

# Mattole Salmon Group

## Mattole Watershed Year 2000 Vstar Stream Sediment Survey

Re: BLM Task Order Number 003 for Cooperative Agreement Number  
B300-A7-1010

And

CDFG Agreement Number P9985120

Stream sediment surveys were conducted over eight watercourse reaches within the Mattole watershed between July 18, 2000 and September 22, 2000. Focused on measurements of fine sediment in pools, a quantified estimate of the fraction of pool volume filled with fine sediment can be a useful index of the sediment supply and relative mobility of a streambed. Once understood, a relationship of its effects on aquatic ecosystems might possibly be established. Vstar ( $V^*$ ), the ratio of fine-sediment volume to pool water volume plus fine-sediment volume, was the method employed for Mattole Salmon Group year 2000 sediment surveys.  $V^*w$ , the weighted mean value of  $V^*$  for a reach, was calculated for each study reach.

The following eight watercourse reaches comprised the sediment survey for year 2000. Specific reach locations are described in each stream summary.

1. Mill Creek, Petrolia, CA: Confluence located at rivermile 2.8 (Township 2 South, Range 2 West, Section 16, on the Petrolia, CA, U.S.G.S. Quadrangle), survey conducted on July 17 & 18, 2000.  
 **$V^*w = 0.26$**
2. Conklin Creek, Petrolia, CA: Confluence located at rivermile 7.9 (Township 2 South, Range 1 West, Sections 6 & 7, on the Petrolia, CA, U.S.G.S. Quadrangle), survey conducted on July 20, 2000.  
 **$V^*w = 0.27$**
3. Squaw Creek, Petrolia, CA: Confluence located at rivermile 14.9 (Township 2 South, Range 1 West, Section 30, on the Buckeye Mountain, CA, U.S.G.S. Quadrangle), survey conducted on July 21, 2000.  
 **$V^*w = 0.24$**
4. Bridge Creek, Whitethorn, CA: Confluence located at rivermile 52.1 (Township 5 South, Range 2 East, Section 5, on the Briceland, CA U.S.G.S. Quadrangle), survey conducted on August 8, 2000.  
 **$V^*w = 0.04$**
5. Westlund Creek, Honeydew, CA: Confluence located at rivermile 31.7 (Township 3 South, Range 1 East, Section 11, on the Honeydew, CA, U.S.G.S. Quadrangle), survey conducted on August 12, 2000.  
 **$V^*w = 0.25$**
6. Middle Creek, Honeydew, CA: Confluence located at rivermile 31.3 (Township 3 South, Range 1 East, Sections 10, 11, & 2, on the Honeydew, CA, U.S.G.S. Quadrangle), survey conducted on September 10, 2000.  **$V^*w = 0.25$**
7. Mainstem Mattole River, Petrolia, CA: Downstream extent of sampling reach located at approximately rivermile 1.3 (Township 2 South, Range 2 West, Sections 18 & 17, on the Petrolia, CA, U.S.G.S. Quadrangle), survey conducted on September 15, 16, & 18, 2000.  **$V^*w = 0.31$**
8. Honeydew Creek, Honeydew, CA: Located at rivermile 26.5 (Township 3 South, Range 1 East, Sections 6 & 7, on the Honeydew, CA, U.S.G.S. Quadrangle), survey conducted on September 22, 2000.  
 **$V^*w = 0.22$**

$V^*$  can be used to evaluate and monitor channel condition and to identify and quantify effects of discrete sediment sources. Used as one of many elements to investigate stream condition, it is hoped that  $V^*$  will provide useful data for evaluating overall habitat status, and in particular, salmonid suitability.