



Field Id



G4NE0249 10052016

ENVIRONMENTAL PROTECTION
AG PROGRAM FIELD SHEET

June 2016

PAGE 1 OF

Data Qualified?

Yes / No

Thomas Cr
@ Lem Turner

storet ID



G4NE0249

JID: 2/61

Latitude: 30.51765

Date: 10/5/16

(mm/dd/yyyy)

County: Nassau RQ - 2016-10-02-28

ORG ID:

Longitude: 81.76549

(Decimal Degrees)

(Decimal Degrees)

Receiving Body of Water: Nassau River

Field ID:

Sampling Team Members						WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment				
B Davis						X	X	X			☒ Sample Container ☐ Carboy ☐ Dipper Equipment ID:	☐ Van Dorn ☐ Syringe ☐ Other	☐ Pole		
P O'Connor							X			X	Collection Method ☒ Wading ☐ From Shore ☐ Other (note below) Via Boat ☐ Canoe/Kayak ☐ Electric Motor ☐ Gasoline Motor				
Water Level: Dry / Low / Normal / High / Flooded Matrix: Fresh / Marine / DI Meter ID# Quanta Photos: Yes / No Tide Falling: Yes / No / NA															
Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)					
EST	1145	0.15	0.3	2.0	23.0	7.8	0.07	0.25	145	23.0					
CEN															
Biological Samples Collected: None HA SCI LVS RPS LVI Other															
Parameter Suite		Parameter Methods				Preservation		Acid Lot#		Expiration pH Check					
Preserved Nutrients		☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP				☒ Ice ☒ H2SO4				☒ <2					
Metals		☐ W-ICPMS ☐ W-ICP				☐ Ice ☐ HNO2				☐ <2					
Filtered Nutrients		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice									
Chlorophyll		☒ CHLSUITE-W				☒ Ice									
Physical/Aggregate (Fresh)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice									
Physical/Aggregate (Marine)		☐ Alkalinity / W-F / W-TSS / TURBIDITY				☐ Ice									
Macroinvertebrates		☐ MI-FW-QLDC				☐ Formalin									
Microbiology		☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR				☐ Ice									
Periphyton		☐ ALGAE-ID				☐ Ice									
Pesticides		☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R				☐ Ice									
		☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH				☐ Other									

Contains

1:1

Sulfuric Acid

SA-6209120

EXP: 07/27/17

Warning!

See SDS

Place

Sticker(s) Here

Notes:

RPS / LUS Done

Field Id



G4NE0249 10052016

Thomas Cr
@ Lem Turner

storet ID



G4NE0249

Signature:

B Davis B. Davis

Date:

10/5/16

Field Parameters Entered into LIMS:

(Initials/Date)

Field Parameters QC in LIMS:

(Initials/Date)

Date Migrated to STORET:

(Initials/Date)

Field Sheets Scanned/Saved:

(Initials/Date)

DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: <u>19070058</u> <u>G4NEC249</u>	DATE (MM/DD/YY): <u>10/05/16</u>	RECEIVING BODY OF WATER: <u>NASSAU River</u>
REMARKS: <u>TIDAL</u>	COUNTY: <u>NASSAU/DUVAL</u>	LOCATION: <u>Thomas Creek @ LEM TURNER</u>		FIELD ID/NAME:

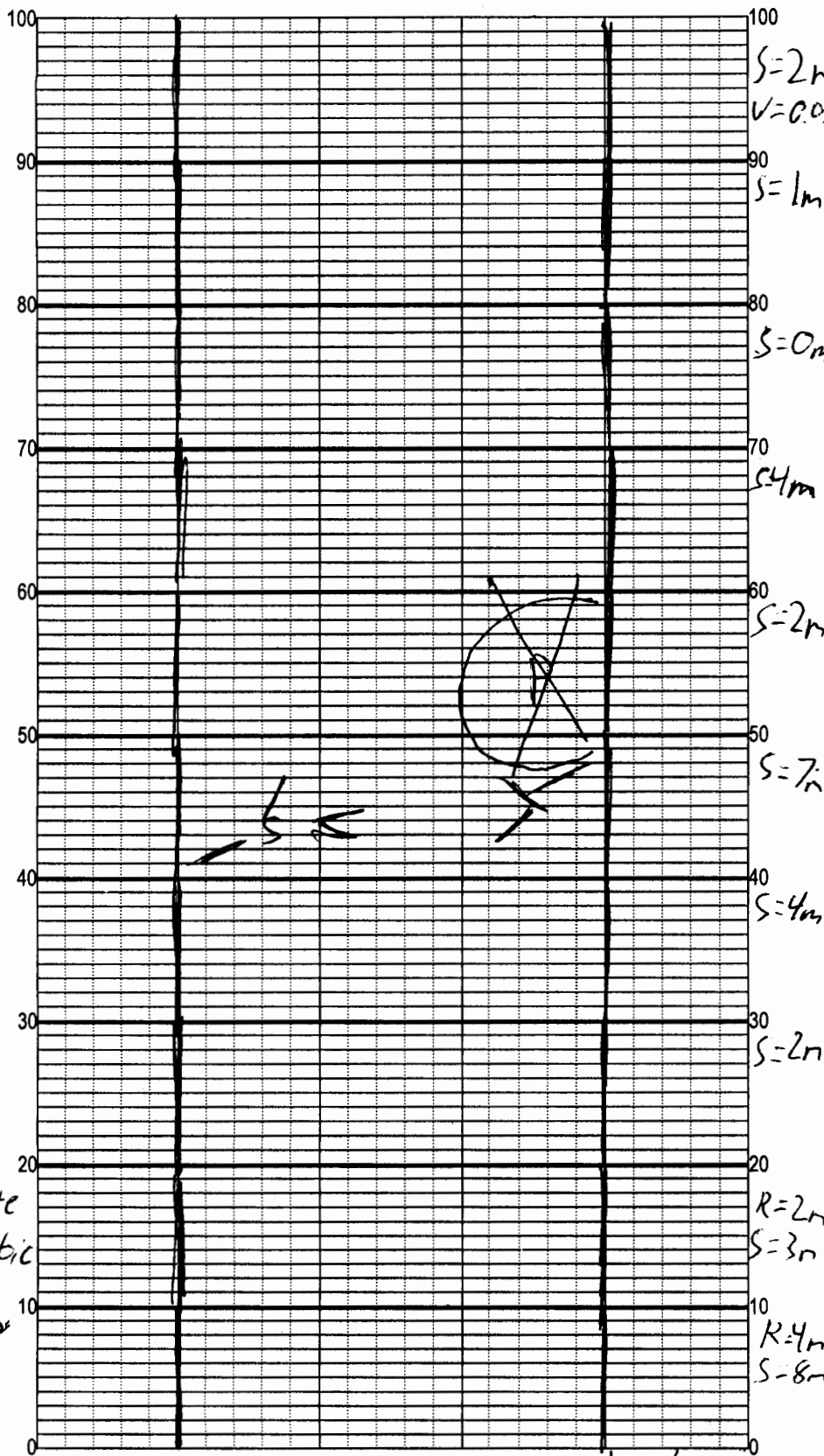
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags)	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered
Substrate Diversity <u>8</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>3</u>	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent 15 14 13 12 11	6% to 15% major productive habitat 10 9 8 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>6</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 18 17 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering <u>5</u> Primary Score <u>22</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered.	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.
Artificial Channelization <u>13</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank <u>8</u> Left Bank <u>8</u>	10 9	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation >12 to 18m	Width of vegetation 6 to 12 m. human activities close to system	Less than 6 m of buffer zone due to intensive human activities
Right Bank <u>10</u> Left Bank <u>10</u>	10 9	8 7 6	5 4	3 2 1
Riparian Zone Vegetation Quality	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance.	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).
Right Bank <u>9</u> Left Bank <u>9</u> Secondary Score <u>67</u>	10 9	8 7 6	5 4	3 2 1

89 TOTAL SCORE

Date: <u>10/05/16</u>	Analyst: <u>PO'Connor, B DAVIS</u>	Signature: <u>[Signature]</u>
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G4NE0249

DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Thomas Creek
 Location: @ LEM TURNER
 Date: 10/05/16
 Sampler: B. Davis, P. O'Connor

100 m: Latitude _____
 Longitude _____

0 m: Latitude _____
 Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☐ S Snags _____

☐ R Roots/undercut banks _____

☐ Leaf Packs (or mats) _____

☐ Aquatic Macrophytes _____

☐ _____

☐ _____

☐ P Pools total # observed = _____
 # range expected = _____

Average width 10 m

Average depth 1 m

Velocity measured at 0 meter mark.

WQ & chemistry taken at 100 meter mark.

Habitat Smothering:
 Note areas (on map) where sand or silt is smothering substrates, limiting habitability.

Bank Stability:
 Note areas (on map) with unstable, eroding banks.

Riparian Buffer Width:
 Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:

< 2 M of Macrophytes was observed while doing the LVS? YES or NO

3% Snags
 < 1% Roots

S = 3.9m/1000'

R = 6m/1000'

DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID 21 FLA 19020058 LATITUDE 30 31 05.8
 COUNTY NASSAU / DUVAL STORET # H4564NE0249 LONGITUDE 81 45 56.4
 DATE 10/05/16 TIME 1145 SAMPLING AGENCY NE ROC
 SITE NAME Thomas Creek @ LEM TURNER RD
 FIELD ID/NAME _____ RECEIVING BODY OF WATER NASSAU RIVER

RIPARIAN ZONE / STREAM FEATURES

Meter ID: DEP# 143734

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>60</u> Silviculture <u>30</u> Field/Pasture <u>5</u> Agricultural <u>5</u> Residential <u>5</u> Commercial <u>5</u> Industry <u>5</u> Other (Specify) <u>5</u>								Landscape Development Intensity Index (LDI) <u> </u>	
Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy						Typical Width (m) <u>10</u> Depth (m)/Velocity (m/sec) Transect <u> </u> m/s <u> </u> m/s <u> </u> m/s <u> </u> m deep <u>0.5</u> m deep <u> </u> m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>>18</u> Right Bank: <u>>18</u>				Hydrologic Modification Score (per FT 3101) <u> </u>					
High Water Mark: <u>0.9</u> + <u>0.3</u> = <u>1.2</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No					
Artificially ☐ No ☒ Mostly recovered, more sinuous Channelized: ☐ Some recovery ☐ Recent, severe				Canopy Cover % ☐ Open ☐ Lightly Shaded (11-45%) ☒ Heavily Shaded ☐ Moderate Shaded (46-80%)					

SEDIMENT / SUBSTRATE

Sediment Oils ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse			Sediment Odors ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☒ Anaerobic ☐ Other (Specify): _____			Smothering of Substrates Sand Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐ Silt Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐ Algae Smothering: None ☒ Slight ☐ Moderate ☐ Severe ☐		
SUBSTRATE TYPE Assessment Tool: ☐ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon			WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u>0.25</u> Mid: <u>0.15</u> <u>23.0</u> <u>7.8</u> <u>2.0</u> <u>23.0</u> <u>145</u> <u>0.07</u> <u> </u> Bottom: <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u>3.0</u>			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) <u>TIDAL</u>		
Woody Debris (Snags) <u>3</u> Undercut Banks / Roots <u>41</u> Leaf Packs or Mat <u> </u> Aquatic Vegetation <u> </u> Rock or Shell Rubble <u> </u> Sand <u> </u> Mud / Muck / Silt <u>96+</u> Other <u> </u> Other <u> </u>			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>6209120</u> Exp: <u>7/27/17</u>			Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐ Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐		
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☒ ☐ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☒ ☐ ☐ Iron/Sulfur Bacteria: ☐ ☐ ☒ ☐			AMBIENT FIELD CONDITIONS / NOTES: <u>OVERCAST PENDING</u> <u>HURRICANE "MATHEW"</u> Hydrologic Disturbance Scoring ☐ 1-2 ☒ 3-4 ☐ 5-6 ☐ 7-8 ☐ 9-10 ☐ The antecedent hydrologic conditions have been met to my best knowledge.			SAMPLING TEAM <u>B DAVIS, P. O'Conner</u> SIGNATURE <u>Totken O'Conner</u>		

19020046

G4NE0249

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

 Site: Thomas Creek @ Glen Turner County: _____ Date: 10/5/16 Investigators: Pat O'Connor / Brian Davis

STORET Station Number: _____

Transect (m)	Point 1=right	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect (m)	Point 1=right	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N			60	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		96		5	N		96
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
10	1	N			70	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		96		5	N		96
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
20	1	N			80	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		90		5	N		72
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
30	1	X			90	1	N		
	2	X				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		82		5	N		82
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
40	1	X			100	1	N		
	2	X				2	N		
	3	X				3	N		
	4	X				4	N		
	5	N		60		5	N		92
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
50	1	X			50	1	X		
	2	X				2	X		
	3	X				3	X		
	4	X				4	X		
	5	N		96		5	N		
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		

Secchi depth

Estimated?

points ranked 4-6

total points assessed

% points ranked 4-6

Check accompanying data collected at same site/date.

Algal mat sample

Linear Veg Survey

Habitat Assessment

SCI/Biorecon

Water sample

RQ-

Algal Thickness Rank

N	rough, no algae, slimy, algae up to 1mm
3	>1mm - 6mm
4	>6mm - 20mm
5	>20mm - 10 cm
6	>10 cm

Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached.

Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.

Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.

Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.

19020058
G4NECZ99

Comments: Tidal Water Body Normal Water Level Over cast 62m² Aquatic Veg

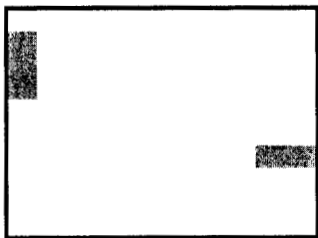
HERBACEOUS SPECIES	Meter Mark									Specimen collected (check)	HERBACEOUS SPECIES	Meter Mark									Specimen collected (check)																				
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90			90-100	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80		80-90	90-100																		

[illegible]

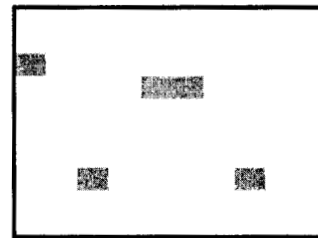
$\angle Zm^2$ Aquatic Vase

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

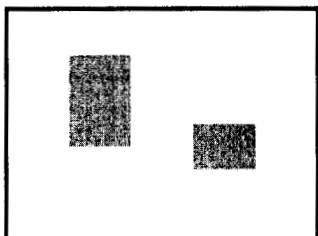
5% Macrophyte Coverage



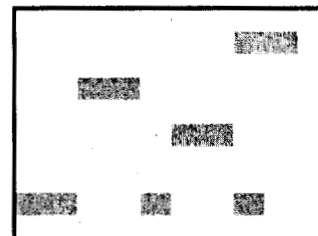
5% Macrophyte Coverage



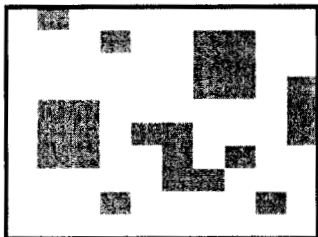
10% Macrophyte Coverage



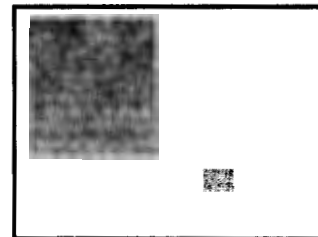
10% Macrophyte Coverage



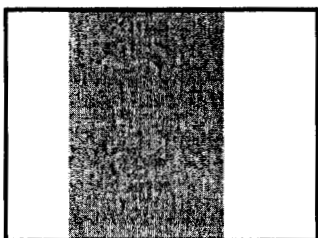
25% Macrophyte Coverage



25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage

