

ODFW AQUATIC INVENTORY PROJECT
OREGON PLAN FOR SALMON & WATERSHEDS
STREAM RESTORATION HABITAT REPORT

STREAM: Clear Creek #5 (L-328)
BASIN: Clackamas River
SURVEY TYPE: Pre-Tx
DATE: February 22, 2006
SURVEY CREW: Brian Cannon, Jon Nott
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 185.0 km²
USGS MAPS: Redland
ECOREGION: Willamette Valley Plains

GENERAL DESCRIPTION:

The Clear Creek habitat survey extended 925 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 6.2 (range: 4.0-10.0). Land use for the reach was second growth (15-30 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 1.6 percent. Riffles (37%) and rapids (33%) dominated stream habitat. Cobble (25%), gravel (25%) and bedrock (24%) dominated stream substrate. Wood volume was moderate at 26.4 m³/100m.

COMMENTS:

There were no potential barriers to upstream fish migration in the surveyed length.

REACH 1

T03S-R03E-S36NE

REACH 1

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

| <u>Narrow Valley Floor</u> | | <u>Broad Valley Floor</u> | |
|----------------------------|-----|---------------------------|--------|
| Steep V-shape | 0% | Constraining Terraces | 100% |
| Moderate V-shape | 0% | Multiple Terraces | 0% |
| Open V-shape | 0% | Wide Floodplain | 0% |
| Valley Width Index | 6.2 | VWI Range: | 4 - 10 |

Channel Morphology (Percent Reach Length)

| <u>Constrained</u> | | <u>Unconstrained</u> | |
|--------------------|------|----------------------|----|
| Hillslope | 0% | Single Channel | 0% |
| Bedrock | 0% | Multiple Channel | 0% |
| Terrace | 0% | Braided Channel | 0% |
| Alt. Terrace/Hill | 100% | | |
| Landuse | 0% | | |

Channel Characteristics

| <u>Type</u> | <u>Length (m)</u> | <u>Area (m2)</u> | <u>Dry Units</u> |
|-------------------|-------------------|------------------|------------------|
| Primary Channel | 925 | 12,274 | 0 |
| Secondary Channel | 0 | 0 | 0 |
| Off-Channel Units | 0 | 0 | 0 |

Channel Dimensions (m)

| <u>Wetted</u> | <u>Active</u> | <u>Floodprone</u> n = 5 | <u>First Terrace</u> n = 5 |
|---------------|---------------|-------------------------|----------------------------|
| Width: 12.9 | Width: 16.7 | 19.4 (12 - 24) | 22.2 (15 - 26) |
| Depth: 0.72 | Height: 1.3 | 2.6 (2.2 - 3.4) | 4.4 (2.7 - 5.9) |

W:D ratio: 13.8
 Stream Flow Type: MF
 Average Unit Gradient: 1.6%
 Water temperature (°C): 4.5 - 4.5

Entrenchment (ACW:FPW ratio): 1.2
 Habitat Units/100m (total channel length): 3.0
 Habitat Units/100m (primary channel length): 3.0

Riparian, Bank, and Wood Summary

| | <u>Primary</u> | <u>Secondary</u> |
|----------------------|----------------|------------------|
| Land Use: | ST | YT |
| Riparian Vegetation: | C30 | D15 |

Bank Condition and Shade

| <u>Bank Status</u> | <u>Percent Reach Length</u> | <u>Shade (% of 180)</u> |
|--------------------|-----------------------------|-------------------------|
| Actively Eroding: | | Reach avg: |
| Undercut Banks: | | Range: - |

Large Wood Debris

| | <u>Total</u> | <u>Total / 100m primary channel</u> |
|-----------------------------|--------------|-------------------------------------|
| All pieces (>=3m x 0.15m): | 174 | 18.8 |
| Volume (m ³): | 244 | 26.4 |
| Key pieces (>=12m x 0.60m): | 9 | 1.0 |

HABITAT INVENTORY

Report Date: 1/24/2007

Survey Date:

2/22/2006

| REACH 1 | | T03S-R03E-S36NE | | | | | REACH 1 | | | | | |
|--------------------|-----------------|------------------------|---------------------|---------------------|------------------------------------|-------------------------------|----------------------------------|-----------|-----------|-----------|-----------|-----------|
| HABITAT DETAIL | | | | | | | | | | | | |
| Habitat Type | Number Units | Total Length (m) | Avg Width (m) | Avg Depth (m) | Total Area (m ²) | Large Boulders (#>0.5m) | Substrate Percent Wetted Area | | | | | |
| | | | | | | | S/O | Snd | Grvl | Cbl | Bldr | Bdrk |
| POOL-LATERAL SCOUR | 8 | 294 | 11.9 | 1.25 | 3,476 | 0 | 1 | 13 | 26 | 22 | 12 | 27 |
| POOL-TRENCH | 1 | 20 | 6.8 | 1.50 | 136 | 0 | 0 | 5 | 5 | 10 | 10 | 70 |
| RAPID/BOULDERS | 7 | 292 | 13.8 | 0.50 | 4,095 | 0 | 0 | 9 | 26 | 31 | 27 | 8 |
| RIFFLE | 9 | 312 | 13.7 | 0.49 | 4,494 | 0 | 0 | 11 | 31 | 29 | 18 | 12 |
| STEP/BEDROCK | 1 | 1 | 12.8 | 0.20 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| STEP/BOULDERS | 1 | 6 | 9.0 | 0.40 | 56 | 0 | 0 | 5 | 15 | 30 | 30 | 20 |
| STEP/STRUCTURE | 1 | 0 | 16.4 | 0.10 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| Total: | 28 | 925 | 12.9 | 0.72 | 12,274 | 0 | Avg: 0 | 10 | 25 | 25 | 17 | 24 |

| HABITAT SUMMARY | | | | | | | | | |
|-------------------|-----------------|------------------------|---------------------|---------------------|-------------------|---------|----------------|--------------------------|--|
| Habitat Group | Number Units | Total Length (m) | Avg Width (m) | Avg Depth (m) | Wetted Area | | Large Boulders | | |
| | | | | | (m ²) | Percent | Number | (# / 100m ²) | |
| Dammed & BW Pools | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 | |
| Scour Pools | 9 | 314 | 11.4 | 1.28 | 3,612 | 29.43% | 0 | 0.0 | |
| Glides | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 | |
| Riffles | 9 | 312 | 13.7 | 0.49 | 4,494 | 36.62% | 0 | 0.0 | |
| Rapids | 7 | 292 | 13.8 | 0.50 | 4,095 | 33.37% | 0 | 0.0 | |
| Cascades | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 | |
| Step/Falls | 3 | 7 | 12.7 | 0.23 | 72 | 0.59% | 0 | 0.0 | |
| Dry | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 | |
| Culverts | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 | |

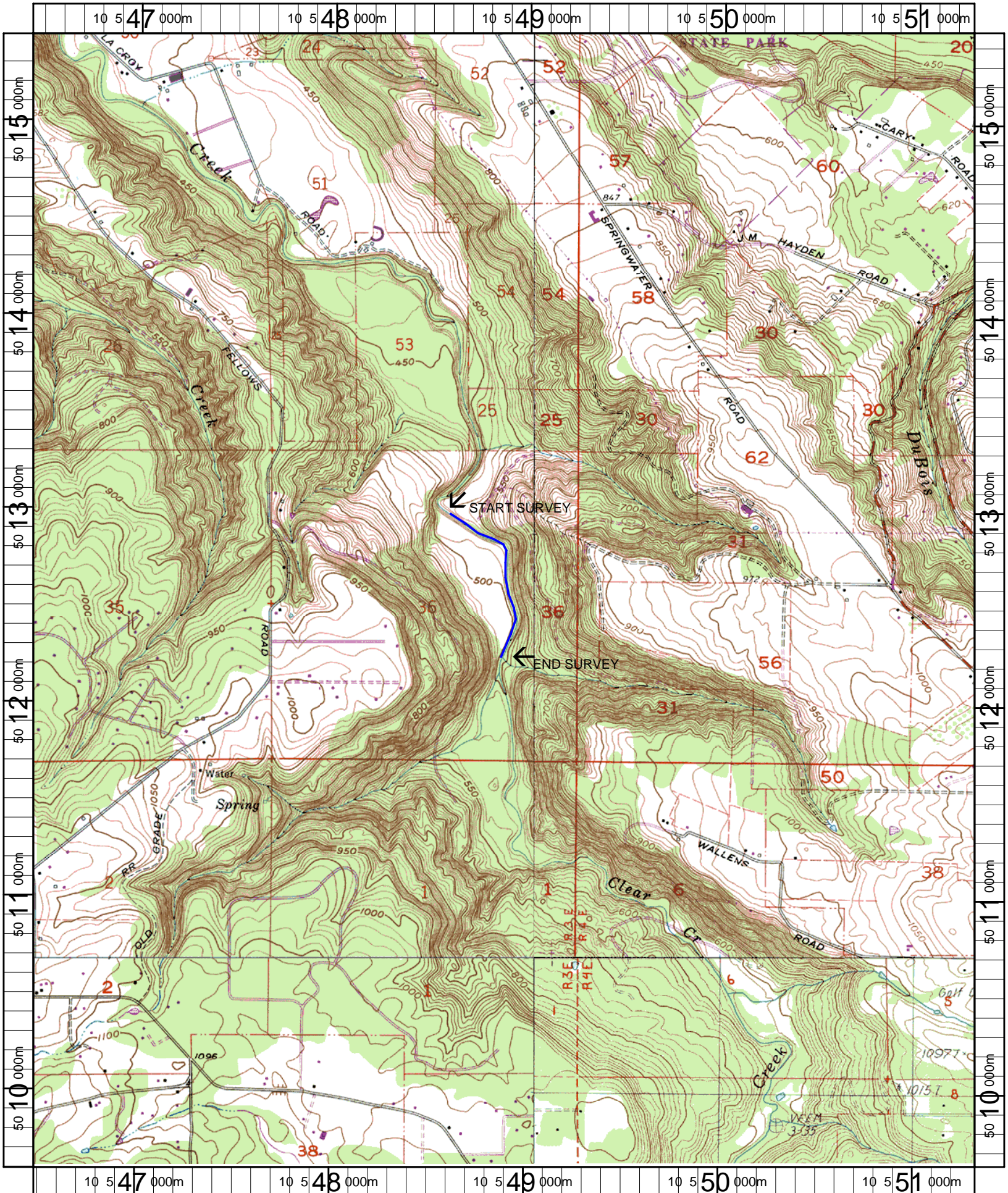
| POOL SUMMARY | | | |
|---------------------------------------|-------|--|----------------------------------|
| | Total | Total of all Channel Lengths # / Km | Primary Channel Length # / Km |
| All Pools: | 9 | 9.7 | 9.7 |
| Pools >=1m deep: | 7 | 7.6 | 7.6 |
| Complex pools (LWD pieces>=3): | 7 | 7.6 | 7.6 |
| Pool frequency (channel widths/pool): | 6.1 | | |
| Residual pool depth (avg): | 0.75 | | |

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: 7-L SITE ID: 328 CLEAR CREEK #5 PRE-TX

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTE ESTIMATOR | NOTE NUMERATOR |
|-------|------|------|-----------|----------|-----------------------------|----------------|
| 1 | TP | 00 | 20 | | T=4.5C | |
| 2 | RI | 00 | 41 | | CA-CT,C30/D3,LT,ST | |
| 5 | SS | 00 | 93.8 | RF | H=03.3M, CONCRETE=100% BDRK | |
| 8 | LP | 00 | 223.7 | | CA-CT, M30/D3, LT/YT | |
| 10 | RI | 00 | 287.5 | SS/ | | |
| 11 | LP | 00 | 310.3 | LA, SS/ | | |
| 12 | RI | 00 | 360.3 | BV | | |
| 14 | RI | 00 | 455.3 | | CA-CT, C30/D30, ST/YT | |
| 19 | RB | 00 | 620.7 | | CA-CT, C30/D15,ST/YT | |
| 20 | LP | 00 | 642.4 | SS/ | | |
| 25 | RI | 00 | 827.6 | | CA-CT,C15/D15,ST/YT | |
| 26 | SR | 00 | 828.6 | | H=0.50M | |



Name: ESTACADA
 Date: 1/25/2007
 Scale: 1 inch equals 2000 feet

Location: 10 548879 E 5012539 N
 Caption: CLEAR CREEK #5 RESTORATION SITE - CLACKAMAS BASIN