SITE 1	Location (UTM): 0397473N, 5022801 E	Man By: Caldwell D & Hestir F
Date/Time: 06/16/07, 09:00	River: Spring Creek	

Site Description: Spring Creek is a small tributary draining from the Blue Mountains into the Upper Grande Ronde River. The area surveyed showed signs of logging, but the creek and adjacent floodplain are an active rehabilitation site managed by the National Forest Service. The creek averaged just a few meters in width, and exhibited very low flow. Large woody debris was laced strategically along the creek banks. It appeared to be placed strategically to redirect flow from the culvert along a more natural path.





Geomorphic Surface	Grain Size		
AC-Active Channel FP-Floodplain B-Lateral Bar MCB-Midchannel Bar B-Point Bar	F = Fines S = Sand (< 2mm) G = Gravel (2-64 mm) C = Cobble (64-256 mm) B = Boulder (>256 mm)	Geomorphic Unit Boundary Geomorphic Unit Boundary Large Woody Debris Fish Sample Location Invertebrate Sample Location Water Quality Sample Location ★ Z ₁	20 meters

SITE 3	Location (UTM): 0443460N, 5053850 E	Man By: Caldwell D & Hestir E	
Date/Time: 06/20/07, 09:00	River: Lower Wallowa River	Map By. Caldwell, D. & Hestil, E.	
Site Description: The lower Wallowa River was surveyed immediately downstream from the Minam Roller Rapids and			

the confluence with the Minam River. The flows in the river were significantly higher than the Upper Grande Ronde River. Due to the higher channel gradient, the river formed a continuous glide. A lateral bar along river left produced a substantial backwater pool, bounded by a cut bank.



Geomorphic Surface	Grain Size	
AC-Active Channel FP-Floodplain LB-Lateral Bar MCB-Midchannel Bar HS-Hillslope	F = Fines S = Sand (< 2mm) G = Gravel (2-64 mm) C = Cobble (64-256 mm) B = Boulder (>256 mm)	Geomorphic Unit Boundary Uegetation Large Woody Debris Fish Sample Location Invertebrate Sample Location I1 Water Quality Sample Location $\bigstar Z_1$

15 meters



CB-Confluence Bar

HS-Hillslope

B = Boulder (>256 mm)

SITE 5	Location (UTM): 0450128N, 5079431 E	Man Bu Coldwell D & Heatin E	
Date/Time: 06/21/07, 11:30	River: Grande Ronde River		

Site Description: Just above river mile 63, we surveyed a narrow straight stretch of the Grande Ronde. The channel was constricted by steep canyon walls, producing fast flow. Along river left, a narrow lateral bar was present with a small debris fan at the mouth of an ephemeral tributary.



Geomorphic Surface	Grain Size		
AC-Active Channel LB-Lateral Bar DF-Debris Fan HS-Hillslope	F = Fines S = Sand (< 2mm) G = Gravel (2-64 mm) C = Cobble (64-256 mm) B = Boulder (>256 mm)	Geomorphic Unit Boundary Geomorphic Unit Boundary Vegetation Large Woody Debris Fish Sample Location I₁ Water Quality Sample Location ★ Z₁	15 meters

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F.P.

F.P.

H.S.

Geomorphic Surface	Grain Size	
AC-Active Channel RAB-Reattachment Bar DF-Debris Fan FP-Floodplain	F = Fines S = Sand (< 2mm) G = Gravel (2-64 mm) C = Cobble (64-256 mm) B = Baulder (>256 mm)	Geomorphic Unit Boundary ✓ Vegetation Large Woody Debris Fish Sample Location ▲ F ₁ Invertebrate Sample Location ● I ₁ Water Quality Sample Location ★ Z ₁
HS-Hillslope		



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Geomorphic Surface	Grain Size		
AC-Active Channel CF-Confluence Fan EB-Eddy Bar MCB-Mid Channel Bar LB-Lateral Bar FP-Floodplain DC-Dry Channel	F = Fines S = Sand (< 2mm) G = Gravel (2-64 mm) C = Cobble (64-256 mm) B = Boulder (>256 mm)	Geomorphic Unit Boundary ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	15 meters







SITE 10	Location (UTM): 0484830N, 5097384 E	Man Ry: Caldwell D & Hestir E
Date/Time: 06/25/07, 09:30	River: Grande Ronde River	

Site Description: A long, straight reach of the river was surveyed. The channel is bedrock dominated, and enclosed by steep canyon walls. Due to the constriction of the channel, flow velocity was high. A small spring, lined with a narrow corridor of riparian vegetation, enters the Grande Ronde on river left, however, due to its size and location, it contributes little (hydrogeomorphically) to the river.



Geomorphic Surface	Grain Size	
AC-Active Channel BR-Bedrock LB-Lateral Bar HS-Hillslope	F = Fines S = Sand (< 2mm) G = Gravel (2-64 mm) C = Cobble (64-256 mm) B = Boulder (>256 mm)	Geomorphic Unit Boundary Vegetation Large Woody Debris Fish Sample Location ▲ F ₁ Invertebrate Sample Location ● I ₁ Water Quality Sample Location ★ Z ₁

20 meters

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Geomorphic Surface	Grain Size		
AC-Active Channel BR-Bedrock LB-Lateral Bar FP-Floodplain HS-Hillslope	F = Fines S = Sand (< 2mm) G = Gravel (2-64 mm) C = Cobble (64-256 mm) B = Boulder (>256 mm)	Geomorphic Unit Boundary Cegetation Large Woody Debris Fish Sample Location Invertebrate Sample Location I1 Water Quality Sample Location Calledon	15 meters



Geomorphic Surface	Grain Size	
AC-Active Channel		Geomorphic Unit Boundary
BR-Bedrock	F = Fines	Vegetation
📃 LB-Lateral Bar	S = Sand (< 2mm)	Fish Sample Location
🔲 EB-Eddy Bar	G = Gravel (2-64 mm)	Invertebrate Sample Location
CF-Confluence Fan	C = Cobble (64-256 mm)	Water Quality Sample Location 🖌 Z ₁
🗖 FP-Floodplain	B = Boulder (>256 mm)	
HS-Hillslope		

15 meters

N