



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2017

PAGE 1 OF

Data Qualified?

Yes / No

STORET Station Name: C-24 Canal @ PSL Blvd

Date: 2/20/2017
(mm/dd/yyyy)

STORET Station ID: G2SE0011

WBID: 3197

Latitude: 27.265000°

(Decimal Degrees)

County: St. Lucie RQ - 2017-02-20-09

ORG ID: 21FLWPB

Longitude: -80.372222°

(Decimal Degrees)

Receiving Body of Water: Street Lucie River

Field ID: G2SE0011

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
Jordan Skaggs									☒ Sample Container	☐ Van Dorn	☐ Pole	
Matt Scwell									☐ Carboy	☐ Syringe		
									☐ Dipper	☐ Other		
									Equipment ID			
									Collection Method			
									☐ Wading	Via Boat		
									☒ From Shore	☐ Canoe/Kayak		
									☐ Other (note below)	☐ Electric Motor		
										☐ Gasoline Motor		

Water Level: Dry / Pooled / Low / <u>Normal</u> / High / Flooded				Matrix: <u>Fresh</u> / Marine / DI						
Meter ID# <u>Lil Gus</u>				Photos: Yes / <u>No</u>						
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°)
<u>EST</u>	<u>1050</u>	<u>0.3</u>	<u>5.5</u>	<u>7.7</u>	<u>89</u>	<u>8.1</u>	<u>0.53</u>	<u>1.0</u>	<u>1069</u>	<u>22.7</u>
<u>CEN</u>		<u>5.0</u>		<u>2.6</u>	<u>29</u>	<u>7.6</u>	<u>0.54</u>		<u>1077</u>	<u>20.7</u>

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other					
SBIO ID Numbers: SBIO-ID: <u>71665</u> RPS-ID: <u>5706</u> Macrophyte-ID: LIMS#: <u>121663 DL</u>					
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	<u>621910</u>		☐ <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-CH-IC / W-COLOR / W-SO4-IC / W-TDS	☐ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Periphyton	☐ ALGAE-ID	☐ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Entero ☐ PCR-FILTER	☐ Ice			
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other			

Notes: <u>MAT V</u>	Place Label Here (If Available)
Signature: _____	Date: _____

Field Parameters Entered into LIMS: 3/16/17
(Initials/Date)

Field Parameters QC in LIMS: DL 6/14/17
(Initials/Date)

Date Migrated to STORET: 121663

Field Sheets Scanned/Saved: DL 6/14/17

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

SAMPLE ID G2SE0011 ORG ID 21FLWBPB LATITUDE 27.265000
 COUNTY St. Lucie STORET # G2SE0011 LONGITUDE -80.372222
 DATE 2/20/17 TIME 1050 SAMPLING AGENCY 21FLWBPB
 SITE NAME C-24 Canal @ PSL Blvd
 FIELD ID/NAME G2SE0011 RECEIVING BODY OF WATER St. Lucie River / bhar

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☒ Commercial ☒ Industry ☐ Other (Specify) ☐								Landscape Development Intensity Index (LDI) ☐	
Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☒ Moderate ☒ Heavy								Typical Width (m) Depth (m)/Velocity (m/sec) Transect ☐ m wide <u>50</u> m wide ☐ m/s <u>0.0</u> m/s ☐ m/s ☐ m deep <u>5.5</u> m deep ☐ m deep	
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>0</u> Right Bank: <u>0</u>				Hydrologic Modification Score (per FT 3101) ☐					
High Water Mark: <u>0.9</u> + <u>5.5</u> = <u>6.0</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 % Coverage INVERT # Times Sampled PERI # Times Sampled Woody Debris (Snags) ☐ ☐ ☐ Undercut Banks / Roots ☐ ☐ ☐ Leaf Packs or Mat ☐ ☐ ☐ Aquatic Vegetation ☐ ☐ ☐ Rock or Shell Rubble.. <u>2</u> ☐ ☐ Sand..... ☐ ☐ ☐ Mud / Muck / Silt ☐ ☐ ☐ Other ☐ ☐ ☐ Other ☐ ☐ ☐			WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: <u>0.3</u> <u>22.7</u> <u>8.1</u> <u>77</u> <u>89</u> <u>1069</u> <u>0.53</u> <u>20</u> Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ VOB Bottom: <u>5.0</u> <u>20.7</u> <u>9.6</u> <u>2.6</u> <u>29</u> <u>0.77</u> <u>0.54</u> ☐ TOTAL DEPTH <u>5.5</u> Meter ID: <u>1.7 GUS</u>					
			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐		
			Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☐ Yes ☐ No Lot Number: <u>629103</u> Exp: <u>7/17</u>			Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐		
			Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☒ No Lot Number: _____ Exp: _____			Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐		
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☐ ☐ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☒ ☐ ☐ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐			System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☒ <u>canal</u>					
SAMPLING TEAM <u>Sewell / Skarls</u>			SIGNATURE: <u>Sevel</u>			DATE: <u>2/20/17</u>		
AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.								

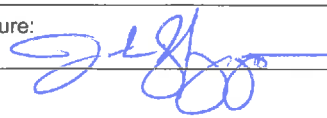
DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: <u>21 FLWPRB</u>		STORET STATION NUMBER: <u>G2SE0011</u>	DATE (MM/DD/YY): <u>02/20/17</u>	RECEIVING BODY OF WATER: <u>St. Lucie</u>
REMARKS:	COUNTY: <u>St. Lucie</u> Martin	LOCATION: <u>C-24 Canal</u>	FIELD ID/NAME: <u>G2SE0011</u>	

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>2</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 <u>2</u> 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 <u>3</u> 2 1
Water Velocity <u>1</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 <u>1</u>
Habitat Smothering <u>11</u> ----- Primary Score <u>17</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 <u>11</u>	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>1</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 <u>1</u>
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>10</u> Left Bank <u>10</u>	<u>10</u> 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>1</u> Left Bank <u>1</u>	10 9	8 7 6	5 4	3 2 <u>1</u>
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>1</u> Left Bank <u>1</u> ----- Secondary Score <u>25</u>	10 9	8 7 6	5 4	3 2 <u>1</u>

42

TOTAL SCORE

Date: <u>02/20/2017</u>	Analyst: <u>Jordan Skoggs</u>	Signature: 
-------------------------	-------------------------------	--

7766 S

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: C-24 canal @ PS County: Date: 2/20/17 Investigators: Staggas/Seneel

Transect (m) Point 1=right 9=left Algal Thickness Rank (N-6, X) Estimated Canopy Cover STORET Station Number: 6250011

0	1	N	N		60	1	N	N	
	2					2			
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9	N	N			9	N	N	

Secchi depth 1.0
Estimated?

points ranked 4-6 0
total points assessed 99
% points ranked 4-6 0

Check accompanying data collected at same site/date.

Algal mat sample
Linear Veg Survey ✓
Habitat Assessment ✓
SCI/Biorecon
Water sample ✓

RQ- 02-20-09

10	1	N	X		70	1	N	X	
	2					2			
	3					3			
	4			0		4			0
	5					5			
	6					6			
	7					7			
	8					8			
	9	N	N			9	N	N	

20	1	N	X		80	1	N	X	
	2					2			
	3					3			
	4			0		4			0
	5					5			
	6					6			
	7					7			
	8					8			
	9	N	N			9	N	N	

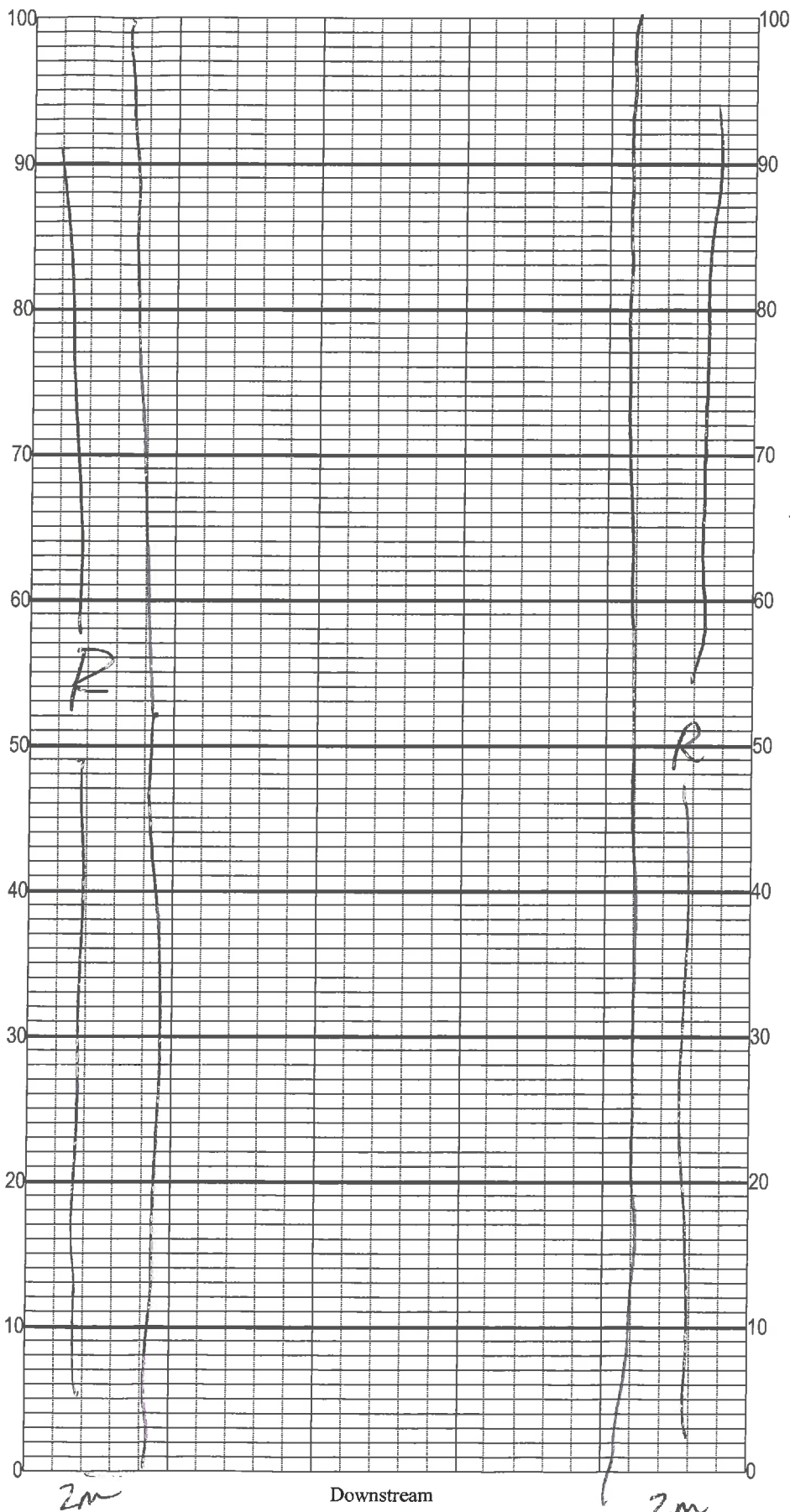
Algal Thickness Rank	
N	rough, no algae, slimy, algae up to 1mm
3	>1mm - 6mm
4	>6mm - 20mm
5	>20mm - 10 cm
6	>10 cm

30	1	N	X		90	1	N	X	
	2					2			
	3					3			
	4			0		4			0
	5					5			
	6					6			
	7					7			
	8					8			
	9	N	N			9	N	N	

40	1	N	X		100	1	N	X	
	2					2			
	3					3			
	4			0		4			0
	5					5			
	6					6			
	7					7			
	8					8			
	9	N	N			9	N	N	

50	1	N	X			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.			
	2					Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.			
	3					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.			
	4			0		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%.			
	5								
	6								
	7								
	8								
	9	N	N						

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



Length of grid represents 100 m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).

G25E0011

Location: C-24 canal

Date: 02/20/2017

Sampler: _____

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☐ Snags _____

☐ Roots/undercut banks _____

☐ Leaf Packs (or mats) _____

☐ Aquatic Macrophytes _____

☒ Rock _____

☐ _____

☐ Pools total # observed = _____
range expected = _____

Average width 50 m

Average depth 5.5 m

Velocity measured at 0 meter mark.

WQ & chemistry taken at 0 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:

20m rock / side

Waterbody: C-24	Date: 7/27/17	County: St. Louis	Storet Number:
Analyst: Senf	Signature: [Signature]		
Comments: veg mapped By SFUND			

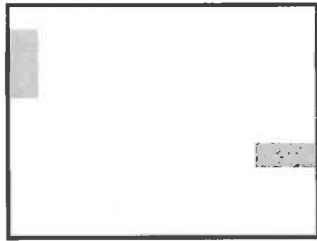
Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m² of taxa present). Note in the boxes below if no dominant are selected, and note total macrophyte abundance rank for each section. Only the most common taxa are listed, so use blank spaces for additional taxa names.

[illegible]

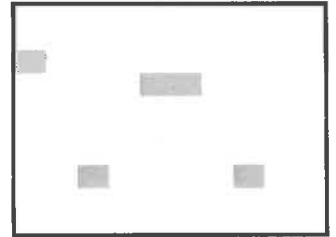
FDEP FORM FD 9000-32 LINEAR VEGETATION SURVEY FIELD SHEET

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

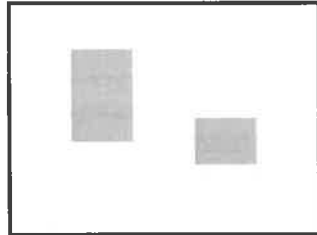
5% Macrophyte Coverage



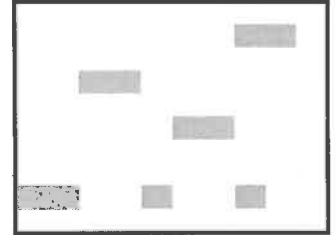
5% Macrophyte Coverage



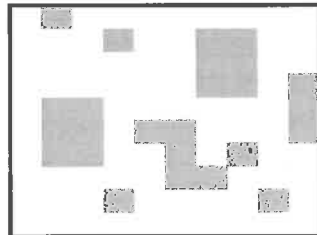
10% Macrophyte Coverage



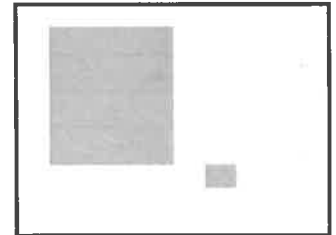
10% Macrophyte Coverage



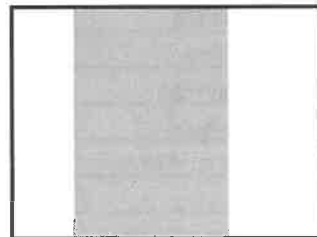
25% Macrophyte Coverage



25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage

