## **Table B1. Channel Stability Class**

Channel stability class is a general index of the channel condition modified from Henshaw (1999). Because armored banks are so common, armored was added as a separate class.

### 4 STABLE

- perennial vegetation to waterline
- no raw or undercut banks (some erosion on outside of meander bends OK)
- no recently exposed roots
- no recent tree falls

### 3 SLIGHTLY UNSTABLE

- perennial vegetation to waterline in most places
- some scalloping of banks
- minor erosion and/or bank undercutting
- recently exposed tree roots rare but present

### 2 MODERATELY UNSTABLE

- perennial vegetation to waterline sparse (mainly scoured or stripped by lateral erosion)
- bank held by hard points (trees, boulders) and eroded back elsewhere
- extensive erosion and bank undercutting
- recently exposed tree roots and fine root hairs common

### 1 COMPLETELY UNSTABLE

- no perennial vegetation at waterline
- banks held only by hard points
- severe erosion of both banks
- recently exposed tree roots common
- tree falls and/or severely undercut trees common

**Table B1. Channel Stability Class in Winter 2006-2007**

The percentage of channel length in each stability class is shown by reach.

Reach	Stable (Class 4)	Slightly Unstable (Class 3)	Moderately Unstable (Class 2)	Completely Unstable (Class 1)	Remarks
TA01	N/A	N/A	N/A	N/A	all banks are armored
TA02	30%	56%	14%	0%	LWD added in 2002 increased bank stability above Culvert B
TA03	7%	74%	20%	0%	
TA04	24%	0%	76%	0%	east bank of entire reach is landslide zone
TA05	38%	36%	26%	0%	
TAWF01	0%	56%	26%	19%	landslides and bank erosion supply silt and clay
TAWF02	19%	64%	0%	17%	
TAWF03	51%	20%	0%	29%	
TAEF01	24%	19%	42%	15%	culvert bypass channel became the main channel in 2007
TAEF02	18%	56%	17%	10%	
EF01 NEW	22%	8%	50%	21%	in 2001, small channel without flow, all riprapped
<b>All</b>	<b>23%</b>	<b>43%</b>	<b>24%</b>	<b>9%</b>	

NOTES

Mainstem was surveyed in December, 2006. Forks were surveyed in early 2007.

A 25-year precipitation storm event occurred in November, 2006.

**Table B3. Comparison of Channel Stability Class in 2001 and 2007**

The percentage of channel length in each stability class is shown by reach.

Date Surveyed	2006/07	2006/07	2001	2001	Remarks
Reach	Stable (Classes 3+4)	Unstable (Classes 1+2)	Stable (Classes 3+4)	Unstable (Classes 1+2)	
TA01	N/A		N/A		all banks are armored
TA02	86%	14%	53%	47%	LWD project increased bank stability above Culvert B
TA03	80%	20%			the upper half of reach was not classified in 2001; see last line of table
TA04	24%	76%	78%	22%	east bank of entire reach is landslide zone
TA05	74%	26%	59%	41%	
TAWF01	56%	44%	71%	29%	landslides and bank erosion worsened, but fine sediment only
TAWF02	83%	17%	100%	0%	shorter reach surveyed in 2001, was more stable then
TAWF03	71%	29%			not surveyed in 2001
TAEF01	43%	57%	27%	73%	culvert bypass channel became the main channel in 2007
TAEF02	73%	27%			not surveyed in 2001
EF01 NEW	29%	71%			in 2001, small channel without flow, all riprapped
All	67%	33%	64%	36%	
<b>TA02 detail</b>					
TA02 below Culv A	100%	0%	53%	47%	aggradation helped stabilize banks
TA02 btw culverts	100%	0%	100%	0%	
TA02 above Culv B	55%	45%	0%	100%	LWD added in 2002 stabilized banks
<b>TA03 lower 165 feet of reach</b>					
	68%	32%	100%	0%	LWD added in 2002 made steps but did not stabilize banks compared to 2001

**NOTES** Mainstem was surveyed in December, 2006. Forks were surveyed in early 2007.  
A 25-year precipitation storm event occurred in November, 2006.