

STREAM: Site 1 - Big Duck Creek RIVER MILE: CR 1050 N DATE: 8/4/2005 QHEI SCORE **54**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE **15**

TYPE		POOL	RIFFLE		POOL	RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)		
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Extent of Embeddedness (check one)	
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

TOTAL NUMBER OF SUBSTRATE TYPES: >4(2) <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrat

COMMENTS: _____

2) INSTREAM COVER:

COVER SCORE **8**

TYPE (Check all that apply)		AMOUNT (Check only one or Check 2 and AVERAGE)	
<input checked="" type="checkbox"/>	UNDERCUT BANKS(1)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input checked="" type="checkbox"/>	OVERHANGING VEGETATION(1)	<input type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input checked="" type="checkbox"/>	SPARSE 5-25%(3)
<input type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	NEARLY ABSENT <5%(1)
<input checked="" type="checkbox"/>	ROOTWADS(1)	<input type="checkbox"/>	
<input type="checkbox"/>	BOULDERS(1)	<input type="checkbox"/>	
<input type="checkbox"/>	OXBOWS(1)	<input type="checkbox"/>	
<input type="checkbox"/>	AQUATIC MACROPHYTES(1)	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/>	

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

CHANNEL SCORE **9**

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input type="checkbox"/> NONE(6)	<input checked="" type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION
<input checked="" type="checkbox"/> LOW(2)	<input type="checkbox"/> FAIR(3)	<input checked="" type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input type="checkbox"/> CANOPY REMOVAL
<input type="checkbox"/> NONE(1)	<input checked="" type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION
				<input type="checkbox"/> IMPOUND
				<input type="checkbox"/> ISLAND
				<input type="checkbox"/> LEVEED
				<input type="checkbox"/> BANK SHAPING

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE **8**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY				BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)	L	R (per bank)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0 POOL SCORE **4**

MAX DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)
<input type="checkbox"/> >4 ft.(6)	<input checked="" type="checkbox"/> POOL WIDTH>RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input type="checkbox"/> POOL WIDTH=RIFFLE WIDTH(1)	<input type="checkbox"/> FAST(1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH<RIFFLE WIDTH(0)	<input type="checkbox"/> MODERATE(1)
<input checked="" type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/> SLOW(1)
<input type="checkbox"/> <0.6 ft.(Pool=0)(0)		<input type="checkbox"/> EDDIES(1)
		<input type="checkbox"/> INTERSTITIAL(-1)
		<input type="checkbox"/> INTERMITTENT(-2)

COMMENTS: _____

RIFFLE SCORE **0**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS
<input type="checkbox"/> GENERALLY >4 in. MAX.>20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble,Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)
<input type="checkbox"/> GENERALLY >4 in. MAX.<20 in.(3)	<input type="checkbox"/> MOD.STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)
<input checked="" type="checkbox"/> GENERALLY <2 in.(Riffle=0)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)	<input type="checkbox"/> LOW(1)
		<input type="checkbox"/> NONE(2)

COMMENTS: _____

6) GRADIENT (FEET/MILE): 12 % POOL 10% % RIFFLE 0 % RUN 90% GRADIENT SCORE 10

STREAM: Site 2 - Big Duck Creek RIVER MILE: South B Street DATE: 8/4/2005 QHEI SCORE **40**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE **-1**

TYPE	POOL	RIFFLE	POOL	RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)		
<input type="checkbox"/> BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> GRAVEL(7)	<input type="checkbox"/> LIMESTONE(1)	<input type="checkbox"/> RIP/RAP(0)	<input checked="" type="checkbox"/> SILT-HEAVY(-2)	<input type="checkbox"/> SILT-MOD(-1)
<input type="checkbox"/> BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> SAND(6)	<input checked="" type="checkbox"/> TILLS(1)	<input type="checkbox"/> HARDPAN(0)	<input type="checkbox"/> SILT-NORM(0)	<input type="checkbox"/> SILT-FREE(1)
<input type="checkbox"/> COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> BEDROCK(5)	<input type="checkbox"/> SANDSTONE(0)		Extent of Embeddedness (check one)	
<input type="checkbox"/> HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> DETRITUS(3)	<input type="checkbox"/> SHALE(-1)		<input checked="" type="checkbox"/> EXTENSIVE(-2)	<input type="checkbox"/> MODERATE(-1)
<input checked="" type="checkbox"/> MUCK/SILT(2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> ARTIFIC(0)	<input type="checkbox"/> COAL FINES(-2)		<input type="checkbox"/> LOW(0)	<input type="checkbox"/> NONE(1)

TOTAL NUMBER OF SUBSTRATE TYPES: >4(2) <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrat)

COMMENTS: _____

2) INSTREAM COVER:

COVER SCORE **15**

TYPE (Check all that apply)		AMOUNT (Check only one or Check 2 and AVERAGE)
<input type="checkbox"/> UNDERCUT BANKS(1)	<input checked="" type="checkbox"/> DEEP POOLS(2)	<input type="checkbox"/> EXTENSIVE >75%(11)
<input checked="" type="checkbox"/> OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/> ROOTWADS(1)	<input checked="" type="checkbox"/> MODERATE 25-75%(7)
<input checked="" type="checkbox"/> SHALLOWS (IN SLOW WATER)(1)	<input checked="" type="checkbox"/> BOULDERS(1)	<input type="checkbox"/> SPARSE 5-25%(3)
	<input type="checkbox"/> OXBOWS(1)	<input type="checkbox"/> NEARLY ABSENT <5%(1)
	<input checked="" type="checkbox"/> AQUATIC MACROPHYTES(1)	
	<input checked="" type="checkbox"/> LOGS OR WOODY DEBRIS(1)	

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

CHANNEL SCORE **6**

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input type="checkbox"/> NONE(6)	<input checked="" type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION
<input type="checkbox"/> LOW(2)	<input type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input checked="" type="checkbox"/> CANOPY REMOVAL
<input checked="" type="checkbox"/> NONE(1)	<input checked="" type="checkbox"/> POOR(1)	<input checked="" type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION
				<input type="checkbox"/> IMPOUND
				<input type="checkbox"/> ISLAND
				<input type="checkbox"/> LEVEED
				<input type="checkbox"/> BANK SHAPING

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE **5**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY		BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)
<input type="checkbox"/>	<input type="checkbox"/> WIDE >150 ft.(4)	<input type="checkbox"/>	<input type="checkbox"/> FOREST, SWAMP(3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> NONE OR LITTLE(3)
<input type="checkbox"/>	<input type="checkbox"/> MODERATE 30-150 ft.(3)	<input type="checkbox"/>	<input type="checkbox"/> OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	<input type="checkbox"/> MODERATE(2)
<input type="checkbox"/>	<input checked="" type="checkbox"/> NARROW 15-30 ft.(2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> RESID.,PARK,NEW FIELD(1)	<input type="checkbox"/>	<input type="checkbox"/> HEAVY OR SEVERE(1)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	<input type="checkbox"/> FENCED PASTURE(1)	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/> NONE(0)				

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0 POOL SCORE **9**

MAX DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)
<input checked="" type="checkbox"/> >4 ft.(6)	<input checked="" type="checkbox"/> POOL WIDTH>RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input type="checkbox"/> POOL WIDTH=RIFFLE WIDTH(1)	<input type="checkbox"/> FAST(1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH<RIFFLE WIDTH(0)	<input type="checkbox"/> MODERATE(1)
<input type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/> SLOW(1)
<input type="checkbox"/> <0.6 ft.(Pool=0)(0)		<input type="checkbox"/> EDDIES(1)
		<input type="checkbox"/> INTERSTITIAL(-1)
		<input type="checkbox"/> INTERMITTENT(-2)

COMMENTS: _____

RIFFLE SCORE **0**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS
<input type="checkbox"/> GENERALLY >4 in. MAX.>20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble,Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)
<input type="checkbox"/> GENERALLY >4 in. MAX.<20 in.(3)	<input type="checkbox"/> MOD.STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)
<input checked="" type="checkbox"/> GENERALLY <2 in.(Riffle=0)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)	<input type="checkbox"/> LOW(1)

COMMENTS: _____

6) GRADIENT (FEET/MILE): 6 % POOL 30% % RIFFLE 0 % RUN 70% GRADIENT SCORE 6

STREAM: Site 3 - Big Duck Creek RIVER MILE: CR 1300 N DATE: 8/4/2005 QHEI SCORE **32.5**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE **10**

TYPE	POOL	RIFFLE		POOL	RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)	
<input type="checkbox"/> BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> LIMESTONE(1)	<input type="checkbox"/> RIP/RAP(0)	<input checked="" type="checkbox"/> SILT-HEAVY(-2)	<input type="checkbox"/> SILT-MOD(-1)
<input type="checkbox"/> BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> TILLS(1)	<input type="checkbox"/> HARDPAN(0)	<input type="checkbox"/> SILT-NORM(0)	<input type="checkbox"/> SILT-FREE(1)
<input type="checkbox"/> COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> SANDSTONE(0)		Extent of Embeddedness (check one)	
<input type="checkbox"/> HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> SHALE(-1)		<input checked="" type="checkbox"/> EXTENSIVE(-2)	<input type="checkbox"/> MODERATE(-1)
<input type="checkbox"/> MUCK/SILT(2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> COAL FINES(-2)		<input type="checkbox"/> LOW(0)	<input type="checkbox"/> NONE(1)

TOTAL NUMBER OF SUBSTRATE TYPES: >4(2) <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrat

COMMENTS:

2) INSTREAM COVER:

COVER SCORE **7**

TYPE (Check all that apply)			AMOUNT (Check only one or Check 2 and AVERAGE)		
<input checked="" type="checkbox"/> UNDERCUT BANKS(1)	<input type="checkbox"/> DEEP POOLS(2)	<input type="checkbox"/> OXBOWS(1)	<input type="checkbox"/> EXTENSIVE >75%(11)		
<input checked="" type="checkbox"/> OVERHANGING VEGETATION(1)	<input type="checkbox"/> ROOTWADS(1)	<input checked="" type="checkbox"/> AQUATIC MACROPHYTES(1)	<input type="checkbox"/> MODERATE 25-75%(7)		
<input checked="" type="checkbox"/> SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/> BOULDERS(1)	<input type="checkbox"/> LOGS OR WOODY DEBRIS(1)	<input checked="" type="checkbox"/> SPARSE 5-25%(3)		
			<input type="checkbox"/> NEARLY ABSENT <5%(1)		

COMMENTS:

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

CHANNEL SCORE **6**

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input type="checkbox"/> NONE(6)	<input type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input checked="" type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION
<input checked="" type="checkbox"/> LOW(2)	<input type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input checked="" type="checkbox"/> CANOPY REMOVAL
<input type="checkbox"/> NONE(1)	<input checked="" type="checkbox"/> POOR(1)	<input checked="" type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION
				<input type="checkbox"/> IMPOUND
				<input type="checkbox"/> ISLAND
				<input type="checkbox"/> LEVEED
				<input checked="" type="checkbox"/> BANK SHAPING

COMMENTS:

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE **3.5**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY				BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)	L	R (per bank)
<input type="checkbox"/>	<input type="checkbox"/> WIDE >150 ft.(4)	<input type="checkbox"/>	<input type="checkbox"/> FOREST, SWAMP(3)	<input type="checkbox"/>	<input type="checkbox"/> URBAN OR INDUSTRIAL(0)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> NONE OR LITTLE(3)
<input type="checkbox"/>	<input type="checkbox"/> MODERATE 30-150 ft.(3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	<input type="checkbox"/> SHRUB OR OLD FIELD(2)	<input type="checkbox"/>	<input type="checkbox"/> MODERATE(2)
<input type="checkbox"/>	<input type="checkbox"/> NARROW 15-30 ft.(2)	<input type="checkbox"/>	<input type="checkbox"/> RESID.,PARK,NEW FIELD(1)	<input type="checkbox"/>	<input type="checkbox"/> CONSERV. TILLAGE(1)	<input type="checkbox"/>	<input type="checkbox"/> HEAVY OR SEVERE(1)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	<input type="checkbox"/> FENCED PASTURE(1)	<input type="checkbox"/>	<input type="checkbox"/> MINING/CONSTRUCTION(0)		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> NONE(0)						

COMMENTS:

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0 POOL SCORE **0**

MAX.DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)	
<input type="checkbox"/> >4 ft.(6)	<input type="checkbox"/> POOL WIDTH>RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)	<input type="checkbox"/> EDDIES(1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input type="checkbox"/> POOL WIDTH=RIFFLE WIDTH(1)	<input type="checkbox"/> FAST(1)	<input type="checkbox"/> INTERSTITIAL(-1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH<RIFFLE WIDTH(0)	<input type="checkbox"/> MODERATE(1)	<input type="checkbox"/> INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input type="checkbox"/> SLOW(1)	
<input checked="" type="checkbox"/> <0.6 ft.(Pool=0)(0)			

COMMENTS:

RIFFLE SCORE **0**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS
<input type="checkbox"/> GENERALLY >4 in. MAX.>20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble,Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)
<input type="checkbox"/> GENERALLY >4 in. MAX.<20 in.(3)	<input type="checkbox"/> MOD.STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/> LOW(1)
<input checked="" type="checkbox"/> GENERALLY <2 in.(Riffle=0)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)	<input type="checkbox"/> NONE(2)
		<input type="checkbox"/> NO RIFFLE(0)

COMMENTS:

6) GRADIENT (FEET/MILE): **6** % POOL **0** % RIFFLE **0** % RUN **100%** GRADIENT SCORE **6**

STREAM: Site 4 - Little Duck Creek RIVER MILE: SR 13 DATE: 8/4/2005 QHEI SCORE **53.5**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE **18**

TYPE	POOL	RIFFLE			POOL	RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)					
<input type="checkbox"/> BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/> BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input checked="" type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input checked="" type="checkbox"/> COBBLE(8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SANDSTONE(0)	Extent of Embeddedness (check one)					
<input type="checkbox"/> HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SHALE(-1)	<input type="checkbox"/>	EXTENSIVE(-2)	<input type="checkbox"/>	MODERATE(-1)		
<input type="checkbox"/> MUCK/SILT(2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	COAL FINES(-2)	<input checked="" type="checkbox"/>	LOW(0)	<input type="checkbox"/>	NONE(1)		

TOTAL NUMBER OF SUBSTRATE TYPES: >4(2) <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrat

COMMENTS: _____

2) INSTREAM COVER:

COVER SCORE **7**

TYPE (Check all that apply)			AMOUNT (Check only one or Check 2 and AVERAGE)		
<input type="checkbox"/> UNDERCUT BANKS(1)	<input type="checkbox"/> DEEP POOLS(2)	<input type="checkbox"/> OXBOWS(1)	<input type="checkbox"/> EXTENSIVE >75%(11)		
<input type="checkbox"/> OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/> ROOTWADS(1)	<input checked="" type="checkbox"/> AQUATIC MACROPHYTES(1)	<input type="checkbox"/> MODERATE 25-75%(7)		
<input checked="" type="checkbox"/> SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/> BOULDERS(1)	<input checked="" type="checkbox"/> LOGS OR WOODY DEBRIS(1)	<input checked="" type="checkbox"/> SPARSE 5-25%(3)		
			<input type="checkbox"/> NEARLY ABSENT <5%(1)		

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

CHANNEL SCORE **8**

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input type="checkbox"/> NONE(6)	<input checked="" type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION
<input type="checkbox"/> LOW(2)	<input type="checkbox"/> FAIR(3)	<input checked="" type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input type="checkbox"/> CANOPY REMOVAL
<input checked="" type="checkbox"/> NONE(1)	<input checked="" type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION
				<input type="checkbox"/> IMPOUND
				<input type="checkbox"/> ISLAND
				<input type="checkbox"/> LEVEED
				<input type="checkbox"/> BANK SHAPING

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE **8.5**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY				BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)	L	R (per bank)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	WIDE >150 ft.(4)		FOREST, SWAMP(3)		URBAN OR INDUSTRIAL(0)		NONE OR LITTLE(3)
<input checked="" type="checkbox"/>	MODERATE 30-150 ft.(3)		OPEN PASTURE/ROW CROP(0)		SHRUB OR OLD FIELD(2)		MODERATE(2)
	NARROW 15-30 ft.(2)		RESID.,PARK,NEW FIELD(1)		CONSERV. TILLAGE(1)		HEAVY OR SEVERE(1)
	VERY NARROW 3-15 ft.(1)		FENCED PASTURE(1)		MINING/CONSTRUCTION(0)		
	NONE(0)						

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0 POOL SCORE **0**

MAX.DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)
<input type="checkbox"/> >4 ft.(6)	<input type="checkbox"/> POOL WIDTH>RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input type="checkbox"/> POOL WIDTH=RIFFLE WIDTH(1)	<input type="checkbox"/> FAST(1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input checked="" type="checkbox"/> POOL WIDTH<RIFFLE WIDTH(0)	<input type="checkbox"/> MODERATE(1)
<input type="checkbox"/> <1.2 ft.(1)		<input type="checkbox"/> SLOW(1)
<input checked="" type="checkbox"/> <0.6 ft.(Pool=0)(0)		<input type="checkbox"/> EDDIES(1)
		<input type="checkbox"/> INTERSTITIAL(-1)
		<input type="checkbox"/> INTERMITTENT(-2)

COMMENTS: _____

RIFFLE SCORE **4**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS
<input type="checkbox"/> GENERALLY >4 in. MAX.>20 in.(4)	<input checked="" type="checkbox"/> STABLE (e.g., Cobble,Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)
<input type="checkbox"/> GENERALLY >4 in. MAX.<20 in.(3)	<input type="checkbox"/> MOD.STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)
<input checked="" type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/> NONE(2)
<input type="checkbox"/> GENERALLY <2 in.(Riffle=0)(0)	<input type="checkbox"/> NO RIFFLE(0)	<input type="checkbox"/> NO RIFFLE(0)
		<input checked="" type="checkbox"/> LOW(1)

COMMENTS: _____

6) GRADIENT (FEET/MILE): **6** % POOL **0** % RIFFLE **15%** % RUN **85%** GRADIENT SCORE **6**

STREAM: Site 5 - Little Duck Creek RIVER MILE: CR 1100 N DATE: 8/4/2005 QHEI SCORE **32.5**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE **-1**

TYPE	POOL	RIFFLE	POOL	RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)		
<input type="checkbox"/> BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> GRAVEL(7)	<input type="checkbox"/> LIMESTONE(1)	<input type="checkbox"/> RIP/RAP(0)	<input checked="" type="checkbox"/> SILT-HEAVY(-2)	<input type="checkbox"/> SILT-MOD(-1)
<input type="checkbox"/> BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> SAND(6)	<input checked="" type="checkbox"/> TILLS(1)	<input type="checkbox"/> HARDPAN(0)	<input type="checkbox"/> SILT-NORM(0)	<input type="checkbox"/> SILT-FREE(1)
<input type="checkbox"/> COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> BEDROCK(5)	<input type="checkbox"/> SANDSTONE(0)		Extent of Embeddedness (check one)	
<input type="checkbox"/> HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> DETRITUS(3)	<input type="checkbox"/> SHALE(-1)		<input checked="" type="checkbox"/> EXTENSIVE(-2)	<input type="checkbox"/> MODERATE(-1)
<input checked="" type="checkbox"/> MUCK/SILT(2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> ARTIFIC(0)	<input type="checkbox"/> COAL FINES(-2)		<input type="checkbox"/> LOW(0)	<input type="checkbox"/> NONE(1)

TOTAL NUMBER OF SUBSTRATE TYPES: >4(2) <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrat

COMMENTS:

2) INSTREAM COVER:

COVER SCORE **6**

TYPE (Check all that apply)		AMOUNT (Check only one or Check 2 and AVERAGE)	
<input type="checkbox"/> UNDERCUT BANKS(1)	<input type="checkbox"/> DEEP POOLS(2)	<input type="checkbox"/> OXBOWS(1)	<input type="checkbox"/> EXTENSIVE >75%(11)
<input checked="" type="checkbox"/> OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/> ROOTWADS(1)	<input type="checkbox"/> AQUATIC MACROPHYTES(1)	<input type="checkbox"/> MODERATE 25-75%(7)
<input checked="" type="checkbox"/> SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/> BOULDERS(1)	<input type="checkbox"/> LOGS OR WOODY DEBRIS(1)	<input checked="" type="checkbox"/> SPARSE 5-25%(3)
			<input type="checkbox"/> NEARLY ABSENT <5%(1)

COMMENTS:

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

CHANNEL SCORE **7**

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input type="checkbox"/> NONE(6)	<input checked="" type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION
<input type="checkbox"/> LOW(2)	<input checked="" type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input checked="" type="checkbox"/> CANOPY REMOVAL
<input checked="" type="checkbox"/> NONE(1)	<input checked="" type="checkbox"/> POOR(1)	<input checked="" type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION
				<input type="checkbox"/> IMPOUND
				<input type="checkbox"/> ISLAND
				<input type="checkbox"/> LEVEED
				<input checked="" type="checkbox"/> BANK SHAPING

COMMENTS:

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE **5.5**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY				BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)	L	R (per bank)
<input type="checkbox"/>	<input type="checkbox"/> WIDE >150 ft.(4)	<input type="checkbox"/>	<input type="checkbox"/> FOREST, SWAMP(3)	<input type="checkbox"/>	<input checked="" type="checkbox"/> URBAN OR INDUSTRIAL(0)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> NONE OR LITTLE(3)
<input checked="" type="checkbox"/>	<input type="checkbox"/> MODERATE 30-150 ft.(3)	<input type="checkbox"/>	<input type="checkbox"/> OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	<input type="checkbox"/> SHRUB OR OLD FIELD(2)	<input type="checkbox"/>	<input type="checkbox"/> MODERATE(2)
<input type="checkbox"/>	<input checked="" type="checkbox"/> NARROW 15-30 ft.(2)	<input checked="" type="checkbox"/>	<input type="checkbox"/> RESID.,PARK,NEW FIELD(1)	<input type="checkbox"/>	<input type="checkbox"/> CONSERV. TILLAGE(1)	<input type="checkbox"/>	<input type="checkbox"/> HEAVY OR SEVERE(1)
<input type="checkbox"/>	<input checked="" type="checkbox"/> VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	<input type="checkbox"/> FENCED PASTURE(1)	<input type="checkbox"/>	<input type="checkbox"/> MINING/CONSTRUCTION(0)		
<input checked="" type="checkbox"/>	<input type="checkbox"/> NONE(0)						

COMMENTS:

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0 POOL SCORE **5**

MAX DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)	
<input type="checkbox"/> >4 ft.(6)	<input checked="" type="checkbox"/> POOL WIDTH>RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)	<input type="checkbox"/> EDDIES(1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input type="checkbox"/> POOL WIDTH=RIFFLE WIDTH(1)	<input type="checkbox"/> FAST(1)	<input type="checkbox"/> INTERSTITIAL(-1)
<input checked="" type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH<RIFFLE WIDTH(0)	<input type="checkbox"/> MODERATE(1)	<input type="checkbox"/> INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/> SLOW(1)	
<input type="checkbox"/> <0.6 ft.(Pool=0)(0)			

COMMENTS:

RIFFLE SCORE **4**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS
<input type="checkbox"/> GENERALLY >4 in. MAX.>20 in.(4)	<input checked="" type="checkbox"/> STABLE (e.g., Cobble,Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)
<input type="checkbox"/> GENERALLY >4 in. MAX.<20 in.(3)	<input type="checkbox"/> MOD.STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> NONE(2)
<input checked="" type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/> NO RIFFLE(0)
<input type="checkbox"/> GENERALLY <2 in.(Riffle=0)(0)	<input type="checkbox"/> NO RIFFLE(0)	<input checked="" type="checkbox"/> LOW(1)

COMMENTS:

6) GRADIENT (FEET/MILE): 6 % POOL 20% % RIFFLE 30% % RUN 50% GRADIENT SCORE 6

STREAM: Site 6 - Little Duck Creek RIVER MILE: CR 700 N DATE: 8/4/2005 QHEI SCORE **36**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE **12**

TYPE	POOL	RIFFLE		POOL	RIFFLE	SUBSTRATE ORIGIN (all)	SILT COVER (one)	
<input type="checkbox"/> BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> GRAVEL(7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> LIMESTONE(1)	<input type="checkbox"/> SILT-HEAVY(-2)	
<input type="checkbox"/> BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> SAND(6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> TILLS(1)	<input type="checkbox"/> SILT-NORM(0)	
<input type="checkbox"/> COBBLE(8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> BEDROCK(5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> SANDSTONE(0)	<input type="checkbox"/> SILT-FREE(1)	
<input type="checkbox"/> HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> DETRITUS(3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> SHALE(-1)	Extent of Embeddedness (check one)	
<input type="checkbox"/> MUCK/SILT(2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ARTIFIC(0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> COAL FINES(-2)	<input type="checkbox"/> EXTENSIVE(-2)	<input checked="" type="checkbox"/> MODERATE(-1)
TOTAL NUMBER OF SUBSTRATE TYPES: <input type="checkbox"/> >4(2)			<input checked="" type="checkbox"/> <4(0)			<input type="checkbox"/> LOW(0)	<input type="checkbox"/> NONE(1)	

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrat

COMMENTS:

2) INSTREAM COVER:

COVER SCORE **3**

TYPE (Check all that apply)		AMOUNT (Check only one or Check 2 and AVERAGE)	
<input type="checkbox"/> UNDERCUT BANKS(1)	<input type="checkbox"/> DEEP POOLS(2)	<input type="checkbox"/> OXBOWS(1)	<input type="checkbox"/> EXTENSIVE >75%(11)
<input type="checkbox"/> OVERHANGING VEGETATION(1)	<input type="checkbox"/> ROOTWADS(1)	<input checked="" type="checkbox"/> AQUATIC MACROPHYTES(1)	<input type="checkbox"/> MODERATE 25-75%(7)
<input checked="" type="checkbox"/> SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/> BOULDERS(1)	<input type="checkbox"/> LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/> SPARSE 5-25%(3)
			<input checked="" type="checkbox"/> NEARLY ABSENT <5%(1)

COMMENTS:

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

CHANNEL SCORE **5**

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input type="checkbox"/> NONE(6)	<input type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input checked="" type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION
<input type="checkbox"/> LOW(2)	<input type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input checked="" type="checkbox"/> CANOPY REMOVAL
<input checked="" type="checkbox"/> NONE(1)	<input checked="" type="checkbox"/> POOR(1)	<input checked="" type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION
				<input type="checkbox"/> IMPOUND
				<input type="checkbox"/> ISLAND
				<input type="checkbox"/> LEVEED
				<input type="checkbox"/> BANK SHAPING

COMMENTS:

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE **3**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY				BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)	L	R (per bank)
<input type="checkbox"/>	<input type="checkbox"/> WIDE >150 ft.(4)	<input type="checkbox"/>	<input type="checkbox"/> FOREST, SWAMP(3)	<input type="checkbox"/>	<input type="checkbox"/> URBAN OR INDUSTRIAL(0)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> NONE OR LITTLE(3)
<input type="checkbox"/>	<input type="checkbox"/> MODERATE 30-150 ft.(3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	<input type="checkbox"/> SHRUB OR OLD FIELD(2)	<input type="checkbox"/>	<input type="checkbox"/> MODERATE(2)
<input type="checkbox"/>	<input type="checkbox"/> NARROW 15-30 ft.(2)	<input type="checkbox"/>	<input type="checkbox"/> RESID.,PARK,NEW FIELD(1)	<input type="checkbox"/>	<input type="checkbox"/> CONSERV. TILLAGE(1)	<input type="checkbox"/>	<input type="checkbox"/> HEAVY OR SEVERE(1)
<input type="checkbox"/>	<input type="checkbox"/> VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	<input type="checkbox"/> FENCED PASTURE(1)	<input type="checkbox"/>	<input type="checkbox"/> MINING/CONSTRUCTION(0)		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> NONE(0)						

COMMENTS:

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0 POOL SCORE **4**

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)
<input type="checkbox"/> >4 ft.(6)	<input checked="" type="checkbox"/> POOL WIDTH>RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input type="checkbox"/> POOL WIDTH=RIFFLE WIDTH(1)	<input type="checkbox"/> FAST(1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH<RIFFLE WIDTH(0)	<input type="checkbox"/> MODERATE(1)
<input checked="" type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/> SLOW(1)
<input type="checkbox"/> <0.6 ft.(Pool=0)(0)		<input type="checkbox"/> EDDIES(1)
		<input type="checkbox"/> INTERSTITIAL(-1)
		<input type="checkbox"/> INTERMITTENT(-2)

COMMENTS:

RIFFLE SCORE **3**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS
<input type="checkbox"/> GENERALLY >4 in. MAX.>20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble,Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)
<input type="checkbox"/> GENERALLY >4 in. MAX.<20 in.(3)	<input checked="" type="checkbox"/> MOD.STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)
<input checked="" type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/> NONE(2)
<input type="checkbox"/> GENERALLY <2 in.(Riffle=0)(0)	<input type="checkbox"/> NO RIFFLE(0)	<input type="checkbox"/> NO RIFFLE(0)
		<input checked="" type="checkbox"/> LOW(1)

COMMENTS:

6) GRADIENT (FEET/MILE): 6 % POOL 15% % RIFFLE 25% % RUN 60% GRADIENT SCORE 6

STREAM: Site 7 - Pipe Creek RIVER MILE: CR 300 W DATE: 8/4/2005 QHEI SCORE **45**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE **13**

TYPE	POOL	RIFFLE			POOL	RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)	
<input type="checkbox"/> BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> LIMESTONE(1)	<input type="checkbox"/> RIP/RAP(0)	<input type="checkbox"/> SILT-HEAVY(-2)	<input type="checkbox"/> SILT-MOD(-1)
<input type="checkbox"/> BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> TILLS(1)	<input type="checkbox"/> HARDPAN(0)	<input checked="" type="checkbox"/> SILT-NORM(0)	<input type="checkbox"/> SILT-FREE(1)
<input type="checkbox"/> COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> SANDSTONE(0)	Extent of Embeddedness (check one)		
<input type="checkbox"/> HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> SHALE(-1)	<input type="checkbox"/> EXTENSIVE(-2)	<input checked="" type="checkbox"/> MODERATE(-1)	<input type="checkbox"/> NONE(1)
<input type="checkbox"/> MUCK/SILT(2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> COAL FINES(-2)	<input type="checkbox"/> LOW(0)	<input type="checkbox"/>	<input type="checkbox"/>

TOTAL NUMBER OF SUBSTRATE TYPES: >4(2) <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrat

COMMENTS: _____

2) INSTREAM COVER:

COVER SCORE **8**

TYPE (Check all that apply)			AMOUNT (Check only one or Check 2 and AVERAGE)		
<input checked="" type="checkbox"/> UNDERCUT BANKS(1)	<input type="checkbox"/> DEEP POOLS(2)	<input type="checkbox"/> OXBOWS(1)	<input type="checkbox"/> EXTENSIVE >75%(11)		
<input type="checkbox"/> OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/> ROOTWADS(1)	<input type="checkbox"/> AQUATIC MACROPHYTES(1)	<input type="checkbox"/> MODERATE 25-75%(7)		
<input checked="" type="checkbox"/> SHALLOWS (IN SLOW WATER)(1)	<input checked="" type="checkbox"/> BOULDERS(1)	<input checked="" type="checkbox"/> LOGS OR WOODY DEBRIS(1)	<input checked="" type="checkbox"/> SPARSE 5-25%(3)		
			<input type="checkbox"/> NEARLY ABSENT <5%(1)		

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

CHANNEL SCORE **6**

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input type="checkbox"/> NONE(6)	<input checked="" type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION
<input type="checkbox"/> LOW(2)	<input type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input type="checkbox"/> CANOPY REMOVAL
<input checked="" type="checkbox"/> NONE(1)	<input checked="" type="checkbox"/> POOR(1)	<input checked="" type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION
				<input type="checkbox"/> IMPOUND
				<input type="checkbox"/> ISLAND
				<input type="checkbox"/> LEVEED
				<input type="checkbox"/> BANK SHAPING

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE **7**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY				BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)	L	R (per bank)
<input checked="" type="checkbox"/>	<input type="checkbox"/> WIDE >150 ft.(4)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> FOREST, SWAMP(3)	<input type="checkbox"/>	<input type="checkbox"/> URBAN OR INDUSTRIAL(0)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> NONE OR LITTLE(3)
<input type="checkbox"/>	<input checked="" type="checkbox"/> MODERATE 30-150 ft.(3)	<input checked="" type="checkbox"/>	<input type="checkbox"/> OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	<input type="checkbox"/> SHRUB OR OLD FIELD(2)	<input type="checkbox"/>	<input type="checkbox"/> MODERATE(2)
<input type="checkbox"/>	<input type="checkbox"/> NARROW 15-30 ft.(2)	<input type="checkbox"/>	<input checked="" type="checkbox"/> RESID.,PARK,NEW FIELD(1)	<input type="checkbox"/>	<input type="checkbox"/> CONSERV. TILLAGE(1)	<input type="checkbox"/>	<input type="checkbox"/> HEAVY OR SEVERE(1)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	<input type="checkbox"/> FENCED PASTURE(1)	<input type="checkbox"/>	<input type="checkbox"/> MINING/CONSTRUCTION(0)		
<input type="checkbox"/>	<input type="checkbox"/> NONE(0)						

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0 POOL SCORE **5**

MAX DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)	
<input type="checkbox"/> >4 ft.(6)	<input checked="" type="checkbox"/> POOL WIDTH>RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)	<input type="checkbox"/> EDDIES(1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input type="checkbox"/> POOL WIDTH=RIFFLE WIDTH(1)	<input type="checkbox"/> FAST(1)	<input type="checkbox"/> INTERSTITIAL(-1)
<input checked="" type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH<RIFFLE WIDTH(0)	<input checked="" type="checkbox"/> MODERATE(1)	<input type="checkbox"/> INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input type="checkbox"/> SLOW(1)	
<input type="checkbox"/> <0.6 ft.(Pool=0)(0)			

COMMENTS: _____

RIFFLE SCORE **0**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS
<input type="checkbox"/> GENERALLY >4 in. MAX.>20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble,Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)
<input type="checkbox"/> GENERALLY >4 in. MAX.<20 in.(3)	<input type="checkbox"/> MOD.STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/> LOW(1)
<input checked="" type="checkbox"/> GENERALLY <2 in.(Riffle=0)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)	<input type="checkbox"/> NONE(2)
		<input checked="" type="checkbox"/> NO RIFFLE(0)

COMMENTS: _____

6) GRADIENT (FEET/MILE): **5** % POOL **5%** % RIFFLE **0** % RUN **95%** GRADIENT SCORE **6**

STREAM: Site 8 - Lilly Creek RIVER MILE: CR 300 W DATE: 8/4/2005 QHEI SCORE **53.5**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE **15**

TYPE	POOL	RIFFLE			POOL	RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SANDSTONE(0)	Extent of Embeddedness (check one)		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SHALE(-1)	<input type="checkbox"/>	EXTENSIVE(-2)	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	COAL FINES(-2)	<input checked="" type="checkbox"/>	LOW(0)	<input type="checkbox"/>
TOTAL NUMBER OF SUBSTRATE TYPES:			<input checked="" type="checkbox"/>	>4(2)	<input type="checkbox"/>	<4(0)				

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrat
 COMMENTS: _____

2) INSTREAM COVER:

COVER SCORE **13**

TYPE (Check all that apply)			AMOUNT (Check only one or Check 2 and AVERAGE)		
<input checked="" type="checkbox"/>	UNDERCUT BANKS(1)	<input type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input checked="" type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/>	ROOTWADS(1)	<input checked="" type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/>	BOULDERS(1)	<input checked="" type="checkbox"/>	SPARSE 5-25%(3)
		<input type="checkbox"/>	OXBOWS(1)	<input type="checkbox"/>	NEARLY ABSENT <5%(1)
		<input checked="" type="checkbox"/>	AQUATIC MACROPHYTES(1)		
		<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)		

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

CHANNEL SCORE **8**

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
HIGH(4)	EXCELLENT(7)	NONE(6)	HIGH(3)	SNAGGING
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RELOCATION
MODERATE(3)	GOOD(5)	<input type="checkbox"/>	MODERATE(2)	CANOPY REMOVAL
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	LOW(1)	DREDGING
LOW(2)	FAIR(3)	<input type="checkbox"/>		ONE SIDE CHANNEL MODIFICATION
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
NONE(1)	POOR(1)	<input type="checkbox"/>		
		<input type="checkbox"/>		
		<input type="checkbox"/>		
		<input type="checkbox"/>		

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE **4.5**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY				BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)	L	R (per bank)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	WIDE >150 ft.(4)		FOREST, SWAMP(3)		URBAN OR INDUSTRIAL(0)		NONE OR LITTLE(3)
<input checked="" type="checkbox"/>	MODERATE 30-150 ft.(3)	<input checked="" type="checkbox"/>	OPEN PASTURE/ROW CROP(0)		SHRUB OR OLD FIELD(2)		MODERATE(2)
<input type="checkbox"/>	NARROW 15-30 ft.(2)	<input type="checkbox"/>	RESID.,PARK,NEW FIELD(1)		CONSERV. TILLAGE(1)		HEAVY OR SEVERE(1)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FENCED PASTURE(1)		MINING/CONSTRUCTION(0)		
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)						
<input type="checkbox"/>	NONE(0)						

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0 POOL SCORE **5**

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
>4 ft.(6)	POOL WIDTH>RIFFLE WIDTH(2)	TORRENTIAL(-1)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4-4 ft.(4)	POOL WIDTH=RIFFLE WIDTH(1)	FAST(1)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2-2.4 ft.(2)	POOL WIDTH<RIFFLE WIDTH(0)	MODERATE(1)
<input type="checkbox"/>		<input checked="" type="checkbox"/>
<1.2 ft.(1)		SLOW(1)
<input type="checkbox"/>		<input type="checkbox"/>
<0.6 ft.(Pool=0)(0)		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

COMMENTS: _____

RIFFLE SCORE **0**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GENERALLY >4 in. MAX.>20 in.(4)	STABLE (e.g., Cobble,Boulder)(2)	EXTENSIVE(-1)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
GENERALLY >4 in. MAX.<20 in.(3)	MOD.STABLE (e.g., Pea Gravel)(1)	MODERATE(0)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
GENERALLY 2-4 in.(1)	UNSTABLE (Gravel, Sand)(0)	LOW(1)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GENERALLY <2 in.(Riffle=0)(0)	NO RIFFLE(0)	NONE(2)
		<input type="checkbox"/>
		NO RIFFLE(0)

COMMENTS: _____

6) GRADIENT (FEET/MILE): 19 % POOL 10% % RIFFLE 5% % RUN 85% GRADIENT SCORE 8

STREAM: Site 9 - Lilly Creek RIVER MILE: SR 28 DATE: 8/4/2005 QHEI SCORE **49**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE **12**

TYPE		POOL		RIFFLE		SUBSTRATE ORIGIN (all)		SILT COVER (one)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	BLDER/SLAB(10)	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>	GRAVEL(7)	<input checked="" type="checkbox"/>	SILT-HEAVY(-2)
<input type="checkbox"/>	BOULDER(9)	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>	SAND(6)	<input type="checkbox"/>	SILT-NORM(0)
<input type="checkbox"/>	COBBLE(8)	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	BEDROCK(5)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	DETRITUS(3)	Extent of Embeddedness (check one)	
<input type="checkbox"/>	MUCK/SILT(2)	<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>	ARTIFIC(0)	<input type="checkbox"/>	EXTENSIVE(-2)
TOTAL NUMBER OF SUBSTRATE TYPES: <input type="checkbox"/> >4(2) <input checked="" type="checkbox"/> <4(0)						<input type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	MODERATE(-1)
						<input checked="" type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	NONE(1)
						<input type="checkbox"/>	HARDPAN(0)		
						<input type="checkbox"/>	SANDSTONE(0)		
						<input type="checkbox"/>	SHALE(-1)		
						<input checked="" type="checkbox"/>	COAL FINES(-2)		

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrat

COMMENTS:

2) INSTREAM COVER:

COVER SCORE **11**

TYPE (Check all that apply)			AMOUNT (Check only one or Check 2 and AVERAGE)		
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input checked="" type="checkbox"/>	OVERHANGING VEGETATION(1)	<input type="checkbox"/>	ROOTWADS(1)	<input checked="" type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/>	BOULDERS(1)	<input type="checkbox"/>	SPARSE 5-25%(3)
		<input type="checkbox"/>	OXBOWS(1)	<input type="checkbox"/>	NEARLY ABSENT <5%(1)
		<input checked="" type="checkbox"/>	AQUATIC MACROPHYTES(1)		
		<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)		

COMMENTS:

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

CHANNEL SCORE **9**

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input type="checkbox"/> NONE(6)	<input checked="" type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION
<input checked="" type="checkbox"/> LOW(2)	<input type="checkbox"/> FAIR(3)	<input checked="" type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input checked="" type="checkbox"/> CANOPY REMOVAL
<input type="checkbox"/> NONE(1)	<input checked="" type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION
				<input type="checkbox"/> IMPOUND
				<input type="checkbox"/> ISLAND
				<input type="checkbox"/> LEVEED
				<input checked="" type="checkbox"/> BANK SHAPING

COMMENTS:

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE **4**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY				BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)	L	R (per bank)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	WIDE >150 ft.(4)	<input checked="" type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	URBAN OR INDUSTRIAL(0)	<input type="checkbox"/>	NONE OR LITTLE(3)
<input type="checkbox"/>	MODERATE 30-150 ft.(3)	<input checked="" type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	SHRUB OR OLD FIELD(2)	<input type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	NARROW 15-30 ft.(2)	<input type="checkbox"/>	RESID.,PARK,NEW FIELD(1)	<input type="checkbox"/>	CONSERV. TILLAGE(1)	<input type="checkbox"/>	HEAVY OR SEVERE(1)
<input checked="" type="checkbox"/>	VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)		
<input type="checkbox"/>	NONE(0)						

COMMENTS:

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0 POOL SCORE **5**

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)
<input type="checkbox"/> >4 ft.(6)	<input checked="" type="checkbox"/> POOL WIDTH>RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input type="checkbox"/> POOL WIDTH=RIFFLE WIDTH(1)	<input type="checkbox"/> FAST(1)
<input checked="" type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH<RIFFLE WIDTH(0)	<input type="checkbox"/> MODERATE(1)
<input type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/> SLOW(1)
<input type="checkbox"/> <0.6 ft.(Pool=0)(0)		<input type="checkbox"/> EDDIES(1)
		<input type="checkbox"/> INTERSTITIAL(-1)
		<input type="checkbox"/> INTERMITTENT(-2)

COMMENTS:

RIFFLE SCORE **0**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS
<input type="checkbox"/> GENERALLY >4 in. MAX.>20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble,Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)
<input type="checkbox"/> GENERALLY >4 in. MAX.<20 in.(3)	<input type="checkbox"/> MOD.STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)
<input checked="" type="checkbox"/> GENERALLY <2 in.(Riffle=0)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)	<input type="checkbox"/> LOW(1)

COMMENTS:

6) GRADIENT (FEET/MILE): **10** % POOL **10%** % RIFFLE **0** % RUN **90%** GRADIENT SCORE **8**

STREAM: Site 10 - Lilly Creek RIVER MILE: CR 1400 N DATE: 8/4/2005 QHEI SCORE **38.5**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE **7**

TYPE	POOL	RIFFLE	POOL	RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)		
<input type="checkbox"/> BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> GRAVEL(7)	<input type="checkbox"/> LIMESTONE(1)	<input type="checkbox"/> RIP/RAP(0)	<input checked="" type="checkbox"/> SILT-HEAVY(-2)	<input type="checkbox"/> SILT-MOD(-1)
<input type="checkbox"/> BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> SAND(6)	<input type="checkbox"/>	<input checked="" type="checkbox"/> TILLS(1)	<input type="checkbox"/> HARDPAN(0)	<input checked="" type="checkbox"/> SILT-NORM(0)	<input type="checkbox"/> SILT-FREE(1)
<input type="checkbox"/> COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> BEDROCK(5)	<input type="checkbox"/>	<input type="checkbox"/> SANDSTONE(0)		Extent of Embeddedness (check one)	
<input type="checkbox"/> HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> DETRITUS(3)	<input type="checkbox"/>	<input type="checkbox"/> SHALE(-1)		<input checked="" type="checkbox"/> EXTENSIVE(-2)	<input type="checkbox"/> MODERATE(-1)
<input checked="" type="checkbox"/> MUCK/SILT(2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ARTIFIC(0)	<input type="checkbox"/>	<input type="checkbox"/> COAL FINES(-2)		<input checked="" type="checkbox"/> LOW(0)	<input type="checkbox"/> NONE(1)

TOTAL NUMBER OF SUBSTRATE TYPES: >4(2) <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrat

COMMENTS: _____

2) INSTREAM COVER:

COVER SCORE **9**

TYPE (Check all that apply)			AMOUNT (Check only one or Check 2 and AVERAGE)		
<input checked="" type="checkbox"/> UNDERCUT BANKS(1)	<input type="checkbox"/> DEEP POOLS(2)	<input type="checkbox"/> OXBOWS(1)	<input type="checkbox"/> EXTENSIVE >75%(11)		
<input checked="" type="checkbox"/> OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/> ROOTWADS(1)	<input checked="" type="checkbox"/> AQUATIC MACROPHYTES(1)	<input type="checkbox"/> MODERATE 25-75%(7)		
<input checked="" type="checkbox"/> SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/> BOULDERS(1)	<input checked="" type="checkbox"/> LOGS OR WOODY DEBRIS(1)	<input checked="" type="checkbox"/> SPARSE 5-25%(3)		
			<input type="checkbox"/> NEARLY ABSENT <5%(1)		

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

CHANNEL SCORE **8**

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input type="checkbox"/> NONE(6)	<input checked="" type="checkbox"/> HIGH(3)	<input checked="" type="checkbox"/> SNAGGING
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION
<input type="checkbox"/> LOW(2)	<input checked="" type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input checked="" type="checkbox"/> CANOPY REMOVAL
<input checked="" type="checkbox"/> NONE(1)	<input type="checkbox"/> POOR(1)	<input checked="" type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE **3.5**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY				BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)	L	R (per bank)
<input type="checkbox"/>	<input type="checkbox"/> WIDE >150 ft.(4)	<input type="checkbox"/>	<input type="checkbox"/> FOREST, SWAMP(3)	<input type="checkbox"/>	<input type="checkbox"/> URBAN OR INDUSTRIAL(0)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> NONE OR LITTLE(3)
<input type="checkbox"/>	<input type="checkbox"/> MODERATE 30-150 ft.(3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	<input type="checkbox"/> SHRUB OR OLD FIELD(2)	<input type="checkbox"/>	<input type="checkbox"/> MODERATE(2)
<input type="checkbox"/>	<input type="checkbox"/> NARROW 15-30 ft.(2)	<input type="checkbox"/>	<input type="checkbox"/> RESID.,PARK,NEW FIELD(1)	<input type="checkbox"/>	<input type="checkbox"/> CONSERV. TILLAGE(1)	<input type="checkbox"/>	<input type="checkbox"/> HEAVY OR SEVERE(1)
<input checked="" type="checkbox"/>	<input type="checkbox"/> VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	<input type="checkbox"/> FENCED PASTURE(1)	<input type="checkbox"/>	<input type="checkbox"/> MINING/CONSTRUCTION(0)		
<input type="checkbox"/>	<input checked="" type="checkbox"/> NONE(0)						

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0 POOL SCORE **5**

MAX.DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)
<input type="checkbox"/> >4 ft.(6)	<input type="checkbox"/> POOL WIDTH>RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input checked="" type="checkbox"/> POOL WIDTH=RIFFLE WIDTH(1)	<input checked="" type="checkbox"/> EDDIES(1)
<input checked="" type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH<RIFFLE WIDTH(0)	<input type="checkbox"/> INTERSTITIAL(-1)
<input type="checkbox"/> <1.2 ft.(1)		<input type="checkbox"/> INTERMITTENT(-2)
<input type="checkbox"/> <0.6 ft.(Pool=0)(0)		<input checked="" type="checkbox"/> SLOW(1)

COMMENTS: _____

RIFFLE SCORE **0**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS
<input type="checkbox"/> GENERALLY >4 in. MAX.>20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble,Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)
<input type="checkbox"/> GENERALLY >4 in. MAX.<20 in.(3)	<input type="checkbox"/> MOD.STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)
<input checked="" type="checkbox"/> GENERALLY <2 in.(Riffle=0)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)	<input type="checkbox"/> LOW(1)

COMMENTS: _____

6) GRADIENT (FEET/MILE): 5 % POOL 10% % RIFFLE 0 % RUN 90% GRADIENT SCORE 6

STREAM: Site 11 - Lilly Creek RIVER MILE: CR 200 W DATE: 8/4/2005 QHEI SCORE **44**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE **6**

TYPE		POOL		RIFFLE		SUBSTRATE ORIGIN (all)		SILT COVER (one)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	BLDER/SLAB(10)	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	SILT-HEAVY(-2)
<input type="checkbox"/>	BOULDER(9)	<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	SILT-NORM(0)
<input type="checkbox"/>	COBBLE(8)	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>	SANDSTONE(0)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	SHALE(-1)	Extent of Embeddedness (check one)	
<input checked="" type="checkbox"/>	MUCK/SILT(2)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	COAL FINES(-2)	<input type="checkbox"/>	EXTENSIVE(-2)
		<input type="checkbox"/>		<input type="checkbox"/>				<input type="checkbox"/>	LOW(0)
		<input type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	MODERATE(-1)
		<input type="checkbox"/>		<input type="checkbox"/>				<input type="checkbox"/>	NONE(1)

TOTAL NUMBER OF SUBSTRATE TYPES: >4(2) <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrat

COMMENTS: _____

2) INSTREAM COVER:

COVER SCORE **11**

TYPE (Check all that apply)			AMOUNT (Check only one or Check 2 and AVERAGE)		
<input checked="" type="checkbox"/>	UNDERCUT BANKS(1)	<input type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/>	ROOTWADS(1)	<input checked="" type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/>	BOULDERS(1)	<input type="checkbox"/>	SPARSE 5-25%(3)
		<input type="checkbox"/>	OXBOWS(1)	<input type="checkbox"/>	NEARLY ABSENT <5%(1)
		<input type="checkbox"/>	AQUATIC MACROPHYTES(1)		
		<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)		

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

CHANNEL SCORE **11**

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input type="checkbox"/> NONE(6)	<input checked="" type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION
<input checked="" type="checkbox"/> LOW(2)	<input checked="" type="checkbox"/> FAIR(3)	<input checked="" type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input checked="" type="checkbox"/> CANOPY REMOVAL
<input type="checkbox"/> NONE(1)	<input type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION
				<input type="checkbox"/> IMPOUND
				<input type="checkbox"/> ISLAND
				<input type="checkbox"/> LEVEED
				<input checked="" type="checkbox"/> BANK SHAPING

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE **5**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY				BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)	L	R (per bank)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	WIDE >150 ft.(4)	<input checked="" type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	URBAN OR INDUSTRIAL(0)	<input type="checkbox"/>	NONE OR LITTLE(3)
<input checked="" type="checkbox"/>	MODERATE 30-150 ft.(3)	<input type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	SHRUB OR OLD FIELD(2)	<input type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	NARROW 15-30 ft.(2)	<input type="checkbox"/>	RESID.,PARK,NEW FIELD(1)	<input type="checkbox"/>	CONSERV. TILLAGE(1)	<input type="checkbox"/>	HEAVY OR SEVERE(1)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)		
<input type="checkbox"/>	NONE(0)						

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0 POOL SCORE **5**

MAX DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)
<input type="checkbox"/> >4 ft.(6)	<input checked="" type="checkbox"/> POOL WIDTH>RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input type="checkbox"/> POOL WIDTH=RIFFLE WIDTH(1)	<input type="checkbox"/> FAST(1)
<input checked="" type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH<RIFFLE WIDTH(0)	<input type="checkbox"/> MODERATE(1)
<input type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/> SLOW(1)
<input type="checkbox"/> <0.6 ft.(Pool=0)(0)		<input type="checkbox"/> EDDIES(1)
		<input type="checkbox"/> INTERSTITIAL(-1)
		<input type="checkbox"/> INTERMITTENT(-2)

COMMENTS: _____

RIFFLE/RUN DEPTH

RIFFLE/RUN SUBSTRATE

RIFFLE/RUN EMBEDDEDNESS

<input type="checkbox"/> GENERALLY >4 in. MAX.>20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble,Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)	<input type="checkbox"/> NONE(2)
<input type="checkbox"/> GENERALLY >4 in. MAX.<20 in.(3)	<input type="checkbox"/> MOD.STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/> LOW(1)	
<input checked="" type="checkbox"/> GENERALLY <2 in.(Riffle=0)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)		

COMMENTS: _____

6) GRADIENT (FEET/MILE): 5 % POOL 5% % RIFFLE 10% % RUN 85% GRADIENT SCORE 6

STREAM: Site 12 - Lilly Creek RIVER MILE: CR 1550 N DATE: 8/4/2005 QHEI SCORE **32.5**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE **5**

TYPE	POOL	RIFFLE		POOL	RIFFLE	SUBSTRATE ORIGIN (all)	SILT COVER (one)
<input type="checkbox"/> BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> LIMESTONE(1)	<input checked="" type="checkbox"/> SILT-HEAVY(-2)
<input type="checkbox"/> BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> RIP/RAP(0)	<input type="checkbox"/> SILT-MOD(-1)
<input type="checkbox"/> COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> HARDPAN(0)	<input type="checkbox"/> SILT-NORM(0)
<input type="checkbox"/> HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> SANDSTONE(0)	<input checked="" type="checkbox"/> EXTENSIVE(-2)
<input checked="" type="checkbox"/> MUCK/SILT(2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> SHALE(-1)	<input type="checkbox"/> MODERATE(-1)
			<input type="checkbox"/>			<input type="checkbox"/> COAL FINES(-2)	<input type="checkbox"/> LOW(0)
			<input type="checkbox"/>				<input type="checkbox"/> NONE(1)

TOTAL NUMBER OF SUBSTRATE TYPES: >4(2) <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrat

COMMENTS:

2) INSTREAM COVER:

COVER SCORE **6**

TYPE (Check all that apply)	AMOUNT (Check only one or Check 2 and AVERAGE)
<input checked="" type="checkbox"/> UNDERCUT BANKS(1)	<input type="checkbox"/> EXTENSIVE >75%(11)
<input checked="" type="checkbox"/> OVERHANGING VEGETATION(1)	<input type="checkbox"/> MODERATE 25-75%(7)
<input checked="" type="checkbox"/> SHALLOWS (IN SLOW WATER)(1)	<input checked="" type="checkbox"/> SPARSE 5-25%(3)
<input type="checkbox"/> DEEP POOLS(2)	<input type="checkbox"/> NEARLY ABSENT <5%(1)
<input type="checkbox"/> ROOTWADS(1)	
<input type="checkbox"/> BOULDERS(1)	
<input type="checkbox"/> OXBOWS(1)	
<input type="checkbox"/> AQUATIC MACROPHYTES(1)	
<input type="checkbox"/> LOGS OR WOODY DEBRIS(1)	

COMMENTS:

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

CHANNEL SCORE **6**

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input type="checkbox"/> NONE(6)	<input checked="" type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION
<input type="checkbox"/> LOW(2)	<input type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input checked="" type="checkbox"/> CANOPY REMOVAL
<input checked="" type="checkbox"/> NONE(1)	<input checked="" type="checkbox"/> POOR(1)	<input checked="" type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION
				<input type="checkbox"/> IMPOUND
				<input type="checkbox"/> ISLAND
				<input type="checkbox"/> LEVEED
				<input checked="" type="checkbox"/> BANK SHAPING

COMMENTS:

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE **5.5**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)	EROSION/RUNOFF-FLOODPLAIN QUALITY	BANK EROSION
L R (per bank)	L R (most predominant per bank)	L R (per bank)
<input type="checkbox"/> WIDE >150 ft.(4)	<input checked="" type="checkbox"/> FOREST, SWAMP(3)	<input checked="" type="checkbox"/> NONE OR LITTLE(3)
<input type="checkbox"/> MODERATE 30-150 ft.(3)	<input checked="" type="checkbox"/> OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/> MODERATE(2)
<input type="checkbox"/> NARROW 15-30 ft.(2)	<input type="checkbox"/> RESID.,PARK,NEW FIELD(1)	<input type="checkbox"/> HEAVY OR SEVERE(1)
<input checked="" type="checkbox"/> VERY NARROW 3-15 ft.(1)	<input type="checkbox"/> FENCED PASTURE(1)	
<input type="checkbox"/> NONE(0)		
	L R (per bank)	
	<input type="checkbox"/> URBAN OR INDUSTRIAL(0)	
	<input type="checkbox"/> SHRUB OR OLD FIELD(2)	
	<input type="checkbox"/> CONSERV. TILLAGE(1)	
	<input type="checkbox"/> MINING/CONSTRUCTION(0)	

COMMENTS:

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0 POOL SCORE **4**

MAX DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)
<input type="checkbox"/> >4 ft.(6)	<input checked="" type="checkbox"/> POOL WIDTH>RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input type="checkbox"/> POOL WIDTH=RIFFLE WIDTH(1)	<input type="checkbox"/> FAST(1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH<RIFFLE WIDTH(0)	<input type="checkbox"/> MODERATE(1)
<input checked="" type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/> SLOW(1)
<input type="checkbox"/> <0.6 ft.(Pool=0)(0)		<input type="checkbox"/> EDDIES(1)
		<input type="checkbox"/> INTERSTITIAL(-1)
		<input type="checkbox"/> INTERMITTENT(-2)

COMMENTS:

RIFFLE SCORE **0**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS
<input type="checkbox"/> GENERALLY >4 in. MAX.>20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble,Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)
<input type="checkbox"/> GENERALLY >4 in. MAX.<20 in.(3)	<input type="checkbox"/> MOD.STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)
<input checked="" type="checkbox"/> GENERALLY <2 in.(Riffle=0)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)	<input type="checkbox"/> LOW(1)

COMMENTS:

6) GRADIENT (FEET/MILE): 5 % POOL 5% % RIFFLE 5% % RUN 90% GRADIENT SCORE 6