

TOWN OF CHAPEL HILL

February 4, 2003

Warren Mitchell Mitchell Westendorf, PA 210 N. Columbia Street Chapel Hill, NC 27514

Re: Creekside determination of east and west channels

Dear Mr. Mitchell,

As per a request from the Planning Department, I have again performed a stream determination for intermittent stream origins on the subject property Tax Map # 7.70.D.5, Address: 600 Morgan Creek Road, PIN# 9787-59-6577. Based on my training using the North Carolina Division of Water Quality Stream Classification Forms and my professional judgment, I have reached the following conclusions:

For the west channel, the existing intermittent stream origin remains at the same location as previously determined.

For the east channel, the existing intermittent stream origin remains at the same location as previously determined.

I have enclosed the determination form for your use.

Best Regards,

Fred Royal, EI, CFM

Stormwater Management Engineer

Cc: Phil Mason, Senior Planner

Larry Tucker, Senior Engineering Coordinator Deborah Squires, Senior G.I.S. Technician Maggie Bowers, Sr. Code Enforcement Officer



TOWN OF CHAPEL HILL

January 17, 2003

Warren Mitchell Mitchell Westendorf, PA 210 N. Columbia Street Chapel Hill, NC 27514

Dear Mr. Mitchell:

A site inspection of the property Tax Map #70.D.5, PIN# 9787-59-6577, Address 600 Morgan Creek Road, was conducted on January 13, 2003. At that time, the area in question did meet the minimum requirement for classification as perennial and intermittent streams, and therefore the Resource Conservation District Ordinance will apply to this parcel.

The perennial determination has already been completed and the intermittent determination found two intermittent streams.

Regards,

Fred Royal

Stormwater Management Engineer

FR/jcf

cc: Larry Tucker, Senior Engineering Coordinator

Deborah Squires, Senior G.I.S. Technician

Maggie Bowers, Sr. Code Enforcement Officer



December 13, 2002

Mr. Roger Waldon Chapel Hill Planning Department 306 N. Columbia Street Chapel Hill, NC 27516

Dear Mr. Waldon:

A field verification was conducted on the property Tax Map # 7.70.D.5, PIN# 9787-59-6577 (Creekside Subdivision Site) on December 12, 2002.

Morgan Creek runs along the east side of this lot. It is perennial.

A small tributary enters Morgan Creek at the southeast corner of this lot. It is perennial for a short distance upstream of the confluence with Morgan Creek. The perennial determination of the tributary begins near the southeast corner of parcel 7.70..6A, approximately 300 feet upstream of the confluence.

The Resource Conservation will apply to the noted portion of the tributary in question and to Morgan Creek.

Regards,

Sandra Maunz

Engineering Technician

SM/jcf

cc:

Larry Tucker, Senior Engineering Coordinator Deborah Squires, Senior G.I.S. Technician Maggie Bowers, Zoning Enforcement Officer

CREQUSIDE

EAST CHANNEL I SO NCDWQ Stream Classification Form

Centia				
Project Name: AR River Ba	asin: Morca	رر _{Cour}	nty: ORANGE	Evaluator: FTR
DWQ Project Number: Nearest	Named Stream:	Latit	•	Signature:
Date: $\sqrt{5/03}$ USGS QUAD:		Longitudo	T	Sing /Dispations
- 1/ /		Longitude:		tion/Directions:
*PLEASE NOTE: If evaluator and landowner	agree that the feat	ure is a man-made	ditch, then use of this	form is not necessary. Als
in the best professional judgement of the evaluate should not be used*	r, the feature is a n	nan-made ditch an	d not a modified natur	al stream—this rating sys
snouta not be usea."		•		
Primary Field Indicators: (Circle	One Number Per	Line)		
I. Geomorphology	Absent	Weak	Moderate	Strong
1) Is There A Riffle-Pool Sequence?	(0)	1	2	3
2) Is The USDA Texture In Streambed				
Different From Surrounding Terrain?	0	R)	2	2
3) Are Natural Levees Present?	<i>(8)</i>			3
4) Is The Channel Sinuous?		<u>i</u>	2	
5) Is There An Active (Or Relic)		<u>†</u>	2	<u>(3</u>
Floodplain Present?	(6)			
6) Is The Channel Braided?	- 4		2	3
7) Are Recent Alluvial Deposits Present?	· <u>@/</u>	- 	2	3
8) Is There A Bankfull Bench Present?	(2)	<u>CI</u> /	<u>2</u>	3
9) Is a Continuous Bed & Bank Present?		<u> </u>	2	3
9) Is a Continuous Bed & Bank Present? (*NOTE: If Bed & Bank Caused By Ditching And WITH)	OFTE Simon size The C	l I	2	3)
10) Is a 2 nd Order Or Greater Channel (As Ind	icated	core=U+)		
On Topo Map And/Or In Field) Present?				
	<u>Yes=3</u>	TN/770 /	No=0	
PRIMARY GEOMORPHOLOGY IN	DICATOR PO	INIS:		•
II Hyduslam			•	
II. Hydrology	Absent	Weak	Moderate	Strong
1) Is There A Groundwater	(a)			
Flow/Discharge Present?		1	22	3
PRIMARY HYDROLOGY INDICATO	OR ÞØ ÍNTS:_	<u> </u>		
III. Biology	Absent	*****	3.5	~.
1) Are Fibrous Roots Present In Streambed?		<u>Weak</u>	<u>Moderate</u>	Strong
2) Are Rooted Plants Present In Streambed?	3	2	<u>i</u>	
3) Is Periphyton Present?	3	2	<u> </u>	
4) Are Bivalves Present?	<u> </u>	<u> </u>	2	3
	- (0)	1	2	3
PRIMARY BIOLOGY INDICATOR I	POINTS:	<u> </u>		•
		•		
Secondary Field Indicators: (Circ	ele One Number P	er Line)		
Coomounholo	A.W			
I. Geomorphology	Absent	Weak	Moderate	Strong
) Is There A Head Cut Present In Channel?	0	(.5/	1	1.5
2) Is There A Grade Control Point In Channel?	0	.5	(1)	1.5
3) Does Topography Indicate A				
Natural Drainage Way?	0		1	$\left(1.5\right)$
SECONDARY GEOMORPHOLOGY.	INDICATOR	POINTS: 3		

_	$\overline{}$
1	—)
\sim	1/
<u> </u>	

II. Hydrology	Absent	Weak	Moderate	Strong
1) Is This Year's (Or Last Year's) Leaflitter	, L			
Present In Streambed?	1.5	h	5	
2) Is Sediment On Plants (Or Debris) Present?	00	(.5/	11	1.5
3) Are Wrack Lines Present?	0		1	(1.5)
4) Is Water In Channel And >48 Hrs. Since	0	(.5)	1	1.5
Last Known Rain? (*NOTE: If Ditch Indicated In #	19 Above Skip This Si	tep And #5 Below*)		
5) Is There Water In Channel During Dry	0	(.5)	1	1.5
Conditions Or In Growing Season)?				
6) Are Hydric Soils Present In Sides Of Channel	el (Or In Headcu	t)? Yes=1.5		$N_0=0$
SECONDARY HYDROLOGY INDICA				

III. Biology	Absent	Weak	Moderate	Strong
1) Are Fish Present?	(0)	.5	1	1.5
2) Are Amphibians Present?	(62)	5	1	1.5
3) Are AquaticTurtles Present?	(0)	5	1	1.5
4) Are Crayfish Present?	(O)	5	1	1.5
5) Are Macrobenthos Present?	Y9	.5	1	1.5
6) Are Iron Oxidizing Bacteria/Fungus Present?	(0)	5	11	1.5
7) Is Filamentous Algae Present?	75)	5	1	1.5
8) Are Wetland Plants In Streambed? SAV	Mostly OBL	Mostly FACW	Mostly FAC	Mostly FACU Mostly UPL
(* NOTE: If Total Absence Of All Plants In Streambed 2	1	.75	(.5 /	0 0
As Noted Above Skip This Step UNLESS SAV Present*).		· · ·		

SECONDARY BIOLOGY INDICATOR POINTS: . \

TOTAL POINTS (Primary + Secondary) = 14.5 (If Greater Than Or Equal To 19 Points The Stream Is At Least Intermittent)

Notes: ETHIMERAL CHANNEL

EAST CHANNER IT (Revious 5 150)

NCDWQ Stream Classification Form

y .	. 1			
Project Name: (Recks) De River B	asin: Morg	Cour	nty: DRANJE	Evaluator:
il	Named Stream:	Latit	ude:	Signature:
Date: $\sqrt{3}/\sqrt{3}$ USGS QUAD:		Longitude:	Loca	tion/Directions:
*PLEASE NOTE: If evaluator and landowne	r avree that the fea	-		
in the best professional judgement of the evaluat	or, the feature is a	man-made ditch an	d not a modified natus	ral stream—this ratina ever
should not be used*	, ,			and our came a times rating syst
Primary Field Indicators: (Circle	One Number Pe	r Line)		
I. Geomorphology	Absent	Weak	Moderate	Strong
1) Is There A Riffle-Pool Sequence?	0	1	(2)	3
2) Is The USDA Texture In Streambed				
Different From Surrounding Terrain?	0_	1	2	(3)
3) Are Natural Levees Present?	<u>(d)</u>	1	2	3
4) Is The Channel Sinuous?	0	11	(2)	3
5) Is There An Active (Or Relic)		\wedge		•
Floodplain Present?	0		2	3
6) Is The Channel Braided?	<u>(6)</u>	1	2	3
7) Are Recent Alluvial Deposits Present?	<u> </u>	1	$-\omega$	3
8) Is There A Bankfull Bench Present?	0	1	<u> </u>	3
9) Is a Continuous Bed & Bank Present?	0	1	2	(3)
(*NOTE: If Bed & Bank Caused By Ditching And WITH 10) Is a 2 nd Order Or Greater Channel (As Inc	<u>IOUT Sinuosity Then</u> licated	Score=()*)		
On Topo Map And/Or In Field) Present?	Yes=3		No=0	
PRIMARY GEOMORPHOLOGY IN		DINTE 4	110-02	· · · · · · · · · · · · · · · · · · ·
I MMAKI GEOMOM HOLOGI IN	DICATOR F	M12: <u>77</u>		
II. Hydrology	Absent	Weak	Moderate	Strong
1) Is There A Groundwater				
Flow/Discharge Present?	0	1	(2)	3
PRIMARY HYDROLOGY INDICAT	OR POINTS:	7_		·
III. Biology	Absent	Weak	Moderate	Strong
1) Are Fibrous Roots Present In Streambed?	3	(2)	1	00
2) Are Rooted Plants Present In Streambed?	3	2	(1)	0
3) Is Periphyton Present?		1	2	3
4) Are Bivalves Present?	70	1	2	3
PRIMARY BIOLOGY INDICATOR	POINTS:	3		
Secondary Field Indicators: (Cir	cle One Number	Per Line)		
I. Geomorphology	Absent	Weak	Moderate	Strong
1) Is There A Head Cut Present In Channel?	0	15)	1	1.5
2) Is There A Grade Control Point In Channel	? 0	.5	1	1.57
3) Does Topography Indicate A				<u> </u>
Natural Drainage Way?	0	.5	1	1.5)
SECONDARY GEOMORPHOLOGY	INDICATOR	POINTS: 3	5	
)				

To the state of th		(59)		
II. Hydrology	Absent	Weak	Moderate	Strong
1) Is This Year's (Or Last Year's) Leaflitter				`.
Present In Streambed?	1.5	(14	.5	0
2) Is Sediment On Plants (Or Debris) Present?	0	150	1	1.5
3) Are Wrack Lines Present?	0	Y 52	1	1.5
4) Is Water In Channel And >48 Hrs. Since	0	(5)	. 1	1.5
Last Known Rain? (*NOTE: If Ditch Indicated In #	Above Skip This St	ep And #5-Below*)		
5) Is There Water In Channel During Dry	0	(7.5)	1	1.5
Conditions Or In Growing Season)?				
6) Are Hydric Soils Present In Sides Of Channe	l (Or In Headcut	Yes=1.5		/No=0)
SECONDARY HYDROLOGY INDICA				

III. Biology	Absent	Weak	Moderate	Strong
1) Are Fish Present?	(9)	.5	1	1.5
2) Are Amphibians Present?	6	.5	1	1.5
3) Are AquaticTurtles Present?	(D)	.5	1	1.5
4) Are Crayfish Present?	762	.5	1	1.5
5) Are Macrobenthos Present?	(60)	.5	11	1.5
6) Are Iron Oxidizing Bacteria/Fungus Present?	<i>70</i> 23\	.5	11	1.5
7) Is Filamentous Algae Present?	<u> (6)</u>	.5	1	1.5
8) Are Wetland Plants In Streambed? SA	V Mostly OBI	Mostly FACW	Mostly FAC	Mostly FACU Mostly UPL
(* NOTE: If Total Absence Of All Plants In Streambed	2 1	.75	(.5 /	0 0
As Noted Above Skip This Step UNLESS SAV Present*).				
CECOMB ARY BYON OCH MARKE AMOR	DOTRING X	^		

SECONDARY BIOLOGY INDICATOR POINTS: - 3

TOTAL POINTS (Primary + Secondary) = 27 (If Greater Than Or Equal To 19 Points The Stream Is At Least Intermittent)

Notes: INTERMITTENT STREAM,

West CHANNEL I (UPSTREAM OF EXISTING ORIGIN) NCDWQ Stream Classification Form

					_
Project Name: Cheekside F	River Basin:	MORGAN	Cou	nty: ERANGE	Evaluator:
DWQ Project Number:	Vearest Nam	ed Stream:	Lati	tude:	Signature:
Date: $\sqrt{3/03}$ USGS QU	IAD•		Longitude:	Locati	on/Directions:
			-		
*PLEASE NOTE: If evaluator and lan	iaowner agre	e that the feature	is a man-made	e ditch, then use of this f	orm is not necessary. Als
in the best professional judgement of the	evatuator, tne	e jeature is a man	i-maae aitch an	id not a modified natural	stream—this rating sys
should not be used*		•			
Primary Field Indicators:	(Circle One	Number Per Li	ne)		
I. Geomorphology	4	Absent	Weak	Moderate	Strong
1) Is There A Riffle-Pool Sequence?			1	2	3
2) Is The USDA Texture In Streambed	_	1/2		•	
Different From Surrounding Terrain				2	3
3) Are Natural Levees Present?			\mathcal{L}_1	2	3
4) Is The Channel Sinuous?		/6 /	11	2	3
5) Is There An Active (Or Relic)	'		_		
Floodplain Present?		100	11	2	3
6) Is The Channel Braided?	•	96/	<u> </u>	2	3
7) Are Recent Alluvial Deposits Preser		<u> </u>	4	2	3
8) Is There A Bankfull Bench Present?		0		2	3
9) Is a Continuous Bed & Bank Presen		0	I	$\frac{2}{2}$	3
(*NOTE: If Bed & Bank Caused By Ditching And 10) Is a 2 nd Order Or Greater Channel ((As Indicate	<u>Sinuosity Inen Scor</u> A	e=U+)		
On Topo Map And/Or In Field) Pro		<i>Yes</i> =3		No=0	
PRIMARY GEOMORPHOLO			TTC. <	110-0	
I MIMARI GEOMORPHOLO	II INDIC	AIUR PUIN	13:		
II. Hydrology	A	bsent	Weak	Moderate	Strong
1) Is There A Groundwater					
Flow/Discharge Present?		0	/1/_	2	3
PRIMARY HYDROLOGY IND	ICATOR .	POINTS: (,		
				•	
III. Biology	A	bsent	Weak	Moderate	Strong
1) Are Fibrous Roots Present In Stream	nbed?	_ 3	2	10	70)
2) Are Rooted Plants Present In Stream	ibed?	3	2		0
3) Is Periphyton Present?		16/1	1	$\frac{\sqrt{2}}{2}$	3
4) Are Bivalves Present?		18/	1	2	3
PRIMARY BIOLOGY INDICA	TOR POL	NTS:			
Secondary Field Indicator	S: (Circle C	ne Number Per	I ine)	4	
		no rvamou r or	Liney		
I. Geomorphology	A	bsefft	Weak	Moderate	Strong
1) Is There A Head Cut Present In Char		19	.5	1	1.5
2) Is There A Grade Control Point In C	hannel?	0	(.5)	1	1.5
3) Does Topography Indicate A					
Natural Drainage Way?		0	.5	1	1.5
SECONDARY GEOMORPHOL	LOGY INI	DICATOR PA	OINTS:	2_	
)			/		5
·		•	//		
				: /	•

(61)	١

II. Hydrology	Absent	Weak	Moderate	Strong
1) Is This Year's (Or Last Year's) Leaflitter			•	
Present In Streambed?	1.5	<u></u>	5	
2) Is Sediment On Plants (Or Debris) Present?	0		<u> </u>	1.5
3) Are Wrack Lines Present?	0	.5	11	(1.5)
4) Is Water In Channel And >48 Hrs. Since	0	.5	1	1.5
Last Known Rain? (*NOTE: If Ditch Indicated In #S	Above Skip This S	Step And #5 Below*)		
5) Is There Water In Channel During Dry	0	.5		1.5
Conditions Or In Growing Season)?		· · · · · · · · · · · · · · · · · · ·		
6) Are Hydric Soils Present In Sides Of Channel	(Or In Headcu	t)? Yes=1.5		No=0
SECONDARY HYDROLOGY INDICA	TOR POIN	TS: <u>4</u> . 5		

III. Biology	Absent	Weak	Moderate	Strong
1) Are Fish Present?	(9)	.5	1	1.5
2) Are Amphibians Present?	2	.5	1	1.5
3) Are AquaticTurtles Present?	795	.5	1	1.5
4) Are Crayfish Present?	70)	<u> </u>	1	1.5
5) Are Macrobenthos Present?	<u> </u>	(.5)	1	1.5
6) Are Iron Oxidizing Bacteria/Fungus Present?	(A)	.5	1	1.5
7) Is Filamentous Algae Present?	(6)	5	1	1.5
8) Are Wetland Plants In Streambed? SA	V Mostly OBL	Mostly FACW	Mostly FAC	Mostly FACU Mostly UPL
(* NOTE: If Total Absence Of All Plants In Streambed As Noted Above Skip This Step UNLESS SAV Present*).	2 1	.75	.5	0 0

SECONDARY BIOLOGY INDICATOR POINTS: - 5

TOTAL POINTS (Primary + Secondary) = /4 (If Greater Than Or Equal To 19 Points The Stream Is At Least Intermittent)

Notes: ETHIMERAL CHANNEL

West CHANNEL II (JUST UNITREAM OF EXISTING ORIGIN)

NCDWQ Stream Classification Form

Project Name: Clock Spe R	River Basin: $\mathcal{N}_{\mathcal{O}}$	BAN (County: ORANZO	Evaluator: Fiz
DWQ Project Number:	Nearest Named Strea	im: L	atitude:	Signature:
Date: USGS QU *PLEASE NOTE: If evaluator and lan in the best professional judgement of the o should not be used*	downer agree that th	Longitude e feature is a man-m is a man-made ditch	ade ditch, then use of th	cation/Directions: his form is not necessary. Also hural stream—this rating syst
<u>Primary Field Indicators:</u>	(Circle One Numbe	r Per Line)		
I. Geomorphology	Absent) Weak	Moderate	Strong
1) Is There A Riffle-Pool Sequence?	/0/	1	2	3
Is The USDA Texture In Streambed			~	
Different From Surrounding Terrain	n? 0	<u> </u>		3
3) Are Natural Levees Present?	0	1	\mathcal{C}_{2}	3
4) Is The Channel Sinuous?	0	M)	2	3
5) Is There An Active (Or Relic)				
Floodplain Present?	0,		2	3
6) Is The Channel Braided?			2	3
7) Are Recent Alluvial Deposits Preser	nt? 0	12	2	3
8) Is There A Bankfull Bench Present?	.0	R	2 ~	3
9) Is a Continuous Bed & Bank Presen	t? 0		R)	3
(*NOTE: If Bed & Bank Caused By Ditching An	d WITHOUT Sinuosity	Then Score=0*)		
10) Is a 2 nd Order Or Greater Channel ((Aş Indicated			
On Topo Map And/Or In Field) Pro		<u>s=3</u>	No=0	
PRIMARY GEOMORPHOLOG	GY INDICATOR	POINTS: 9		
II. Hydrology	Absent	Weak	<u>Moderate</u>	Strong
1) Is There A Groundwater		/		
Flow/Discharge Present?	//0 /	1	2	3
PRIMARY HYDROLOGY IND.	ICATOR PO ÍN'	TS: <u>2</u> 0		
III. Biology	Abrond	%	36.3	α.
1) Are Fibrous Roots Present In Stream	Absent	Weak 2	Moderate	Strong
				0
2) Are Rooted Plants Present In Stream	ibea!			0
3) Is Periphyton Present?		<u>i</u>	2	3
1) Are Bivalves Present?	TOP POST	<u> </u>	2	3
PRIMARY BIOLOGY INDICA	IOR POINTS:			
Secondary Field Indicator	** (** * * * * *		•	
Secondary Field Indicator	S: (Circle One Num	iber Per Line)		•
I. Geomorphology	Absent	Weak	Moderate	Strong
l) Is There A Head Cut Present In Char	nnel?	.5	1	15_
2) Is There A Grade Control Point In C		.5	1	75)
3) Does Topography Indicate A	·			
Natural Drainage Way?	0		1	(1.5)
SECONDARY GEOMORPHOL		OR POINTS.	3	1.3
)			4	
	f .		1	

II. Hydrology	Absent	Weak	Moderate	Strong
1) Is This Year's (Or Last Year's) Leaflitter				
Present In Streambed?	1.5	1	.5	
2) Is Sediment On Plants (Or Debris) Present?	0	(.5)	1	<u> </u>
3) Are Wrack Lines Present?	0	(5)	11	1.5
1) Is Water In Channel And >48 Hrs. Since	0	.5	1	1.5
Last Known Rain? (*NOTE: If Ditch Indicated In #9	Above Skip This St	ep And #5 Below*)		
5) Is There Water In Channel During Dry	0	.5	1	_1.5
Conditions Or In Growing Season)?				
6) Are Hydric Soils Present In Sides Of Channel	(Or In Headcut	t)? $Yes=1.5$		No=0
SECONDARY HYDROLOGY INDICA		•		

III. Biology	Absept	Weak	Moderate	Strong
1) Are Fish Present?	(%)	.5	1	1.5
2) Are Amphibians Present?	762	.5	1	1.5
3) Are AquaticTurtles Present?	/8/	5	1	1.5
4) Are Crayfish Present?	82	5	1	1.5
5) Are Macrobenthos Present?		.5	1	1.5
6) Are Iron Oxidizing Bacteria/Fungus Presen	t? 7 02	5	1	1.5
7) Is Filamentous Algae Present?	<i></i>	.5	1	1.5
8) Are Wetland Plants In Streambed?	SAV Mostly OBL	Mostly FACW	Mostly FAC	Mostly FACL Mostly UPL
(* NOTE: If Total Absence Of All Plants In Streambed	2 1	.75	.5	0
As Noted Above Skip This Step UNLESS SAV Present*).	· · · · · · · · · · · · · · · · · · ·			
COCCAND ADVIDED ACTUATION OF A	an narama 🖊			

SECONDARY BIOLOGY INDICATOR POINTS:

TOTAL POINTS (Primary + Secondary) = // (If Greater Than Or Equal To 19 Points The Stream Is At Least Intermittent)

Notes: EPHMERAE CHANNEL

WEST CHANNEL TIT

(DOWN STREAM OF EXISTING ORIGIN)

NCDWQ Stream Classification Form

Project Name: COULS/BL River Bas	. 1 200			
	in: Proper	Cour	nty: DRANGE	Evaluator: (5)
	amed Stream:	Latit	ude:	Signature:
Date: $\sqrt{3}/\sqrt{3}$ USGS QUAD:		Longitude:	Locati	ion/Directions:
*PLEASE NOTE: If evaluator and landowner a	aree that the feat	_	•	
in the best professional judgement of the evaluator,	the feature is a n	an-made ditch an	d not a modified nature	orm is not necessary. Atso,
should not be used*	e yearan e aş a n		a noi a mougica natara	i sireum—inis ruung system
Primary Field Indicators: (Circle C	ne Number Per	Line)		
		,		
I. Geomorphology	Absent	Weak	<u>Moderate</u>	Strong
1) Is There A Riffle-Pool Sequence?	0	<u> </u>		3
2) Is The USDA Texture In Streambed		_		
Different From Surrounding Terrain?		1	2	
3) Are Natural Levees Present?		1	2	3
4) Is The Channel Sinuous?		1	2	
5) Is There An Active (Or Relic)				
Floodplain Present?		I	<u> </u>	3
6) Is The Channel Braided?		1	2	3
7) Are Recent Alluvial Deposits Present?	0	<u>I</u>	— <i>(2)</i> —	
8) Is There A Bankfull Bench Present?	0			3
9) Is a Continuous Bed & Bank Present? (*NOTE: If Bed & Bank Caused By Ditching And WITHOL	O	1	2	73/
10) Is a 2 nd Order Or Greater Channel (As Indica	o <u>r Sinuosily Inen S</u> Sted	core=U*)	$\overline{}$	
On Topo Map And/Or In Field) Present?	<i>Yes</i> =3	Ź	No=0	
PRIMARY GEOMORPHOLOGY IND		INTS. 10	(10-0)	
	ICATOR I O	1115. <u>78)</u>		
II. Hydrology	Absent	Weak	Moderate	Strong
1) Is There A Groundwater				
Flow/Discharge Present?	/ 0/	1	22	3
PRIMARY HYDROLOGY INDICATO	R POINTS:_	<u>0 </u>		
III. Biology	Absent	Weak	Moderate	Strong
1) Are Fibrous Roots Present In Streambed?	3	2	772	0
2) Are Rooted Plants Present In Streambed?	3	2	(1)	0
3) Is Periphyton Present?	6	1 .	2	3
4) Are Bivalves Present?	707	1	2	3
PRIMARY BIOLOGY INDICATOR PO	OINTS: 7		,	
	•			
	e One Number P	er Line)		
Secondary Field Indicators: (Circle		•		
	Absent	Weak	Moderate	Strong
I. Geomorphology	Absent	Weak 5	Moderate	Strong
I. Geomorphology 1) Is There A Head Cut Present In Channel?	0	.5	Moderate	(15)
I. Geomorphology 1) Is There A Head Cut Present In Channel? 2) Is There A Grade Control Point In Channel?			Moderate 1 1	
I. Geomorphology 1) Is There A Head Cut Present In Channel?	0	.5	Moderate 1 1	(15)



	6	5	
_		_	_

II. Hydrology	Absent	Weak	Moderate	Strong
1) Is This Year's (Or Last Year's) Leaflitter				
Present In Streambed?	1.5		.5	0
2) Is Sediment On Plants (Or Debris) Present?	0	(5)	1	1.5_
3) Are Wrack Lines Present?	0	<u> </u>	1	(1.5)
4) Is Water In Channel And >48 Hrs. Since	(T)	.5	1	1.5
Last Known Rain? (*NOTE: If Ditch Indicated In #S	Above Skip This S	Step And #5 Below*)		
5) Is There Water In Channel During Dry	0	('.5)	1	1.5
Conditions Or In Growing Season)?				
6) Are Hydric Soils Present In Sides Of Channel	(Or In Headcu	t)? Yes=1.5		∕No =0)
SECONDARY HYDROLOGY INDICA	TOR POIN	TS: 3.5	(

III. Biology	Absent	Weak	Moderate	Strong
1) Are Fish Present?	$\langle y \rangle$.5	1	1.5
2) Are Amphibians Present?	(B)	5	1	1.5
3) Are AquaticTurtles Present?	(F)	.5	1	1.5
4) Are Crayfish Present?		.5	1	1.5
5) Are Macrobenthos Present?	700	.5	11	1.5
6) Are Iron Oxidizing Bacteria/Fungus Present?		.5	1	1.5
7) Is Filamentous Algae Present?	(0)	5	11	1.5
8) Are Wetland Plants In Streambed? SA'	V Mostly OBL	Mostly FACW	Mostly FAC	Mostly FACU Mostly UPL
(* NOTE: If Total Absence Of All Plants In Streambed As Noted Above Skip This Step UNLESS SAV Present*).	2 1	.75	.5	0 0
SECONDARY RIOLOGY INDICATOR	POINTS1	\sim		

TOTAL POINTS (Primary + Secondary) = 28.75 (If Greater Than Or Equal To 19 Points The Stream Is At Least Intermittent)

Notes: INTERMITENT STROAM