HABITAT ASSESSMENT FIELD DATA SHEET PHEDIDA ADDIDATE-TIME-INITIALS: ______ NC-4 7/8/98 VP confl LN

Surveyed by: _____

Habitat	Category			
Peremeter	Ontimal	Suboptimal	Marginal	Poor
1. Instream Cover (fish)	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat	30-50% mix of boulder, cobble, or other stable	10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable.	less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat obvious.
SCORE:	20 19 18 17 (16)	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Epifaunal Substrate	Well-developed riffle and run; riffle is as wide as stream and length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream but length is less than 2 times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; riffle not as wide as stream and its length is less than 2 times the stream width; gravel or large boulders and bedrock prevalent; some cobble present.	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking.
SCORE:	20 19 18 17 16	15 14 (13) 12 11	10 9 8 7 6	5 4 3 2 m 1 m 0 m
3. Embedd ed ness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
SCORE:	20 19 18 17 (16)	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Velocity/Depth Regimes	All four velocity/depth regimes present (slow-deep; slow- shallow; fast-deep; fast-shallow).	Only 3 or the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 or the 4 regimes present (if fast-shallow or slow- shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
SCORE:	20 19 18 (17) 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Alteration	No channelization or dredging present.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging (greater than	New embankments present on both banks; and 40-80% of stream reach channelized and disrupted.	banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted.
1		20 yr) may be present, but recent channelization is not present.	SD	MS DocID 2023698
SCORE:	20 19 18 (17)16	15 14 13 12 11	10 9 8 7 0	ພວາຍ4 ຫ່ວ່າ∠າ∋າ ປີ
6. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5- 30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent	Heavy deposits of the material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE:	20 19 18 17 16	15 (14) 13 12 11	10 9 8 7 6	5 4 3 2 1 0

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Habitat		"Cate	gory	
Parameter	Optimal	Suboptimal	Marginal	Poor
7. Frequency of Riffles	Occurrence of riffles relatively frequent; distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is > 25.
SCORE:	20 19 18 17 16	15 14 13 12 (11)	10 9 8 7 6	5 4 3 2 1 0
8. Channel Flow Status	Water reaches base of both lower banks and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or < 25% of channel substrate is exposed.	Water fills 25 - 75% of the available channel and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE:	20 19 18 17 16	(15)14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
9. Condition of Banks	Banks stable; no evidence of erosion of bank failure.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60-100% of bank has erosional scars.
SCORE:	20 19 18 17 (16)	15 14 13 12 11	10 9 7 8 7 6 6	5 - 4 - 3 2 - 1 0
10. Bank Vegetative Protection	More than 90% of the streambank surfaces covered by vegetation.	70 - 90% of the streambank surfaces covered by vegetation.	50 - 70% of the streambank surfaces covered by vegetation.	Less than 50 % of the streambank surfaces covered by vegetation.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
11. Grazing or Other Disruptive Pressure	Vegetative disruption through grazing or mowing is minimal or not evident; almost all plants allowed to grow	Disruption evident but not affecting full plant growth potential to any great extent; more than one-half of	Disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of	Disruption of streambank vegetation is very high; vegetation has been removed to 2
110	naturally.	the potential plant stubble height remaining.	the potential plant stubble height remaining.	inches or less in average stubble height.
SCORE:	20 19 18 17 (16)	15 14 13 12 11	10. 9 B 8 7 6 6	5 4 3 2 1 0
12. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6 -12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 6 8 7 6 7	5 4 3 2 1 0

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Totals - (Side 2): _____

(Side 1):

- -	RAPID HABITAT	ASSESSMENT FORM: RIFF	LEIKUN PREVALENCE	7
STREAM NAME: NESKO	prik (KN	(2	DATE	OF VISIT: / 102 / 98
STREAM ID:	S	TEAM ID (circle):	1 2 3 4 5	6 R
SCORE				
HABITAT PARAMETER		CAT	TEGORY	
	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
1. Instream Cover (Fish)	Greater than 50% mix of bouider, cobble, submerged logs, undercut banks, or other stable habitst.	30 to 50% mix of boulder, cobble, or other stable habitat; adequate habitat.	10 to 30% mix of boulder, cobble, or other stable habitat; habitat availability is less than desirable.	Less than 10% of boulder, cobble, or other,stable habitst; lack of habitat is obvious.
SCORE: 7	20 19 18 17 16	15 14 13 12 11	10 9 8 7. "6 .	5 4 3 2 1 0
2. EPIFAUNAL SUBSTRATE	Well-developed fifte and run; riffle is as wide as stream and its length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream, but is less than two times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; reduced riffle area that does not extend across entire cross section and is less than two times the width; gravel or large boulders and bedrock prevalent; cobble present.	Riffles or run virtually non- existent; gravel or large boulders and bedrock prevalent; sobble lacking.
SCORE:	20 19 18 17 16	15 14 13 12 33	10 9 8 7 8	5 4,3 2 1 0
3. EMBEDDEDNESS	Gravel, cobble, and boulders particles are batween 0 and 25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are between 25 and 50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are between 50 and 75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are over 75% surrounded by fine sediment
SCORE: 3	20 19 18 17 18	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Velocity/Depth Regimes	All four velocity regimes are present (slow-deep, slow-shallow, fast-deep, fast-shallow).	Only three of the four habitat types are present (if fest- shallow is missing, score lower than if other regimes are missing).	Only two of the four habitat types are present (if fast- shallow or slow-shallow are missing, score low).	Dominated by one velocity/depth regime (usually slow-deep).
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. CHANNEL ALTERATION	No channelization of dredging present	Some channelization is present, usually in areas of brifge abutments; evidence of past channelization, i.e., dredging (greater then past 20 yr) may be present, but recent channelization is not present.	New embankments are present on both banks; and 40 to 80% of the stream reach is channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach is channelized and disrupted.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 8	5 4 3 2 1 0
6. SEDIMENT DEPOSITION	Little or no enlargement of islands or point bars and less than 5% of the bottom is affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5 to 30% of the bottom is affected; slight deposition in pools.	Moderate deposition of new gravel or coarse send on old and new bars; 30 to 50% of the bottom is affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material; increased bar development; more than 50% of the bottom is changing frequently; pools almost absent due to substantial sediment deposition.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 0 9 7 6	5 A 2 2 1 O

RAPID HABITAT ASSESSMENT FORM: RIFFLE/RUN- STREAMS (continued)

HABITAT PARAMETER		САТ	EGORY	
	OPTIMAL	SUB-OPTIMAL	Manginal	Poor
7. FREQUENCY OF RIFFLES	Occurrnece of nifflee is relatively frequent; the distance between riffles divided by the width of the stream equals 5 to 7; veriety of habitst.	Occurrence of riffles is infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occessional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25	Generally all flat water or shellow riffles; poor habitat; distance between riffles divided by the width of the stream is greater than 25.
SCORE:	20 19 18 17 6	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. CHANNEL FLOW STATUS	Water reaches the base of both banks and a minimal area of channel substrate is exposed.	Water fills more than 75% of the available channel; or less than 25% of the channel substrate is exposed.	Water fill 25 to 75% of the svailable channel; and/or riffle substrates are mostly exposed.	Very little water in channel, and mostly present as standing pools.
SCORE:	20 19 18 17 (16)	15 14 13 12 11	10~9~8 7~6	5 4 3 2 1 0
9, Condition of Banks	Banks stable; no evidence of erosion or bank failure.	Banks moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion	Unstable; many eroded eress; "raw" areas frequent along straight sections and bends; on side slopes, 60 to 100% of bnak has erosional scars.
SCORE: 2	20 19 18 17 16	15 14 13 12 11-	10 9 38 7 7 6	5 4 3 2 1 0
10. BANK VEGETATIVE PROTECTION	More then 90% of the streambank surfaces are covered by vegetation.	70 to 90% of the streambank surfaces are covered by vegetation.	50 to 70% of the streembank surfaces are covered by vegetation.	Less then 50% of the streembank surfaces are covered by vegetation.
SCORE:	20 19 18 17 16	15 (14) 13 12 11	10 9 8 7 6	5 4 3 2 1 0
11. GRAZING OR OTHER DISRUPTIVE PRESSURE	Vegetative disruption, through grazing or mowing is minimal or not evident; almost all plants are allowed to grow naturally.	Disruption is evident but is not affecting full plant growth potentail to any great extent; more than one-half of the potential plant stubble height remaining.	Disruption is obvious; petches of bare soil or closely cropped vegetation are common; less than one- helf of the potential plant stubble height remaining.	Disruption of streambank vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height.
SCORE: 3	20 19 18 17 16	15 14 (13)12 11	10 9 8 7.6	5 4 3 2 1 0
12. RIPARIAN VEGETATION ZONE WIDTH (LEAST BUFFERED SIDE)	Width of riperian zone is greater than 18 m; human activities (i.e., parking lots, roadbeds, clearcuts, lawns, or crops) have not impacted this zone	Zone width is between 12 and 18 m; human activities have only minimally impacted this zone.	Zone width is between 6 and 12 m; human activities have impacted the zone a great deal.	Width of zone is less than 6 m; little or no riparian vegetation due to man- induced activities.
SCORE: D	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

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TREAM ID:	S	itan ij (crce):		
SCORE				
IABITAT PARAMETER	CATEGORY			
	OPTIMAL	SUB-OPTIMAL	MARGINAL	Poor
. Instream Cover (FISH)	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitst.	30 to 50% mix of boulder, cobble, or other stable hebitat; adequate habitat.	10 to 30% mix of boulder, cobble, or other stable habitat; habitat availability is less than desirable.	Less than 10% of boulder, cobble, or other stable habitat; lack of habitat is obvious.
SCORE:	20 19 18 17 (6)	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
. Epifaunal Substrate	Well-developed riffle and run; riffle is as wide as stream and its length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream, but is less than two times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; reduced riffle area that does not extend across entire cross section and is less than two times the width; gravel or large boulders and bedrock prevalent; cobble present.	Riffles or run virtually non- existent; gravel or large boulders and bedrock prevalent; cobble lacking.
SCORE:	20 19 18 17 16	15 14113512.49	10 9 8 7 8	5 4 3 2 1 0
. Émbedoedness	Gravel, cobble, and boulders particles are between 0 and 25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are between 25 and 50% surrounded by fine sediment.	Gravel, cobble, and boulder perticles are between 50 and 75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are over 75% surrounded by fine sedimen
SCORE:	20 19 18 17 16	45 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
. Velocity/Depth Regimes	All four velocity regimes are present (slow-deep, slow-shallow, fast-deep, fest-shallow).	Only three of the four habitat types are present (if fast- shallow is missing, score lower than if other regimes are missing).	Only two of the four habitat types are present (if fast- shallow or slow-shallow are missing, score low).	Dominated by one velocity/depth regime (usually slow-deep).
SCORE:	20 19 18 17 76	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
CHANNEL ALTERATION	No channelization of dredging present	Some channelization is present, usually in areas of brifge abutments; evidence of pest channelization, i.e., dredging (greater than pest 20 yr) may be present, but recent channelization is not present.	New embankments are present on both banks; and 40 to 80% of the stream reach is channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach is channelized and disrupted.
SCORE:	20 19 18 17 16 ((5) 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
SEDIMENT DEPOSITION	Little or no enlargement of islands or point bars and less then 5% of the bottom is affected by sediment deposition.	Some new increase in ber formation, mostly from coarse gravel; 5 to 30% of the bottom is affected; slight deposition in pools.	Moderate deposition of new gravel or coarse sand on old and new bars; 30 to 50% of the bottom is affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material; increased bar development; more than 50% of the bottom is changing frequently; pools almost absent due to substantial sediment deposition.
SCORE:	20 19 18 17 16	15 (14) 13 12 11	10 9 8 7 6	5 4 3 2 1 0

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HABITAT PARAMETER		CAT	EGORY	
	OPTIMAL	SUB-OPTIMAL	Marginal	Poor
7. FREQUENCY OF RIFFLES	Occurrnece of riffles is relatively frequent; the distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat.	Occurrence of riffles is infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occassional riffle or band; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25	Generally all flat water or shellow riffles; poor habitat; distance between riffles divided by the width of the stream is greater than 25.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. CHANNEL FLOW STATUS	Water reaches the base of both banks and a minimal area of channel substrate is exposed.	Water fills more than 75% of the available channel; or less than 25% of the channel substrate is exposed.	Water fill 25 to 75% of the available channel; and/or riffle substrates are mostly exposed.	Very little water in channel, and mostly present as standing pools.
SCORE:	20 19 18 17 (16	15 14 13 12 T1	10 9 * 8 7 * 6	5 4 3 2 1 0
9. Condition of Banks	Banks stable; no evidence of erosion or bank failure.	Banks moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60 to 100% of bnak has erosional scars.
SCORE:	20 19 18 17 16	15 14 13, 12. 11	10 9 8 778 8	5 4 3 2 1 0
10. BANK VEGETATIVE PROTECTION	More than 90% of the streambank surfaces are covered by vegetation.	70 to 90% of the streambank surfaces are covered by vegetation.	50 to 70% of the streambank surfaces are covered by vegetation.	Less then 50% of the streambank surfaces are covered by vegetation.
SCORE:	20 19 18 17 16	15 (14)13 12 11	10 9 8 7 6	5 4 3 2 1 0
11. Grazing or Other Disruptive Pressure	Vegetative disruption, through grazing or mowing is minimal or not evident; almost all plants are allowed to grow naturally.	Disruption is evident but is not affecting full plant growth potentail to any great extent; more than one-half of the potential plant stubble height remaining.	Disruption is obvious; patches of bare soil or closely cropped vegetation are common; less than one- half of the potential plant stubble height remaining.	Disruption of streambank vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height.
SCORE:	20 19 18 17 (16)	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
1.2. RIPARIAN VEGETATION ZONE WIDTH (LEAST BUFFERED SIDE)	Width of riparian zone is greater than 18 m; human activities (i.e., parking lots, roadbeds, clearcuts, lawns, or crops) have not impacted this zone	Zone width is between 12 and 18 m; human activities have only minimally impacted this zone.	Zone width is between 6 and 12 m; human activities have impacted the zone a great deal.	Width of zone is less than 6 m; little or no riperian vegetation due to man- induced activities.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

REVIEWED BY (INITIAL):

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STREAM NAME	ALL ALL ADDRESS AND ADDRESS ADDRES		RAPID HABITAT ASSESSMENT FORM: RIFFLE/RUN PREVALENCE			
STREAM MAN	NESCO	pyck CK	1	DATE	OF VISIT: 712198	
STREAM ID:		S	TEAM ID (circle):	1 2 3 4 5	6 R	
TOTAL						
HABITAT PARA	METER		CAT	EGORY		
		Optimal	SUB-OPTIMAL	MARGINAL	POOR	
1. INSTREAM COVER	(FISH)	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat.	30 to 50% mix of boulder, cobble, or other stable habitat; adequate habitat.	10 to 30% mix of boulder, cobble, or other stable habitat; habitat evailability is less then desirable.	Less than 10% of boulder, cobble, or other,stable habitat; leck of habitat is obvious.	
SCORE:	13	20 19 18 17 16	15 14 (13)12 11	10 9 8 7 6	5 4 3 2 1 0	
2. EPIFAUNAL SUBS	TRATE	Well-developed riffle and run; riffle is as wide as stream and its length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream, but is less than two times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; reduced riffle area that does not extend across entire cross section and is less than two times the width; gravel or large boulders and bedrock prevalent; cobble present.	Riffles or run virtually non- existent; gravel or large boulders and bedrock prevalent; cobble lacking.	
SCORE:	9	20 19 18 17 16	15 14 13 12 44	10 2 8 4 7/ 86	5 4 3 22 1 0	
3. EMBEDDEDNESS		Gravel, cobble, and boulders particles are between 0 and 25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are between 25 and 50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are between 50 and 75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are over 75% surrounded by fine sediment.	
SCORE:	13	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
4. Velocity/ Dep th	REGIMES	All four velocity regimes are present (slow-deep, slow-shallow, fast-deep, fast-shallow),	Only three of the four habitat types are present (If fast- shellow is missing, soore lower then if other regimes are missing).	Only two of the four habitat types are present (if fast- shallow or slow-shallow are missing, score low).	Dominated by one velocity/depth regime (usually slow-deep).	
SCORE:	12/	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
5. CHANNEL ALTERA	TION	No chennelization of dredging present	Some channelization is present, usually in areas of brifge abutments; evidence of past channelization, i.e., dredging (greater than past 20 yr) may be present, but recent channelization is not present.	New embankments are present on both banks; and 40 to 80% of the stream reach is channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach is channelized and disrupted.	
SCORE:	15	20 19 18 17 16	15 14 13 12 11	10 9 8 7 8	5 4 3 2 1 0	
6. SEDIMENT DEPOSI	ITION	Little or no enlargement of islands or point bars and less than 5% of the bottom is affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5 to 30% of the bottom is affected; slight deposition in pools.	Moderate deposition of new gravel or coarse sand on old and new bars; 30 to 50% of the bottom is affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material; increased bar development; more than 50% of the bottom is changing frequently; pools simost absent due to substantial sediment deposition.	
SCORE:	14	20 19 18 17 16	15/14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	

RAPID HABITAT ASSESSMENT FORM: RIFFLE/RUN- STREAMS (continued)

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HABITAT PARAMETER	·	CATEGORY				
l	OPTIMAL	SUE-OPTIMAL	MARGINAL	Poor		
7. Frequency of Riffles	Occurrnece of riffles is relatively frequent; the distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat.	Occurrence of riffles is infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occassional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is greater than 25.		
SCORE:	20 19 18 17 16	15 14 13 12 11	40 9 8 7 6	5 4 3 2 1 0		
8. CHANNEL FLOW STATUS	Water reaches the base of both banks and a minimal area of channel substrate is exposed.	Water fills more than 75% of the evailable channel; or less than 25% of the channel substrate is exposed.	Water fill 25 to 75% of the svailable channel; and/or riffle substrates are mostly exposed.	Very little water in channel, and mostly present as standing pools.		
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0		
9. CONDITION OF BANKS	Banks stable; no evidence of erosion or bank failure.	Banks moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 80% of banks in reach have areas of erosion	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60 to 100% of bnak has erosional scars.		
SCORE: 3	20 19 18 17 16	15 14 (63) 12/ 18	10 8 : 48 x 7 ** 6	5 4 3 32™1 0		
10, BANK VEGETATIVE PROTECTION	More than 90% of the streambank surfaces are covered by vegetation.	70 to 90% of the streambank surfaces are covered by vegetation.	50 to 70% of the streambank surfaces are covered by vegetation.	Less then 50% of the streambank surfaces are covered by vegetation.		
SCORE:	20 19 18 1 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0		
11. GRAZING OR OTHER DISRUPTIVE PRESSURE	Vegetative disruption, through grazing or mowing is minimal or not evident; almost all plants are allowed to grow naturally.	Disruption is evident but is not affecting full plent growth potentail to any great extent; more than one-half of the potential plant stubble height remaining.	Disruption is obvious; patches of bare soil or closely cropped vegetation are common; less than one- half of the potential plant stubble height remaining.	Disruption of streambank vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height.		
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0		
12. RIPARIAN VEGETATION ZONE WIDTH (LEAST BUFFERED SIDE)	Width of riparian zone is greater than 18 m; human activities (i.e., parking lots, roadbeds, clearcuts, lawns, or crops) have not impacted this zone	Zone width is between 12 and 18 m; human activities have only minimally impacted this zone.	Zone width is between 6 and 12 m; human activities have impacted the zone a great deal.	Width of zone is less than 6 m; little or no riparian vegetation due to man- induced activities.		
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0		

REVIEWED BY (INITIAL):

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TREAM NAME: NUESCAD	ack CK - MO	utti	DATI	E OF VISIT: / / 9
TREAM ID:	S	TEAM ID (circle);	1 2 3 4 5	6 R
TOTAL				
ABITAT PARAMETER		CAT	EGORY	
	OPTIMAL	SUB-OPTIMAL	MARGINAL	Poor
, Instream Cover (Fish)	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat.	30 to 50% mix of boulder, cobble, or other stable habitat; adequate habitat.	10 to 30% mix of boulder, cobble, or other stable habitat; habitat availability is less than desirable.	Less than 10% of boulder cobble, or other stable habitat; lack of habitat is obvious.
SCORE: 15	20 19 18 17 16	(15) 14 13 12 11	10 98 76	5 4 3 2 1 0
EPIFAUNAL SUBSTRATE	Well-developed riffle and run; riffle is as wide as stream and its length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream, but is less than two times width; abundance of cobble; boulders and gravel common.	Run erea may be lacking; reduced riffle area that does not extend across entire cross section and is less than two times the width; gravel or large boulders and bedrock prevalent; cobble present.	Riffles or run virtually non existent; gravel or large boulders and bedrock prevalent; cobble lacking.
SCORE: 15	20 19 18 17 16	15 14 131 12 49	10 9 88 7 46	5 4 3 2 1 0
EMBEDDEDNESS	Gravel, cobble, and boulders particles are between 0 and 25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are between 25 and 50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are between 50 and 75% surrounded by fine sediment.	Gravel, cobble, and bould particles are over 75% surrounded by fine sedime
SCORE:	20 19 18 17 16	15 14 13 (12) 11	10 9 8 7 6	5 4 3 2 1 0
Velocity/Depth Regimes	All four velocity regimes are present (slow-deep, slow-shallow, fast-deep, fast-shallow),	Only three of the four habitat types are present (if fast- shallow is missing, score lower then if other regimes are missing).	Only two of the four habitst types are present (if fast- shallow or slow-shallow are missing, score low).	Dominated by one velocity/depth regime (usually slow-deep).
SCORE: 16	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
CHANNEL ALTERATION	No channelization of dredging present	Some channelization is present, usually in areas of brifge abutments; evidence of past chennelization, i.e., dredging (greater than past 20 yr) may be present, but recent channelization is not present.	New embankments are present on both banks; and 40 to 80% of the stream reach is channelized and disrupted.	Banks shored with gabion cement; over 80% of the stream reach is channelize and disrupted.
SCORE: 15	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
SEDIMENT DEPOSITION	Little or no enlargement of islands or point bars and less than 5% of the bottom is affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5 to 30% of the bottom is affected; slight deposition in pools.	Moderate deposition of new gravel or coarse sand on old and new bars; 30 to 50% of the bottom is affected; sediment deposits at obstructions, constrictions, and bands; moderate deposition of pools prevalent.	Heavy deposits of fine material; increased bar development; more than 50% of the bottom is changing frequently; pools almost absent due to substantial sediment deposition.
SCORE: 13	20 19 18 17 16	15 14 (13) 12 11	10 9 8 7 6	5 4 3 2 1 0
à, le	Вхон (смо (усы 6:5	Iden 20 17 15 18 15 18 30	R	EVIEWED BY (INITIAL):

RAPID HABITAT ASSESSMENT FORM: RIFFLE/RUN- STREAMS (continued)

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HABITAT PARAMETER		CAT	EGORY	
	OPTIMAL	SUB-OPTIMAL	MARGINAL	Poor
7. FREQUENCY OF RIFFLES	Occurrnece of riffles is relatively frequent; the distance between riffles divided by the width of the stream equals 5 to 7; veriety of habitat.	Occurrence of riffles is infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occassional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is greater than 25.
SCORE: 3	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. CHANNEL FLOW STATUS	Water reaches the base of both banks and a minimal area of channel substrate is exposed.	Water fills more than 75% of the available channel; or less than 25% of the channel substrate is exposed.	Water fill 25 to 75% of the available channel; and/or riffie substrates are mostly exposed.	Very little water in channel, and mostly present as standing pools.
SCORE:	20 19 18 17 (16)	15 14 13 12 M	10 9 8 7 6	5 4 3 2 1 0
9. CONDITION OF BANKS	Banks stable; no evidence of erosion or bank failure.	Banks moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60 to 100% of bnak has erosional scars.
SCORE: 14	20 19 18 17 16	15 (14) 13, 124-11-	10 9 38 37446	5 4 3 2×1 0
10. BANK VEGETATIVE PROTECTION	More than 90% of the streambank surfaces are covered by vegetation.	70 to 90% of the streembank surfaces are covered by vegetation.	50 to 70% of the streambank surfaces are covered by vegstation.	Less than 50% of the streambank surfaces are covered by vegetation.
SCORE: 14	20 19 18 17 16	15 (14) 13 12 11	10 9 8 7 6	5 4 3 2 1 0
11. GRAZING OR OTHER DISRUPTIVE PRESSURE	Vegetative disruption, through grazing or mowing is minimal or not evident; almost all plants are allowed to grow naturally.	Disruption is evident but is not affecting full plant growth potentail to any great extent; more than one-half of the potential plant stubble height remaining.	Disruption is obvious; patches of bare soil or closely cropped vegetation are common; less than one- half of the potential plant stubble height remaining.	Disruption of streambank vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height.
SCORE: 15	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
12. RIPARIAN VEGETATION ZONE WIDTH (LEAST BUFFERED SIDE)	Width of riparian zone is greater than 18 m; human activities (i.e., parking lots, roadbeds, clearcuts, lawns, or crops) have not impacted this zone	Zone width is between 12 and 18 m; human activities have only minimally impacted this zone.	Zone width is between 6 and 12 m; human activities have impacted the zone a great deal.	Width of zone is less than 6 m; little or no riparian vegetation due to man- induced activities.
SCORE: 15	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
187 64 - 773			R	eviewed by (initial):

RAPID HABITAT ASSESSMENT FORM: RIFFLE/RUN PREVALENCE				
STREAM NAME: NES	COPELX LY	, 	DATE	OF VISIT: 7/1/98
STREAM ID:	_s NC7	TEAM ID (circle):	1 2 3 4 5	6 R
TOTAL				
HABITAT PARAMETER		CAT	EGORY	
	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
1. INSTREAM COVER (FISH)	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat.	30 to 50% mix of boulder, cobble, or other stable habitat; adequate habitat.	10 to 30% mix of boulder, cobble, or other stable habitat; habitat availability is less than desirable.	Less than 10% of boulder, cobble, or other stable habitat; lack of habitat is obvious.
SCORE: 14	20 19 18 17 16	15 (14)13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. EPIFAUNAL SUBSTRATE	Well-developed riffle and run; riffle is as wide as stream and its length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream, but is less than two times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; reduced riffle area that does not extend across entire cross section and is less than two times the width; gravel or large boulders and bedrock prevalent; cobble present.	Riffles or run virtually non- existent; gravel or large boulders and bedrock prevalent; cobble lacking.
SCORE: 13	20 19 18 17 16	15 14 (13) 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Embeddedness	Gravel, cobble, and boulders particles are between 0 and 25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are between 25 and 50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are between 50 and 75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are over 75% surrounded by fine sediment.
SCORE: 47	20 19 18 17 16 /	15)14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Velocity/Depth Regimes	All four velocity regimes are present (slow-deep, slow-shallow, fast-deep, fast-shallow).	Only three of the four habitat types are present (if fast- shallow is missing, score lower than if other regimes are missing).	Only two of the four habitat types are present (if fast- shallow or slow-shallow are missing, score low).	Dominated by one velocity/depth regime (usually slow-deep).
SCORE:	20 19 18 17(16)	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. CHANNEL ALTERATION	No channelization of dredging present	Some channelization is present, usually in areas of brifge abutments; evidence of past channelization, i.e., dredging (greater than past 20 yr) may be present, but recent channelization is not present.	New embankments are present on both banks; and 40 to 80% of the stream reach is channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach is channelized and disrupted.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
UC	Little or no enlargement of islands or point bars and less than 5% of the bottom is affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5 to 30% of the bottom is affected; slight deposition in pools.	Moderate deposition of new gravel or coarse sand on old and new bars; 30 to 50% of the bottom is affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material; increased bar development; more than 50% of the bottom is changing frequently; pools almost absent due to substantial sediment deposition.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

REVIEWED BY (INITIAL):

RAPID HABITAT ASSESSMENT FORM: RIFFLE/RUN. STREAMS (continued)

HABITAT PARAMETER		CAT	TEGORY	
	OPTIMAL	SUB-OPTIMAL	MARGINAL	Poor
7. FREQUENCY OF RIFFLES	Occurrnece of riffles is relatively frequent; the distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat.	Occurrence of riffles is infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occassional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is greater than 25.
SCORE: 15	20 19 18 17 16	15)14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. CHANNEL FLOW STATUS	Water reaches the base of both banks and a minimal area of channel substrate is exposed.	Water fills more than 75% of the available channel; or less than 25% of the channel substrate is exposed.	Water fill 25 to 75% of the available channel; and/or riffle substrates are mostly exposed.	Very little water in channel, and mostly present as standing pools.
SCORE:	20 19 18 7 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
9. CONDITION OF BANKS	Banks stable; no evidence of erosion or bank failure.	Banks moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60 to 100% of bnek has erosional scars.
SCORE: 5	20 19 18 17 16	(15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
10. BANK VEGETATIVE PROTECTION	More than 90% of the streambank surfaces are covered by vegetation.	70 to 90% of the streambank surfaces are covered by vegetation.	50 to 70% of the streambank surfaces are covered by vegetation.	Less than 50% of the streambank surfaces are covered by vegetation.
SCORE:	20 19 18 17 16	15 (14) 13 12 11	10 9 8 7 6	5 4 3 2 1 0
11. GRAZING OR OTHER DISRUPTIVE PRESSURE	Vegetative disruption, through grazing or mowing is minimal or not evident; almost all plants are allowed to grow naturally.	Disruption is evident but is not affecting full plant growth potentail to any great extent; more than one-half of the potential plant stubble height remaining.	Disruption is obvious; patches of bare soil or closely cropped vegetation are common; less than one- half of the potential plant stubble height remaining.	Disruption of streambank vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height.
SCORE:	20 19 18 17 16)	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
12. RIPARIAN VEGETATION ZONE WIDTH (LEAST BUFFERED SIDE)	Width of riparian zone is greater than 18 m; human activities (i.e., parking lots, roadbeds, clearcuts, lawns, or crops) have not impacted this zone	Zone width is between 12 and 18 m; human activities have only minimally impacted this zone.	Zone width is between 6 and 12 m; human activities have impacted the zone a great deal.	Width of zone is less than 6 m; little or no riparian vegetation due to man- induced activities.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

REVIEWED BY (INITIAL)

HABITAT	ASSESSMENT	FIELD	DATA	SHEET

DATE-TIME-INITIALS : _____ 7/8/93

Surveyed by: _____.

Habitat	Category			
Parameter	Optimal	Suboptimal	Marginal	Poor
1. Instream Cover (fish)	Greater than 50% mix of boulder, cobble,	30-50% mix of boulder, cobble, or other stable habitat; adequate habitat.	10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable.	less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat obvious.
SCORE	20 19 48 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Epifaunal Substrate	Well-developed riffle and run; riffle is as wide as stream and length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream but length is less than 2 times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; riffle not as wide as stream and its length is less than 2 times the stream width; gravel or large boulders and bedrock prevalent; some cobble present.	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking.
SCORE:	20 19 18 17 16	15 14 (13) 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
SCORE:	20	<u>15 14 13 12 11</u>	10 9 8 7 6	5 4 3 2 1 0
4. Velocity/Depth Regimes	All four velocity/depth regimes present (slow-deep; slow- shallow; fast-deep; fast-shallow)	Only 3 or the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes)	Only 2 or the 4 regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).
SCORE	20 19 18 17 16	45 14 13 12 14		5 400 300 200 10 0
5. Channel Alteration	No channelization or dredging present.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging (greater than 20 yr) may be present, but recent channelization is not present.	New embankments present on both banks; and 40-80% of stream reach channelized and disrupted.	banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0 5
6. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5- 30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of the material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
TOTAL (Side 1):	-	··· ·		

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RIFFLE/RUN PREVALENCE

NC 5

RIFFLE/RUN PREVALENCE - pg: 2

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Habitat		Cate	gory	
Parameter	Optimal	Suboptimal	Marginal	Poor
7. Frequency of Riffles	Occurrence of riffles relatively frequent; distance between riffles divided by the width of the stream equals 5 to 7; variety of babitat	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is > 25.
SCOPE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
JUCKE.	20 19 10 17 10	Mator file > 75% of	Motor fills 25 75% of	
8. Channel Flow Status	of both lower banks and minimal amount of channel substrate is exposed.	the available channel; or < 25% of channel substrate is exposed.	the available channel and/or riffle substrates are mostly exposed.	channel and mostly present as standing pools.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0 1
9. Condition of Banks	Banks stable; no evidence of erosion of bank failure.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60-100% of bank has erosional scars.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 4 1 0
10. Bank Vegetative Protection	More than 90% of the streambank surfaces covered by vegetation.	70 - 90% of the streambank surfaces covered by vegetation.	50 - 70% of the streambank surfaces covered by vegetation.	Less than 50 % of the streambank surfaces covered by vegetation.
SCORE:	20 19 18 (17) 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
11. Grazing or Other Disruptive Pressure	Vegetative disruption through grazing or mowing is minimal or not evident; almost all	Disruption evident but not affecting full plant growth potential to any great extent:	Disruption obvious; patches of bare soil or closely cropped	Disruption of streambank vegetation is very bioby vegetation bas
· · · 7	plants allowed to grow naturally.	more than one-half of the potential plant stubble height remaining.	the potential plant stubble height remaining.	been removed to 2 inches or less in average stubble height.
SCORE:	plants allowed to grow naturally.	more than one-half of the potential plant stubble height remaining.	the potential plant stubble height remaining.	been removed to 2 inches or less in average stubble height.
SCORE: 12. Riparian Vegetative Zone Width	plants allowed to grow naturally. 20 19 18 17 16 Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns or crops) have not impacted zone.	more than one-half of the potential plant stubble height remaining. 15 14 13 12 11 Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Vegetation common, less than one-half of the potential plant stubble height remaining. 10 9 8 7 6 Width of riparian zone 6 -12 meters; human activities have impacted zone a great deal.	been removed to 2 inches or less in average stubble height. 5 4 3 2 1 0 Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.

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Totals - (Side 2):

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(Side 1): _____

	RAPID HABITAT	ASSESSMENT FORM: RIFF	LE/RUN PP	REVALENC	ε			
STREAM NAME: N/450	park CK - Mo	wth			DATE	of Visit:	1	/ 93
STREAM ID:	S	TEAN ID (circle):	12	3 4	5	6	R	
TOTAL								
HABITAT PARAMETER		CAT	EGORY					
-	OPTIMAL	SUB-OPTIMAL	N	AARGINAL			Poor	
1. Instream Cover (Pish)	Greater than 50% mix of boulder, cobble, submerged logs, underout banks, or other stable hebitst.	30 to 50% mix of boulder, - cobble, or other stable hebitst; edequate habitst.	10 to 30% cobbie, or habitat; ha is less than	mix of boul other stable bitat availab desirable.	der, i	Less that cobble, a hebitst; l obvious.	n 10% of r other,st eck of hel	boulder, able bitat is
SCORE: 15	20 19 18 17 16	(15)14 13-12-11	30 9 88	87.	6	5.4	3_2	1 0
2. EPIFAUNAL SUBSTRATE	Well-developed riffle and run; riffle is as wide as stream and its length extends two times the width of stream; abundance of cobble.	Riffie is as wide as stream, but is less than two times width; abundence of oobble; boulders and gravel common.	Run area m reduced riff not extend cross section than two til gravel or la bedrock pro present.	ney be lookin fle, area that across entir on and is les mas the wid rgs boulders evalent; cobi	G: does th: and bie	Riffles or existent; boulders prevalent	run virtua gravel or and bedro ; cobbie la 	sily non- large book acking.
SCORE:	20119 18 17 16					5. <i>1</i> (* 1	3 2	1.0
3. EMBEDDEDNESS	Gravel, cobble, and boulders particles are between 0 and 25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are between 25 and 50% surrounded by fine sediment.	Gravel, cob particles an and 75% s fine sedime	ble, and bou e between 5 urrounded b int.	ider i0 y	Grevel, o particles surrounde	obble, and are over 7 ad by fine	1 boulder 75% sediment.
SCORE: 12	20 19 18 17 16	15 14 13 12 11	10 9	8	6	5 4	3 2	1_0
4. VELOCITY/DEPTH REGIMES	All four velocity regimes are present (slow-deep, slow-shallow, fast-deep, fast-shallow).	Only three of the four habitat types are present (if fast- shallow is missing, score lower then if other regimes are missing).	Only two of types are po shellow or i missing, so	f the four ha resent (if faa slow-shallow ora low).	bitet It-9%	Dominate velocity/d (usually a	d by one epth regin low-deep)	me).
SCORE: 1(p	20 19 18 17 (16)	15 14 13 12 11	10 9	87	6	54	3_2	1 0
5. CHANNEL ALTERATION	No channelization of dredging present	Some channelization is present, usually in areas of brifge abutments; evidence of past channelization, i.e., dredging (greater than past 20 yr) may be present, but recent channelization is not present.	New emban present on 1 40 to 80% reach is che disrupted.	ikments are both banks; of the stream mnelized and	and n f	Banks sho cement; o stream re and disrup	pred with wer 80% ach is cha bted.	gabion or of the innelized
SCORE: 15	20 19 18 17 16	(5)14 13 12 11	10 9	8 7	8	5 4	3 2	1 0
6. SEDIMENT DEPOSITION	Little or no enlargement of islands or point bars and less than 5% of the bottom is affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5 to 30% of the bottom is affected; slight deposition in pools.	Moderate de gravel or co. and new bas of the botto sediment de obstructions and bends;"r deposition o prevalent.	aposition of arse sand or rs; 30 to 50 m is affected posits at constrictio moderate f pools	new hold % d; ns,	Heavy dep material; i developme 50% of th changing 1 almost able substantia deposition	posits of f increased ent; more e bottom requently sent due t I sedimen	ine bar than is ; pools co t
SCORE:	20 19 18 17 16	15 14 (13) 12 11	10 9	8 7	6	5 4 :	3 2 1	0
Gle	bou jobb grav Sa	Ider 20 14 15 wl 15 ml 30 17 20			RE	VIEWED 8	Y (INITIA	L):

RAPID HABITAT ASSESSMENT FORM: RIFFLE/RUN- STREAMS (continued)

HABITAT PARAMETE	3	CAT	EGORY	
	OPTIMAL	SUB-OPTIMAL	Marginal	Poor
7. FREQUENCY OF RIFFLES	Occurrence of riffles is relatively frequent; the distance between riffles divided by the width of the stream equals 5 to 7; veriety of habitst.	Occurrence of riffles is infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occessional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is greater than 25.
SCORE: 13	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. CHANNEL FLOW STATUS	Water reaches the base of both banks and a minimal area of channel substrate is exposed.	Water fills more than 75% of the svailable channel; or less than 25% of the channel substrate is exposed.	Water fill 25 to 75% of the svailable channel; and/or riffle substrates are mostly exposed.	Very little water in channel, and mostly present as standing pools.
SCORE:	20 19 18 17 (6)	15 14 13 12 11	10***8***8****	5 4 3 2 1 0
9. CONDITION OF BANKS	Banks stable; no evidence of erosion or bank failure.	Banks moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion. Charter and for a state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60 to 100% of bnak has erosional scars.
SCORE:	20.19,18,17,16			5 if Supret 0
10. BANK VEGETATIVE PROTECTION	More than 90% of the streambank surfaces are covered by vegetation.	70 to 90% of the streambank surfaces are covered by vegetation.	50 to 70% of the streambank surfaces are covered by vegetation.	Less than 50% of the streambank surfaces are covered by vegetation.
SCORE: 14	20 19 18 17 18	15 (14) 13 12 13	10 9 8 7 6	5 4 3 2 1 0
11. GRAZING OR OTHER DISRUPTIVE PRESSURE SCORE:	Vegetative disruption, through grazing or mowing is minimal or not evident; almost all plants are allowed to grow naturally. The 20 19 18 17 16	Disruption is evident but is not affecting full plant growth potentail to any great extent; more then one-helf of the potential plant stubble height remaining: 15 14 13 12 13	Disruption is obvious; petches of bars soil or closely cropped vegetation are common; less than one- helf of the potential plant stubble height remaining. 10 ⁹ 9 8 7 6	Disruption of streambank vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height. 5 4 3 2 1 0
12. RIPARIAN VEGETATION ZONE WIDTH (LEAST BUFFERED SIDE)	Width of riperian zone is , greater than 18 m; human activities (i.e., parking lots, roadbeds, clearcuts, lawns, or crops) have not impacted this zone	Zone width is between 12 and 18 m; human activities have only minimally impacted this zone.	Zone width is between 8 and 12 m; human activities have impacted the zone a great deal.	Width of zone is less than 5 m; fittle or no riperian vegetation due to man- induced activities.
SCORE: 15	20 19 18 17 16	15)14 13 12 11 	10 9 8 7 6	5 4 3 2 1 0

87 86 73

REVIEWED BY (INITIAL):

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بوه معد را ۱۰۰۰ و مراجع ۱۰۰۰ و

HABITAT ASSESSMENT FIELD DATA SHEET

DATE-TIME-INITIALS : ______

Surveyed by: _____:

NC-2 TIE/YO RIFFLE/RUN PREVALENCE TS Surfue of Substrat: yellow Boy Undernisth: Black/Gray Sodin

Habitat	Category			
Parameter	Optimal	Suboptimal	Marginal	Poor
1. Instream Cover (fish) - SCORE:	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat. 20 19 18 17 16	30-50% mix of boulder, cobble, or other stable habitat; adequate habitat. (15)14 13 12 11	10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable.	less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat obvious. 5 4 3 2 1 0
2. Epifaunal Substrate	Well-developed riffle and run; riffle is as wide as stream and length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream but length is less than 2 times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; riffle not as wide as stream and its length is less than 2 times the stream width; gravel or large boulders and bedrock prevalent; some cobble present.	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking.
3. Embeddedness	20 19 18 17 16 Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment.	(15) 14 13 12 11 Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	10 9 8 7 6 Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	5 4 3 2 1 0 Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
SCORE:	20 19 18 17 16	15 14 13 12 11	(10) 9 8 7 6	5 4 3 3 2 1 0
4. Velocity/Depth Regimes	All four velocity/depth regimes present (slow-deep; slow- shallow; fast-deep; fast-shallow).	Only 3 or the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 or the 4 regimes present (if fast-shallow or slow- shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
SCORE:	20 19 18 17 16	15 14 13 /12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Alteration	No channelization ordredging present	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging (greater than 20 yr) may be present, but recent channelization is not present.	New embankments present on both banks; and 40-80% of stream reach channelized and disrupted.	banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted.
SCORE:	20 19 18 17 16	15 14 (13) 12 11	10 9 8 7 6	5 4 3 2 1 0
6. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5- 30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of the material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE:	20 19 18 17 16	15 14 ⊨ 13 12 11 □	[10 9 a 8 a 7 ⊈ 6 }	5 4 3 2 1 0

RIFFLE/RUN PREVALENCE - pg. 2

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Habitat		Cate	gory	
Parameter	Optimal	Suboptimal	Marginal	Poor
7. Frequency of Riffles	Occurrence of riffles relatively frequent; distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is > 25.
SCORF:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Channel Flow Status	Water reaches base of both lower banks and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or < 25% of channel substrate is exposed.	Water fills 25 - 75% of the available channel and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE:	20 19 (18) 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
9. Condition of Banks	Banks stable; no evidence of erosion of bank failure.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60-100% of bank has erosional scars.
SCORE:	20 19 18 17 16	15 (14) 13 12 11	10 9 8 7 6	5 4 3 2 1 0
10. Bank Vegetative Protection	More than 90% of the streambank surfaces covered by vegetation.	70 - 90% of the streambank surfaces covered by vegetation.	50 - 70% of the streambank surfaces covered by vegetation.	Less than 50 % of the streambank surfaces covered by vegetation.
SCORE:	20 19 (18) 17 16	15 14 13 12 11	10 9 6 8 8 7 6 6 9	5 4 3 2 1 0
11. Grazing or Other Disruptive Pressure	Vegetative disruption through grazing or mowing is minimal or not evident; almost all plants allowed to grow naturally.	Disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	Disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Disruption of streambank vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height.
SCORE:	20 19 18 (17) 16	15 14 13 12 11	10 9	5 4 3 2 1 0
12. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6 -12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 10 9 9 8 20 7 8 6 9	5 4 3 2 1 0

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Totals - (Side 2): _____

(Side 1): _____

Little Vescopede Up Seddo Tunnel 7/2/98 HABITAT ASSESSMENT FIELD DATA SHEET

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Habitat		Cat	agory	
Parameter	Optimal	Suboptimal	Marginal	Poor
1. Instream Cover (Fish)	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat.	30-50% mix of boulder, cobble, or other stable habitat; adequate habitat.	10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable.	Less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat is nbvious.
SCORE 4	20 19 18 17 (16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Epifaunal Substrate	Weil-developed riffle and run; riffle is as wide as stream and length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream but length is less than two times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; riffle not as wide as stream and its length is less than 2 times the stream width; gravel or large boulders and bedrock prevalent; some cobble present.	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking.
SCORE	20 19 18 (17)16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 28 7 6	5 4 3 2 1 0
4. Velocity/Depth Regimes	All four velocity/ depth regimes present (slow-deep, slow-shallow, fast- deep, fast-shallow).	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 C
5. Channel Alteration	No channelization or dredging present.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	New embankments present on both banks; and 40 to 80% of stream reach channel- ized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
6. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at obstruction, constriction, and bends; moderate deposition of pools prevalent	Heavy deposits of fir material, increased to development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sedimen- deposition.
$1 \downarrow \downarrow$			p. 01010111	

Habitat	Catagory			
Parameter	Optimal	Suboptimal	Marginal	Poor
7. Frequency of Riffles	Occurrence of riffles relatively frequent; distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is between ratio > 25.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 . 6.	5 4 3 2 1 0
8. Channel Flow Status	Water reaches base of both lower banks and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE	20 19 18/17/16	15 14 13 12 11	10 9 .8 7 8 8	5%4 34ZTT-0
9. Condition of Banks	Banks stable; no - evidence of erosion or bank failure.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slones, 60-100% of bank has erosional scars.
SCORE	20 19 18 17 16	15 14 (13) 12 11	10 9 8 8 7 6	5 4 3 2 1 0
10. Bank Vegetative Protection	More than 90% of the streambank surfaces covered by vegetation.	70-90% of the streambank surfaces covered by vegetation.	50-70% of the streambank surfaces covered by vegetation.	Less than 50% of the streambank surfaces covered by vegetation.
SCORE	20 19 18 17 16	(15)14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
11. Grazing or Other Disruptive Pressure	Vegetative disruption, through grazing or mowing, minimal or not evident; almost all plants allowed to grow naturally.	Disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	Disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Disruption of streambank vagetation is very high; vegetation has been removed to 2 inches or less in average stubble height.
SCORE V	20 19 18 17/16	A15 44 33 3 3 2 3 1 1 3	10 9 348 57 6 8	5 4 4 4 2 2 3 0
12. Riparlan Vegetative Zone Width	Width of riparian zone >18 meters; human activities (I.e., parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE 14	20 19 18 17 16	15 (14) 13 12 11	10 9	5 4 3 2 1 0

Total Score _____

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HABITAT ASSESSMENT FIELD DATA SHEET 2-8-98-

RIFFLE/RUN PREVALENCE

Black CK - 62, dage deren Maclik DATE-TIME-INITIALS : Surveyed by: _____ <u>25/</u>

Habitat	Category			
Parameter	Optimal	Suboptimal	Marginal	Poor
1. Instream Cover (fish) -	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat.	30-50% mix of boulder, cobble, or other stable habitat; adequate habitat.	10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable.	less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat obvious.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Epifaunal Substrate	Well-developed riffle and run; riffle is as wide as stream and length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream but length is less than 2 times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; riffle not as wide as stream and its length is less than 2 times the stream width; gravel or large boulders and bedrock prevalent; some cobble present.	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking.
SCORE:	20 19 18 17 16	15 14 13 (12) 11	10 9 8 7 6	5 4 3 2 1 0
3. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment. $f_{C} = C_{1} + C_{2}$	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 97 8 7 6	5 4 3 2 1 0
4. Velocity/Depth Regimes	All four velocity/depth regimes present (slow-deep; slow- shallow; fast-deep; fast-shallow).	Only 3 or the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 or the 4 regimes present (if fast-shallow or slow- shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
SCORE:	20 19 18 17 /16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Alteration	No channelization of dredging present.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging (greater than 20 yr) may be present, but recent channelization is not present.	New embankments present on both banks; and 40-80% of stream reach channelized and disrupted.	banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
6. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5- 30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of the material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE:	20 19 18 17 16	15 14 13 12 11	(10) 9 8 7 6	5 4 3 2 1 0

TOTAL (Side 1): _____

RIFFLE/RUN PREVALENCE - pg. 2

Habitat		Category			
Parameter	Optimal	Suboptimal	Marginal	Poor	
7. Frequency of Riffles	Occurrence of riffles relatively frequent; distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is > 25.	
SCORE:	20 19 18 17 16	15, 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
8. Channel Flow Status	Water reaches base of both lower banks and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or < 25% of channel substrate is exposed.	Water fills 25 - 75% of the available channel and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
9. Condition of Banks	Banks stable; no evidence of erosion of bank failure.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60-100% of bank has erosional scars.	
SCORE:	20 19/18 /17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
10. Bank Vegetative Protection	More than 90% of the streambank surfaces covered by vegetation.	70 - 90% of the streambank surfaces covered by vegetation.	50 - 70% of the streambank surfaces covered by vegetation.	Less than 50 % of the streambank surfaces covered by vegetation.	
SCORE:	20 19 18 17 /16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
11. Grazing or Other Disruptive Pressure	Vegetative disruption through grazing or mowing is minimal or not evident; almost all plants allowed to grow naturally.	Disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	Disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Disruption of streambank vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height.	
SCORE:	20 19 18/17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
12. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6 -12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 9 8 8 7 6 6	5 4 3 2 1 0	

Totals - (Side 2): _____

(Side 1): _____

HABITAT ASSESSMENT FIELD DATA SHEET

Black

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DATE-TIME-INITIALS : _____

Surveyed by: 252032

Habitat	Category			
Parameter	Optimal	Suboptimal	Marginal	Poor
1. Instream Cover (fish) -	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat.	30-50% mix of boulder, cobble, or other stable habitat; adequate habitat.	10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable.	less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat obvious.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Epifaunal Substrate	Well-developed niffle and run; riffle is as wide as stream and length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream but length is less than 2 times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; riffle not as wide as stream and its length is less than 2 times the stream width; gravel or large boulders and bedrock prevalent; some cobble present.	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6 (5 4 3 2 1 - 0
3. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
SCORE:	20 19 18 17 16	15 14 13 12 11	5 14 13 12 11 1 10 9 8 7 6	
4. Velocity/Depth Regimes	All four velocity/depth regimes present (slow-deep; slow- shallow; fast-deep; fast-shallow).	Only 3 or the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 or the 4 regimes present (if fast-shallow or slow- shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep). Store Stafford
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Alteration	No channelization or	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging (greater than 20 yr) may be present, but recent channelization is not present.	New embankments present on both banks; and 40-80% of stream reach channelized and disrupted.	banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0 1
6. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5- 30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of the material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 67 6	5 4 3 2 1 0

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RIFFLE/RUN PREVALENCE - pg. 2

Habitat	Category			
Parameter	Optimal	Suboptimal	Marginal	Poor
7. Frequency of Riffles	Occurrence of riffles relatively frequent; distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is > 25.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6 6	5 4 3 2 1 0
8. Channel Flow Status	Water reaches base of both lower banks and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or < 25% of channel substrate is exposed.	Water fills 25 - 75% of the available channel and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
9. Condition of Banks	Banks stable; no evidence of erosion of bank failure.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60-100% of bank has erosional scars.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
10. Bank Vegetative Protection	More than 90% of the streambank surfaces covered by vegetation.	70 - 90% of the streambank surfaces covered by vegetation.	50 - 70% of the streambank surfaces covered by vegetation.	Less than 50 % of the streambank surfaces covered by vegetation.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 / 9 8 7 6	5 4 3 2 1 0
11. Grazing or Other Disruptive Pressure	Vegetative disruption through grazing or mowing is minimal or not evident; almost all plants allowed to grow naturally.	Disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant	Disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant	Disruption of streambank vegetation is very high; vegetation has been removed to 2 inches or less in
		stubble neight	studdle neight	average studdle
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
12. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6 -12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 7 9 8 7 6	5 4 3 2 1 0

Totals - (Side 2): _____

(Side 1): _____

HABITAT ASSESSMENT FIELD DATA SHEET 7-8-97 0930

DATE-TIME-INITIALS ; Black Cot at 309 Surveyed by:

Habitat	Category				
Parameter	Optimal	Suboptimal	Marginal	Poor	
1. Instream Cover (fish)	Greater than 50% mix 30-50% mix of boulder, of boulder, cobble, cobble, or other stable submerged logs, habitat; adequate undercut banks, or habitat.		10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable.	less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat obvious.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
2. Epifaunal Substrate	Well-developed niffle and run; riffle is as wide as stream and length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream but length is less than 2 times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; riffle not as wide as stream and its length is less than 2 times the stream width; gravel or large boulders and bedrock prevalent; some cobble present.	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking. 3 1/4	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0 0	
3. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.	
SCORE:	20 19 18 17 16	15 14 13 12 11	15 14 13 12 11 10 9 8 7 6		
4. Velocity/Depth Regimes	All four velocity/depth regimes present (slow-deep; slow- shallow; fast-deep; fast-shallow).	Only 3 or the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 or the 4 regimes present (if fast-shallow or slow- shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
5. Channel Alteration	No channelization or dredging present.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging (greater than 20 yr) may be present, but recent channelization is not present.	New embankments present on both banks; and 40-80% of stream reach channelized and disrupted.	banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 4 3 2 1 0 1	
6. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5- 30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of the material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
SCORE:	20 19 18 17 16	15 14 18 13 12 11 20	10 9 8 7 6	5 4 3 2 1 0	

RIFFLE/RUN PREVALENCE - pg. 2

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Habitat	Category				
Parameter	Optimal	Suboptimal	Marginal Poor		
7. Frequency of Riffles	Occurrence of riffles relatively frequent; distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is > 25.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
8. Channel Flow Status	Water reaches base of both lower banks and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or < 25% of channel substrate is exposed.	Water fills 25 - 75% of the available channel and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
9. Condition of Banks	Banks stable; no evidence of erosion of bank failure.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60-100% of bank has erosional scars.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7/ 6	5 4 3 2 1 0	
10. Bank Vegetative Protection	More than 90% of the streambank surfaces covered by vegetation.	70 - 90% of the streambank surfaces covered by vegetation.	50 - 70% of the streambank surfaces covered by vegetation.	Less than 50 % of the streambank surfaces covered by vegetation.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
11. Grazing or Other Disruptive Pressure	Vegetative disruption through grazing or mowing is minimal or not evident; almost all plants allowed to grow naturally.	Disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	Disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Disruption of streambank vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6 /	5 4 3 2 1 0	
12. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6 -12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	

Totals - (Side 2): _____

(Side 1): ____

HABITAT	ASSESSMENT	FIELD	DATA SHEET				
•	Black	Exer)	Met Stra	-i.	Sec. X	(7. Q

RIFFLE/RUN PREVALENCE bedre e 15 tourin 20 tot in 167 instea 20 inst

DATE-TIME-INITIALS : ______

Surveyed by: ______.

Habitat	Category			
Parameter	Optimal	Suboptimal	Marginal	Poor
1. Instream Cover (fish)	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat.	30-50% mix of boulder, cobble, or other stable habitat; adequate habitat.	10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable.	less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat obvious.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 D
2. Epifaunal Substrate	Well-developed riffle and run; riffle is as wide as stream and length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream but length is less than 2 times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; riffle not as wide as stream and its length is less than 2 times the stream width; gravel or large boulders and bedrock prevalent; some cobble present.	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 mai 9 an 8 min 7 in 6 min	5 4 3 2 1 0
3. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment. Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Velocity/Depth Regimes	All four velocity/depth regimes present (slow-deep; slow- shallow; fast-deep; fast-shallow).	Only 3 or the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 or the 4 regimes present (if fast-shallow or slow- shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
SCORE:	20 19 18 17 /16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Alteration	No channelization or dredging present.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging (greater than 20 yr) may be present, but recent channelization is not present.	New embankments present on both banks; and 40-80% of stream reach channelized and disrupted.	banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
6. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5- 30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of the material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 8 7 6	5 4 3 2 1 0

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Habitat	Category			
Parameter	Optimal	Suboptimal	Marginal	Poor
7. Frequency of Riffles	Occurrence of riffles relatively frequent; distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is > 25.
SCORE:	20 19 18 17 / 16/	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Channel Flow Status	Water reaches base of both lower banks and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or < 25% of channel substrate is exposed.	Water fills 25 - 75% of the available channel and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE:	20 19 18 17/ 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 2 0
9. Condition of Banks	Banks stable; no evidence of erosion of bank failure.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60-100% of bank has erosional scars.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
10. Bank Vegetative Protection	More than 90% of the streambank surfaces covered by vegetation.	70 - 90% of the streambank surfaces covered by vegetation.	50 - 70% of the streambank surfaces covered by vegetation.	Less than 50 % of the streambank surfaces covered by vegetation.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
11. Grazing or Other Disruptive Pressure	Vegetative disruption through grazing or mowing is minimal or not evident; almost all plants allowed to grow naturally.	Disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	Disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Disruption of streambank vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
12. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6 -12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
SCORE:	20 19 18 17 16	15 14 13 12/11	10 1 9 8 8 7 8 6	5 4 3 2 1 0

Totals - (Side 2): _____

(Side 1): _____

STATION SCORE:

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HABITAT ASSESSMENT FIELD DATA SHEET

RIFFLE/RUN PREVALENCE

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DATE-TIME-INITIALS : ______

Surveyed by: _____.

LN-3 7/8/98

Habitat	Category			
Parameter	Optimal	Suboptimal	Marginal	Poor
1. Instream Cover (fish)	Greater than 50% mix of boulder, cobble,	30-50% mix of boulder, cobble, or other stable habitat; adequate habitat.	10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable.	less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat obvious.
SCORE:	20 19 18 17 (16)	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Epifaunal Substrate	Well-developed riffle and run; riffle is as wide as stream and length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream but length is less than 2 times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; riffle not as wide as stream and its length is less than 2 times the stream width; gravel or large boulders and bedrock prevalent; some cobble present.	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking.
SCORE:	20 19 18 17 16	15 14 (13) 12 11	10 - 9 - 9 - 8 - 7 - 5 - 6 - 5 -	5 4 3 2 1 0
3. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 (9) 8 7 6	5 4 3 2 1 0
4. Velocity/Depth Regimes	All four velocity/depth regimes present (slow-deep; slow- shallow; fast-deep; fast-shallow).	Only 3 or the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 or the 4 regimes present (if fast-shallow or slow- shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
SCORE:	20 19 18 17 16	15 (14) 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Alteration	No channelization or dredging present.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging (greater than 20 yr) may be present, but recent channelization is not present.	New embankments present on both banks; and 40-80% of stream reach channelized and disrupted.	banks shored with gabion or cement; over.80% of the stream reach channelized and disrupted.
SCORE:	20 19 18 (17)16	15 14 13 12 11	9 8 7 6	15-1-4 - 3 - 2 - 1 0
6. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5- 30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of the material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

RIFFLE/RUN PREVALENCE - pg. 2

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Habitat	Category			
Parameter	Optimal	Suboptimal	Marginal	Poor
7. Frequency of Riffles	Occurrence of riffles relatively frequent; distance between niffles divided by the width of the stream equals 5 to 7; variety of habitat	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is > 25.
SCORE:	20 19 18 17 16	15 (14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Channel Flow Status	Water reaches base of both lower banks and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or < 25% of channel substrate is exposed.	Water fills 25 - 75% of the available channel and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE: 10	20 19 (18) 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
9. Condition of Banks	Banks stable; no evidence of erosion of bank failure.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60-100% of bank has erosional scars.
SCORE:	20 19 18 17 16	15 14 13 (12)11	10 - 9 - 8 - 7 - 6 - 6	5 4 3 2 1 0
10. Bank Vegetative Protection	More than 90% of the streambank surfaces covered by vegetation.	70 - 90% of the streambank surfaces covered by vegetation.	50 - 70% of the streambank surfaces covered by vegetation.	Less than 50 % of the streambank surfaces covered by vegetation.
SCORE:	20 19 (18) 17 16	15 14 13 12 11	10 9 8 8 7 6 5	5 4 3 2 1 0
11. Grazing or Other Disruptive Pressure	Vegetative disruption through grazing or mowing is minimal or not evident; almost all plants allowed to grow	Disruption evident but not affecting full plant growth potential to any great extent; more than one-half of	Disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of	Disruption of streambank vegetation is very high; vegetation has been removed to 2
	naturally.	the potential plant stubble height remaining.	the potential plant stubble height remaining.	inches or less in average stubble height.
SCORE: 10	20 19 18 17 (16)	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
12. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns or crops) have not impacted	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6 -12 meters; human activities have impacted zone a great deal.	Width of riparian zo <6 meters; little or r riparian vegetation due to human activities.
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 9 8 7 8 6 6	5 4 3 2 1

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Totals - (Side 2):

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(Side 1): _____

STATION SCORE: _____

HABITAT ASSESSMENT FIELD DATA SHEET

RIFFLE/RUN PREVALENCE

LN-4

DATE-TIME-INITIALS : ______

Surveyed by: _____.

Habitat	Category				
Parameter	Optimal	Suboptimal	Marginal	Poor	
1. Instream Cover (fish)	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat.	30-50% mix of boulder, cobble, or other stable habitat; adequate habitat.	10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable.	less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat obvious.	
SCORE:	20 19 18 17 16	15 14 13 12 11		5 4 3 Z 1 U	
2. Epifaunal Substrate	Well-developed niffle and run; riffle is as wide as stream and length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream but length is less than 2 times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; riffle not as wide as stream and its length is less than 2 times the stream width; gravel or large boulders and bedrock prevalent; some cobble present.	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 1 0	
3. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment.	boulder particles are 25-50% surrounded by fine sediment.	boulder particles are 50-75% surrounded by fine sediment.	boulder particles are more than 75% surrounded by fine sediment.	
SCORE:	20 19 18 17 16	15 14 13 12 11 10 9 8 7		5 4 3 2 1 0	
4. Velocity/Depth Regimes	All four velocity/depth regimes present (slow-deep; slow- shallow; fast-deep; fast-shallow).	Only 3 or the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 or the 4 regimes present (if fast-shallow or slow- shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
5. Channel	No channelization or	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging (greater than 20 yr) may be present, but recent channelization is not present.	New embankments present on both banks; and 40-80% of stream reach channelized and disrupted.	banks shored with gabion or cement; over.80% of the stream reach channelized and disrupted.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 - 4 - 3 - 2 - 1 0 -	
6. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5- 30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of the material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	

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TOTAL (Side 1): _____

Habitat	Category				
Parameter	Optimal	Suboptimal	Marginal	Poor	
7. Frequency of Riffles	Occurrence of riffles relatively frequent; distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is > 25.	
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
8. Channel Flow Status	Water reaches base of both lower banks and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or < 25% of channel substrate is exposed.	Water fills 25 - 75% of the available channel and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
SCORE: (O	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
9. Condition of Banks	Banks stable; no evidence of erosion of bank failure.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60-100% of bank has erosional scars.	
SCORE:	20 19 18 17 16	15 (14 # 13 - 12 - 11 -	10 9 8 7 6	5 4 3 2 1 0	
10. Bank Vegetative Protection	More than 90% of the streambank surfaces covered by vegetation.	70 - 90% of the streambank surfaces covered by vegetation.	50 - 70% of the streambank surfaces covered by vegetation.	Less than 50 % of the streambank surfaces covered by vegetation.	
SCORE:	20 19 18 (17) 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
11. Grazing or Other Disruptive Pressure	Vegetative disruption through grazing or mowing is minimal or not evident; almost all plants allowed to grow naturally.	Disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaising.	Disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Disruption of streambank vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height.	
SCORE:	20 19 18 17 16	15 14) 13 12 11	10 9 8 7 6	5 4 3 2 1 1 0	
12. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6 -12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.	
	208819-18 817-516	15 ≋14 ≋ 13 ∰12 ≗11 €	10 9 8 8 7 8 6 1	5 4 3 Z 1 U	

Totals - (Side 2): ____

(Side 1): _____

Fixed Samples ER-BL13 REV 182 MERCY MATTICS DISSING MATTICS	COMMONWEALTH COMMONWEALTH COMMONWEALTH COEPARTMENT OF ENVIRC BUREAU OF LA	OF PENNSYLVANIA ONMENTAL RESOURCES ABORATORIES	LAB Number	
	WATER OR WASTE ALL CHEMICAL ANAL MG/L UNLESS OTH	E QUALITY REPORT	Date Receive	d
ESTABLISHMENT	SE	FACILITY		COLL NUMBER
COUNTY MUNICIPALITY	PROGRAM COL	L NAME		TYPE TR STD ANALYSIS
CARD (3) ID CODE (ALL CARDS) 4-16 Cnty Mun T Est Case	Fac	LONGITUDE 11-18	DATE 19-24 M D Y	TIME 25-28 KIND 29
2 USGS-0 30-34 BUREAU 35-37 AMIS SAN	PLE NUMBER 38-43	O STREAM NAME 44-57	PINPTPI	RELATIVE POINT 58
TRIBUTARY TO:	0016 001016	5 1014F 15194	PLAK K	ADDITIONAL LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN	<u></u>			Distand ATOL
	73/			Db Zo
FIELD ANALYSES	1	LAB AN	ALYSES	1 1
Type Sample 23-50	Chemist		Date Analyzed	
Source of Sample 61-62	Color (00080)		Total Solids (00500)	
Reason Sampled 63-64	Turb (00070)		Susp Solids (00530)	
Proportional Composite Uniform 65 Sample	(00403)		Set Solids (00545)	
Temporai 66 Spatial	Spec Cond (00095)		Total Diss Solids (00515)	
Aliquots 67-68	Aik (00410)		NO ₂ N (00615)	
Flow Estimated 69 Measured 69	pH4 (00436)		NO ₃ N (00620)	
Below - 3 No Flow - 4 80	PH8 (70508)		NHN (00610)	
Stream Flow-CFS (00061)	TOC (00680)		Kjel-N (00625)	
Stream Flow-MGD (50051)	COD (00340)		Hardness (00900)	
Gage Reading-Ft. (00065)	(00310)		Ca unno i	
Temp (C) (00010)	P TD (00665) (00666)		Mo (00927)	
PH (00400)	Al-Tot ug/1 / (01105)		(00945)	
DO. (00300)	Cd-Tot ug/i (01027)		C) (00940)	
Ci (50060)				
Hal Br (71871)			F (00951) [
(71866)	Cu-Tot ug/1 / (01042)		MBAS (38260)	
Spec Cond (00094)	Fe-Tot ug/1 (01045)		Phenois Dr (46002) ug/1 Ds (32730)	
Appearance (48001)	Mn-Tot ug/1 (01055)		Cyanide (00720)	
Odor (01330)	Ni-Tot ug/1 (01067)		(
CUSTODY LOG	Pb-Tot up/1 (01051)		, [
Legai Seal No			·/ [
Received by	Zn-Tot ug/1 (01092))	
Condition of Seal				

Fixed Samples 1500-FM-LAB0013	COMMONWEALTH OF PENNSYLVANIA LAB No DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LABORATORIES	Imber
	WATER OR WASTE QUALITY REPORT ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED	
ESTABLISHMENT	E FACILITY	COLL NUMBER
COUNTY MUNICIPALITY	PROGRAM COLL NAME	TYPE TR STD ANALYSIS
CARD (3) CARD (3) Cnty 2 USGS -Q 30-34 USGS -Q 30-34 ID CODE (ALL CARDS) 4-16 Cnty Mun T Est Case BUREAU 35-37 AMIS SAM	LATITUDE 4-10 LONGITUDE 11-18 DATE 19-24 Fac 0	TIME 25-8 KIND 29 Hr Min B C A RELATIVE POINT 58
TRIBUTARY TO:	x 57 your clewn 724 43	ADDITIONAL LAB ANALYSES
FIELD ANALYSES		
Type Sample 59-60	Chemical Date Analyzed	
Source of Sample 61-62	Color (00080) Total Solids (00	500]
Reason Sampled 63-64	Turb (00070) Susp Solids (00	530)
Proportional Composite Un form 65	pH (00403) Set solids (00	5451
Temporai 66 Spatia	Spec Cond, (00095) Total Diss Solids (00	515}
Alíquots 67-68	Alk (00410) NO ₂ N (00	615}
Flow Estimated Measured 69	PH4 (00436) (00	620)
Condition Above - 1 Norma - 2 Flood - 5 Below - 3 No Flow - 4 80	PH8 (70508) (00435) (00	610}
CARD (2) Stream Flow-CF5 (00061)	T.O C. (00680)	625}
Stream Flow-MGD (50051)	C O D. (00340)	900)
Pipe Flow-MGD (50050)	(00310) (00310) (00310) (000310) (000310) (000310)	916)
Gage Reading-Ft (00065)	P (00665) Mg (00	927)
Temp (C) (00010)	Al-Tot ug/((01105) 50, (00	945)
рн (00400)		940)
D D. (00300) Cl (50060)		
Hal Br (71871)		
1 (71866) Spec Cond (00094)	Phenois Dr (46	002)
Appearance (46001)	re-107 ug/1 (01045) ug/l Ds (32	730)
Odor (01330)	Mn-Tot ug/((01055) Cyanide (00	720)
CUSTODY LOG	Ni-Tot ug/l (01067)	
How Shipped Date	P6-Tot ug/I (01051)	
Received by		
Condition of Seal	Zn-Tot ug/1 (01092)	

			Fix	xed	Samples
 	-		 -	-	

1500-P	M-LAB	0013	3	
5/95			4	

1		Ti			e	p = 2
1		- FN	141	3.4.5	$\pm \Lambda$	122
-1	6	- 7				

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LABORATORIES

Date Received _____

WATER OR WASTE QUALITY REPORT ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED

ESTABLISHMENT HIG MSS - 2014 TEXK		FACILITY	COLL NUMBER
COUNTY MUNICULUTY DA 102	TUA PROGRAM COLL NAME	TYPE TR	STD ANALYSIS
ID CODE (ALL CARDS) 4/16 CARD (3) Cnty Mun T Est Case Fi 2 4	LATITUDE 4-10 LONGIT	457	KIND 29
	XIGOBRIBLIITT	THE MEISICICIPE	K
TRIBUTARY TO:		ADDITIONAL	LAB ANALYSES
	IA - 10 yds up tradi	a LEnynstrum: STP	
FIELD ANALYSES Type Sample 59-60	Chemical	LAB ANALYSES Date Analyzed	
Source of Sample 61-62	Color (00080)	Total Solids (00500)	
Reason Sampled 63-64	Turb (00070)	Susp Solids (00530)	
Proportional Composite Uniform 65 Sample	DH (00403)	Set solids (00545)	
Tempora' 66 Spatiai	Spec Cond (00095)	Total Diss Solids (00515)	
Aliquots 67-68	(00410)	(00615)	
Flow Estimated Measured 69	pH4 (00436)	(00620)	
Condition Above - 1 Normal - 2 Flood - 5 Below - 3 No Flow - 4 80	PH8 (00435)	100610)	
CARD (2) Stream Flow-CFS (00061)	T.O.C. (00680)	Kjei-N (00625)	
Stream Flow-MGD (\$0051)	C.O.D (00340)	Hardness (00900)	
Pipe Flow-MGD (50050)	5-Day BOD (00310)	(00916)	
Gage Reading-Ft (00065)	P T (00665) (00666)	Mg (00927)	
Temp (C) (00010)	Al-Tot ug/l (01105)	(00945)	
рН (00400)	Cd-Tot ug/l (01027)		
D.O. (00300) CI (50060)	Cr-Töt üg/i (01034)	F (00951)	
Hai Br (71871)	CU-Tot ug/l (01042)	MBAS (38260)	
Spec Cond (00094)	Fe-Tot ug/1 (01045)	Phenois Dr (46002)	
Appearance (46001)	Mn-Tot ug/ ; (01055)		
Cuoor (01330)	Ni-Tot Ue/1 (01067)		
CUSTODY LOG How Shipped Date		┷ <u>┿</u> ┷┥╽╼╼╼╴╵═╼╼╴╵┝═┷═	
Legal Seal No	(01051)		
Condition of Seal	211-Tot ug/1 (01092)		

Fixed Samples	
1500-FM-LAB0013	

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6/95					
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COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LABORATORIES

LAB Number	
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Date Received

WATER OR WASTE QUALITY REPORT
ALL CHEMICAL ANALYSES EXPRESSED IN
MG/L UNLESS OTHERWISE SPECIFIED

ESTABLISHMENT	ASE	FACIUTY	COLL NUMBER
COUNTY MUNICIPALITY	PROGRAM COLL NAME	TYPE TR	STD ANALYSIS
CARD (3) ID CODE (ALL CARDS) 4-16 CARD (3) Cnty Mun T Est Case 2 1 Est Case 1 Case 1		TUDE 11-18 DATE 19-24 TIME 25-8	
$\frac{1}{7020}$	2603111 NEED	OPERKICKI	
TRIBUTARY TO:		ADDITIONAL	LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN STOL. N	C5-HP, 104 TO VAS UPS	Treak AT.93 bidge	
	FRIEN I The Manappine CK		
FIELD ANALYSES Type Sample 59-60	Chemical	LAB ANALYSES	1
Source of Sample 61-62	Calor (00080)	Total Solids (00500)	
Reason Sampled 63-64	Turb (00070)	5450 Salids (00530)	
Proportional Composite Uniform 65 Sample	Он (00403)	Set solids (00545)	
Temporan 66 Spa tia)	Spec Cand (00095)	Total Diss Solids (60515)	
Aliquots 67-68	(00410)	(00615)	
Flow Estimated 69) pH4 (00436)	NO ₃ N (00620)	
Condition Above - 1 Normal - 2 Flood - 5 Below - 3 No Flow - 4 80	Hat (70508) pH8. (00435)	(0061D)	
Stream Flow-CFS (00061)	T.O.C (00680)	Kjel-N (00625)	
Stream Flow-MGD (50051)	C D.D. (00340)	Hardness (00900)	
Pipe Flow-MGD (50050)	5-Day BOD (00310)	(00916)	
Gage Reading-Ft. (00065)	P T (00665)	Mg (00927)	
Temp (C) (00010)	Al-Tot ug/1 (01105)	50 ₄ (00945)	
pH (00400)	Cd-Tot ug/l (01027)	CI (00940)	
	Cr-Tat ug/i (01034)	F (00951)	
Hal Br (71871)	Cu-Tot ug/l (01042)		
Spec Cond (00094)	Fe-Tot ug/1 (01045)	Phenois Dr (46002)	
Appearance (46001) Odor (01330)	Mn-Tot ug/1. (01055)	Cyanide (00720)	
	Ni-Tot ug/l (01067)		
How Shipped	Pb-Tot ug/l (01051)		
Received by			
Condition of Seal			
MALE WATER OR WASTE QUALITY REPORT NUCLER OR WASTE QUALITY REPORT NUCLER OR WASTE SPECIAL NUCLER OR WASTE QUALITY REPORT NUCLER OR WASTE SPECIAL Statution Control CONT Control Control Control Contre Control <th>Fixed Samples 1500-FM-LAB0013 6/95</th> <th>COMMONWEALTH OF PENNSYLVANIA LAB I DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LABORATORIES</th> <th>Number</th>	Fixed Samples 1500-FM-LAB0013 6/95	COMMONWEALTH OF PENNSYLVANIA LAB I DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LABORATORIES	Number
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Alternation Cove Pathon Pathon Pathon Pathon Columbri Price American Price A	NU3	WATER OR WASTE QUALITY REPORT ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED	
Country Multicidative Processor Country Processor Country Processor Country Processor Pr	ESTABLISHMENT	CASE FACILITY	COLL NUMBER
Dis Cost Call Challs 4 Mile LATTICLE & Lic CONCINCTS 11-19 CALL Challs 4 2 Copy Own 1 + Bit over 1 ex 1 (ex	COUNTY MUNICIPALITY	Two Ille KUTTA	TYPE TR STD ANALYSIS
Important Important <t< td=""><td>CARD (3) Cnty Mun T Est Case 2 USGS -Q 30-34 BUREAU 35-37 AMIS</td><td>Fac. LATITUDE 4-10 LONGITUDE 13-18 DATE 19-24 Fac. M D Q</td><td>TIME 25-8 KIND 29 Hr Min 220</td></t<>	CARD (3) Cnty Mun T Est Case 2 USGS -Q 30-34 BUREAU 35-37 AMIS	Fac. LATITUDE 4-10 LONGITUDE 13-18 DATE 19-24 Fac. M D Q	TIME 25-8 KIND 29 Hr Min 220
Linker Under Auslik Landing Fraction Linker Under Fracti		CIOUPTPICE FERRIC	
Image: Press and comparison SS-40 Image: Press and comparison Image: Press and comparison <thimage: and="" comparison<="" press="" th=""> Image: Press and comp</thimage:>	FULL DESCRIPTION WHERE SAMPLE TAKEN	and the second sec	ADDITIONAL COD ANALISES
FIELD ANALYSES Data Analyses Type sample 61-62 ////////////////////////////////////		NC' + dmor Oleve UK, e Fuith	
Type Service S5.60 T Chemical Date Analyzes Source of Sample 61-42 Color Color Total Solids 000500 Reason Sampled 63.84 Color 000800 Total Solids 000500 Sample Total Solids 000700 Solid Solids 000500 Solid Solids 000510 Sample Tempority 66 See Cond 000605 Total Solids 000510 Total Solids 000510 Aliquets e148 Alix 00010 Aliquets 66 See Cond 000510 Total Installes 000510 Aliquets e148 Alix 00010 Aliquets 66 Pr4 000430 Nops, solids 000510 Nops, solids Solids Nops, solids <t< td=""><td>FIELD ANALYSES</td><td>LAB ANALYSES</td><td></td></t<>	FIELD ANALYSES	LAB ANALYSES	
Source of Sample 61-62 Color cooler cooler <thcooler< th=""> <thc< td=""><td>Type Sample 59-60</td><td>Chemical Date Analyzed</td><td></td></thc<></thcooler<>	Type Sample 59-60	Chemical Date Analyzed	
Restor Sampled 63.44 0 Turb (00070 North Solido (00010) Compositive Sample Turb (00070 North Solido (00010) North Solido (00010) Tem col 1 Sample Tem col 1 65 Dr (00020) North Solido (00010) Aliagets 61.48 Col 10 North Solido (00010) North Solido (00010) Aliagets 61.48 Col 10 North Solido (00010) North Solido (00010) Aliagets 61.48 Col 10 North III (00010) North IIII (00010) Aliagets 10014 Aliagets 10014 (00010) North IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Source of Sample 61-62	Color (00080) Total Solids (1	00500)
Propertural Sample Propertural Lundom 65 1 Prov (00403) Settorial (00545) Settorial (00545) Arlaust 64 Sample Sample Table Dis Solid) (00545) Arlaust 64 Sample Sample Table Dis Solid) (00545) Arlaust 64 Sample Sample (00536) Table Dis Solid) (00515) Flow Etimitation Mesured 69 P44 (00336) 110 ph. (00620) Condition Able 1 Flow Sample Flow Sample 100336 110 ph. (00620) Stream Flow-CFS (00651) To C (00680) 110 ph. (00620) 110 ph.	Reason Sampled 63-64	7 Turb (00070) Susp Solids (1	00530)
Termoral Sprine Spec Cond. (00030) Total Dm Sulleh (0015) Allquots 67-68 All (0010) Allquots 60-15 Flow Edimateo Meaured 68 PH4 (0010) Allquots (0027) Condition Allquots 67-68 PH4 (0010) Allquots (0027) Condition Allquots 80-00-2 Norma-2 Floor 5 00 PH8 Condition Allow-7 Norma-2 Floor 5 00 PH8 (0010) PH2 Stream Flow-MGD 100511 To C 100300 PH8 (0020) PH8 Stream Flow-MGD (50051) To C 100300 PH8 (00020) PH8 (00020) PH8 (00020) PH8 (00020) PH8 (00020) PH8 (00020) PH8 (00000) PH8 (00000) PH8 (00000) PH8 (00000) PH8 (00000) PH8 (00000) PH8 PH8 (00000) PH8	Proportional Composite Uniform 65 Sample	pH (00403) Set solids (1	00545)
Aliquets 67.68 Alit (00410) NG/K (00651) Plow Etimated Messured 69 pH4 (00436) NOjN (00620) Condition Above 1 Nomin 2 Floor 5 60 pH8 (00436) NOjN (00620) Stream Flow-CF5 (00061) To C (00480) Higg (00620) Higg (00620) Stream Flow-CF5 (00061) To C (00480) Higg (00620) Higg (00620) Stream Flow-CF5 (00061) To C (00480) Higg (00520) Higg (00520) Stream Flow-CF5 (00061) Solution Above (00520) Higg (00527) Pipe Flow-MGD (50051) Colo (00240) Higg (00527) Higg (00645) Pit (00665) Pit (00666) Mig (00527) Dit D	Temporal 66 Spatia	Spec. Cond (00095)	DO515)
Flow Estimated Measured 69 PH4 000436 (NO3H) (C06120) Candition Above -1 Normal -2 Floor -5 80 PH4 (C00435) (C00435) Stream Flow-CFS (C0061) CAR0 (2) To C (C00435) (C0610) (C0623) Stream Flow-CFS (C0061) CO.D. (C0240) (C00435) (C0623) Pipe Flow-MGD (S00651) CO.D. (C0240) (C0623) (C00400) Pipe Flow-MGD (S0065) CO.D. (C0240) (C00400) (C00400) (C00400) PH (C00400) CG (C0110) (C0110) (C00400) (C00400) (C0110) (C0110) (C00400) (C00400) (C0110) (C0110) (C00400) (C0110) (C0102) (C00400) (C0102) (C00400) (C00400) (C0102) (C0102) (C00400) (C0102) (C00400) (C0102) (C00400) (C00400) (C0102) (C00400) (C00400) (C0102) (C00400) (C00400) (C00400) (C00400) (C00400) (C00400) (C00400) (C00400) (Aliquots 67-68	Aik (00410)	00615)
Condition Above 1 Normali 2 Plobal 5 Plob (765 88) Plob (006 10) Stream Flow-C5 (00061) CARD (2) TO C (00680) Plob (006 10) Stream Flow-MGD (50051) C D (00210) Plob (00010) Plob (00010) Stream Flow-MGD (50051) C D (00210) Plob (00010) Plob (00010) C D (00210) Recipier (00000) Plob G (00001) Plob (00010) Plob <td>Flow Estimated Measured 69</td> <td>pH4 (00436) NO3N (I</td> <td>D062D)</td>	Flow Estimated Measured 69	pH4 (00436) NO3N (I	D062D)
Stream Flow-CFS (00061) T D C (006680) (4)e1.N (00625) Stream Flow-MGD (50051) C D. (00340) hardness (00500) Pipe Flow-MGD (50050) C D. (00310) Ca (00916) Cage Reading-Pt (00065) (006665) Mg (00927) Mg PH (00400) Al-Tertugrii (01105) SO ₄ (00945) Image: Case Case Case Case Case Case Case Case	Condition Above - 1 Normal - 2 Flood - 5 Below - 3 No Flow - 4 80	Hot (70508)	D061D)
Stream Flow-MGD (50051) Image: Construction of Seal Seal No. Pipe Flow-MGD (50050) Image: Construction of Seal Seal No. Pipe Flow-MGD (50050) Image: Construction of Seal Seal No. Pipe Flow-MGD (50050) Image: Construction of Seal Seal No. Piperalex (60010) Image: Construction of Seal Seal No. Construction of Seal Seal No. Image: Construction of Seal No. Piperalex Received by Construction of Seal No. Piperalex (61002) Construction of Seal No. Image: Construction of Seal No. Piperalex (61002)	Stream Flow-CFS (00061)		00625)
Pipe Flow-MGD (50050) S-Day 80D (00310) G (00916) Gage Reading-Pt (00065) P To (00665) Mg (00927) Temp (C) (00010) XI-Tortug/I (01105) SO4 (00940) SO4 pH (00400) G (01027) G (00940) G D.0 (00300) G (01027) G (00940) G Hal gr (71871) G (01024) MBAS (38260) G spec Cond (00094) F (00142) MBAS (38260) G dor (01300) F (01042) MBAS (38260) D G dor (00094) F (01042) MBAS (38260) D G <	Stream Flow-MGD (50051)	C D.D. (00340)	00900)
Gage Reading-Ft. (00065) Mg (00927) Temp (C) (00010) Al.Totrug/l (01105) SO ₄ (00945) pH (00400) Cd.Totug/l (01027) Cl. (00940) D.0 (00300) (00300) Cd.Totug/l (01042) MBAS (38260) Hal Br (71571) Cu.Totug/l (01042) MBAS (38260) Cl. Spec Cond (00094) Fe.Totug/l (01042) MBAS (38260) Cl. Appearance (46001) Mi.Totug/l (01045) Phenols Dr (46002) Dr (46002) Mov Shipped Date Date Pb.Totug/l (01051) Cl. (00720) Received by Date Date Pb.Totug/l (01051) Cl. (01052) Condition of Seal Zn-Totug/l (01052) Cl. (01051) Cl. (01052)	Pipe Flow-MGD (50050)	5-Day BOD (00310)	D0916)
Temp (C) (00010) XI.Totrug/I (01105) SO_4 (00945) pH (00400) Cd.Totrug/I (01107) Cd. (00940) D.O (00300) Cd.Totrug/I (01027) Cd. (00940) Hal Br (71871) Cd.Totrug/I (01042) MBAS (38260) J.(71866) Cu.Totrug/I (01042) MBAS (38260) Spec Cond (00094) Fe-Totrug/I (01042) MBAS (38260) Appearance (46001) MI.Totrug/I (01055) Cyanide (00720) Odor (01330) MI.Totrug/I (01067)	Gage Reading-Ft. (00065)	P T (00665)	00927)
pH (00400) Cd ⁻ Tot ug/l (01027) Cd (00940) D. 0. (00300) Cl (50060) F (00951) F Hal Br (71871) Cu ⁻ Tot ug/l (01034) F (00951) J. 71856) Cu ⁻ Tot ug/l (01042) MBAS (38260) Dr (46002) Spec Cond (00094) F (00051) Dr (46002) Dr (46002) Appearance (46001) Min-Tot ug/l (01055) Dr (46002) Dr (46002) Odor (01330) Min-Tot ug/l (01055) Cyanide (00720) Mex Shipped Date Pb ⁻ Tot ug/l (01067) Max Max (010720) How Shipped Date Pb ⁻ Tot ug/l (01067) Max Max (010720) Max Received by Zn-Tot ug/l (01051) Max Max (01092) Max (01092) Max	Temp (C) (00010)	Al-Totug4 (01105) 504 (1	00945)
D.D. (00300) (01034) F (00951) Hal Br (71871) (01042) MBAS (38260) (171866) (171866) (01042) MBAS (38260) Spec Cond (00094) Fe-Tot Ug/l (01045) Dr (46002) Appearance (46001) Min-Tot Ug/l (01055) Dr (46002) Odor (01330) Min-Tot Ug/l (01055) Cyanide (00720) Mos Shipped Date Pb-Tot Ug/l (01051) Pb-Tot Ug/l (01051) Legal Seal No. Received by Zn-Tot Ug/l (01092) (01092) (01092)	рН (00400)	(d-Tot ug/) (01027)	00940)
Hal Br (71871) Cu-Tot ug/l (01042) MBAS (38260) Spec Cond (00094) Fe-Tot ug/l (01045) Phenois Dr (46002) Appearance (46001) Fe-Tot ug/l (01045) Dr (46002) Dr (46002) Odor (01330) Min-Tot ug/l (01055) Cyanide (00720) Mos Shipped Date Pb-Tot ug/l (01051) Phenois Cyanide Legal Seal No. Pb-Tot ug/l (01051) Pb-Tot ug/l (01092) Pb-Tot ug/l Condition of Seal Zn-Tot ug/l (01092) Pb-Tot ug/l (01092) Pb-Tot ug/l	D.O. (00300) CI (50060)	Gritotug/l (01034) F ((00951)
I (71866) Spec Cond (00094) Appearance (46001) Odor (01330) Mn-Tot ug/l (01055) Mn-Tot ug/l (01055) Most Tot ug/l (01055) Most Tot ug/l (01057) Most Tot ug/l (01067) Most Tot ug/l (01051) Most Tot ug/l (01092)	Hal Br (71871)		38260)
Appearance (46001) ug/l Ds (32730) Odor (01330) Mn-Tot ug/l (01055) Cyanide (00720) CUSTODY LOG Ni-Tot ug/l (01067)	L (71866) Spec Cond (00094)	Fe-Tot ug/((01045) Phenois Dr (/	46002)
Odor (01330) Custopy Log Ni-Tot ug/l (01053) Cyanide (00720) How Shipped Date Date Pb.Tot ug/l (01051)	Appearance (46001)		32730)
CUSTODY LOG Mi-rot ug/l (01067) How Shipped Date Date Pb-Tot ug/l (01051) Legal Seal No Pb-Tot ug/l (01092) Condition of Seal Zn-Tot ug/l (01092)	Odor (01330)	Line for cynice ((20720)
now snipped Date Legal Seal No.	CUSTODY LOG		
Received by	Legal Seal No Date	Pb-Tot ug/l (01051)	
	Received by	Zn-Tot ug/l (01092)	

	Fixed	Samples

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1500-	FM-LAB0013 _		
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COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LABORATORIES

LAB Number

Date Received

WATER OR WASTE QUALITY REPORT ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED

ESTABLISHMENT	K ľ	ASE		FACILITY		COLL NUMBER
COUNTY	MUNICIPALITY	PROGRAM	COLL NAME	×-,	TYPE TR	STD ANALYSIS
CARD (3) ID CODE (ALL	L CARDS) 4-16	LATITUDE	4-10 LONGIT	TUDE 11-18 DATE 19-2	4 TIME 25-8	KIND 29
. 2 Cnty Mun	T Est Case	Fac		1 1 9030	43 - "C	10 10 /
USGS -Q 30-34 BU	REAU 35-37 AMIS SA	MPLE NUMBER 38-43	STREAM NAME 4	14-57		RELATIVE POINT 58
	1020	210101312	174-27-1710	1X1 KX1		
TRIBUTARY TO:					ADDITIONAL	LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE	TAKEN		· · · · · · · · · · · · · · · · · · ·	a Alen AL		
		CA Side 1913	 	4- 020000	£	
FIELD ANALYSES	59-50			LAB ANALYSES	/	1
'ype sample						
Source of Sample	61-62	Color (0	00080)	Total Solids	(00500)	
Reason Sampled	63-64 06	Turb (0	00070)	Susp Solids	(00530)	
Proportional Composite Uniform Sample	65] (DH) (0	00403)	Set solids	(00545)	
Tembora Spatial	66	Spec Cond (0	00095)	Total Diss Solids	(00515)	
Aliquots	67-68		00410)	NO2N	(00615)	
Flow Estimated Measured	69	рH4 (0	00436)	NO3N	(00620)	
Condition Above - t Normal - 2 Below - 3 No Flow - 4	Flood - 5 80	Hot (77	70508)	NH ₃ N	(00610)	
Stream Flow-CFS (00061)	CARD (2		00680)	Kjel-N	(00625)	
Stream Flow-MGD (50051)	-+-+-+-	 C.O.D. (0	00340)		(00000)	
Pipe Flow-MGD (50050)		5-Day BOD (0	20310)	Hardness	(00900)	
Gage Reading-Ft. (00065)			30665)		(00916)	
Temp (C) (00010)		TD (0	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	- Mg	(00927)	
рн (00400)		Al-Tot ug/l (0	01105)	504	(00945)	
D.O. (00300)		Cd-Tot ug/l (0	01027)	CI	(00940)	
Hal Br (71871)		Cr-Totug/I (0	01034)	F	(00951)	
H (71866)		Cu-Tot ug/l (D	01042)	MBAS	(38260)	
Spec Cond (00094)	╾╪╌┞╌┼╼┾╼	Fe-Tot ug/l (0	01045)	Phenols ug/l	Dr (46002) Ds (32730)	
Odor (01330)	╤┿╼┿╍┾╍┾╍	Mn-Tot ug/l (0	01055)	Cyanide	(00720)	
CUSTODY	LOG	Ni-Tot ug/l (0	01067)		,	
How Shipped	Date	-				<u>+</u>
Legal Seal No.		PD-Tot ug/l' (0	01051)		L	
Received by		Zn-Totug/l (0	21092)			
Condition of Seal		-		⁽		

Fiver	i Samnies
1500-FM-LAB0013	

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LABORATORIES

LAB Number	<u> </u>
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Date Received

1500-FM- 6/95	LABOUTS	1900
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WATER OR WASTE QUALITY REPORT ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED

ESTABLISHMENT	ASE FACIL	JTY	COLL NUMBER
COUNTY	PROGRAM COLL NAME	TYPE TR	STD ANALYSIS
102740 = 1/2010 T	The second strains		845 <u>8</u> 1
CARD (3) ID CODE (ALL CARDS) 4-16	LATITUDE 4-10 LONGITUDE 1	11-18 DATE 19-24 TIME 25-8	KIND 29
Cnty Mun T Est Case	Fac	1 2550 5 10 -	in 15
USGS-Q 30-34 BUREAU 35-37 AMIS SAN	APLE NUMBER 38-43 STREAM NAME 44-57		RELATIVE POINT 58
117020	14193222777/THE	1 FALLE	
TRIBUTARY TO:		ADDITIONAL	LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN			
······································	Company Contraction States		
	- Tall - Part		
FIELD ANALYSES	, [LAB ANALYSES	
Type Sample 59-60	Chemical	Date Analyzed	<u> </u>
Source of Sample 61-62	Color (00080)	Total Solids (00500)	
Reason Sampled 63-64	Turb (00070)	Susp Solids (00530)	
Proportional Composite Uniform 65	рн (00403)	Set solids (00545)	
Sample Temporal 66	Spec. Cond (00095)	Total Diss Solids (00515)	
Spatia:			
Flow Estimated 69	pH4 (00436)	NO3N (00620)	
Condition Above - 1 Normal - 2 Flood - 5 Below - 3 No Flow - 4 80	PH8 (00435)	NH3N (00610)	
CARD (2)	T.O C. (00680)	Kjel-N (00625)	
Stream Flow-MGD (50051)	C.O D. (00340)		
Pine Flow-MGD (S0050)	5-Day BOD (00310)	Hardness (00900)	
		Ca (00916)	
Gage Reading-rt. (00093)	TD (00666)	Mg (00927)	
Temp (C) (00010)	Al-Tot ug/l (01105)	SO ₄ (00945)	
рН (00400)	Cd-Tot ug/l (01027)	CI (00940)	
D O (00300) Ci (50060)	Cr-Totug/I (01034)		
hal Br (71871)			
L (71866) Spec Cond (00094)		MBAS (38260)	
Appearance (46001)	/ Fe-Tot ug/l (01045)	ug/i Ds (32730)	
Odor (01330)	Mn-Tot ug/] (01055)	Cyanide (00720)	
CUSTODY LOG	Ni-Tot ug/l (01067)		
How Shipped Date			
Legal Seal No.	Pb-Tot ug/l (D1051)		
Received by			
Condition of Seal	Zn-Totug/I (01092)		

Fixed Samples 1500-FM-LAB0013 6/95	COMMONWEALTH DEPARTMENT OF ENVIF BUREAU OF I	OF PENNSYLVANIA CONMENTAL PROTECTION LABORATORIES	LAB Number	
	WATER OR WAST ALL CHEMICAL ANA MG/L UNLESS OTH	E QUALITY REPORT LYSES EXPRESSED IN HERWISE SPECIFIED		
ESTABLISHMENT A CH	CASE	FACILITY		COLL NUMBER
COUNTY MUNICIPALITY -	PROGRAM	COLL NAME	TYPE TR	STD ANALYSIS
CARD (3) ID CODE (ALL CARDS) 4-16 Cnty Mun T Est Case 2	Fac.	0 LONGITUDE 11-18	DATE 19-24 TIME 25-8	KIND 29
	PLEEPXE	PARKIC		LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN	······			
	<u>A4 3</u>	, .		
FIELD ANALYSES		LAB ANA	LYSES	/
3900 <u>01</u>				
Source of Sample 61-62	Color (0008	(0)	Total Solids (00500)	
Reason Sampled 63-64	Turb (000)	(0)	Susp. Salids (00530)	
Proportional Composite Uniform 65 Sample	DH (004)	13)	Set solids (00545)	
Tempora: 66 Spatia)	Spec Cond (DOOS		Total Diss Solids (00515)	
Aliquots 67-68	Alk (004:	0)	NO2N (00615)	
Flow Estimated Measured 69	DH4 (004)		NO3N (00620)	
Condition Above - 1 Norma 2 Flood - 5 Below - 3 No Flow - 4 80	DH8 Hot (705)		NH3N (00610)	
CARD (Stream Flow-CFS (00061)			(00625)	
Stream Flow-MGD (50051)		10)		
Pipe Flow-MGD (50050)	5-Day BOD (003	0)	Rardness (00900)	
Gage Reading-Ft. (00065)	P 7 (0066		Ca (00916)	
Temp (C) (00010)	TD 10066		Mg (00927)	
pH (00400)	Al-Tot ug/1 (0110		(00945)	
D D (00300)	Cd-Tot ug//- (010)		(00940)	
Ci (50060) Hai Br (71871)	Cr-Tot ug/l (010)		(00951)	
i (71866)	Cu-Tot ug/1 (0104	12)	MBAS (38260)	
Appearance (46001)	Fe-Tot ug/	IS)	ug/i Ds (32730)	
Odor (01330)	10105 (0105	5)	Lud Cyanide (00720)	
CUSTODY LOG	Ni-Tot ug/ (0106	7)		
How Shipped Date	- Pb-Tot ug/1 (0105	,1)		
Received by			`\ <u></u> `\ <u></u>	┶╾┶╼╼╄╼╼ <mark>┶</mark>
Condition of Seal	Zn-Tot ug/1 (0109)2)		

ANIANAL

Fixed Samples	COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LABORATORIES
	WATER OR WASTE QUALITY REPORT ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED

LAB Number	
------------	--

Date Received _____

ESTABUSHMENT	CASE	FACILITY	COLL NUMBER
COUNTY MUNICIPALITY	PROGRAM COLL NAME		TYPE TR STD ANALYS'S
CARD (3) ID CODE (ALL CARDS) 4-16 Cnty Mun T Est Case			TIME 25-8 KIND 29 Hr Min
USGS -Q 30-34 BUREAU 35-37 AMIS 5/	MPLE NUMBER 38-43 STREAM NAME	44-57	RELATIVE POINT 58
	1902 1929 27 14		
FULL DESCRIPTION WHERE SAMPLE TAKEN			DUITIONAL LAB ANALISES
	sac de sa Talla	far sit	
FIELD ANALYSES		LAB ANALYSES	
Type Sample 59-60	Chemical	Date Analyzed	<u>//</u>
Source of Sample 61-62	Color (00080)	Total Solids (00500	
Reason Sampled 63-64	Turb (00070)	Susp. Salids (00530	»;
Proportional Composite Uniform 65 Sample	pH (00403)	Set solids (0054)	5)
T em pora 66 Spatial	Spec Cond (00095)	Total Diss Solids 40051	5)
Aliquots 67-68	Aik (00410)	NO2N (0061)	5)
Flow Estimated 69	pH4 (00436)	NO3N (00651	»
Condition Above - 1 Normal - 2 Flood - 5 Below - 3 No Flow - 4 80	PH8 (00435)	NH3N (00610	
Stream Flow-CFS (00061)	2) 7.0 C (00680)	Kjel-N (0062)	57
Stream Flow-MGD (50051)	C O D. (00340)	Hardness (00906	
Pipe Flow-MGD (50050)	5-Day 80D (00310)	(0091)	
Gage Reading-Ft. (00065)	P 7 (00665)	Mg (0092)	,,,,,,,
Temp (C) (00010)			
рн (00400)			
D.O (00300)	(Cd-Tot ug/l (01027)	Ci / (0094(
Hal Br (71871)	Cr-Tot ug/l (01034)	F (00951	»
I (71866)	Cu-Tot ug/l (01042)	MBAS (38260	»
Spec Cond (00094)	Fe-Tot ug/l (01045)	Phenols Dr (4600) ug/l Ds (32730	
Odor (01330)	Mn-Tot ug/1 (01055)	Cyanide (00720	
CUSTODY LOG			
How Shipped Date			
Legal Seal No	- (01051)		
Received by	Zn-Tot ug/l (01092)		

Fixed Samples 1500-FM-LAB0013	COMMONWEALT DEPARTMENT OF ENV	H OF PENNSYLVANIA	LAB Number	
6/95 first first pis	BUREAU OF	LABORATORIES	Date Received	
	WATER OR WAS	TE QUALITY REPORT		
	ALL CHEMICAL AN MG/L UNLESS OT	ALYSES EXPRESSED IN THERWISE SPECIFIED		
ESTABUSHMENT CA	SE	FACILITY		COLL NUMBER
COUNTY MUNICIPALITY	PROGRAM	COLL NAME	TYPE TR	STD ANALYSIS
Sizense Black and	7.4 106	LUPSKY		∞
CARD (3) ID CODE (ALL CARDS) 4-16	LATITUDE 4	LONGITUDE 11-18	DATE 19-24 TIME 25-8	KIND 29
Chty Mun 7 Est Case	Fac.			μη [~]
			TREPIONEL	RELATINE POINT ER
USGS - U SU-SA	CLCLARTERIO I	STREAM NAME 44-57		RELATIVE FUNT 30
	26056	S MARKIN K	-reek	LI
TRIBUTARY TO:			ADDITIONAL	LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN				
FIELD ANALYSES	The second	LAB A	NALYSES	1
Type sample S9-00	Chemical			
Source of Sample 61-62	Color (000	080)	Total Solids (00500)	
Reason Sampled 63-64	Turb (000	070)	Susp Salids (60530)	
Proportional Composite Uniform 65		403)	Set solids (00545)	
Sample		┟╼╼╾┵╌╌╌┹╼╌╌╢╌╍╌┦╌╌╌┲╌╌╌╢		
T em poral 66 Spatial	Spec Cond (000	095)	Total Diss Solids (00515)	
Aliquots 67-68	Alk (00	410)	NO2N (00615)	
Flow Estimated				
Measured 69	рн4 (004	436)	(00620)	
Condition Above - 1 Normal - 2 Flood - 5 Below - 3 No Flow - 4 80	PH8 Hot (70	508)	NH3N (00610)	
> CARD (2)	Cold (00			······································
Stream Flow-CFS (00061)	T.O.C. (004	680)	Kje(-N (00625)	
Stream Flow-MGD (50051)	C.O.D. (003	340)		
Pipe Flow-MGD (50050)	5-Day BOD (00)	310)		
			Ca (00916)	
Gage Reading-Ft (00065)	то (обе	666)	Mg (00927)	
Temp (C) (00010)	Al-Totug/l (01	105)	SO4 (00945)	
pH (00400)				L [
D.D. (00300)				
Hal Br (71871)	(D10	034)	F (00951)	
	Cu-Tot ug/1 (010	042)	MBAS (38260)	
Spec Cond (00094)	Fe-Tot ug/l (010	045)	Phenois Dr (46002)	
Appearance (46001)		╘╍┙┼╍┙┽╍╸┽╸╸┥	ug/i Ds (32730)	┟╌╌ <mark>┟╶╌</mark> ┟╌╴ <mark>┤</mark> ╌╴┥
Odor (01330)	Mn-Tot ug/l (010	055)	Cyanide (00720)	
CUSTODY LOG	Ni-Tot ug/1 (010	267)		
How Shipped Date	Pb-Totug/l (010	051)		
Received by	~ ~			
Condition of Seal	Zn-Tot ug/l (Q10	92]		

500-FM-LAB0013////////////////////////	BUREAU OF LABORATORIES	Deta Resound
MEDA TEAN	WATER OR WASTE QUALITY REPORT	Date Received
	ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED	
ESTABUSHMENT CA	FACILITY	COLL NUMBER
		TYPE TR STD ANALYSIS
107 PVAQ Stort	$T = \int O(p + 1) \int S^{2} Y$	
CARD (3) ID CODE (ALL CARDS) 4-16	LATITUDE 4-10 LONGITUDE 11-18	DATE 19-24 TIME 25-8 KIND 29
Cnty Mun T Est Case	Fac.	M D Y Hr Min
2		043041817131314
USGS -Q 30-34 BUREAU 35-37 AMIS SAMI	PLE NUMBER 38-43 STREAM NAME 44-57	RELATIVE POINT 58
	26952 ENAMA MET	
TRIBUTARY TO:	and Aman	ADDITIONAL LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN * A 2 #		
Type Sample 59-60	Chemica)	A Date Analyzed
المناجعا		
Source of Sample 61-62	Color (00080)	Total Solids (00500)
Reason Sampled 63-64	Turb (00070)	Susp. Solids (00530)
Proportional Composite Uniform 65	рч (00403)	Set solids (00545)
Tempora 66	Spec Cand (00095)	Total Diss Solids (00515)
Alíquots 67-58	Alk (00410)	NO ₂ N (00615)
Flow Estimated	рна (00436)	NO 3N (00620)
Condition Above - 1 Normal - 2 Flood - 5	Hot (70508)	
CARD (2)	Cold (00435)	
Stream Flow-CFS (00061)		Kjel-N (00625)
Stream Flow-MGD (50051)	C O D. (00340)	Hardness (00900)
Pipe Flow-MGD (50050)	5-Day BOD (00310)	Ca (00916)
Gage Reading-Ft. (00065)	P T (00665) (00666)	Mg (00927)
Temp (C) (00010)	Al-Tot ug/l (01105)	s0 ₄ (00945)
pH (00400)	Cd-Tot ug// (01027)	
D.O (100300) CI (50060)		
Hal Br (71871)		
Spec Cond (00094)	Cu-Tot ug/l (01042)	MBA5 (38260)
Appearance (46001)	Fe-Tot ug/! (01045)	ug/i Ds (32730)
Odor (01330)	Mn-Tot ug/l (01055)	Cyanide (00720)
	Ni-Tot ug/((01067)	
How Shipped Date	Pp-Tot ug/l (01051)	
Received by		
Condition of Seal	Zn-Tot ug/l (01092)	

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LAB Number __

Fixed Samples

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Fixed Samples 1500-FM-LAB0013	COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LABORATORIES	LAB Number
	WATER OR WASTE QUALITY REPORT ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED	
ESTABUSHMENT, CASE	FACIUTY	COLL NUMBER
COUNTY MUNICIPALITY	PROGRAM COLL NAME	TYPE TR STD ANALYSIS
CARD (3) ID CODE (ALL CARDS) 4-16	LATITUDE 4-10 LONGITUDE 71-18	DATE 19-24 TIME 25-8 KIND 29
		07019509301
USGS -Q 30-34 BUREAU 35-37 AMIS SAMPI	E NUMBER 38-43 STREAM NAME 44-57	RELATIVE POINT 58
TRIBUTARY TO:	1202/1/2/14/24	ADDITIONAL LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN		
FIELD ANALYSES	LAB AN	ALYSES
Source of Sample 61-62	Color (00080)	Total Solids (00500)
Reason Sampled 63-64	Turb (00070)	Susp. Solids (00530)
Proportional Composite Uniform 65 5	DH (00403)	Set solids (00545)
Tempora) 66 Spatjal	Spec Cond (00095)	Total Diss Solids (00515)
Aliquats 67-68	Alk (00410)	NO2N (00615)
Flow Estimated Measured 69	рн4 (00436)	NO3N (00620)
Condition Above - 1 Normai - 2 Flood - 5 Below - 3 No Flow - 4 80	pH8 (00435)	NH3N (00610)
CARD (2)	T.O.C. (00680)	Kjel-N (00625)
Stream Flow-MGD (50051)	C D D. (00340)	
Pipe Flow-MGD (50050)	5-Day BOD (00310)	Hardness (00900)
Gage Reading-Ft. (00065)	P (00665)	Ca (00916)
Temp (C) (00010)	TD (00666)	Mg (00927)
рн (00400)	Al-Tot ug/l (01105)	SO ₄ (00945)
	Cd-Tot ug/i (01027)	Cl {00940}
Hai Br (71871)	Cr-Tot ug/l (01034)	F (00951)
1(71866)	(Cu-Tot ug/) (D1042)	MBAS (38260)
Spec Cond (00094)	Fe-Tot ug/l (01045)	Phenois Dr (46002)
Odor (01330)	Mn-Tot ug/ (01055)	Cyanide (00720)
	Ni-Tat ug/l (01067)	
How Shipped Date		
Legal Seal No.		
Condition of Seal	2n-Tot ug/1 (01092)	

Fixed Samples 1500-FM-LAB0013	COMMONWEALTH OF PENNSYLVANIA LAB Num DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LABORATORIES	iber
	WATER OR WASTE QUALITY REPORT ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED	
ESTABLISHMENT, Norman Ch	EASE FACILITY	COLL NUMBER
COUNTY MUNICIPALITY	PROGRAM COLL NAME	TYPE TR STD ANALYS'S
	LATITUDE 4.10 ONGITUDE 11-18 DATE 19-24	TIME 25-8 KIND 29
CARD (3) Cnty Mun T Est Case		
	ACCIS BANKAN AMERAL	CARLANIVE POINT 30
TRIBUTARY TO:		DITIONAL LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN	Se OP Margare	
FIELD ANALYSES		
Type Sample 59-60	Chemical Date Analyzed	
Source of Sample 61-62	Color (00080) Total Solios (0050	0)
Reason Sampled 63-64	5 Turb (00070) Suso Saiids (0053	o)
Proportional Composite Uniform 65 Sample	DPH (00403) Set solids (0054	5)
T em pora 66 Spatial	Sper. Cond (00095) Total Diss Solios (0051	5)
Aliquots 67-68	Alk (00410) NO ₂ N (0061	5)
Flow Estimated Measured 69	D PH4 (00436) NO ₃ N (0062	0)
Condition Above - 1 Normai - 2 Flood - 5 Below - 3 No Flow - 4 80	Hot (70508) NH ₃ N (0061	0)
Stream Flow-CFS (00061)	2) 7 0.C (00680) Kjel-N (0062	5)
Stream Flow-MGD (50051)	C O D. (00340)	
Pipe Flow-MGD (50050)	S-Day BOD (00310)	
Gage Reading-Ft (00065)	P T (00665)	
Temp (C) (00010)		
pH (00400)		
D O. (00300)		», []
hal Br (71871)	Cr.Tot ug/i (01034)	
5pec Cond (00094)	Cu-rat ug/((01042) MBAS (3826 Phenols Dr (4600	2)
Appearance (46001)	(01045) ug// Ug// Ds (3273	0)
Odor (01330)	Mn-Tot ug/ (01055) Cyanide (0072	0)
CUSTODY LOG	Ni-Tot ug/l (01067)	
How Shipped Date	Pb-Tot ug/i (01051)	
Received by		
Condition of Seal		

Fixed Samples	COMMONWE DEPARTMENT OF BUREAL	ALTH OF PENNSYLVANIA ENVIRONMENTAL PROTECTION J OF LABORATORIES	LAB Number	
		ASTE OUALITY REPORT	Date Received	
	ALL CHEMICAL MG/L UNLES	ANALYSES EXPRESSED IN S OTHERWISE SPECIFIED		
ESTABLISHMENT	CASE	FACIUTY		COLL NUMBER
COUNTY MUNICIP	ALITY PROGRAM	COLL NAME	TYPE TR	STD ANALYSIS
ID CODE (ALL CARDS)	4-16 LATITL	IDE 4-10 LONGITUDE 11-18	DATE 19-24 TIME 25-8	KIND 29
CARD (3) Cnty Mun 7 Es	st Case Fac		M D Y Hr M	in
2 UISGS 0 30.34	37 AMIS SAMPLE NUMBER 38-43		PHEREFEL?	RELATIVE POINT 58
	1 2 (1) 4 4 21 21	11 22 1 1 93 1 4	+ 1 × 1 × 1 1 1	
TRIBUTARY TO:			ADDITIONAL	LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN		·····		
		1 13 Martin		
		a de la composición d		
FIELD ANALYSES	-50 Cold Chamical	LAB AN	ALYSES	1
Source of Sample 61	-62 () (Color	(08000)	Total Solids (00500)	
Reason Sampled 63	-54 06 Turb	(00070)	Susp Solids (00530)	
Propertional Composite Uniform Sample	65 DH	(00403)	Set solids (00545)	
Tempora! Spatial	66 Spec Cond	(00095)	Total Diss Solids (00515)	
Aliquots 67-	-68 Alk	(00410)	NO ₂ N (00615)	
Flow Estimated Measured	69 рн4	(00436)	NO3N (00620)	
Condition Above - 1 Normai - 2 Floc Befow - 3 No Flow - 4	pd-5 BO PH8 Hot	(70508)	NH3N (00610)	
	CARD (2)	(00435)		
Stream Flow-CFS (00061)	T.O.C.	(00680)	Kjel-N (00625)	
Stream Flow-MGD (50051)	C O.D.	(00340)	Hardness (00900)	
Pipe Flow-MGD (50050)	S-Day BOD	(00310)	Ca (00916)	
Gage Reading-Ft. (00065)	P P	(00665)	Mg (00927)	
Temp (C) (00010)	Al-Tot ug/l	(01105)	sO ₄ (00945)	
pH (00400)	Cd-Tot ug/	(01027)	Cl (00940)	
D.O (00300) CI (50060)				
Hal Br (71871)				
Spec Cond (00094)	Cu-Tot ug/l		MBAS (38260)	
Appearance (46001)	Fe-Tot ug/l	(01045)	ug/i Ds (32730)	
Odor (01330)	Mn-Tot ug/l	(01055)	Cyanide (00720)	
CUSTODY LOG	Ni-Tot ug/l	(01067)		
How Shipped Date	Pb-Tot ug/l	(01051)		
Received by				
Condition of Seal	Zn-Tot ug/l	(01092)		

Fixed Samples 1500-FM-LAB0013	COMMONWEALTH (DEPARTMENT OF ENVIRO BUREAU OF LA	DF PENNSYLVANIA DNMENTAL PROTECTION ABORATORIES	CAB Number	
<u>theiting parts</u>	WATER OR WASTE ALL CHEMICAL ANALY MG/L UNLESS OTHE	QUALITY REPORT YSES EXPRESSED IN ERWISE SPECIFIED	Date Heceived	
ESTABLISHMENT	CASE	FACILITY		COLL NUMBER
COUNTY MUNICIPALITY	PROGRAM CO	DLL NAME	TYPE TR	STD ANALYSIS
CARD (3) ID CODE (ALL CARDS) 4-16	LATITUDE 4-10	LONGITUDE 11-18	DATE 19-24 TIME 2	15-8 KIND 29
			079,9812	30 /
USGS -Q 30-34 BUREAU 35-37 AMIS	ample number 38:43 21/21/01/31/12	STREAM NAME 44-57		RELATIVE POINT 58
TRIBUTARY TO:			ADDITIO	NAL LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN	<u>PROX 2000</u>	1015 up mounts		
	CH BLACK (K.	/		
	······			
Type Sample 59-60	Chemical		Date Anaiyzed	
Source of Sample 61-62	/ Color (00080)		Total Solids (00500)	
Reason Sampled 63-64	D Turb (00070)		Susp. Solids (D053D)	
Proportional Composite Uniform 65	DH (00403)		Set solids (00545)	
Temporal 66 Spatia!	\$pec Cond (00095)		Total Diss Solids (00515)	
Aliquots 67-68	Alk (00410)		NO2N (00615)	
Flow Estimated 69	рн4 (00436)		NO ₃ N (00620)	
Condition Above - 1 Normal - 2 Flood - 5 Below - 3 No Flow - 4 80	PH8 (70508) Cold (00435)		NH3N (00610)	
Stream Flow-CF5 (00061)	(2) T.O.C. (00680)		Kjel-N (00625)	
Stream Flow-MGD (50051)	C.O.D. (00340)		Hardness (00900)	
Pipe Flow-MGD (50050)	(6-Day BOD) (00310)		Ca (00916)	
Gage Reading-Ft. (00065)	P T (00665) (00666)		Mg (00927)	
Temp (C) (00010)	Al-Tot ug/l (01105)		50 ₄ (00945)	
pH (00400)	Cd-Tot ug/) (01027)		(00940)	
D. O. (00300) Ci (50060)	Cr-Tot ug/l (01034)		F (00951)	
Hal Br (71871)	Cu-Tot ug/l (01042)		MBAS (38260)	
Spec Cond (00094)	Fe-Tot uo// (01045)		Phenois Dr (46002)	
Appearance (46001)			ug/l Ds (32730)	<u> </u>
Odor (01330)			Cyanide (00720)	
CUSTODY LOG	Ni-Tot ug/l (01067)			
Legal Seal No Date	Pb-Tot ug/l (01051)			
Received by	Zn-Tot ua/l (01092)			
Condition of Seal				

Fixed Samples 1500-FM-LAB0013	DI	COMMONWEAL EPARTMENT OF EN BUREAU O	TH OF PENNSYLVANIA VIRONMENTAL PROTECTION F LABORATORIES	LAB Number	
Fixed ton meta	-	WATER OR WAS ALL CHEMICAL AN MG/L UNLESS O	STE QUALITY REPORT NALYSES EXPRESSED IN DTHERWISE SPECIFIED		
ESTABLISHMENT		Survey	FACILITY	-	COLL NUMBER
COUNTY MUNIC		PROGRAM	COLL NAM	TYPE TR	STD ANALYSIS
Luzenne	Jugan loat	74/06	I den to	44 4	1000
CARD (3) Cnty Mun T	Est Case Fa	c.	4-10 LONGITODE (1-18	M D Y Hr	Min
2				01630918111	50
USGS-Q 30-34 BUREAU 3	5-37 AMIS SAMPLE	E NUMBER 38-43	STREAM NAME 44-57		RELATIVE POINT 58
	2 2 00	KI P AIY	171 1 1 1 1		
FULL DESCRIPTION WHERE SAMPLE TAKEN				ADDITIONA	L LAB ANALTSES
FIELD ANALYSES			LAB AN	ALYSES /	
(ype sample)		Chemical		Date Analyzed	
Source of Sample 6	51-62 09	Color (00	0080}	Total Solids (00500)	
Reason Sampled 6	53-64 06	Turb (00	0070)	Susp. Solids (D0530)	
Proportional Composite Uniform		PH (00		Set solids (00545)	
Sampie					- <u>-</u> <u>-</u> <u>-</u>
Temporai Spatial	66	Spec Cond (00	12600	Total Diss Solids (00515)	
Aliquots 6	67- 6 8	Alk (OC	0410)	NO2N (00615)	
Flow Estimated Measured	69	pH4 (00	0436)	NO ₃ N (00620)	TTTT
Condition Above - 1 Normai - 2 Fli Below - 3 No Flow - 4	ood - 5 80	170 Hot 170	0508)	NH3N (00610)	
	→ CARD (2)		0680)		
Stream Flow-CFS (00061)	┶┿┿┥╎				
Stream Flow-MGD (50051)	╇╍┿╍┥╽			hardness (00900)	
Pipe Flow-MGD (50050)		3-Day 800 (00	0310)	(00916)	
Gage Reading-Ft. (00065)			0665)	Mg (00927)	TIT
Temp (C) (00010)		Al-10t ug/l (01	1105)	50 ₄ (00945)	
pH (00400)					-
P.O. (00300)					
Hal Br (71871)		Cr-Tatug/I (01		F (00951)	
(71866)		Cu-Tot ug/i (01	1042}	MBA5 (38260)	
Spec Cond (D0094)	╪╌┾╌┽╼┤╏	re-Tot ug/i (01	1045)	Phenois Dr (46002)	
Odor (01330)	┿┿┿┥	Mn-Tot ug/1 (01	1055)	Cyanide (00720)	
		Ni-Tot ug/l (01	1067)		
How Shipped USCam Date	e 6130198			, , 	<u>╶</u> ┷╼╼╇╸┈╄╶┈┞╸╌╿ ╼┰╼╼┰╴╴┎╴╍┯╼╼┓
Legal Seal No.	9	Pb-Tot ug/l (01			
Condition of Seal	(An-Tot ug/l (01	1092)		
L					

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Fixed Samples 1500-FM-LAB0013 6/95	COMMONWEALTH OF PENNSYLVANIA EPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LABORATORIES	LAB Number
lfixat for metab	WATER OR WASTE QUALITY REPORT ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED	
ESTABLISHMENT STP CASE	FACILITY	
		A TYPE TR STD ANALYSIS
Luzenne Butla TI	1p 106 Len -20	ll 14 000
CARD (3) ID CODE (ALL CARDS) 4-16	LATITUDE 4-10 LONGITUDE 11-18	DATE 19-24 TIME 25-8 KIND 29
2 Crity Mun T Est Case P		01631091610302
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	DILISIDIALE I I I I I	
FULL DESCRIPTION WHERE SAMPLE TAKEN		
Type Sample 59-60	Chemical 1	Date Analyzed
Source of Sample 61-62	Calor (00080)	Total Solids (00500)
Reason Sampled 63-64 0 6	Turb (00070)	Susp. Solids (00530)
Proportional Composite Uniform 65 Sample	DH (00403)	Set solids (00545)
Tempora: 66 Spatia	Spec Cond (00095)	Total Diss Solids (00515)
Aliquots 67-68		NO2N (00615)
Flow Estimated Measured 69	pH4 (Q0436)	(00620)
Condition Above - 1 Normal - 2 Flood - 5 Below - 3 No Flow - 4 80	(70508)	(00610)
CARD (2)	T.O C. (00680)	
Stream Flow-MGD (50051)	C D.D. (00340)	
Pipe Flow-MGD (50050)	S-Day BOD (00310)	hardness (00900)
Gage Reading-Pt. (00065)		(00916)
Temp (C) (00010)	TD (00666)	Mg (00927)
pH (00400)	Al-Tot ug/l (01'05)	504 (00945)
D.O (00300)	Cd-Tot ug/i (01027)	(00940)
	Ar-Tot ug/1 (01034)	F (00951)
Br (718/1)	Eu-Tot ug/! (D1042)	MBA5 (38260)
Spec Cond (00094)	Fe-Tot ug/i (01045)	Phenois Dr (46002)
Appearance (46001)	(01055)	
)dor (01330)		Cyanice (00720)
CUSTODY LOG How Shipped USCAnd Date 6 30 70		
egal Seal No.	Pb-Tot ug/l (01051)	
ondition of Seal	2n-Tot ug/i (01092)	

Fixed Samples 1500-FM-LAB0013	C	COMMONWE DEPARTMENT OF E BUREAU	ALTH OF F INVIRONM	PENNSYLVANIA IENTAL PROTE(RATORIES	CTION		LAB Number		
Fixed for metals		WATER OR W ALL CHEMICAL MG/L UNLESS	ASTE QU ANALYSE S OTHERW	IALITY REPOR	RT N				
ESTABLISHMENT	CASE	Sugue	• <u>•</u> ••	F	ACILITY			COLL N	
COUNTY MUNICIPAL	TY (PROGRAM	COLL	NAME		11	TYPE	TR STD AN	ALYSIS
Luzenne Sus	an 104	17mp 108	>	Jon	<u></u>	fall		40	00
CARD (3) ID CODE (ALL CARDS) 41 Crity Mun T Est	6 LCasel F	ac.	DE 4-10	LONGITU	DE 11-18	DATE 19-	24 TI Y +	ME 25-8	KIND 29
						0630	0181	10 415	21
USGS -Q 30-34 BUREAU 35-37		LE NUMBER 38-43		STREAM NAME 44	57	1010/00		RELATIV	E POINT 58
1 1 1 7 0 1	2 012	211521	YI8					11	
TRIBUTARY TO:					·····		ADD	ITIONAL LAB AN	ALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN						·····		······	
		······							
FIELD ANALYSES Type Sample 59-60	AV	Chemical			LAB A	NALYSES	/	' /	
Source of Sample 61-62	09	Color	(00080)			Total Solids	(00500)		
Reason Sampled 63-64	06	Turb	(00070)			Susp Solids	(00530)		
Proportional Composite Uniform Sample	65	DH	(00403)7			Set solids	(00545)		\Box
Tempora: Spatia!	66	Spec Cond	(00095)			Total Diss Solids) (00515)		TT
Aliquots 67-68	\square	Alk	(00410)	TTT		NO2N	(00615)		TTT
Flow Estimated Measured	69	pH4	(00436)			NO ₃ N	(00620)		
Condition Above - 1 Normal - 2 Flood - Below - 3 No Flow - 4	5 80	(PH8) Hot	(70508)			NH3N	(00610)		
	CARD (2)	Cold	(00435) L				_ [<u>-</u>	_ <u>+</u>
Stream Flow-CFS (00061)		ΤΟ C.	(00680)				5)		
Stream Flow-MGD (50051)		C D D.	(00340)			Hardiness	(00900)		TT
Pipe Flow-MGD (50050)	\Box	S-Day BOD	(00310)			G	(00916)		$\overline{\Box}$
Gage Reading-Ft (00065)			(00665)			Mg	(00927)		
Temp (C) (00010)			(01105)		<u></u>		(009.45)		┶ <u>╺</u> ┷╶─┘ ╅╌╌╋╌┙
рН (00400)							ι		<u>↓</u>] ┬─┬─┐
D.O (00300)		Carratugn				G	(00940)		
Hal Br (71871)	TTÝ	Cr-Tot ug/I	(01034)			F	(00951)		
Spec Cond (00094)	TTT	Eu-Tot ug/i	(01042)			MBAS	(38260)		
Appearance (46001)	++-	(Fe-Tot ug/I	(01045)			ug/)	Ds (32730)		
Odor (01330)	╪╾╪╼┥	Mr-Tot ug/l	(01055)			Cyanide	(00720)		
CUSTODY LOG	<u> </u>	Ni-Tot ug/i	(01067)						
How Shipped US Cance Date &	130 98	Pb-Tot ug/l	(01051)				,[TTT
Received by			(01003)			1	г Г		+
Condition of Seal	(int ug/i	(01092)			(L		

Fixed Samples 1500-FM-LAB0013 6/95	COMMONWEALTH OF PENNSYLVANIA LAB Numb DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LABORATORIES	
Lined for mitals	Date Rece WATER OR WASTE QUALITY REPORT ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED	sved
ESTABLISHMENT Hozloton STP	FACILITY	COLL NUMBER
COUNTY MUNICIPALITY HIZ A TO BY MUNICIPALITY	PROGRAM COLL NAME	YPE TR STO ANALYSIS
CARD (3) ID CODE (ALL CARDS) 4-16	LATITUDE 4-10 LONGITUDE 11-18 DATE 19-24	TIME 25-8 KIND 29
Crity Mun T Est Case		
1 11 71012 01	2115121419 1 1 1 1 1 1 1 1 1	
TRIBUTARY TO:	AI	DDITIONAL LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN		
FIELD ANALYSES	LAB ANALYSES	1 1
	Chemical Date Analyzed	
Source of Sample 61-62 09	Color (00080) Total Solids (00500	, []
Reason Sampled 63-64	Turb (00070) Susa. Solids (00530	, []
Proportional Composite Uniform 65 Samole	PH (00403) Set solids (00545)	,
Temporal 66 Spatia!	Spec Cond (00095) Total Diss Solids (00515)	
Aliquots 67-68	Alk (00410) NO ₂ N (00615	
Flow Estimated Measured 69	pH4 (00436) NO ₃ N (00620)	
Condition Above - 1 Norma - 2 Flood - 5 Below - 3 No Flow - 4 80	PH8 Hot (70508) (00610)	
CARD (2)	T.O.C. (00680)	
Stream Flow-MGD (50051)	C D D. (00340)	<u> </u>
Pipe Flow-MGD (50050)	(00900) (00310) (00310)	
Gage Reading-Ft. (00065)		
Temp (C) (00010)		
рн (00400)	Al/Tot ug/l (01105) 504 (00945)	, D
D.O. (00300)	Cd-Tot ug/l (01027)	
Hal Br (71871)	(Cr-Tot ug/i) (01034) F (00951)	
1 (71866)	Cu-Tot ug/l (01042) MBAS (38260)	
Appearance (46001)	Fe-Tot ug/l (01045) Phenols Dr (46002) ug/l Ds (32730)	,
Odor (01330)	Mn-Tot ug/1 (01055) (00720) Cyanide (00720)	,
CUSTODY LOG	Ni-Tot ug (1) (01067)	,
How Shipped $U > (HKDU)$ Date $U > (HKDU)$ Date $U > (HKDU)$ Date $U > (HKDU)$	Pb-Tot ug/l (01051)	,
Received by(Condition of Seal(Zn-Tot ug/l (01092)	

	Fixed	Samples
500-FM-LAB	0013	

1300		 	00			-	
6/95	_	 		_	_	_	

+ixed toil mela	$\underline{\Sigma}$

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LABORATORIES

LAB Number _____

Date Received _____

WATER OR WASTE QUALITY REPORT ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED

ESTABLISHMENT () CTD CAS	FACILITY	COLL NUMBER
St John SII	Jurver	
Luzerne Butten Tim	10 106 Len Scall	4 000
CARD (3) ID CODE (ALL CARDS) 4-16	LATITUDE 4-10 LONGITUDE 71-18	DATE 19-24 TIME 25-8 KIND 29
		6638981000 2
USGS-Q 30-34 BUREAU 35-37 AMIS SAMP	LE NUMBER 38-43 STREAM NAME 44-57	RELATIVE POINT 58
1170201	2115214151111	
TRIBUTARY TO:		ADDITIONAL LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN		
FIELD ANALYSES	LAB A	ALYSES / /
Type Sample 59-60 O Y	Chemical	Date Analyzed
Source of Sample 61-62	Color (00080)	Total Solids (00500)
Reason Sampled 63-64 66	Turb (00070)	Susp. Solids (D0530)
Proportional Composite Uniform 65	(00403)	Set solids (D0545)
Tempora 66 Spatia'	Spec Cond (00095)	Total Diss Solids (005 15)
Aliquots 67-68	Aik (00410)	(00615)
Flow Estimated Measured 69	pH4 (00436)	(00620)
Condition Above - 1 Normai - 2 Flood - 5 Below - 3 No Flow - 4 80	PH8 Hot (70508) (00435)	(00610)
CARD (2)	T.O C (00680)	
Stream Flow-MGD (50051)	C.O.D. (00340)	
Pipe Flow-MGD (50050)	5-Day BOD (00310)	
Gage Reading:Ft. (00065)		
Temp (C) (00010)	TD (00666)	(00927)
рН (00400)	Al-Tot ug/l (01105)	50 ₄ (00945)
00300)	(01027)	CI (00940)
Hal Br (71871)	(01034)	F (00951)
l (71866)	Cu-Tot ug/1 (01042)	MBAS (38260)
Spec Cond (00094)	Pe-Tot ug/l (01045)	Phenols Dr (46002) ug/l Ds (32730)
Odor (01330)	Mn-Tot ug/l (01055)	Cyanide (00720)
	Ni-Tot ug/l (01067)	
How Shipped USCAnc Date 6 30 98	(01051) (01051)	
Received by		
Condition of Seal	(01092)	

Fixed Samples 1500-FM-LAB0013 6/95	DE	COMMONWE PARTMENT OF E BUREAU	ALTH O ENVIROI I OF LAE	F PENNSYLVANIA NMENTAL PROTECTION BORATORIES	LAB Numbe Date Receiv	er	
fixed for milals		WATER OR W ALL CHEMICAL MG/L UNLESS	ASTE (ANALYS S OTHER	QUALITY REPORT BES EXPRESSED IN RWISE SPECIFIED			
ESTABLISHMENT Liftle Nescope & downstream flor	CASE M JOTOO	SUR	VE	Y FACILITY			0215
COUNTY BUTT	N TU	JA DROGRAM		LE NAME LEN Sch	all [PETR	
CARD (3) ID CODE (ALL CARDS) 4-16 Crity Mun T Est C	Tase Fac		DE 4-10		DATE 19-24 M D Y Also 2 D GIV 1	TIME 25-8 Hr Min	KIND 29
USGS-Q 30-34 BUREAU 35-37 AMI	S SAMPLE	NUMBER 38-43	╧	STREAM NAME 44-57			RELATIVE POINT 58
	1012	115121	52				
FULL DESCRIPTION WHERE SAMPLE TAKEN							
FIELD ANALYSES				LAB A	NALYSES	1	1
Type Sample 59-60		Chemical			Date Analyzed	/	
Source of Sample 61-62		Color	(00080)		Total Solids (00500)		
Reason Sampled 63-64	26	Turb	(00070)		Susp. Solids (00530)		
Proportional Composite Uniform 6 Sample	65 🗌	(FH)	(00403)		Set solids (00545)		
Tempora Spatia!	66	Spec. Cand	(00095)		Total Diss Solids (00515)		
Alìquots 67-68		Alk	(00410)		(00615)		
Flow Estimated Measured e	69	рН4	(00436)		NO31 (00620)		
Condition Above - 1 Normai - 2 Flood - 5 Below - 3 No Flow - 4 8		DH8 Cold	(70508) (00435)		(00610)		
Stream Flow-CFS (00061)		TOC	(00680)		Kjel-N (00625)		
Stream Flow-MGD (50051)		C O.D.	(00340)		Hardness (00900)		
Pipe Flow-MGD (50050)		S-Day BOD	(00310)		G (00916)		
Gage Reading-Ft. (00065)			(00 66 5) (00666)		(00927)		
Temp (C) (00010)	╧╡ᢤ	Al-Tot ug/l	(01105)		SO ₄ (00945)		
рн (00400)	┿┽	Cd-Tot ug/l	(01027)		(00940)		
CI (50060)	╧╇╌┥╽	Cr-Tot ug/ł	(01034)		F (00951)		
Hal Br (71871)		Cu-fot ug/l	(01042)		MBAS (38260)		
Spec Cand (00094)	╺┿╼┥ᢤ	Fe-Tot ug/l	(01045)		Phenois Dr (46002)		
Appearance (46001) Odor (01330)	╾┿╾┥╎	(Mn-Tot ug/1	(01055)		Cyanide (00720)		
		Ni-Tot ug/!	(01067)		()		
How Shipped <u>USCAPGO</u> Date <u>10[3</u> Legal Seal No.	0/98	Pb-Tot ug/l	(01051)				
Received by Condition of Seal		Zn-Tot ug/l	(01092)				
					k		

Fixed Samples 1500-FM-LAB0013 6/95	COMMONWE DEPARTMENT OF E BUREAU	ALTH OF PENNSYLVANIA ENVIRONMENTAL PROTECTION I OF LABORATORIES	LAB Number	
I fined for mitals	WATER OR W ALL CHEMICAL MG/L UNLESS	ASTE QUALITY REPORT ANALYSES EXPRESSED IN S OTHERWISE SPECIFIED		
ESTABLISHMENT DATA TINNAD	SE SUR			COLL NUMBER
COUNTY IN FOR IT MUNICIPALITY	PROGRAM	COLL NAME	A A TYPE THAT	STD ANALYSIS
LUZERIVE BUTION TU	10/10/10/10	Jen Schau		
CARD (3) Cnty Mun T Est Case 2	Fac		0163098135	
USGS-Q 30-34 BUREAU 35-37 AMIS SAN	APLE NUMBER 38-43	STREAM NAME 44-57		RELATIVE POINT 58
	2122			LAR ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN				
		<u></u>		
FIELD ANALYSES Type Sample 59-60	Chemical	LAB A	NALYSES	1
Source of Sample 61-62	Color	(00080)	Total Solids (00500)	
Reason Sampled 63-64 0 4	Turb	(00070)	Susp Solids (00530)	
Proportional Composite Uniform 65 Sample	(PH)	(00403)	Set solids (00545)	
Tempora: 66 Spatial	Spec Cond	(00095)	Total Diss Solids (00515)	
Aliquots 67-68	Alk	(00410)	(00615)	
Flow Estimated 69	рн4	(00436)	NO ₃ N (00620)	
Condition Above - 1 Normal - 2 Flood - 5 Below - 3 No Flow - 4 BO	PH8 Hot X	(70508)	17H3N (00610)	
CARD (2) Stream Flow-CFS (00061)	т.ос	(00680)	Kjel-N (D0625)	
Stream Flow-MGD (5005 1)	C.O.D.	(00340)	Hardness ; (00900)	
Pipe Flow-MGD (50050)	S-Day BOD	(00310)	(00916)	
Gage Reading-Ft (00065)	PX	(00665)		
Temp (C) (00010)				
pH (00400)	ATTOLUGIT	(01105)	(00945)	
D D. (00300)	Cd-Tot ug/	(01027)	(00940)	
Hal Br (71871)	Et-Tot Ug/	(01034)	F (00951)	
· (71866)	Cu-Tot ug/T	(01042)	MBAS (38260)	
Spec Cond (00094)	Fe-Tot ug/T	(01045)	Phenois Dr (46002)	
Appearance (46001)	Min-Tortuget,	(01055)	Ug/) Ds (32730) Cyanide (00720)	
	Ni-Tot ug/i	(01067)		
How Shipped US CARGO Date 6/30/98	Pb-Tot ug/l)	(01051)		
Received by				
Condition of Seal	. Kn-fot ug/l			

Fixed Samples		EALTH OF PENNSYLVANIA ENVIRONMENTAL PROTECTION	LAB Number	
6/95	BUREA	U OF LABORATORIES	Date Received	
- fired for metals	WATER OR V	VASTE QUALITY REPORT		
	MG/L UNLES	S OTHERWISE SPECIFIED		
ESTABLISHMENT	Jeddo CASE	UT 7/ FACILITY		COLL NUMBER
Upstream Jittle nescor	rek SUKI			0215
LIZZEND RUNICIPALI	PROGRAM	A COLL NAME	TYPE TR	STD ANALYSIS
CARD (2) ID CODE (ALL CARDS) 4-1		JDE 4-10 LONGITUDE 11-18	DATE 19-24 TIME 25-8	KIND 29
Crity Mun T Est	Case Fac		M D Y Hr I	Min
2			06309813	301
USGS-0 30-34 BUREAU 35-37	AMIS SAMPLE NUMBER 38-43	STREAM NAME 44-57		RELATIVE POINT S8
	10411214	5111 1 1 1 1		
FULL DESCRIPTION WHERE SAMPLE TAKEN			ADDITIONAL	L LAD ANALTSES
FIELD ANALYSES		LAB A	INALYSES /	
Type Sample 59-60	O Chemical		Date Analyzed	
Source of Sample 61-62	O I Color	(00080)	Total Solids (00500)	
Reason Sampled 63-64	6 6 Turb	(00070)	Susp. Solids (00530)	
Proportional Composite Uniform	65 PH	(00403)	Set solids (00545)	
Sample T e mporal	66 Spec Cond	(00095)	Total Diss Solids (00515)	
Sparia: Aliquots 67-68		(00410)	WO3N (00615)	
Flow Estimated		(00436)		
Condition Above - 1 Normal - 2 Flood -		(70508)		
Below - 3 No Flow - 4	80 Cold	(00435)		
Stream Flow-CFS (00061)		(00680)	Kjel-N (00625)	
Stream Flow-MGD (50051)	C.O.D.	(00340)	Hardness (00900)	
Pipe Flow-MGD (50050)	S-Day BOD	(00310)	(00916)	
Gage Reading-Ft. (00065)		(00665)	(00927)	
Temp {C) {00010}	Al-Tot ug/l	(01105)	504 (00945)	
pH (00400)	Cd-Tôt ug/i	(01027)		
D.O. (00300)				
Hal Br (71871)				
Spec Cond (00094)	Cu-Tot ug/l	(01042)	MBAS (38260)	
Appearance (46001)	Fe-Tot ug/l	(01045)	ug/l Ds (32730)	
Odor (01330)	Min-Tat ug/l	(01055)	Cyanide (00720)	
CUSTODY LOG	Ni-Tat ug/l	(01067)		
How Shipped <u>US (KIGO</u> Date <u>(</u> Legal Seal No	20/48 p6.76t ug/1	(01051)		
Received by	(Zn-Tot ug/l)	(01092)		
Condition of Seal				

Fixed Samples 1500-FM-LAB0013	COMMONWEALTH OF PENNSYLVANIA LAB Number DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LABORATORIES
total MEDICS (DI HUD3	WATER OR WASTE QUALITY REPORT Date Received ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED
ESTABLISHMENT NESODECK (REK CASI	SURVEY FACILITY COLL NUMBER
COUNTY MUMCIPALITY MUMCIPALITY LY ZEINE BUTEVILLE	PROGRAM COLL NAME TYPE TR STD ANALYSIS
CARD (3) ID CODE (ALL CARDS) 4-16 Cnty Mun T Est Case F 1 2	LATITUDE 4.10 / LONGITUDE 11-18 DATE 19-24 TIME 25-8 KIND 29 Fac M D Y Hr Min Min
USGS-0 30-34 BUREAU 35-37 AMIS SAMP	RELATIVE POINT 58
TRIBUTARY TO:	ADDITIONAL LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN	Alum BOLF (ALICSE
	in St. Jun's STP
Type Sample 59-60	Chemical Date Analyzed
Source of Sample 61-62	Color (00080) Total Solids (00500)
Reason Sampled 63-64	Turb (00070) Susp. Solids (D0530)
Proportional Composite Uniform 65 Sample	5F (00403) Set solids (00545)
Temporal 66 Spatial	Spec Cond (00095)
Aliquots 67-68	Alk (00410) NO2N (00615)
Flow Estimated Measured 69	pH4 (00436) (00620) (00620)
Condition Above - 1 Norma - 2 Flood - 5 Below - 3 No Flow - 4 80	PH8 Hot X (70508) (00610) (00610)
CARD (2)	T.O C. (00680)
Stream Flow-MGD (50051)	C.O.D. (00340)
Pipe Flow-MGD (50050)	S-Day BOD (00310) (00916) (00916)
Gage Reading-Ft. (00065)	
Temp (C) (00010)	
pH (00400)	Al-Tot ug/l (01105) 504 (00945)
	(01027) (01027) (01027) (00940)
Hai Br (7187 !)	Cr-Totug/1 (01034)
+(71866)	Cu-Tot ug/l (01042) MBAS (38260)
Appearance (46001)	Fe-Tot ug/l (01045) Phenois Dr (46002) ug/l Ds (32730)
Odor (01330)	Mn-Tot ug/l (01055) Cyanide (00720)
CUSTODY LOG	Ni-Tót ug/l (01067)
How Shipped US (KUD) Date 2 SU [48] Legal Seal No.	Pb.Tot ug/l (01051)
Received by Condition of Seal	Zn-Tot ug/l (01092)

Fixed Samples			ALTH OF PENN ENVIRONMENT	SYLVANIA	LAB NU	umber	
ELY METERS HAN	Û <u>3</u>	WATER OR W ALL CHEMICAL MG/L UNLESS	ASTE QUALI ANALYSES EX S OTHERWISE S	TY REPORT PRESSED IN SPECIFIED	Date R	eceived	
ESTABLISHMENT NESCODECT	rezk casi	E SURV	ΈÝ	FACILITY			COLL NUMBER
COUNTY	Butler Tuf	PROGRAM	COLL NAME	Kupsky		TYPE TR	STD ANALYSIS
CARD (3) ID CODE (AL	L CARDS) 4-16	ac.	DE 4-10		DATE 19-24	TIME 25-8	in KIND 29
2 USGS -Q 30-34 L	REAU 35-37 AMIS SAMP	LE NUMBER 38-43	STREA	M NAME 44-57	I GEPPIP	KU	RELATIVE POINT 5
TRIBUTARY TO:						ADDITIONAL	LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE	TAKEN UP, R	t. 309 bri	ilgre	Star NC			·
FIELD ANALYSES		1		LAB	ANALYSES		
Type Sample	59-60	Chemical			Date Analyzed		
Source of Sample	61-62	Color	(00080)		Total Solids (00	500)	
Reason Sampled	63-64	Turb	(00070)		Susp. Solids (DO	530;	
Proportional Composite Uniform Sample	65		(00403)		Set solids (00	545)	
T em pora Spatial	66	Spec Cond	(00095)		Total Diss Solids (00	515)	
Aliquots	67-68	Alk	(00410)		00 ² N (00	615)	
Frow Estimated Measured	69	p ∺4	(00436)			620)	
Condition Above - 1 Normal - 2 Below - 3 No Flow - 4	Flood - 5	PH8 Cold	(70508) (00435)			610)	
Stream Flow-CFS (00061)	CARD (2)	T.O C	(00680)] Kjel-N (00	625)	
Stream Flow-MGD (50051)		C D.D.	(00340)		Hardness (00	900)	
Pipe Flow-MGD (50050)		S-Day BOD	(00310)		(3) (00	916)	
Gage Reading-Ft. (00065)			(00665) (00666)		Mg (00	927)	
Temp (C) (00010)		Ai-Tot ug/l	(01105)		1 504 (00	945)	
pH (00400)		Cd-Tot ug/)	(01027)			940)	
D.O (00300) CI (50060)		Cr-Tot ug/l	(01034)			951)	
Hal Br (71871)		Cu-Tot ug/i	(01042)			260)	
Spec Cond (00094)		Fe-Tot ug/l	(01045)		Phenois Dr (46	002)	
Appearance (46001)		Mn-Tot ug/l	(01055)		Ug/l Ds (32 Cyanide (00	730)	
		Ni-Tot ug/l	(01067)				
How Shipped US (H Cont	Date 6 4 98	Pb-Tot ug/l	(01051)				
Received by		Zn-Tot ug/l	(01092)] (]		
Condition of Seal					J [(, 	

Fixed Samples	COMMONWEALTH OF PENNSYLVANIA	LAB Number
6/95	BUREAU OF LABORATORIES	Date Received
Total Metals (wHW)3	WATER OR WASTE QUALITY REPORT	
	ALL CHEMICAL ANALYSES EXPRESSED IN MG/L UNLESS OTHERWISE SPECIFIED	
ALSTOPERV PETU	CASE SURVEY	C260
COUNTY MUNICIPALITY	PROGRAM COLL NAME	TYPE TR STD ANALYSIS
huzerne Bugarlos	TUP I VE KUPSKY	
CARD (3) ID CODE (ALL CARDS) 4-16	EATITUDE 4-10 UDNGITUDE 11-18	DATE 19-24 TIME 25-8 KIND 29
		AL 310 918 111 310
USGS-0 30-34 BUREAU 35-37 AMIS	AMPLE NUMBER 38-43	RELATIVE POINT 58
1 1 7 7	771010131110 NIFISICOPE	LICIKI RIKI.
FULL DESCRIPTION WHERE SAMPLE TAKEN		
5百	NC4 - up ht. NESuprik CK	
FIELD ANALYSES		INALYSES / /
Type Sample 59-60	Chemical	Date Analyzed
		F
Source of Sample 61-62	Color (00080)	Total Solids (00500)
Reason Sampled 63-64	2 Turb (00070)	Susp Solids (00530)
Proportional Composite Uniform 65	(00403)	Set solids (00545)
Sample		
Tempora 66 Spatial :	(00095)	Total Diss Solids (00515)
Aliquots 67-68	(00410)	NO ₂ N (00615)
Fiow Estimated		
Measured 69	pH4 (00436)	(NO3N) (00620)
Condition Above - 1 Normal - 2 Flood - 5 Below - 3 No Flow - 4 80	(70508)	NH3N (00610)
Stream Flow-CFS (00061)	T.O.C. (00680)	Kjel-N (00625)
Stream Flow-MGD (50051)	C.O D. (00340)	Hardness (00900)
Pipe Flow-MGD (50050)	5-Day BOD (00310)	
		(00916) (00916)
		Mg (00927)
Temp (C) (00010)	Al-Tot ug/1 (01105)	504 (00945)
рН (00400)		
00300)	(d-Tot ug/) (01027)	(00940)
CI (50060)	Cr-Tot ug/i (01034)	F (00951)
Hal Br (71871)		
Sper Cond (0094)		
	Fe-Tot ug/1 (01045)	ug/l Ds (32730)
Order (01330)	Mn-Tot ug/l (01055)	Cyanide (00720)
CUSTODY LOG	Ni-Tot ug/l (01067)	
How Shipped USCARD Date 6/9/	Pb-Tat ug/l (01051)	
Received by		
Condition of Seal	2n-Tot ug/l (01092)	

Fixed Samples 1500-FM-LAB0013	COMMONWE DEPARTMENT OF I BUREAU	ALTH OF PENNSYLVANIA ENVIRONMENTAL PROTECTION J OF LABORATORIES	LAB Number	
Elat Metals (Hulez	ALL CHEMICAL MG/L UNLES	ASTE QUALITY REPORT ANALYSES EXPRESSED IN S OTHERWISE SPECIFIED		
ESTABLISHMENT NESCOPELK (VELL	CASE SUR VO		; <u></u>	COLL NUMBER
COUNTY MUNICIPA	AUTY PROGRAM	COLL NAME Kupaking	TYPE TR	STD ANALYSIS
CARD (3) ID CODE (ALL CARDS) A Crity Mun T Est	4-16 LATITU t Case Fac	DE 4-10 LONGITUDE 11-18	DATE 19-24 TIME 25- M D Y Hr	8 KIND 29 Min
2 USGS -Q 30-34 BUREAU 35-3	7 AMIS SAMPLE NUMBER 38-43	STREAM NAME 44-57	06367810	C /
TRIBUTARY TO:	1202603	ORWIEISICIOITI	ECK CKI	L LAB ANALYSES
FULL DESCRIPTION WHERE SAMPLE TAKEN	to NC3 - down	St. Johns STP		
FIELD ANALYSES Type Sample 59-	60 Chemical		Date Analyzed	
Source of Sample 61-	62 () (Color	(08000)	Total Solids (00500)	
Reason Sampled 63.	54 C C Turb	(00070)	Susp. Solids (00530)	
Proportional Composite Uniform Sample	65 D	(00403)	Set solids (00545)	
Temporal Spatial	66 Spec Cond	(00095)	Total Diss Solids (00515)	
Aliquots 67-1	68 (Tk	(00410)	NO2N (60615)	
Flow Estimated Measured	69 pH4	(00436)	(NO ₃ N) (00620)	
Below - 3 No Flow - 4	Cold	(70508)	(00610)	
Stream Flow-CFS (00061)	T.O C.	(00680)	Kjel-N (00625)	
Stream Flow-MGD (50051)	c.o.ə.	(00340)	hardness (00900)	
Pipe Flow-MGD (50050)	S-Day BOD T X	(00310)	(00916)	
Gage Reading-Ft: (00065) Temp (C) (00010)		(00666)	Mg) (00927)	
рн (00400)	Al-Tot ug/l	(01105)	(00945)	
D D. (00300)	Cd-Tot ug/l	(01027)	(00940)	
CI (50060) Hal Br (71871)	Cr.Forugat	(01034)	F (00951)	
Spec Cond (00094)	Cu-Tot ug/l	(01042)	MBA5 (38260)	
Appearance (46001)	Fe-Tot ug/I	(01045)	ug/l Ds (32730)	
Odor (01330)	Mn ^s Tot ug/	(01055)	Cyanide (00720)	
CUSTODY LOG How Shipped <u>VSCHCCO</u> Date	6/30/90	(01067)		
Legal Seal No Received by	Pb-Tot ug/l			
Condition of Seal	(Zn-Tot ug/l	(01092)		

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

	LABORATORY REPORT	RECEIVED	7/02/98
FOR	SAMPLE NUMBER H9834376	REPORTED	7/13/98

COLLECTOR	E. KUPSKY WQM2	SAMPLING DATE 7/01/98
COLLECTOR NO.	0260317	SAMPLING TIME 9:30
ESTABLISHMENT	LITTLE NESCOPECK	STANDARD ANAL 000
CASE NAME		TYPE CODE
FACILITY		WQN
ID CODE		STREAM CODE
		RIVER MILE IND

TEST	DESCRIPTION		RESULT	CONC	VERIFY	BY	VERIFY DATE
00095	SPEC CONDUCT		675.0000		G	SLH	7/06/98
00310	BOD 5 DAY	<	0.3000	MG/L	G	WET	7/07/98
00403	PH LAB		4.6000		G	HWS	7/02/98
00410	T ALK CACO3		1.6000	MG/L	G	HWS	7/02/98
00515	RES DISS/105		630.0000	MG/L	G	I CB	7/08/98
00610A	NH3-N		0.1100	MG/L	G	HEM	7/02/98
00615A	NO2-N	<	0.0100	MG/L	G	FFV	7/02/98
00620A	N03-N		0.4300	MG/L	G	FFV	7/02/98
00900A	T HARD CACO3		103.0000	MG/L	G	RVT	7/10/98
00916A	CA TOTAL		32.0000	MG/L	G	MRO	7/06/98
00927A	MG		47.1000	MG/L	G	MRO	7/06/98
00940A	CL		22.0000	MG/L	G	HEM	7/02/98
00945A	SO4 TOTAL		197.0000	MG/L	G	RVT	7/02/98
01027A	CD	<	10.0000	UG/L	G	MRO	7/06/98
01034A	CR TOT	<	50.0000	UG/L	G	MRO	7/06/98
01042A	CU TOT		31.0000	UG/L	G	MRO	7/06/98
01045A	FE		1820.0000	UG/L	G	MRO	7/06/98
01051H	PB		3.0000	UG/L	G	DES	7/02/98
01055A	MN		3110.0000	UG/L	G	MRO	7/06/98
01067A	NI		133.0000	UG/L	G	MRO	7/06/98
01092A	ZN,TOT UG/L		466.0000	UG/L	G	MRO	7/06/98
01105A	AL		7000.0000	UG/L	G	MRO	7/06/98
70508	T ACIDITY HT		52.0000	MG/L	G	MRD	7/07/98

TOTAL NUMBER OF TESTS FOR THIS SAMPLE 23

Sau in

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Black - 300 Rate The Alt

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77 93

10-502 REV. 2/9			DESK MEM	OR	ANDUM		
BLACK	$\leq c$	CEE	K su	re'	eg		
D (NAME & ADDRESS)		¹	FROM (NAME & ADDRES	SS)	9-		
ITE SENT 6-16-4	E		DATE NEEDED				
PLEASE CALL [.]	/	APPROVAL	<u> </u>		SEE ME		
RETURNED YOUR CALL		AS REQUESTED			COMMENT		
C INFORMATION & FILE	F	PREPARE REPLY	/ REPORT		NOTE AND RETURN		
NECESSARY ACTION		SIGNATURE					
CEIVED BY	DATE			TIME	I	·	
ROUTE	INITIA	L DATE	AC			INITIAL	DATE
		-				·····	
ESSAGE							

Avere is a first of the USED & a part of the TOPO MAP that was in with the NODES renewal application. Schall knows where they are !

CC: pate



Sewerage Permit No. PA-0026921 Page 2e of 14

Point Source	Name		Location	Receiving Stream
009	Diversion Chamber N	10.9	19th Street & Wilbur Court City of Hazleton Lat. 40°58'06" Long. 75°59'18"	Black Creek
010	Diversion Chamber M	No. 12	Terminus of Black Creek Interceptor Hazle Township Lat. 40°58'31" Long. 75°58'32"	Black Creek
011	Diversion Chamber 1	No. 1	Poplar Street City of Hazleton Lat. 40°57'19" Long. 75°58'06"	Hazle Creek
012	Diversion Chamber I	No. 2	Poplar Street City of Hazleton Lat. 40°57'17" Long. 75°58'07"	Hazle Creek
013	Diversion Chamber	No. 3A	Poplar Street City of Hazleton Lat. 40°57'15" Long. 75°58'08"	Hazle Creek
014	Diversion Chamber	No. 3B	Poplar Street City of Hazleton Lat. 40°57'14" Long. 75°58'05"	Hazle Creek
- 015	Diversion Chamber I	No. 5	Locust Street City of Hazleton Lat. 40°57'03" Long. 75°58'59"	Cranberry Creek
016	Diversion Chamber I	No. 4	Mill Street City of Hazleton Lat. 40°57'13" Long. 75°57'56"	Hazle Creek

Sewerage Permit No. PA-0026921 Page 2e of 14

Point Source	Name		Location	Receiving Stream
009	Diversion Chamber M	No. 9	19th Street & Wilbur Court City of Hazleton Lat. 40°58'06" Long. 75°59'18"	Black Creek
010	Diversion Chamber M	No. 12	Terminus of Black Creek Interceptor Hazle Township Lat. 40°58'31" Long. 75°58'32"	Black Creek
011	Diversion Chamber H	No. 1	Poplar Street City of Hazleton Lat. 40°57'19" Long. 75°58'06"	Hazle Creek
012	Diversion Chamber	No. 2	Poplar Street City of Hazleton Lat. 40°57'17" Long. 75°58'07"	Hazle Creek
013	Diversion Chamber	No. 3A	Poplar Street City of Hazleton Lat. 40°57'15" Long. 75°58'08"	Hazle Creek
014	Diversion Chamber	No. 3B	Poplar Street City of Hazleton Lat. 40°57'14" Long. 75°58'05"	Hazle Creek
015	Diversion Chamber 1	No. 5	Locust Street City of Hazleton Lat. 40°57'03" Long. 75°58'59"	Cranberry Creek
016	Diversion Chamber	No. 4	Mill Street City of Hazleton Lat. 40°57'13" Long. 75°57'56"	Hazle Creek



NAMEButler_Township ADORESS_P.OBox 150 Drums, PA1822	MEButler_Township_Municipal_Authority Deness_P.OBox 150 Drums, PA18222			DISCHARGE MONITORING R (2 10) PA-0046396 PERMIT NUMBER			CITER (15/01.5) CITER			9104ed. 2040-0004 ' expires 9-30-85
				MONIT	ORING PERIC	ac				
FACILITY Drums SIP	Luzerne	County	FROM GC	MOD	AY TO YEAR	MO DAY				
LOCATION_OULTCL_IVERTAILTE	T PACALUT		- (20-21)	(22-23) (24	$\frac{1}{(26\ 27)}$	28-29) (JU-JI) NO	OTE: Read instruct	ions before c	ompleting th	his form.
PARAMETER		(1 Card Only) QU (46-53)	ANTITY OR LOADIN (54-61)	G	(4 Card Only) (18-45)	QUALITY OR CONC (46-51)	CENTRATION (54-62)		NO. FREQUE	NCY SAMPLE
(32-37)		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	דואט	52-63) (63-61	ils
	SAMPLE	NT 1413	. 680		****	****	****		31/3	
Flow (MGD)	PERMIT REQUIREME	: Report 3D day-avg	Report Daily Max	MGD	****	****	· · · · · · · · · · · · · · · · · · ·	***	Cont	Rec. Inst.
	SAMPLE MEASUREME	NT 75	. 83	Lbs/		23	21		5131	1
CBOD5	PERMIT REQUIREME	, 84 30 day`avg	I25 7 day avg	Day	****	-255 -35 30 day tavg	7 day avg	MG/L	1/WK	· 8-Hr Comp.
	SAMPLE MEASUREME	NT 53	87	Lbs/		20	15		513	1
Total Suspended Solids	PERMIT REQUIREMEN	100 ** 30 day avg	,150 7 day avg	Day	****	30 30°day avg ~	7-day avg	MG/L	1/WK	8-Hr Comp.
1	SAMPLE MEASUREME	NT ****	****		6.7	****	7.1		31/3	1
рн	PERMIT REQUIREME	NT ****	****	***	6.0 Minimum	****	Maximum	SU	Dail	y Grab
	SAMPLE MEASUREME	NT								
	PERMIT REQUIREME	T				E	1 23.4			
	SAMPLE MEASUREME	NT								
	PERMIT	NT						· · ·		
	SAMPLE MEASUREMI	זא:								
	PERMIT REQUIREME	NT						·		
NAME/TITLE PRINCIPAL EXECUTIV	E OFFICER	CERTIFY UNDER PENALTY	OF LAW THAT I HAVE	PERSONALLY ED HEREIN A	EXAMINED NO BASED			TELEPHONE		DATE
Fred. Smith.	0 15 11	N MY INQUIRE OF THOSE STAINING THE INFORMATIC TRUE ACCURATE AND C FICANT PENALTIES FOR NE POSSIBILITY OF FINE A JUSC \$ 1319 <i>(Proglima m</i>)	INDIVIDIJALS IMMEDIAT DN I BELIEVE THE SL OMPLETE I AM AWARE SUBMITTING FALSE IN NO IMPRISONMENT SEE Ider from statutis may in der from statutis may in der from statutis may in	ELY RESPONS JOMITTED INF THAT THERE FORMATION 10 USC 1 Include fines up	SIBLE FOR OPMATION ARE SIG INCLUDING 1001 AND IN SININA	URE OF PRINCIPAL	II EXECUTIVE 7/7	188.450	4 98	z 5
TYPED OR PRINTED		id in metimiem insprisionminist	W INTERVER D RUISED + BAR 3		OFFI	CER OR AUTHORIZ	ED AGENT COL	E NUMBE	R YEAR	MO DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all utiachments here)

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Butler Township Ess_P.O. Box 150 Urums, PA_18222	Butler Iownship Municipal Authority ss_P.O. Box 150 Urums, PA_18222			DISCHARGE MONITORING REPORT (DAIR) (2-10) PA-0046396 PERMIT NUMBER 015CHARGE NUMBER				Γα. ΟΛ Αρ			sem Approvød. IMB No. 2040-0004 pprovøl øxpirøs 9-30-85		
EACILITY_URUMS_SIP	Luzecne		FROM YEAF	MONIT MO 0 1 (22-21) (24	ORING PERI AY TO YEAR 75 (26.27) (26.27)	$ \begin{array}{c c} $	DTE: Read instruct	líons belore	comp	leting this	form.		
PARAMETER (12.17)	\searrow	(3 Card Only) Q (46-53)	UANTITY OR LOADI	NG	(1 Card Only) (18-15)	QUALITY OR CONC (46-53)	ENTRATION (54-61)		NO. EX	FREQUENCI OF ANALYSIS	SAMPLE TYPE		
(52-57)	<u> </u>	AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS	(62-63)	(64-68)	(69-70)		
	SAMPLE MEASUREM	ENT ****	****		****		****						
Coliform, Fecal (May 1 to Sept. 30)	PERMIT	ENT ****	****	***	****	200 30 day geo ']#/ 1,00 m1		1/WK	Grab		
	SAMPLE MEASUREM	ENT ****	****		****	7	****			5/31			
Coliform, Fecal (Oct. 1 to Apr. 30)	PERMIT REQUIREM	ENT ****	****	***	****	2,000. 30 day geo	****	#/ 100 ml		1/WK	Grab		
	SAMPLE MEASUREM	ENT ****	****		0,4	Q.5 Monitor &	****		1	31/31			
Chlorine Residual (1st Month thru 24th M	PERMIT	×***	****	***	****	Report		MG/L		Daily	Grab		
<u>_</u>	SAMPLE	ENT ****	****				****		+				
Chlorine Residual (25th Month thru expir	PERMIT	ENT ****	****	***	****	1.0 30 day ayg		MG/L		Daily	Grab		
	SAMPLE	ENT ****	****	1	2.5	****	****		Ì	5/31			
Uxvaen, Dissolved	PERMIT	INT ****	****	****	5.0 Inst Mn_	****	****	MG/L		1/WK	Grab		
	SAMPLE	ENT							1				
	PERMIT	INT	~		· · ·								
	SAMPLE MEASUREM	ENT							<u> </u>				
	PERMIT	INT											
NAME/TITLE PRINCIPAL EXECUTIVE	OFFICER	CERTIFY UNDER PENALTY	OF LAW THAT I HAVE	PERSONALLY	EXAMINED		L	TELEPHONE	1	D A	. Τ ε		
FRED Smith TYPED OR PRINTED		IN MY INQUIRY OF THOS IBTAINING THE INFORMAT IFICANT RENALTIES FOR HE POSSIBILITY OF FIRE JU SC 1 13 (Provident JU SC 1 13 (Provident Id ut matingan) imprimement	E INDIVIDIJALS IMMEDIA IDN I BELIEVE THE S COMPLETE I AM ANARE SUBMITTING FALSE II AND IMPRISONMENT SEI Undre There istellers and S I of boggers & munths and S	TELY RESPONS SUBMITTED INFI THAT THERE NFORMATION I INFINITE LINES UP	IBLE FOR DHMATION ARE SIG NCLUDING NCLUDING NGU AND NJ STILING OFFI	URE OF PRINCIPAL	EXECUTIVE ARE	7884	SGY IER	98 YEAR N	2 5		

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all utilichments here)

MONTHLY FACILITY I	REPORT Date Prepared <u>Feb469</u>
acility NameButler Township Authority	PWSID NO.
cillty Address_PO Box 150, St. Johns. PA 18247	NPDES Permit No. 0046396
IncipalityButler Township	Incinerator Permit Number(s) N/A
unty Luzerne	Telephone Number (717) 788-4564
nature (Print Name)	
laChief Operator	
Total Hours Incinerator Operated	N/A
Type of Fuel	N/A
Total Fuel Usage	N/A
Supplier of Fuel	N/A
Estimated Amount of Sludge Incinerated	N/A
(a) How much (Lons) N/A (b) Where N/A (c) When (Last Occurrence) N/A (d) Haular N/A (a) Receipts: Yes No X Other Wastes (Grits, Barscreening, etc.) (a) How Much (Tons) //2 /ox; (b) Where Drums Plant (c) When (Last Occurrence) Weekly (d) Hauler Cunfer Trucking and Excavating (c) Receipts: Yes No X Septic Tank Waste Accepted: Yes No X If yes: (a) N/A (b) Hauler(s) N/A N/A N/A	(a) How Much (Lons) <u>"2 fev ony</u> (b) Where (c) When (Last Occurrence) <u>(53</u> (d) Hauler plant personnel (e) Receipts: Yes No X Percent (%) Hauled N/A
Analysis Performed to ensuire tank waste contains n	o industrial waste
(a) Yes No X We have no industrial way (b) If yes, frequency	ate into the system
Additional Comments:	

PERMITTEE NAME/ADDRESS (Includ Peculity Name/Location II digerent) NAME Pennsylvania I ADDRESS Eckley Miner S C/O Mr. Vance R D #2 Roy	listorical & s Village Packard	Museum Com	NATIONAL POLLU DISCHAI	TANT DISCI RGE MON (2-14) 0060445 IT NUMBER	HARGE ELIMINATIO	N SYSTEM (NPUES) RT (DAIR) (17-19) 001 HARGE NUMBER	MAR 3 1	1998 S	Forr OM App	n Approv 8 No. 20 rovel exp	ied. 40-0004 iires 9-30-85	ľ
ACILITY Weatherly, PA LOCATION Weatherly, Luz	18255 Terne County			MONIT MO D 02 0 (22-23) (24	ORING PERIC AY TO YEAR 1 TO 98 -23) (26-27) (D MO DAY 28 31 28-39 (10-11) N	OTE: Read Instructi	ions before c	ompietir	ig this f	orm.	1
PARAMETER	$\overline{\mathbf{N}}$	(3 Card Only) QU. (46-53)	ANTITY OR LOADIN (34-41)	G	(4 Card Only) (18-45)	QUALITY OR CONT (46-53)	CENTRATION (SI-61)	1	NO. PRE	QUENCY	SAMPLE	
(32-37)		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	HAXIMUM	UNIT	62-63) (1	ALY518 54-683	(69-70)	
	SAMPLE MEASUREMENT	.007	0.014		****	****	****		Da	ily	Weir	
Flow	PERMIT REQUIREMENT	0.02	Report Vuaily Max	MGD					We	ekly_	Pump Ra or Weir	
	SAMPLE MEASUREMENT	.51		Lbs/		8.7		•	1/1	Ло	Comp 8	
CBOD5	PERMIT	4 2 30 day avg		Day		an iby iv		MG/L	i in	onth-	8 Hr. Comp.	
	SAMPLE MEASUREMENT	1,28	•	Lbs/		22.0			1/1	Ло	Comp 8	
Solids - Total Suspended	PERMIT	5.0 34 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	AN A A	Day	NA.	107 day av		MG/L	H K	7 ónth	8 Hr. Comp.	
	SAMPLE MEASUREMENT	****	****		****		****			-4-46		
Coliform, Fecal (Ma _y 1 to Sept. 30)	PERMIT			***		30 day de di		#/100 ml.	С. М	/ onth	Grab	
	SAMPLE MEASUREMENT	****	****		****	16,600	₩ 11 ★★★★		1/1	Мо	Grab	
Coliform, Fecal (Oct. 1 to Apr. 30)	PERMIT			***		304 day-geg		#/100 ml.	in the	/ onth	Grab	
	SAMPLE HEASUREMENT	****	****		6,0	6.0	6.0		Da	úly	Grab	
рН	PERMIT REQUIREMENT	****		***	Minimum'		Max1mum. ³	SU	a sh	/ eek	Grab	
	SAMPLE MEASUREMENT	****	****		0.0	.0.03	0.5		Da	uly	Grab	
Chlorine Residual	PERMIT REQUIREMENT	****		***	PN A A	NIA		MG/L	1 	/ eek	Grab	
NAME/TITLE PRINCIPAL EXECUTIVE	OFFICER I CENTI	TY UNDER PENALTY O	W LAW THAT I MAVE P	ERSONALLY	EXAMINED	101/-		TELEPHONE		0 4	TE	
David Dubick/Representative	ON MY OBTANN IS TRUI NIFICAN THE PO 33 U S C	MOURY OF THOSE NG THE PUPORMATION E ACCURATE AND CO T PENALTIES FOR S SSIBILITY OF FINE ANN 11318 IP-nelling and	MOVIOUALS IMMEDIATE 1 BELIEVE THE SU MPLETE I AM AWARE UDMITTING FALSE INF D INPRISONMENT SEE 17 IAPAP HOMENTA	LY RESPONSI BMITTED INFO THAT THERE ORMATION IN 18 USC 11 rlude (were an	IBLE FOR DANATION ARE SIG VCLUDING ODI AND SIGNATI	URE OF PRINCIPAL	MAR PE EXECUTIVE 717	636-112	2 9	8 0	3 27	
TYPED OR PRINTED	VIOLATIONS IR	nazinium imprimumini id Icernce all attachment	between & munths and & s		OFFIC	ER OR AUTHORIZ	ED AGENT ARE	NUMBI	R Y	AR	O DAY	

CHLORINATION OF ANY VIOLATIONS IRCIGNATE BIL VINCHMENIS ASIE) DAVID DUBICK REPLACING.

MONTHLY FACILITY REPORT Date Prepared0327998 acility Name Eckley WTP PWS ID NO	PA DEPARTMENT OF ENVI	RONMENTAL RESOURCES	Month February 199	98
cility Name Eckley WTP PWS 10 NO. hcility Address RR # 2 Box 236 NPDES Permit No. PA0060445 inicipality Weatheny, PA 18255 Incinerator Permit Number (3) person Completing Form David J. Kawitski. PE Telephone Number 717-636-1122 Person Completing Form David J. Kawitski. PE Signature Signature	MONTHLY FACIL	ITY REPORT	Date Prepared _	03/27/98
Address RR #2 Box 236 NPDES Permit No. PA0060445 inicipality Weatherty.PA 18255 Incinerator Permit Number(s) person Completing Form David J. Kavitski, PE Signature	cility Name Eckley WTP	PWS ID NO.		
Incinerator Permit Number(s)	Icility Address RR # 2 Box 236	NPDES Permit I	10. PA0060445	
ounty Luzerne Telephone Number 217-636-1122 Person Completing Form David J. Kavitski, PE Signature	unicipality Weatherly, PA 18255	Incinerator Pe	ermit Number(s)	
Person Completing Form David J. Kavitski, PE Signature	ounty Luzeme	Telephone Numb	717-636-1122	
Title Contractor 1. Total Hours Incinerator Operated N/A 2. Type of Fuel N/A 3. Total Fuel Usage N/A 4. Supplier of Fuel N/A 5. Estimated Amount of Sludge Incinerated N/A 6. Incinerator Ash Disposal N/A 7. Sludge Disposal None (a) How Much (Tons) N/A (b) Where (c) When (Last Occurrence) (d) Hauler (e) Receipts: Yes 8. Other Wastes (Grits, Barscreening, etc.) (a) How Much (Tons) None (b) Where (c) When (Last Occurrence) (d) Hauler (e) Receipts: Yes	Person Completing Form David J. Kavitski, PE Signature and Kautski, PE	(Print Name)		
1. Total Hours Incinerator Operated N/A 2. Type of Fuel N/A 3. Total Fuel Usage N/A 4. Supplier of Fuel N/A 5. Estimated Amount of Sludge Incinerated N/A 6. Incinerator Ash Disposal N/A 7. Sludge Disposal None (a) How Much (Tons) N/A (b) Khere (c) When (Last Occurrence) (d) Hauler (e) Receipts: Yes	Title Contractor			
2. Type of Fuel N/A 3. Total Fuel Usage N/A 4. Supplier of Fuel N/A 5. Estimated Amount of Sludge Incinerated N/A 6. Incinerator Ash Disposal N/A 7. Sludge Disposal None (a) How Much (Tons) N/A (b) Where (c) When (Last Occurrence) (d) Hauler (e) Receipts: Yes None (b) Where (c) When (Last Occurrence) (d) Hauler (e) Receipts: Yes 8. Other Wastes (Grits, Barscreening, etc.) (a) How Much (Tons) None (c) When (Last Occurrence) (d) Hauler (e) Receipts: Yes None (b) Where (c) When (Last Occurrence) (d) Hauler (e) Receipts: Yes No 9. Septic Tank Waste Accepted: Yes No (b) Hauler(S) (c) When (Ist Occurrence) (d) Hauler (e) Receipts: Yes No 9. Septic Tank Waste Accepted: Yes No (b) Hauler(S) Percent (X) Hauled (b) Hauler(S	'1. Total Hours Incinerator Operated \underline{N}	I/A		·····
3. Total Fuel Usage N/A 4. Supplier of Fuel N/A 5. Estimated Amount of Sludge Incinerated N/A 6. Incinerator Ash Disposal N/A 7. Sludge Disposal None (a) How Much (Tons) N/A (a) How Much (Tons)	2. Type of Fuel <u>N/A</u>	·····		
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6. Incinerator Ash Disposal N/A 7. Sludge Disposal None (a) How Much (Tons) N/A (a) How Much (Tons)	5. Estimated Amount of Sludge Incinera	ated N/A		- <u></u>
(a) How Nuch (Tons) N/A (a) How Much (Tons)	6. Incinerator Ash Disposal <u>N/A</u>	7. Sludge	Disposal None	
 8. Other Wastes (Grits, Barscreening, etc.) (a) How Much (Tons) None (b) Where (c) When (Last Occurrence)	<pre>(a) How Much (Tons) N/A (b) Where (c) When (Last Occurrence) (d) Hauler (e) Receipts: Yes No</pre>	(a) Hov (b) Whe (c) Whe (c) Whe (d) Hau (e) Rec	Which (Tons) ere en (Last Occurrence iler iler ceipts: Yes	:e) No
<pre>(a) How Much (Tons) None (b) Where (c) When (Last Occurrence)</pre>	8. Other Wastes (Grits, Barscreening,	etc.)		
9. Septic Tank Waste Accepted: Yes No X 10. If yes: (a) Volume N/A (b) Hauler(s) Percent (%) Hauled 11. Analysis Performed to ensure tank waste contains no industrial waste (a) Yes No (b) If yes, frequency 12. Additional Comments:	(a) How Much (Tons) <u>None</u> (b) Where (c) When (Last Occurrence) (d) Hauler (e) Receipts: Yes No			
10. If yes: (a) Volume N/A (b) Hauler(s) Percent (%) Hauled 11. Analysis Performed to ensure tank waste contains no industrial waste (a) Yes No 12. Additional Comments:	9. Septic Tank Waste Accepted: Yes	No <u>x</u>		
<pre>11. Analysis Performed to ensure tank waste contains no industrial waste (a) Yes No (b) If yes, frequency 12. Additional Comments:</pre>	10. If yes: (a) Volume N/A (b) Hauler(s)	_ Percent (%) Hauled_		
11. Analysis Performed to ensure tank waste contains no industrial waste (a) Yes	·			
12. Additional Comments:	<pre>11.' Analysis Performed to ensure tank v (a) Yes No (b) If yes, frequency</pre>	waste contains no indu	strial waste	
•	12. Additional Comments:			
	·		•	

PERMI <u>TTEE NAM</u> E/ADDRESS <i>(Include Facility M</i> NAME GREATER たくたくてし ADDRESS P. G. 30% 651	ama/Location if Different) 1.3 57 P		NATIONAL POL DISCH	LUTANT DISCH IARGE MON (2-16) 2-15-1-2-1	NARGE ELIMINATION SYS	тем (NPDES) (DMR) (17-19) .) (А ()	APR 10 UIFALL 00 UUBR 02)	T 1998	Form / OMB N Approv	Approved. Io. 2040-00 vel.expires	004 05-31-98
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OUN, CARBUJACEOUS US DAY, 200	SAMPLE MEASUREMENT	1.766	1,845	(26)	非常非非非 实。 ————————————————————————————————————	21		(19)		34	6-14
GOUGE & D D MISINFECT. 2KCS CAPL		1850 HO AVG	2969 XX V8 &V	135/D	*****	25.0 MO AVG	40.0 XX = 5 A	V SGZL		SALLY	COMEL
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NAME/TITLE PRINCIPAL EXECUTIVE	OFFICER	IFY UNDER PENALTY OF	LAW THAT I HAVE PERSO RMATION SUBMITTED H	DNALLY EXAMI	NED AND ASED ON BLE FOR	p (*)		TELEPHO	NE	DA	ATE
Michael Kelcha TYPED OR PRINTED	Cont TRUE, SIGNIF L. THE P. U.S.C. and or	NING THE INFORMATION ACCURATE AND COL ICANT PENALTIES FOR OSSIBILITY OF FINE AND § 1319. (Penalties under meximum imprisonment o	A BELIEVE THE SUBMI VPLETE. I AM AWA SUBMITTING FALSE INF IMPRISONMENT. SEE 18 In these statutes may inch I between 6 months and 6	TTED INFORM RE THAT TH ORMATION, IN U.S.C. \$ 1001 U.S.C. \$ 1001 U.S.C. \$ 1001 U.S.C. \$ 1001	ATION IS ERE ASE CLUDING I AND 33 \$10,000 OFF	TURE OF PRINCIPAL	EXECUTIVE AL D AGENT C	REA NUMB	<u>~!~5/</u> ER	95- / YEAR N	AD DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

 Flate
 Under the second description

 EPA Form 3320-1 (08-95)
 Previous editions may be used.
 IREPLACES EPA FORM T-40 WHICH MAY NOT BE USED.)
 Statestic
 PAGE

GREATER HAZLETON JOINT SEWER AUTHORITY OFFICES VALMONT INDUSTRIAL PARK P.O. BOX 651 HAZLETON, PA. 18201

PHONE 717-454-0851 Fax 717-454-1640

Department of Environmental Protection Regional Water Quality Department 2 Public Square Wilkes-Barre, PA 18711-0790

1998

Listed below is our monthly report of bypassing at the Sewage Treatment Plant of the Greater Hazleton Joint Sewer Authority:

3,000,000	Gallons
2,041,666	Gallons
2,333,324	Gallons
625,000	Gallons
187,498	Gallons
885,412	Gallons
6,666,656	Gallons
2,499,990	Gallons
1,249,995	Gallons
249,996	Gallons
541,664	Gallons
1,666,666	Gallons
1,750,000	Gallons
666,664	Gallons
500,000	Gallons
	$\begin{array}{r} 3,000,000\\ 2,041,666\\ 2,333,324\\ 625,000\\ 187,498\\ 885,412\\ 6,666,656\\ 2,499,990\\ 1,249,995\\ 249,996\\ 541,664\\ 1,666,666\\ 1,750,000\\ 666,664\\ 500,000\\ \end{array}$

Respectfully submitted,

Month March

Michael Kelchak, Superintendent Greater Hazleton Joint Sewer Authority
	PA Department of Environm	ental Protection	Month/Year	March (1998)
	Monthly Facility R	eport	Date prepared	April 9, 1998
'itu Nama	Greater Hazietan Jaint Sawar Authorit	ty PWS 1D NO		
ity Addross	Jaycee & Oscar Thomas Drive AVID) NPDFS Permi	t.No PA002	6921
cinality	West Hazleton, PA 18201	Incinerator Pe	rmit No(s)	
	Lizerne	Talonhamo	717-454-0951	Į.
Раноот	Completing Form Chris Carrie	phone	Please Print No	une
Simot	re brie carsia			
Jignulu Title	Chief Onerstor			
1 Tota	al Hours Incinerator Operated NIA			
1. 1010 7 Tum	e of Fyel			
2. 1 ypx 2. Tot-	ıl Fuel Usage			
4 Sum	plier of Fuel			
5 Feri	mated Amount of Sludge Incinerated			
6 Inci	nerator Ash Disposal N/A	7. Shudoo D	isposal X	
(n)	How Much (Tons)	(n) How X	fuch (Tons) 368	01
(H) 1 (h) 1	Where	(h) Whom	? Alliance & Ka	vstone Landfill
(c) I	When (Last Occurrence)	(c) When	(Last Occurance) 2.7	11-98
(A)	Hauler	(d) Haula	7 Waste Reduct	ion & Recveline F.
(a) I (a) I	Receipts: Yes No	(4) Tiulle	ots: Yes ¥	NO
8 Ath	er Waste (Grits Rar screening etc.)		<u>A</u>	
(n)	How Much (Tons) 23.89			
(h)	Where Alliance Sanitary Landfill			
(r) I	When (Last Occurrence) 3-76-98			
(d))	Hauler Waste Reduction & Recycling	Snt.		
(0) 1	Receipts: Yes X No			
9. Seni	tic Tank Waste Accented: Yes	No		
10. If Y	ves			
(a) V	<i>'olume</i> 165,000 gallons			
(h) H	lauler Can Do	p	ercent (%) Hauled	54.000 galloge
H	lauler E'Z House	'	I' Y ALMATCH	25.000 gallon
H	lauler Luzerne			3.000 gallow
Fi Fi	(auler Rato-Rooter (Rerwick)	····		51.000 gallor
H H	lauler Roto-Rooter (Willow Rosen)			2:000 gallone
H H	Tauler Sal's Sentic			30.000 gallon
H H	Tauler			Eanon
L L	lauler			
л н	lauler	·····		
[]. Anal	lysis Performed to ensure tank waste conta	ins no industrial wasta		
(a) V	es No V Da	uler Manifest required		
(4) I (h) I	f ves, frequency	Argannest required		
101 1				
12 IL	annal Commente			

This Facility Report Is To Be Submitted With Monthly DEP Discharge Monitoring Report This Form Can Be Duplicated

GREATER HAZLETON JOINT SEWER AUTHORITY

MONTHLY REPORT OF COMBINED SEWER OVERFLOWS

MONTH OF November 19 97

Point Sot	Irce	Overflow
(NPDES	Location	(Million
serial nur	nber)	gallons)
002	Plant bypass	2.24
003	6 & Ridge, Hazle Twp.	5,03
004	Cranberry St., Hazle Twp.	1.35
005	22 & Harvey, W. Hazleton	5.03
008	Washington & Allen	3.09
008	Lincoln St.	0.58
009	19 & Wilbur	13.66
010	Black Creek	6.32
011	Poplar Sl.	4.70
012	Þoplar St.	7.93
013	Poplar St.	5.61
014	Poplar St.	0,06
015	Locust St.	2.13
016	Mill St.	8.96
TOTAL D	IVERTED FLOW (MG):	66.69

The ligures in this report are derived from calculations based on drainage area and rainfall data supplied by NOAA. They represent an approximation of diverted combined sewer flows and are not a labulation of measured overflows, except for Point Source 002, which is monitored and recorded.

Chris Carsia April 9, 1998

Signed

Date

Aporess Box 203K, Airpo Hazleton, PA 1	ses, Inc. rt Beltway 8201		013411A РА-(РЕЯМ	PGE MONII (276) 2032018 UT NUMBER		1 (12.19) (12.19) 001	1	ſ		(2418-20-204) Арргохаl ахрй) (4))4 18 8 9-30-85
FACILITY Hazle Township, LOCATION LUZEFNE County			EROM YEAR	MONITO	PRING PERIO Y 10 (f an) Y 10 (f an) Y 10 (f an)		01E: Read instruc	IAN 30	1998) Isting this to	
PARAMETER (12.17)		(16 ST) (16 ST) AVERAGE	ARTITY OR LOADI (SEAL) MAXUAUA	11-11-5	(1 Cord Only) (1948) NOTHINGT	AVENAGE	ENTRATION (5161) MAXIMUM	UNITS	NO EX	1111 (1111) (1111 (1111)) (1111) (111	SAMPLE TYPE
	SAMPLE MEARUREMENT	.008			***	****	****	-	$\left \right\rangle$	mab	
Flow (MGU)	PERMIT	.013	N.A.	MGD	***	* * * *	***	_	-62-	Weekly	Pump Ka or We
	SANFLE MEAGURENENT			Lbs/		· 18			\bigcirc	manth	
CBOD ⁵	PERMIT REQUIRTMENT	<u>N.A.</u>	N.A.	Day	N.A.	10.0	N.A.	MG/L		17 Month	Comp-
talide -	SAMPLE MEASUREMENT			Lbs/		49		_	0	month	
Total Suspended	PERMII REQUIREMENT	N.A.	N.A.	Day	N.A.	15.0,	N.A.	MG/L		17 Month	Comp-
Nitrogen-Ammunia	SAMPLE MEASURFMENT			Lbs/		·			0	month	
(May 1 to Oct. 31)	PERMIT REQUIREMENT	N.A.	0.90	Day	N.A.	4.0	8.0	MG/L		17 Month	Comp-
Nitrogen-Ammonia	SAMPLE MEASUREMENT			Lbs/		7,97		_			
(Nov. 1 to April 30)	PERMIT	<u>N.A.</u>	2.60	Day	N.A.	12.0	24.0	MG/L		17 Month	Comp-
Focal Coliform	SAMFI E MEASURFMENT	****	****	-		0					
(10/1 to 4/30)	PERMIT REQUIREMENT	****	****		N.A.	2000		#/ 100 ML		17 Month	Grab
Encol Coliform	SAMPLE MEASUREMENT	****	****	-				µ/			
(5/1 to 9/30)	PERMIT REQUIREMENT	***	****	-	N.A.	200		#7 100 ml		17 Month	Grab
Sin Lagon, Presic TYPED OR PRINTED COMMENT AND EXPLANATION OF AN	Jent Line A	AM TAMILIAR WITH TH V INDURY OF THOS WING THE INCOMAT NE ACCUBATE AND A VISSION ILV OF THE VISSION OF THE ACCUMULAN	E INFORMATION SUBDIT E INFORMATION SUBDIT E INFORMEDIA ON I RELIFYE THE S "COMPLETE I AM AWARE SUBDITING FALSE IN AND IMPROSONALISE IN AND IMPROSONALISE IN A SUBDITION IN A SUBDITION IN INFORMATION IN A SUBDITION IN INFORMATION IN A SUBDITION IN INFORMATION IN A SUBDITION IN INFORMATION IN A SUBDITION IN A SUBDITION IN INFORMATION IN A SUBDITION IN A SUBDITION IN INFORMATION IN A SUBDITION IN	TED HERFIN AND TED HERFIN AND ITENT TED HIGH THAT THER THAT THER THAT THER THAT THER THAT THER THAT THE THAT THAT THE THAT THAT THAT THAT THAT THAT THAT THAT	D PASED ALF FOR INMATION APE SIZ, IT LIMPIC TOTAL STOTAT	URE OF FRINCIPAL	E EXECUTIVE	1 455 -F	HD Er	YEAR M	

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	Lagana Enterpris <u>boness</u> Box 203K, Airpor Hazleton, PA 18	es, Inc. t Beltway 201		PÅ-003	10.1. (1010) 1. 1/ 2018- міт. нумпеа		(1*19) (1*19)				: 518-ала - 04а Апрго уві ехр а	U (XXI4 103 9-30-85
	ACILITY Hazle Township, OCATION Luzerne County			170% (18AT	MONIT	ORING PERIC	MO 1000 12 31 12 131 N	OTE: Read instruct	ons before	compl	lating this f	orm.
	PARAMETER (12-17)		(16 14) (16 14)	(9.61)	1	(1 (OUALITY OR CON (46.51)	(34 61)		NO EX	111 (114 46 4 01 444 4 5 15	SAMPLE TYPE
+		SAMPLE MEASUREMENT	***					MAX1MUM				(69.201
	DH	PERMII REQUIREMENT	****	****	-	6.0 Minimum	N.A.	9.0 Maximum	รบ		Weekly	Grab
		SAMPLE MEABUREMENT	***	***		10.33	1.			0	Karnet	
	Oxygen, Dissolved	PERMIT REQUIREMENT	***	***	***	6.0	N.A.	N.A.	MG/L		1/ Month	Grab
		SAMPLE MEAGUREMENT	***	***	_							
	Total Residual Chlorin (1st:Month thru 24th u	C PERMIT	****	***			Monitor and Report	Monitor and Repor			Weekly	Grab
		SAMPLE MEASUREMENT	****	****			2.4				Weekly	
	Total Residual Chlori (25th month thru expi	E PERMIT	****	****			1.2	2.8			Weekly	Grab
		SAMPLE MEASUREMENT										
		PERMIT REQUIREMENT		·····								
		SAMPLE MEASUREMENT										
		PERMIT REQUIREMENT										
		SAMPLE MEASUREMENT										
		PERMIT REQUIREMENT			-							
	NAME/TITLE PRINCIPAL EXECUTIVE	DEFICER I CER AND CORE CORE CORE CORE CORE CORE CORE CORE	THE V UNDER PENAL TO AM FAMILIAR WITH TO WINDUM OF THO NING THE INFORMAT UNF RECOMMENTER FOR THALTES FOR TOSSUMETRY OF FINE SC 4.110 (Prindlaw) Manuan impersummer Reference all attachming	COF LAW THAT I HAV IE INFORMATION SUBMI SE INTRUDIALS IMMETY NON I TELEVE THE COMPLETE I AM AWAF SUBMITTING FAIST ANTI IMPRISONMENT SU wider the plating man of the televes formatic and catts faces	E PERSONALLY ITTED HEREIN INTELY RESPON SUBMITED HA RE THAT THERE PRORMATION EL TR USF 4 S michale fines w Listens	EXAMINIED INTO BASED SIGNIE FOR FORMATION E APE SIG ICOL WIND ICOL WIND D SIGNA OFF	THE OF PRINCIPA	L EXECUTIVE THE	TELEPHON 7 455	-SUS BER	0 A 98 YEAR 1) 28 40 DAY
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Nescopeck Bor	ough Council			(2-10)		(17.19)				Appr. elen	pites \$ 20-
in clothe Theod	ore Snith, P	resident	_ i	PA-00207	745	001					
B	10005		PERM	T NUMBER	0:50						-
Nescopeck, LA	_ 18515			MONIT	CRING PERIC	00					
CATION Nescoperk Bor	ough Luzers	e County	FROM DO		TO DE						
			(20.21)	(22.23) (24	(2627) (24.24) (JU.JI) N	OTE: Read instruc	tions before	comp	leting this	lorm.
PARAMETER		(1 Card Only) QU (46.51)	ANTITY OR LOADIN (54-61)	G	14 Curd Only) (18-15)	OUALITY OR CONC (46-51)	ENTRATION (S441)		NO.	INEDUENC	SAMPL
(12-37)		AVERAGE	HATIHUN	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITE	62-6J	AMALYSIS (AJ-48)	(64-70)
	SANPLE MEASUREMENT	. 146	.219		****	****	****				T
Flow (MGD)	PERMIT	0.110 . 10 July 300	- Report	MGD		****	****	***		art- Re	zoroing
	SAMPLE -						Top		1		1
	HEASUREMENT	306.86	318.75	Lbs/	***	236.23	075.00	4		<u> </u>	
CBOD5	PERMIT	22.9 J	7 days sures	Dav	1	25-U- 1-	7 1134-04	MGZI		1/ Voor	Como
	BAMPLE	The second second					the art		<u></u> †───	HCCA	100.10-
S-174-	NEABUREMENT	86.95	95.68	Lbs/	****	72.5	77.0	1			1
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incer suspended		BUE DAY AVE	LE GAY AVOIL	Uay		BU Cay-avg-	PAR ARD	MG/L		Week	Comp-
	MEASUREMENT	****	****			****				ł	
o¥	PERMIT				6.03.6		9.0 th				1
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Coliforn Frent	BAMPLE MEASURENENT	****	****		****		****	1			
(May 1 to Sent. 30)	PERMIT					200] //	F	17	1.
						JU Day geo		100 101	_	Week	Grad
2.2 <i>46</i>	BAMPLE MEASUREMENT	****	****		****	507.50	****				
Contorm, Fecal	PERMIT	1 - 1 - 1 - 2 - 2 - 2	A section that		Salar States	2000		#/	-	17	+
(OCC. 1 LO APr. 30)	REQUIREMENT	****	***	***		30 day geo	****	100 ml		Week '	Grab
	BAMPLE MEASUREMENT	****	****		.9	. 13	1.7		1	1	
Chlorine -			Contraction of the		Report	Report	Report	-	}		+
iotal Residual	REQUIREMENT	***	****	***	- Minimum	ARI Mean	Maximum	MG/L		Daily	Grab
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Theodore R Swith Jr	Acceden Int and	T PENALTES FOR S	UBMITTING FALSE ME	04-10-10-10-10-10-10-10-10-10-10-10-10-10-	CON AND ELENATI	Int of PRINCIPAL	A. TIT	bee-c	157	104 1	5 100
TTPED DA PRINTED	and		Anis and Barriet and San	ride fines an mest	DI JINITAL OFFIC	ER OR AUTHORILE	DAGENT ANT	A NUN	· <u>·</u> ···	YEAR	MO DA-
	リア マリンしょういつへ た くれく	Irrense of whichmont	1 hr -)								

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Besults ARE From a Paiman STP

Facili	ty Name <u>Nescopeck</u> STP	PWS 10 NO.
Factiti	ty Address R.R. 4/ Nescopect	NPDES Permit No. 0020745
Mentely	pallty Mescapeck Bucungh	Inclaerator Parmit Humber(s)
County	LUZERNE	Talaphone Humber 759-8157
Per	son Completing Form Theodore RS	mith Jr Brint Hand
Sigi	nature Thutu & Amethy	
Tit	le <u>operator</u>	
1.	Total Hours Incinerator Operated	
2.	Type of Fuel	
з.	Total Fuel Usage	
4.	Supplier of Fuel	
5.	Estimated Amount of Sludge Incinerat	Ad
6.	Incinerator Ash Disposal	7. Sludge Disposal
	<pre>(a) How Much (Tons) (b) Where (c) When (Last Occurrence) (d) Hauler (e) Receipts: Yes No</pre>	(a) How Nuch (Tons)
υ.	(a) How Much (Tons) (b) Where (c) When (Last Occurrence) (d) Hauler (e) Receipts: Yes No	
9.	Septic Tank Waste Accepted: Yes	ne No emperar
10.	If yes: (a) Yolume (b) Hauler(s)	Percent (%) Hauled
11.	Analysis Performed to ensure tank w (a) Yes No (b) If yes, frequency	nate contains ao industrial waste
12.	Additional Comments:	

THIS FACILITY REPORT IS TO BE SUBNITTED WITH MONTHLY DER DISCHARGE

Conyngham, PA	ugh Author 18219	ity	NATIONAL POLLUT DISCHAI PA-007 PERM	TANT "H RGE NI 12048 IT NUMBER	ARGE ELIMINATIO	N SYSTEM I.NPDI.3) RT (1741R) (17-19) 31 HARGE NUMBER	APR 0	7 1998 99	1	Approv St No. 20 Approvel exp	rəd 40-0004 hir os 9-30
ACILITY Sugarloaf Town OCATION Luzerne County	iship '		FROM 78AR 98 (20-21)	MONIT MO D 03 0 (22-23) (24	ORING PERIC AY TO YEAR / TO 98 -231 (26.27) (26.27)	00 MO DAY 03 3/ (58.99) (10-31) NO	DTE: Read instruc	tions before	comple	eting this	orm.
PARAMETER		(1 Caril Only) QU. (16-53)	ANTITY OR LOADIN (54-61)	1G	(1 Card Only) (18-45)	QUALITY OR CONC (46.51)	ENTRATION (54-61)		NO.	THEOUENC	SAMPL
(32-37)		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS	62.63	ANAL 1515 (11 45)	169.20
	SAMPLE MEASUREMENT	. 493 mco	,880 mes		****	****	****			31/31	
Flow (MGD)	PERMIT REQUIREMENT	.35 30 day avg	Daily Max	MGD	****	**** '	* * * * *	***	4	ontin- ous	Reco Insr
	SAMPLE MEASUREMENT	19.00	24.82	Lbs/	****	5	6.4			4/21	, ,
CBOD ₅	PERMIT REQUIREMENT	73.0 30 day avo	117.0 7 day avg	Day	****	25.0 30 day avg	40.0 7 day avg	MG/L		1/Wk.	Сотр
	SAMPLE MEASUREMENT	34.44	44.43/	Lbs/	****	9.25	/ 3			41-	
Solids - Total Suspended	PERMIT REQUILEMENT	87.60 30 day avg	,131.40 7, day avg	Day	****	30.0 30 day avg	45.0 7 day avg	MG/L		1/Wk.	Сотр
······	BAMPLE MEASUREMENT	****	****		6.4	****	7. 9			31/11	
рН	PERMIT	***	1****	***	6.0 Minimum	****	9.0 Maximum	รบ		Daily	Grab
	SAMPLE MEASUREMENT	****	****		****	N'.A.	****			NA	NA
'Coliform, Fecal (May 1 to Sept. 30)	PERMIT	****	(1263) [] ****	.***	****	200 30 day geo	****	#/ 100 ml		1/Wk.	Grab
	SAMPLE MEASUREMENT	****	****		****	10. 8/	****			4/31	· -
Coliform, Fecal (Oct. 1 to Apr. 30)	PERMIT REQUIREMENT	****	****	***	****	2,000 30 day geo	****	#/ 100 ml		1/Wk.	Grab
	SAMPLE MEASUREMENT	****	****		TRACE	12	2.0			31/31	,
Chlorine - Total Residual	PERMIT REQUIREMENT	****	****	***	Report Minimum	Report ARI Mean	Report Maximum	MG/L		Daily	Grab
AME/TITLE PRINCIPAL EXECUTIVE	OFFICER I CER	TIFY UNDER PENALTY O	F LAW THAT I HAVE P	D HEREIN AN	AAMINED D			TELEPHONE		D A	TE
PANGENBURC BENJAMI <u>CHAIRMAN</u> TYPED OR PRINTED	IN M. ON M. OBTAIL IS TRI NIL P 33 US Ind w	Y INDURY OF THOSE VING THE INFORMATION US ACCURATE AND COUNT INT HEMALTIES FOR SI (DSSIDILITY OF FINE ANI C\$1319 (Productor and matunium improvement) of	INDIVIDUIALS IMMEDIATE () RELIEVE THE SUI MPLETE I AM AWARE UBMITTING FALSE INII D IMPRISONMENT SEE () IMPRI	EV RESPONSI BMITTED INFO THAT THERE ORMATION IN 18 USC 1 IC rlide fines up f rdfs i	BLE FOR IRMATION ARC SIG CLUONIC: DOL AND SIGNATU OFFIC	IRE OF PRINCIPAL	EXECUTIVE 7/7	788 4 NUMBE	442 R 1	4 3 TEAR M	95 DAY

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AMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all astachments here)

NAME Butler Townsh ADDHESS P.U. BOX 150 St. Johns, PA	ip Municipal	Authority	PATIONAL POLLUT DISCHAF PA-U PERM	ANT DISCH RGE MONI (2.16) 1046388 11 NUMBER		N SYSTEM (NPDI.S) RT (DAR) (17-19) UUI NARGE NUMBER	MAR 0 9 1	1998 -SJ		Form Appre OMB No. 2 Approval a	oved. 040-9004 ppires 9-30-85
FACILITY St. Johns STP LOCATION BUTTER TOWNSH	ip, Luzerne (County	FROM YEAR	MONITO	ORING PERIC	$\frac{D}{MO} = \frac{DAY}{2}$	OTE: Read instr	ructions be	lore comp	leting this	form.
PARAMETER		(3 Cord Only) QU. (16-53)	(10-11) ANTITY OR LOADIN (34-61)	(G	(4 Card (Inly) (38-15)	QUALITY OR CONC (46-53)	CENTRATION (54-61)		NO. EX	FREQUENC OF ANALYSI	Y SAMPLE TYPE
(32-37)		AVERAGE	MAXIMUM	זואט	MUMINIM	AVERAGE	MAXIMUM	UNI	TS 162-63	(6+-68)	(64.70)
	SAMPLE MEASUREMENT	.436	.699		****	****	****			28/28	
Flow (MGD)	PERMIT ' REQUIREMENT	Report 30 day avy	Report Daily Max	MGD	****	****	1 ****			Cont.	Rec. Inst.
	SAMPLE MEASUREMENT	66	83	Lbs/	N4	18	51			4128	
	PERMIT REQUIREMENT	125 30 day avg	200 7 day avg	Day	****	25 30 day-avg	40 7 day av	vg MG/	L	1/Wk.	8-nr Com
	SAMPLE MEASUREMENT	55	72	Lbs/	12	15	19			4128	
Total Suspended Solids	PERMIT REQUIREMENT	150 30 day avq	225 7 day avg	Day	****	30 30 day avg.	45 7 day a	vg MG/	'L [1/Wk.	8-hr Com
	SAMPLE MEASUREMENT	****	****		6.8	****	7.2			26/28	
рН	PERMIT REQUIREMENT	****	z, ****	***	6.0_ Minimum	****	9.0 Maximum	<u>≣</u> ≩¥ SĽ		Daily	Grab
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	3	· ·								
	SAMPLE MEASUREMENT										
	PERMIT -				2			ي در م	<u> </u>		
	SAMPLE MEASUREMENT	-									
	PERMIT REQUIREMENT								0.0		
AME/TITLE PRINCIPAL EXECUT	IVE OFFICER I CEP	ATIFY UNDER PENALTY	OF LAW THAT I HAVE	PERSONALLY ED HEREIN AN		<u> </u>		TELER	PHONE) A T E
Fried-Smith	ON A OBTA IS TE NIFIC THE J] U	MY INOUIRY OF THOSE INING THE INFORMATIC RUE ACCURATE AND CI ANT PENALTIES FOR POSSIBILITY OF FINE AN SC \$1339 (Product un	INDIVIDIJALS IMMEDIAT INDIVIDIJALS IMMEDIAT DNPLETE I AM AWARE SUBMITTING FALSE IN NO IMPRISONMENT SEE drit them ataxiatics not in	ELT RESPONS JAMITTED INFI THAT THERE FORMATION I 18 U.S.C. 1 Include feres up	HELE FOR ORMATION ARE SIG INCLUDING 1001 AND SIGNAT	WILL OF PRINCIPA	constr L EXECUTIVE	711 12	12 4564	98	36
TYPED OR PRINTED	and a	e maximum iniffrancient i	d between 6 months and 5	Vental	OFFI	CER OR AUTHORIZ	ED AGENT	CODE	NUMBER	YEAR	MO DAY

MMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all uttachnices here)

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PERMITTEE NAME/ADDRESS (Include Foculity Name/Locayon in different) BULIEF TOWNSH NAME - P.O. BOX-150- ADDRESS - St. Johns, PA	ip Municipa — 18247—	Authority	NATIONAL POLLU DISCHAI	TANT DISCHA RGE MONIT A-0046388	ARGE ELIMINATION	A SYSTEM (NPDF.S) T (DAR) (17-19) 001 ARGE NUMBER				Form App. OMB No. 204 Approvel exp.	105 54
FACILITY	ip, Luzerne	e-Coanty	FROM YEAR	MONITC MO DA 3 / (22-23) (24-2	DRING PERIO Y TO YEAR 251 (26.27) 1.	$\frac{MO}{3} \frac{DAY}{28}$ $\frac{3}{28} \frac{28}{(39-31)}$ NC	DTE: Read instruc	tions before	comp	eting this f	orm.
PARAMETER	\bigtriangledown	(3 Cord Only) QU (46-53)	ANTITY OR LOADIN (54-67)	NG	(4 Card Only) (38-45)	QUALITY OR CONC (46-53)	ENTRATION (54-61)		NO. EX	FREQUENCY OF	SAMPLE TYPE
(32-37)		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS	(62-63)	(64-68)	(69.70)
	SAMPLE MEASUREMENT	****	****		****		****		{		
Coliform, Fecal (May 1 to Sept. 30)	PERMIT REQUIREMENT	****	****	***	****	200 30 day geo	****	#/ 100 n	1	1/Wk	Grab
	SAMPLE MEASUREMENT	****	****		****	7	****	{		4/28	
Coliform, Fecal (Oct. 1 to Apr. 30)	PERMIT REQUIREMENT	****	****	***	****	2,000 30 day geo	****	#/ 100	ml	1/Wk	Grab
Chlorine Residual	SAMPLE MEASUREMENT	****	****		0.5	0.6	****			28/28	
(lst Month - 24th M	РЕВМІТ ВАФФРЕМЕНТ	****	****	***	****	Mon & Rep 30 day avg	****	MG/L		Dail	Grab
Chlorine Residual	SAMPLE MEASUREMENT	****	****			****	****			ļ	
(25th Month - Expiration Date)	PERMIT REQUIREMENT	****	****	***	****	30 day avg	****	MG/I		Dail	Grab
	SAMPLE MEASUREMENT	****	****		7.0	****	****		{		
Oxygen, Dissolved	PERMIT REQUIREMENT	****	****	***	5.0 * Inst Mr	*****	****	MG/I		1/Wk	Grab
Final NHo Mg/1	SAMPLE MEASUREMENT				0.8	1.2	1.6			4/28	
(Quarterly)	PERMIT REQUIREMENT				· · ·			-			
PO4 Mg/1	SAMPLE MEASUREMENT				3.0	1.3	1.8			4128	
(Quarterly)	PERMIT REQUIREMENT		54					-	-		
NAME/TITLE PRINCIPAL EXECUTIVE	OFFICER I CERT	TIFY UNDER PENALTY I	DE LAW THAT I HAVE	PERSONALLY E	XAMINED D BASED			TELEPHON	E	DA	TE
Fried Smith	ON M OBTAIN IS TRU NIFICA THE P	Y INQUIRY OF THOSE VING THE INFORMATIO UE ACCURATE AND CO NT PENALTIES FOR OSSIBILITY OF FINE AT	INDIVIDUALS IMMEDIA' IN I RELIEVE THE S DMPLETE I AM AWARE SUBMITTING FALSE IN ID IMPRISONMENT SEE	IELY RESPONSIE UBMITTED INFO THAT THERE IFORMATION IN 18 U.S.C. 1 10	RMATION ARE SIG CLUDING, AND SOL AND SVENATI	the CIL. D. es	EXECUTIVE 71	1 17EE-4	, 54 J.	9E .	3 6
TYPED OR PRINTED		C 31319 (Produirs un masicium inipitamenti	der shere statutes may a d between 6 numbrs and 5	nrlude fines up f seurs i	OFFIC	CER OR AUTHORIZE	DAGENT AR		ER	YEAR H	O DAY

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MONTHLY FACILITY I	REPORT Date Prepared MARIES
acility Name Butler Township Authority	PWS ID NO
acility Address_PO Box 150, St. Johns, PA 18247	NPDES Permit No. 0046396
lunicipalityButler Township	Incinerator Permit Number(s) N/A
ountyLuzerne	Telephone Number (717) 788-4564
erson Completing Form Joseph J. McDermott (Print Name) ignature	
Total Hours Incinerator Operated	N/A
Type of Fuel	N/A
Total Fuel Usage	N/A
Supplier of Fuel	N/A
Estimated Amount of Sludge Incinerated	N/A
Incinerator Ash Disposal N/A (a) How much (Tons) N/A (b) Where N/A (c) When (Last Occurrence) N/A (d) Hauler N/A (e) Receipts: Yes No X Other Wastes (Grits, Barscreening, etc.) (a) How Much (Tons) // Tow (b) Where Drums Plant (c) When (Last Occurrence) Weekly (d) Hauler Cunfer Trucking and Excavating (e) Receipts: Yes No X Septic Tank Waste Accepted: Yes No X . If yes: (a) Volume N/A (b) Hauler(s) N/A . Analysis Performed to ensure tank waste contains n (a) Yes No X We have no industrial wa (b) If yes, frequency	Z Sludge Disposal (Vct AI, 22.23, 48 (a) How Much (Tons) 3.94 bst - 410x (b) Where How Much (Tons) 1.94 bst - 410x (c) When (Last Occurrence) 1.973 (d) Hauler plant personnel (e) Receipts: Yes No X Percent (%) Hauled N/A o industrial waste ste into the system 1.93 bst - 100 bst - 1

PADER-RBP FIELD SHEET

WATTERBODY NAME NOSCOPELK	Creek	STR CODE/RMI	
STATION NUMBER NO 1	LOCATION	down walfi	04159
DATE 7.7.98	TIME	James Grant	
AQUATIC ECOREGION	COUNTY		TOWNSHIP
INVESTIGATORS			
FORM COMPLETED BY	<u> </u>		· •
REASON POR SURVEY			
WEATHER CONDITIONS			
PHOTOGRAPH NUMBER(S)			
	WATER QUAL	ITY	
Collector Number		Temp (97)	DO
Corductivi		Other	&
Tratmuranta Inod			····
Stream Type:	and an and the second second	an linestar	
coldwater trout-stock	(eq warmwat	er limestor	le spring/influenced
water odors: normal sewag	le betrotenu	cnemical n	ione other
Water Surface Ulls: Blick	t sneen	grops	Ilecks none
Turbidity: (clear) slight	turbia oj	paque wate	r color
<u>Phi</u>	SILAL CAARAC	TERISTICS	-
Predominant Surrounding La			
forest (4) cropi	and (10)	pasture (``
residential (40)	commercial (pascare (/
other highlight - Galf) indu	Striar ()
Junei	ourse (10	/	
Erosion: none (mo	derate	heavy i	
NPS Pollution: no evidence	A SOMA	potentia	& Voids
			gat course
Stream Width 30.H. Strea	m Depth (m):	riffle 8-18"	
High Water Mark m D	am Present:	es no Char	nelized: ves ro
Canopy Cover: open	partly open	Dartly sl	haded shaded
	purtry open	parery o	pinded
Sediment Odors: normal	sewage	petroleum	chemical
anaerobic	none	other	
Sediment Oils: absent)	slight m	oderate r	profuse
Sediment Deposits: sludge	sawdust	paper fil	per sand
relict	shells o	ther	
			·····
Are the undersides of store	es which are	not deenly en	bedded black?
ves 60		The accent of	
1 ((¹)		,	

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PHYSICAL CHARACTERISTICS (continued)

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Inorganic Substrate	Components: 40	Organic Substrate	Components: 40
PERCENT Type D Bedrock Boulder > Cobble 6	<u>iameter (mm/in)</u> 256 / >10	PERCENT Type Detritus	Characteristics sticks, wood, and CPOM
$\frac{20}{20}$ Gravel 2 $\frac{15}{5}$ Sand 0	-64 / 0.1 - 2.5 .06 - 2 / gritty	<u>30</u> Muck-Mud	black, FPOM
Silt Clay <	.00406 / .004 / slick	Mari	grey, shell fragments
0	AQUATIC BIC	<u>DTA</u>	
Relative Abundance: Periphyton Slimes Ma	(0=absent, 1=rare, 2 Filamentous Algae acroinvertebrates	epresent, 3=common <u>3</u> Macrophy Fishes_3	, 4=abundańt) tes
<u>CPOM Sample:</u> Was sample field pr Shredders in Sample	eserved for later la Total	boratory analyses? # Organisms in Samp	YES NO
	FISHERIES D	ATA	
Sampling Duration (Habitat Complexity/ Flow: flood b Crew Gear/Crew Performan	min) Distan Quality: excellent ankfull moderate	ce <u>m</u> Area good fair poor low Gear Used	m ² very poor
Comments			
Genus/Species	Adults	Juveniles	Anomalies
			+
			
	<u> </u>	<u> </u>	+
	1	·····	
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PADER-RBP FIELD SHEET

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WATERBODY NAME		STR CODE/RMI	
STATION NUMBER KIL-3	LOCATION	_	
DATE	TIME		
ACUATIC ECOREGION	COUNTY	<u>ጥ</u> (- WNSHIP
TARESTCARODS		IV	
ENVESTIGATORS			
	<u></u>		
REASON FOR SURVEI		· · ·····	
WEATHER CONDITIONS	<u></u>		······································
PHOTOGRAPH NUMBER(S)			
	WATER OU	LITY	
Collector Number		1900 (9C)	DO
-U Conductiv		1emp (-c)	
	ILY		
Instruments Used			
Stream Type:		•••	
coldwater trout-stoc	ked warmwa	ter limestone	spring/influenced
Water Odors: normal sewa	ge petroleu	m chemical no	ne other
Water Surface Olls: slich	k sheen	globs f	lecks none
Turbidity: (clear) slight	turbid	opaque water	color
PH	<u>YSICAL CHARA</u>	<u>CTERISTICS</u>	
			-
Predominant Surrounding La	and Use (%):		
forest $(\underline{\mathcal{O}})$ crop	land ()	pasture ()
residential (10)	commercial	() indust	crial ()
other	()	(<u> </u>
······································		/	
Erosion: none mo	derate	heavy Pr.	A MI INSTRAMI
NES Pollution: no evidence	Some	e potential 81	obvious
			0212020
Stream Width 40 H. Stream	m Depth (m)	riffld X ⁱⁱ m	\mathbb{R}^{\prime} \mathbb{R}^{\prime}
High Water Mark / m r	am Present:	ves no Chann	elized: yes mo
Capopy Cover: open	Dartly Open	yes no chann	dod ghadad
canopy cover: open (party open) partiy sha	ded sugged
Sediment Odors: normal	801/7 00	notroloum .	ebomi ce l
bedimente odors. instindi	bewaye	petroreum	chemical
Sediment Oiles	alicht	other	
Sediment Dirs: absent	ariduc	moderate pr	oruse
Seaiment Deposits: (sludge	sawdust	paper fibe	r sand
relict	shells	other	
Are the undereides of stor	oe which and	not doonly and	addad black?
vog (no	es which die	nor deepty emp	euleu Diack:
Yes (10)		,	

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PHYSICAL CHARACTERISTICS (Continued)

Inorganic	Substrat	e Components: 🔗	Organic	Substrate	Components: 20
PERCENT 10	<u>Type</u> Bedrock Boulder Cobble	<u>Diameter (mm/in)</u> >256 / >10 64 -255 / 2.5 - 10	PERCENT 70	<u>Type</u> Detritus	Characteristics sticks, wood, and CPOM
35	Gravel Sand	2 - 64 / 0.1 - 2.5 0.06 - 2 / gritty	_10	Muck-Mud	black, FPOM
	Silt Clay	.00406 / <.004 / slick		Marl	grey, shell fragments
	الكويفي ميروي تيني الأنزغ فالبكارية				

AOUATIC BIOTA

Relative Abundance: (0=absent, 1=rare, 2=present, 3=common, 4=abundant) Periphyton <u>7</u> Filamentous Algae Slimes <u>Macroinvertebrates</u> Macrophytes 3 Fishes 3 CPOM Sample: Was sample field preserved for later laboratory analyses? YES NO Shredders in Sample _____ Total # Organisms in Sample FISHERIES DATA Sampling Duration (min) Distance m Area m² Habitat Complexity/Quality: excellent good fair poor very poor Flow: flood bankfull moderate low Crew Gear Used _____ Gear/Crew Performance ÷ Comments Adults Genus/Species Juveniles Anomalies

PADER-RBP	FIELD SHEET
WATERBODY NAME NESCOFECK CIUL	STR_CODE/RMI
STATION NUMBER NC LOCATIC	N Kt 309 bridge
DATE <u>7-2-98</u> TIME	
AQUATIC ECOREGION COUNTY	TOWNSHIP
INVESTIGATORS	
FORM COMPLETED BY	-
REASON FOR SURVEY	
WEATHER CONDITIONS	
PHOTOGRAPH NUMBER(S)	
WATER	QUALITY
Collector Number	remp (°C) DO
pH Conductivity	Utner
Instruments Used	
Stream Type:	
coldwater trout-stocked war	mwater limestone spring/influenced
water Odors: normal) sewage petro.	leum chemical none other
Water Surface Oils: slick she	en globs flecks none
furbidity: glear slight turbid	opaque water color
PHISICAL CH	ARACTERISTICS
Prodominant Surrounding Land Res (4 \ .
forest (M)) graphed (
1010000000000000000000000000000000000) pasture ()
residential (<u>/()</u>) commercia	() industrial ()
other	()
Fragione and	h a arms
NPS Pollution: none moderate	neavy
MPS POILICION: NO EVIdence	come potential and obvious
Stroom Width EN It. Stroom Barth	
High Water Mark i B Dan Dream	m): riffle 0 run 10 pool $\alpha 1$
Capopy Cover: Open partie of	it: yes no channelized: yes no
canopy cover. Open party op	partly shaded shaded
Sediment Mors: portal servaça	
Sediment Odors. Norman sewage	petroleum cnemical
Sediment Oile: abcant elight	
Sediment Deposite: eludra	ust namer fiber (rand)
seutment Deposites: Studge Sawa	athor
relict shells	JUNET
Are the undersider of stars which	and not deputies and added blacks
Are the undersides of stones which	are not deepty embedded black?
yes (no)	,
\bigcirc	

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PHYSICAL CHARACTERISTICS (continued)

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PERCENTType BedrockDiameter (mm/in) mm/in)PERCENTType Characteristics sticks, wood, and CPOM5Boulder>256 / >10Characteristics sticks, wood, and CPOM20Cobble64 - 256 / 2.5 - 1020Cobble64 - 256 / 2.5 - 1020S Gravel2 - 64 / 0.1 - 2.520S and0.06 - 2 / grittyMarlgrey, shell15Silt.00406 /Marlgrey, shell12Clay<fragments	Inorganic	Substrat	e Components: D	Organic	Substrate	Components:20
26 Cobble 64 - 256 / 2.5 - 10 26 Gravel 2 - 64 / 0.1 - 2.5 40 Muck-Mud black, FOM 25 Sand 0.06 - 2 / gritty 40 Muck-Mud black, FOM 15 Silt .00406 / Marl grey, shell Clay <.004 / slick fragments	PERCENT	<u>Type</u> Bedrock Boulder	Diameter (mm/in) >256 / >10	PERCENT 	<u>Type</u> Detritus	Characteristics sticks, wood, and CPOM
<u></u>	<u>20</u> 25	Cobble Gravel Sand	64 - 256 / 2.5 - 10 2 - 64 / 0.1 - 2.5 0.06 - 2 / gritty	_40_	Muck-Mud	black, FROM
		Silt Clay	.00406 / <.004 / slick		Marl	grey, shell fragments

AQUATIC BIOTA

Relative Abundance: (0=absent, 1=rare, 2=present, 3=common, 4=abundant) Periphyton 7/ Filamentous Algae 2/ Macrophytes 4/ Slimes Macroinvertebrates 3 Fishes 2/ CPOM Sample: Was sample field preserved for later laboratory analyses? YES NO / Shredders in Sample _____ Total # Organisms in Sample _ FISHERIES DATA Sampling Duration (min) Distance m Area m² Habitat Complexity/Quality: excellent good fair poor very poor Flow: flood bankfull moderate low Gear Used _____ Gear Used _____ Comments Comments Adults Juveniles Anomalies Genus/Species .

PADER-RBP FIELD SHEET

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WATERBODY NAME NESW FECK CK	<u> </u>	STR CODE/RM	I
STATION NUMBER MC. 7	LOCATION 2	tenith	
DATE $7-1-98$	TIME		
AQUATIC ECOREGION	COUNTY		TOWNSHIP
INVESTIGATORS			
PERSON FOR SUBVEY			
REASON FOR SURVEI			
WEATHER CONDITIONS WORM IN	2124. Si	were short storn	r Evenne Jefore
PHOTOGRAPH NUMBER(S)			J T
	WATER OUP	LITY	
Collector Number	·····	Temp (°C)	DO
pH Conductivit	У	Other	
Instruments Used			
Stream Type:		· · · · · · · · · · · · · · · · · · ·	
Coldwater trout-stocke		ter limesto	ne <u>spring</u> /influenced
Water Odors: Normal sewage	petroleu		flocks
Water Surface Offs: Silck	, sneen	globs	riecks none
Turbidity: Clear Slight	CUEDIO	opaque wat	er color <u>mudder black the</u> Dibion
PHYS	ICAL CHARA	CTERISTICS	
Predominant Surrounding Lan	d IIse (%):		-
forest (30) cropla	d (30)	pasture ()
residential (30) c	ommercial	($)$ inc	ustrial (
other $(\underline{}, \underline{})$	(()	
	(/	
Erosion: none (mod	erate	heavy	·
NPS Pollution: no evidence	som	e potential)	obvious
Stream Width <u>GDAF</u> , Stream	Depth (m)	: riffle	run pool
High Water Markm Day	m Present:	yes no Ch	annelized: yes no
Canopy Cover: open p	artly open	> partly	shaded shaded
Sediment Odors: formal		notroloum	chomical
anaerobic	none	petroreum	Chemicai
Sediment Oils: (absent)	slight	moderate	profuso
Sediment Deposits: sludge	eawdue	moderate	iber cand
ralict of	shells	other Araber I	the states +
		Vener <u>Mover</u>	JA - GIMENT
Are the undersides of stones	s which ar	e not deenly	embedded black?
ves no.	uL	- wee weeking	construct pruch.

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<u>PHYSICAL</u> <u>CHARACTERISTICS</u> (continued)

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Inorganic	Substrat	e Components: 90	Organic	Substrate	Components: 10
PERCENT	<u>Type</u> Bedrock Boulder Cobble	<u>Diameter (mm/in)</u> >256 / >10 54 -255 / 2 5 - 10	PERCENT 100	<u>Type</u> Detritus	Characteristics sticks, wood, and CPOM
$-\frac{20}{45}$	Gravel Sand	2 - 64 / 0.1 - 2.5 0.06 - 2 / gritty		Muck-Mud	black, FPOM
5	Silt Clay	.00406 / <.004 / slick		Marl	grey, shell fragments
AQUATIC BIOTA					
<u>Relative</u> Periphy Slimes	Abundanc ton	<u>e:</u> (0=absent, 1=rare, Filamentous Algad Macroinvertebrates	2=present,	3=common, Macrophyt shes / -	4=abundant) es <u>z</u> <u>Sour</u> 1 tout of Mouth
CPOM Sam	ole:			UT SING	in The mal curris from 1

CPOM	Sample	<u>.</u>						(un stream	w of h	id that the	ërs të
Was	sample	field	preserved	for	later	labo	pratory	analy	ses?	YES	(NO)	
Shre	dders :	in Samp	ole	-	Tota	1 #	Organis	sms in	Samp.	le		

FISHERIES DATA

•

Sampling	Duration	(min)	Distar	ice	m	Area	m2	
Habitat	Complexity	/Quality:	excellent	good	fair	poor	very	poor
Flow:	flood	bankfull	: moderate	3	low	•	_	
Crew				_ Ge	ar Used			· •
Gear/Cre	w Performa	ance						
Comments								

Genus/Speciles	Adults	Juveniles	Anomalies

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PADER-RBP FIELD SHEET

WATERBODY NAME AKSADGER (15	STR CODE/RMI
STATION NUMBER 11(-5 LO	CATION NOTON L. NESCO MOL
DATE 7-8-98 TI	ME 12.00
AQUATIC ECOREGION CO	UNTY TOWNSHIP
INVESTIGATORS	
FORM COMPLETED BY	· •••
REASON FOR SURVEY	
WEATHER CONDITIONS	
PHOTOGRAPH NUMBER(S)	
W	ATER QUALITY
	-
Collector Number	Temp (°C) DO
pH Conductivity _	Other
Instruments Used	
Stream Type:	
coldwater trout-stocked	warmwater limestone spring/influenced
Water Odors: normal sewage p	petroleum chemical none other
Water Surface-Oils: slick	sheen globs flecks none
Turbidity: clear slight (Ku	urbid) opaque water color brun
PHYSIC	L CHARACTERISTICS
Prodominant Surrounding Land T	
forest ((A)) cropland	
residential (5) com	percial () industrial ()
other	kingshall ()
	(DL D MAJUNCH (47 555 DOVE > TE
Erosion: none modera	te heavy
NPS Pollution: no evidence	some potential (obvious)
Stream Width <u>40 50</u> Stream De	pth (m): riffle run pool
High Water Mark <u>m</u> Dam P	resent: yes no Channelized: yes no
Canopy Cover: open (part	ly open partly shaded shaded
Sediment Odors: normal ' se	wage petroleum chemical
anaerobic	none other
Sediment Oils: (absent) sli	ght moderate profuse
Seaiment Deposits: sludge	sawdust paper fiber (sand
relict she	iis other <u>Muly</u>
No the undersides of states of	
ALE UNE UNDERSIDES OF STORES W	nich are not deeply embedded black?
yes (no) - 4 ps sitted w/crow	1315 11 mul - gray Cartony area on typet some.

PHYSICAL CHARACTERISTICS (continued)

Inorganic Substrate Components: 70	Organic Substrate Components:
PERCENT Type Diameter (mm/in) Bedrock Boulder >256 / >10 Cobble 64 - 256 / 2.5 - 10 Cobble 64 - 256 / 0.1 - 2.5 Cobble Sand 0.06 - 2 / gritty ZO Silt .00406 / Clay <.004 / slick	PERCENTType DetritusCharacteristics sticks, wood, and CPOMDetritussticks, wood, and CPOMMuck-Mudblack, FPOM Muck-MudMarlgrey, shell fragments
	ويوجو اجتماعه البرائيس المالية البالية التواعية المتعالية المتحية المتكالة المتكالة محتما والمتحد المتحد المتح

AQUATIC BIOTA

Relative Abundance: (0=absent, 1=rare, 2=present, 3=common, 4=abundant) Periphyton ______ Filamentous Algae _____ Macrophytes _____ Slimes _____ Macroinvertebrates _____ Fishes _____

<u>CPOM Sample:</u>

Was sample field preserved for later laboratory analyses? YES NO Shredders in Sample _____ Total # Organisms in Sample _____

FISHERIES DATA

Sampling	J Duration	(min)	Distar	nce	m	Area	m²	
Habitat	Complexity	y/Quality:	excellent	good	fair	poor	very	poor
Flow:	flood	bankfull	moderate	3	low			
Crew				_ Ge	ar Used			
Gear/Cre	w Performa	ance						
Comments	5							

Genus/Species	Adults	Juveniles	Anomalies
		Ì	
		1	

HABITAT ASSESSMENT FIELD DATA SHEET

RIFFLE/RUN PREVALENC

Habitat		Cate	gory	
Perameter	Optimal	Suboptimal	Marginal	Poor
1. Instream Cover (Fish)	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat.	30-50% mix of boulder, cobble, or other stable habitat; adequate habitat.	10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable.	Less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat is obvious.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Epifaunal Substrate	Well-developed riffle and run; riffle is as wide as stream and length extends two times the width of stream; abundance of cobble.	Riffle is as wide as stream but length is less than two times width; abundance of cobble; boulders and gravel common.	Run area may be lacking; riffle not as wide as stream and its length is less than 2 times the stream width; gravel or large boulders and bedrock prevalent; some cobble present.	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking.
SCORE 10	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
SCORE 10	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Valocity/Depth Regimes	All four velocity/ depth regimes present (slow-deep, slow-shallow, fast- deep, fast-shallow).	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
SCORE 14	20 19 18 17 16	15 (14) 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Alteration	No channelization or dredging present.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	New embankments present on both banks; and 40 to 80% of stream reach channel- ized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 C
6. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from coarse gravel; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom effected; sediment deposits at obstruction, constriction, and bends; moderate deposition of pools prevalent.	Heavy deposits of fin material, increased by development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1

RIFFLE/RUN PREVALENC.

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Habitat	Category				
Parameter	Optimal	Suboptimal	Marginal	Poor	
7. Frequency of Riffles	Occurrence of riffles relatively frequent; distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is between ratio >25.	
8. Channel Flow Status	Water reaches base of both lower banks and minimal amount of channel substrate is exposed.	water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
SCORE 10	20 19 18 17 16)	15 14 13 12 11	10 9 8 7 6 ···	5 4 3 2 1 0	
9. Condition of Banks	Banks stable; no evidence of erosion or bank failure.	Moderately stable; infrequent, small areas of erosion mostly healed over.	Moderately unstable; up to 60% of banks in reach have areas of erosion.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slones, 60-100% of bank has erosional scars.	
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 4 6	5 4 3 2 1 0	
10. Bank Vegetative Protection	More than 90% of the streambank surfaces covered by vegetation.	70-90% of the streambank surfaces covered by vegetation.	50-70% of the streambank surfaces covered by vegetation.	Less than 50% of the streambank surfaces covered by vegetation.	
SCORE 15	20 19 18 17 16	15) 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
11. Grazing or Other Disruptive Pressure	Vegetative disruption, through grazing or mowing, minimal or not evident; almost all plants allowed to grow naturally.	Disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	Disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Disruption of streambank vagetation is very high; vegetation has been removed to 2 inches or less in average stubble height.	
SCORE 12	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	
12. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.	
SCORE N	20 19 18 17/16	15 14 13 12 11	10 9 8. 7 6	5 4 3 2 1 0	

Total Score ____

INTEROFFICE MEMORANDUM

		Date: 15-Jun-1998 11:37am EST From: Edward P. Kupsky KUPSKY.EDWARD
		Dept: Water Quality Management Tel No: (717) 826-2330
TO:	Kate Crowley	(CROWLEY.KATE)
CC: CC:	George Fetchko Len Schall	(FETCHKO.GEORGE) (SCHALL.LEN) (WILLC CUEDDILL)
CC: CC:	Sherrili Wills Thomas Stauffer	(WILLS.SHERRILL) (STAUFFER.THOMAS)

Subject: Nescopeck/Black Creek Stream Investigation

The watershed investigation for Nescopeck/Black Creek is scheduled for June 30 thru July 2. Since it will be desirable to have flow data and since we cannot ship chems on the 2nd, We will have two teams collecting chem and flow data on the 30th and the 1st. All of the dischangers will also have to be sampled in addition to the AMDs. We will work out assignments for the stream stations and the AMDs using the biologist and intern Kate. Len will have to handle the permited dischargers. We have been getting requests to take out other interns if we are doing anything interesting so we may be able to get additional unskilled help.

Since the CSOs seem to be an important component of the investigation it may be necessary to set up a plan to sample them when they are flowing. We can evaluate their effects on the biology even when they are dry but it would be of no use to do chems up and downstream then. Len knows where they are and we will look at all of the known ones.

- Have more prostal out STP's - Lea has prostal out STP's - Kistie has NMR's except Lothiner + Hassing INTEROFFICE MEMORANDUM

Date: 09-Jun-1998 07:58am EST From: Paul Panek PANEK.PAUL Dept: Land Recycling & Waste Mgt. Tel No: (717) 826-5440

TO: Sherrill Wills

(WILLS.SHERRILL)

Subject: Lake Waulenpaupack

Sherry:

What is the quality of Lake Wallenpaupack? What do you know about it. I am doing a cleanup project not far from it and some of the workers want to do some fishing in the lake. Some local people have made some comments about not eating the fish, etc. Do the people know what they are talking about or are they like most peoplwho don't have a clue? Let me know what you or Ed thinks about the Paupack. Thanks!! Paul





18 Little Nescopecker. up Jedo LN-1 Spectes 0-3 3-6 6-9 9-12 12+ Brok Treater-11 JHT 11 | | || W. Sucher 11 Blue gill -Pumpin Deed T Creek club HHT III 川 川 UTI Largemonthing JH[|| Sculpin T-duter 1 116 Ft. +c+a1 =

LN-2 BUGS 7/8/98 19 p.H= 4.5 alkalimity = 0 KICK : NO BUGS D: Did not collect Habitat: Did Sheet LN-3 7/8/98 pH=4.5 $g|K^{2}| = 0$ Kick: No Bugs D: Did Not COLLECT Habitat : Did Sheet Yellow Boy almost gone grzy/black sediment presul

26, Electrofishing 7/8/98 NC-4 (up LN) 30 Feet 0-3 3-6 Cutlips Minnow White Suckey 11 String Sculpin Blacknost Date

21 7/8/98 LN-4 2 Kicks: 1 individual Sialis D: Did not collect habitat: Sheet (ompleted 7/8/98 NC-5 R+93 2 Kicks - NO BUGS D' Did Not Collect habitat: Sheet completed PH; 4,5-5 alkel: 0 (UP LN) 2Kicks: good DFrame (2) Collected habitat: Sheet Completed slimy sculpin collected in Kick

7-2-98 NC-1 @Rt.309 14 12 15 2 2 . 1 Species 50 feet 9-12 0-3 3-6 212 6-9 50fall fish heet and 11 11 250 Kt. White suchan 50 Cut Lips // Mad Tom 5 sculpin dartes 11][> +++ iii +++ +++ brown hout long nose -date Hack-nose do ce // unknown (4)

16 NC-2 (7-2-98) NC-3 (7-2-98) 105pt.) (280 ft.) 17 Species 0-3 Specifs 0-3 3-6 6-9 9-12 712 3+6 4-9 9-12 >12 1/// **#** mad tom ~ long-nose ~ date brook 1 111 Fall +++++ #++ |1| black-nose dace cuttins III ## +## olace 1 ## TNC nose daca - II 11 sculpin - 11 white suckey ~ tess: Larter L #### piteral -1 Common. loht.suckie-111 Common ._ Shiner Sculpin Fess outer Creekohub $\|$

Sample number(Kree	(\underline{k})
Location 174 Rt 309	
Date collected 7-5-98	Date analyzed 19-498
• 1	
1. Warthing	26
2.	27
3	28
4	29
5	30
6	31
7	32
8	33
9	34
10	35
11	36
12	37
13	38
14	39
15	40
	41
.7	42
.8	43
9	44
0	45
1	46.
2.	47.
3	48
4.	49.
c	50 [;]

Stream <u>Wardensch Greek</u>	
Sample number <u>NO.4.</u> (k.c.k.	
Location	
Date collected <u>7-8-98</u>	Date analyzed3 9.5
Production /	26
2 (transmot	27.
Amina o	P 28.
4. Explormenta	29.
5. Iscurchez	30.
-6. Durchitedes	31.
4. Chanderta	32.
8. Rhysouphila	33.
9. Lachar	34.
10. Campanas	35
HI. Chankar	36
12. Por granthopers	37
43. Hydropake	38
T4. Takana Francis	39
15. Hermound	40
16. Baris	41
A. Stene mis	42
18. <u>//c. 3 P</u>	43
19. <u>Per 12 -</u>	44
20. <u></u>	⁷ 45
21. Conte Madamac	46
2. 120 andreser	47
23. <u>No. ma Jess when y</u>	48
24	49
25	50

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Stream Nesdeproch like Sample number NC 2 (Kok) Location 114 Combels Date collected 7999 Date analyzed 3995 1 41. J.m.C · I. Campares -26. 27. F.Serreka AMUMIN cz. H. Hopsyche -13. For that u 28. CAther Samae MI WI WI II 14. Aschychia 29. Rhy 24 36/2 5. Herringen, a 5. Rh. Meshild I P Br. Delet heckes OFC 32. Claasing a. Paratioterskich. av 8. Conthe chad and c 33. Champila 9. Turner Die 34. 13.14 por · J SH 10. Periosta -35. Spenter 1 HI. Full desire fring . 36. Schratel 203 -12. Herekenser _ 3T. Malina March ANIMAN MUCH 2P 38. Simelium the un all 13. Phaseans phara OP LIA. Drught I SC 39. Bach 11 O SC-40. (HENSELSer 41. 1 Cr/cs/2 16. 42. Comple 130 4 P 17. 43. Farado + 1155 18. 144. Michall ung 2 SH -19.____ 45. Stevera s 20. 46. Mader and 250 21. 147. Plenner 23C-22. JJC C. Line Barry 48. 23. -Di. E. 49. 2. Jan 17-24. 50. (figure the man date 25. ٠. .

Benthic Macroinvertebrate Enumeration

Stream L. Hle Nexuprok	
Sample number <u>2 N 9</u>	
Location Up Jeddo Tunne	./
Date collected 7-2-98	Date analyzed 10-9-93
1. deretra	26.
2. Tallaperta	27.
S. N. granda	28
4. Delophilodes	_ 29
5. Hydrops she	30
5. Rhysouphila	31.
2. Isonyah 2	32
8. Sial 3	_ 33
og. Clossesema	34
10. Epternegella	_ 35
Mr. Paraleptophlebia	_ 36
-12. Aselles & CG	37
13. Per esta	_ 38
44. Similium	_ 39
15. Chermatopsyche	40
16. Odstupoda 3p UNK	41
T. C.C.b. raphia 6 SC	42
U.S. Cortoscaus 4SC	43
49. <u>Bartis</u>	44
20. Orthodedinge	45
21. Jan, podinae	46
-22. T. put dar sp 45H	47
23. 134. Tohsin. 6FC	48
24	49
25	50

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Sample number NC St 1K.	$c \neq)$
Date collected	Date analyzed7778
T. Hydropyche	26
2. D. pleationa OF	<u>C</u> - 27
3. Horeneutria	28
4. Rhisappila	29
5. Orthealadinac	30
6	31.
7. A Frame.	32.
8. Tallaperta Mit Hit	W/ 33.
9. Tomata T	34.
10. Chlickenhidae 1 C	⁷⁷ 35.
- 11. Cothe Machanne Hit	Ht 136. France 211 72x2
12. Taryrochmae 1	_ 37. (operally Hyters which and
13. Accention AH- HHT I	38. are early instars
-14. Sin - 111 67	⊅ 39
45. Nov. 21	40
16. Econ 120 1	41.
IT. Peridaet 3F	² 42
18. 1. franci toberate int	43
19. Hydre suche The Hat to	HT 441
20. Depterting of	45
21. Del and Lides T	46
22. Channellos ate it	/_ 47
23. Ener Lidae 11 67	₽ 48
24. Tip date sp 1 4.	5//49
25	50
Sample number Ne. 3 14	\neq λ
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Location Zhan W. D. L.	
Date collected 7.2.38	Date analyzed 3 3 33
X. Micrasema -	26. Ntheoly Jointe 14 4 48 - 20
J. Ontochademach	127. Tana 1 02 - 111
13. Tanna dende	28. <u>Beptens 1 4 SC</u>
4. Kar 2419 -	429. Danseta 1 5P
-S. Computer	30. Nyon my Still
Co. Heretande	31
or. Francial 10	<u>26</u> 32.
8. Revershillar 1	<u>P</u> 33.
19. Altrix 2	<u>7</u> 34.
10. Heren a 0	<u>P</u> 35
-n. Fredard 6	<u> </u>
12. Plangarphis	37
13. <u>Terks ta</u>	38
H. Flinterper bi	<u>7</u> <u>C</u> 39.
15. <u>Bir da</u>	40
. clo. Strandhan	41
UT. Person tract	42
18. <u>B</u> 2	<u>P</u> 43
19. <u>Elm in 190</u>	44
20	45
21. 11 12 1911	46
22. <u>120. 213</u>	47
23. 14: 7 1 m 7 11 111	48
124. <u>Per set 1</u>	49
25. <u>- Secondry</u>	50.

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DENCILL IMCLULIVELEDIGEC MANAGE

Sample number	(A.ox)	
Location <u>787 30</u>	<u> </u>	
Date collected 7-2-	515-	Date analyzed 22 2 2 2 2 2
G. Fampy	306 2	6. A france
2. Charalta	4 FC- 12	7. Facouched prover Mil
· 3. Siztor	<u>< P</u> 21	8. Comman Att
4. (1	<u>330</u>	9. Grachize the fift III
5. Hill maker	5-FC- 130	. The the start and At 111 600
·6. N	<u>27 - 3</u> 1	1. Col marine THE PALL
H. Contains	<u> </u>	2. H. free ache 1
58. Ol achartar	10.6 33	3. Stranger 41. 430
5. Bar 4 6	<u>CC</u> 34	r. <u>Newland</u> 530
40. He was	<u> </u>	F Farmer tag T
H. Tarapatria	<u></u>	- Commence and all
12. 20	<u>05H</u> 37	-137. A. 1 6 CG
Las. Parcharante.	<u> </u>	Charles Contraction of SC
14. the main pro-	<u>672-</u> 39	· Loute the AP
15. <u>The second</u>	<u> </u>	· Film Supervision
16. <u>Alt internet and a</u>	41	· Complexity or 1 6 FFC.
17	42	•
18	43.	•
19	44 .	•
20	45.	•
21	46.	
22.	47.	
23.	48.	
24		
25	50.	

Sample number	
Location Up Hazelton	STP
Date collected 7-5-98	Date analyzed /2-11-98
A.c.K	
Y. Cambarus	26
2. Oligochacta	27
3. Dr. thoulad. and -	28
4. Tanypedinaer	29
5. Similium -	30
6	31
7. <u>C Frome</u>	32
8. Similium Att HA HA	33
9. Orthockadiinae HATHAM	<i>T / / / </i>
10. Tanypodinae HT	35
11. Oligocharta HMI	36
12.	37
13	38
14	39
15	40
16	41
17	42
18	43
19	44
20	45
21	46
22	47
23	48
24.	49.

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Benthic Macroinvertebrate Enumeration

Stream 1. He Nove set Chrick	
Sample number <u>des Tedde Team</u> e	el d'Alame LNP
Location	
Date collected 7-2-93	Date analyzed
-Bio 55 1111	26
-1. <u>Low - int</u>	_ 20.
2. Man payene II	_ 27
J. Clascound II	_ 28
4. Morecephila HT	_ 29
5. 43cmpshid 1	30
6. Rectophelades Millel	//31
7. Chematipsyche III	32
8. Neckenst 1	33
5. Sevente 1/2 / 200	34
10. Chrocharts 4	35
H. Devetia T	36
12. Sime low Hor HAT	37
13. Stantas 1	38
H. Classeling & HHL	39
45. Det. 13, 4.5 11 - 5C-	40
46. Tip. Lane My	41
C17. Buth Ardina 18	42
18. January 15. 5	43
19	44.
20. •	45.
21.	46.
22	47
23	//8
<i>د</i> ر.	40.
24 .	47
25	50

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DEILUTE INCLOTURE COLORE MINISTER

Sample number <u>IVC 6</u>	
Location	
Date collected 7-1-98	Date analyzed <u>12-9-98</u>
1. K.e.K	26.
2. Nothing	27.
3.	28.
d-Lame	29.
	30
Mighania 1	31
- Levatia 1	32
Chitunan dar III	
	3/
·	
1	36
2	37
2	37
۶. <u></u>	30.
۲۰. <u> </u>	
۶۰	40.
7	41.
·	42.
)	43.
•••••••••••••••••••••••••••••••••••••••	44
· · · · · · · · · · · · · · · · · · ·	45
·	40
· · · · · · · · · · · · · · · · · · ·	4/.
	48
•	49
·	50

Sample number	
Location _ Ht (up) h	neeth
Date collected $7-5-95$	Date analyzed <u>12 - 9 - 95</u>
1. Alak	26. 0'- flame
2. Nigtonau	27. Tanypodinze HAT UMI
3. Hydropsycher	28. Othereladinae II
ur. S. 2/13	29. Hydropsyche AHY HII
s. Dy tic. dae	so. Dytse die 1
6. Tipula	31. Siz/.s M/1
2. Oligocharta	32. N. 9ton. 2 11
8. Pychopsiche	4 SH 33. Leve tra T
9. Tanypodinae	34. Chevma topsyche HATTLA HATTLA IM / 11/4
10. arch legaster	3 P 35. Finlophella 1 4 SC
W. Cheuna topsyche	36
12	37
13.	38
14	39
15	40
16	41
17	42
18	43.
19	44
20	45
21	46
22.	47
7 3	48

Stream Neswork CK Sample number NC 4 (d'ime) Location 1/2 X: He Nescopret Date collected 7-8-98 Date analyzed 12-2-98 Y. Nigronia 11 -26. Crtheoladinae 2. S.z. 1 - 27. Chiman 3 11 3. Hydropsyche un in 128. Brachy conthes 1 170 4. Rhyacophila 11 29. s. Cheving to psyche 11 ~ 30. 6. Blossosoma 1 31. 7. Isonychid III 32. -8. Levetta 11 ______ 33. 9. Bephenus III 34. 40. Dolophilodes 201 - 35. H. Actoneutia in 1 36. 12. Epeonus 37. 43. Stenonema spl with 38. 14. <u>S. Sp. 2</u> 39. 45. Paragnetina 11 40. 46. Pphilogemphus // IP 41. 17. C/2755cm, 2 1 - 42. 18. Ephemorella 43. 19. Hexatoma 44. 20. Stenelmis 45. 21. Phomoki B.J. 46. -22. 737-50 801 47. 47. 23. 3 - 2 - 48. _____ 48. _____ C24. Nom 1 17 / 49. 50. 25. Tan -----

Benthic Macroinvertebrate Enumeration

Stream Nescopect Creek	
Sample number NC7 (d. Liz.	un e)
Location Zen. th	
Date collected98	Date analyzed3-98
set la che la se	A.
1. <u>Mydro Essere</u>	26
2. Nigtonia	27
3. Hydropsychidzesp	28
4. J. 2/13 / -	29
5. Tanypudinze 1 -	- 30 in Kick petri dish
G. danthus 1 5P	31
7	32
8	33.
9	34.
10.	35.
II.	36.
12.	37.
13.	38
14	30
15	
16	40.
10	_ 41
1/.	42.
18	_ 43
19	44
20	45
21	46
22.	47
23	48
24	49
25	50

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Stream NEX: wat Check	
Sample number NOT (K.	ek
Location <u>cn. th</u>	
Date collected 7-1-65	Date analyzed
-it and I	26
$1 \cdot \frac{M}{M} = \frac{1}{2} \cdot $	20
- D. I C. I. J.	29
J. <u>Man and a des</u>	20
4. <u>1. p. 6.1- 351</u>	29
~ Backing	30
Deliaila	31
T. Dyficidae sp. 01	32.
8. <u>Allarta</u>	33.
S. Dub. raph. 2 6	<u>J C-34.</u>
10. <u>H-jdropsjoh. dre sp</u>	35
M. Orthue/3d. nae	36
12.	37
13.	38
14	39
15	40
16	41
17	42
18	43
19	44
20	45
21.	46
22.	47
23	48
24	49
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Sample number		
Location Blidge de	un Hazelfon STP	
Date collected 7-8 -	93 Date analyzed 12-9-98	-
•		
1. <u>Kck</u>	26	
2: Tanypodinze	27	
3. Cheuma topsych	28	<u></u>
4. <u>Physa</u>	29	
5. Dythe dae	30	
6. Simulium	31	
7	32.	
8. <u>d-fram</u>	33	
9. Tanpodinse UNA	17 HIT IHT HT 134.	
10 Ortheolad inac Htt	447144 1447 4477 11 A/5.	
H. Simulium HH	36	
12. Physiz HT	37	
13. Company II	38	
4. Dythe, dae 1	39	
s. Cherma topsyche	-111 HHT 1 40.	<u></u>
16. Tipula II	41	۱ ــــــــــــــــــــــــــــــــــــ
7. Elmidael	42	
8. Oligocharta 1	43	
5. Beyen, 2 1	<u>2</u> <i>P</i> 44	
0	45	
1	46	
2	47	
3	48	
4	49	
5	50	

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	NC	t <u>LIV</u>	<u>9</u> Jo	ddo	<u> 2N10</u>		× IV M
MGD	28.37	+ 1.4	1 31	. 25	37.53	2	40.78
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pHs.	\mathcal{O},\mathcal{O}	\mathcal{O} . (0 16	696.0	18773	.ε.	17655,5
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11/2	5.9	1.	3 /	0331	1167.3	2.	10781
Curro STB. M	$\left(\overset{(7)}{,}\right)$	77.12	To: 011				
F1. 4 - 546 - 3	XN 12	2 / 1	10.5	NC 6		BC 14	BC 15
V MOD	38.12	F	332	90.39	A	. 08	2.29
Fe	517.9	ہ۔ بر	2434	427.9	÷	0.5	3.57.1
ptls		18	52876	THEE	6 4 -	147	7.6
<i>1</i> 71	2157	5 3	#13.5 #13.5	JETT	Z#	1.1	4.3
Ĥ/K	645.4	4 🔄	966.7 96.7	2110.	8-	0.0	187.2
Min	1182.3	2 - 7	48-3	836.	St.	06	_ن_ن
	/	6.9 MUD Haz STP HI	K= 3682.9				, <u>-</u>
	BC 16	BC17	BE 18	REA	FMD	BC19	NC 7
MCD	1.18-	/ Q . I G	17.27	3.	/	3273	1.23 79
Ťe.	1.59	64.4	43.9	31.	3	63.6	645.6
rthe	3.9	0.0	1077.6	175	J. 1	38-21.6	15849.1
F#1	≺ <i>⊋.C</i>	20 3	948	231	4.5	3544	1961.6
A1K	96.4	2236.6	236.5	0.0	Ð	491.3	2891.7
Mos	2.6	12.6	58.2	11	7./	224.9	1005-11

1967 145.56 Fe. 754.1 PH 2505.93 HI 2505.93 HIK 3162.5 JD+RC 236 98 - PC. 4 96.0. 18-6 # 101.4 Mn 1335,1 85.9

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