FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified? Yes / No

WIN Station Name: Grassy Creek @ CR 621 E **Date:** 02/07/2019 (mm/dd/yyyy)

WIN/ Field ID: G4SD0165 **WBID:** 1932 **Latitude:** 27.30346 (Decimal Degrees)

County: Hendry **ORG ID:** 21FLFTM **Longitude:** -81.34731 (Decimal Degrees)

Receiving Body of Water: Lake Huntley **RQ-2019-** 02-04-78

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Steve Cofone	X	X	X		
Gary Snorek				X	X

Sampling Equipment
- [x] Sample Container [ ] Van Dorn [ ] Pole
- [ ] Carboy [x] Syringe
- [ ] Dipper [ ] Other
- Depth Measured with Secchi
- Equipment ID Decon Gear

Collection Method
- [x] Wading [ ] Canoe/Kayak
- [ ] From Shore [ ] Electric Motor
- [ ] Other [ ] Gasoline Motor

Water Level: Dry/ Pooled/ Low / (Normal) / High / Flooded **Meter ID#** Keys **Matrix:** (Fresh) / Marine / DI

Photos: Yes (No) **Flow:** No Flow / Interstitial / (Flowing) / NA **Tide:** Rising/ Falling/ Slack/ (NA) **Tide Times:** High Low

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPTh)	Sp COND (µmhos/cm)	Temp. (C°)
(EST)	1200	0.3	0.15	0.3	9.49	105.5	6.60	0.07	155	22.12
CEN										

Biological Samples Collected: None (HA) SCI (RPS) Algae ID (LVS) LVI Other:

SBIO ID Numbers: SBIO-ID: HA-ID: RPS-ID: Macrophyte-ID: LIMS#:

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	[x] W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	[x] Ice [x] H_2SO_4	A827405Φ	10/1/19	[x] <2
Metals	[ ] W-ICPMS [ ] W-ICP	[ ] Ice [ ] HNO_3			[ ] <2
Filtered Nutrients	[x] W-PO4-F [x] Field Filtered 0.45 µm Filter	[x] Ice			
Chlorophyll	[x] CHLSUITE-W	[x] Ice			
Physical/Aggregate (Fresh)	[x] Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS	[x] Ice			
Physical/Aggregate (Marine)	[ ] Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	[ ] Ice			
Macroinvertebrates	[ ] MI-FW-QLDC	[ ] Formalin			
Periphyton	[ ] ALGAE-ID	[ ] Ice			
Microbiology	[ ] E Coli [ ] F Coli [ ] Enterococci	[ ] Ice			
Molecular	[ ] PCR-FILTER [ ] PCR-BacR [ ] PCR-GULL2 [ ] PCR-HF183 [ ] PCR-DG3 [ ] PCR-GFD	[ ] Ice			
Tracers	[ ] W-E8321-DI [ ] W-E8321-MS	[ ] Ice			
Pesticides	[ ] W-PSNP-TQ [ ] W-CT-CL-R [ ] W-E8321-DI [ ] W-PCL-SQ-R [ ] WE8321-MS [ ] W-CARB-AA	[ ] Ice			
Phytoplankton	[ ] DTY-QN-C [ ] PKD-QN-C	[ ] Ice			

Place Preservative Sticker(s) Here (If Available)

Notes:

Field ID/WIN ID G4SD0165

Location Grassy Creek @CR621E

Signature: [signature] **Date:** 2/7/19

LIMS EVENT ID: _____ WIN Import ID: _____

Enter Field Parameters, Verify Station ID In LIMS DMT: _____ (Initials/Date) QC Station ID, Field Parameters In LIMS DMT: _____ (Initials/Date)

Scan/Save Field Sheets _____ (Initials/Date) Migrate Data to WIN: _____ (Initials/Date) Verify Data In WIN: _____ (Initials/Date)

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

SAMPLE ID 2019-2-4-78 ORG ID _____ LATITUDE 27.30346
COUNTY HIGHLANDS STORET # G4SD0165 LONGITUDE -81.34731
DATE 2/7/19 TIME 1200 SAMPLING AGENCY FTW SWACC / 8052
SITE NAME GRASSY CREEK
FIELD ID/NAME GRASSY CREEK RECEIVING BODY OF WATER LAKE HUNTLEY

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)
X							

Landscape Development Intensity Index (LDI)

Local Watershed Erosion (select one) : ☐ None ☑ Slight ☐ Moderate ☐ Heavy
Local Watershed NPS Pollution : ☐ No evidence ☑ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side
Left Bank : _____ Right Bank : _____

Hydrologic Modification Score (per FT 3101) _____

Typical Width (m) Depth (m)/Velocity (m/sec) Transect
6 m wide

0.25 m/s	_____ m/s	_____ m/s
0.4 m deep	_____ m deep	_____ m deep

High Water Mark: _____ (m) + _____ (above present water level) = _____ (present depth) (above bed)

Artificially Impounded ☐ Yes ☐ No

Artificially Channelized : ☐ NO ☐ Mostly recovered, more sinuous ☒ 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

	None	Slight	Moderate	Severe
Sand Smothering:	☐	☐	☑	☐
Silt Smothering:	☐	☐	☑	☐
Algae Smothering:	☑	☐	☐	☐

SUBSTRATE TYPE
Assessment Tool: ☐ SCI ☒ RPS ☑ LVS ☐ LCI ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	0.4		
Undercut Banks / Roots	0.4		
Leaf Packs or Mat	0		
Aquatic Vegetation	1.1		
Rock or Shell Rubble..	4		
Sand.....	30		
Mud / Muck / Silt	20		
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 :	0.3	22.12	6.64	9.40	105.5	155	0.07	0.3
Mid:								☒ VOB
Bottom								TOTAL DEPTH

Meter ID: KEYS — 0.3

Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐

Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐

Water Sample Taken? ☒ Yes ☐ No
Sample Preserved? ☒ Yes ☐ No
Lot Number: SA8274050 Exp: 10/19

Color Tannic ☐ Green (Algae) ☐ Clear ☑ Other (Specify) ☐

Algae Sample Taken? ☐ Yes ☒ No
Sample Preserved? ☐ Yes ☐ No
Lot Number: N/A 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) ☐ _____

AMBIENT FIELD CONDITIONS / N

☒ The antecedent hydrologic cond

Field ID/WIN ID G4SD0165
Location Grassy Creek @CR621E

SAMPLING TEAM STAFF COFOR / GARY SWARTZ
SIGNATURE : _____
DATE : 2/7/19

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Grassy Creek | County: Highlands | Date: 2/7/19 | Investigators: Steve Catone, Gary Sacks

STORET Station Number: G4SD0165

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N=6, X)	Estimated	Canopy Cover
CANOPY MAPS	1	N		
	2			
	3			
0	4			
	5			84
	6			
	7			
	8			
	9			
	1	N		
	2			
	3			
	4			
10	5			76
	6			
	7			
	8			
	9			
	1	N		
	2			
	3			
	4			
20	5			75
	6			
	7			
	8			
	9			
	1	N		
	2			
	3			
	4			
30	5			85
	6			
	7			
	8			
	9			
	1	N		
	2			
	3			
	4			
40	5			54
	6			
	7			
	8			
	9			
	1	N		
	2			
	3			
	4			
50	5			86
	6			
	7			
	8			
	9			

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N=6, X)	Estimated	Canopy Cover
	1	N		
	2			
	3			
	4			
60	5			70
	6			
	7			
	8			
	9			
	1	N		
	2			
	3			
	4			
70	5			65
	6			
	7			
	8			
	9			
	1	N		
	2			
	3			
	4			
80	5			58
	6			
	7			
	8			
	9			
	1	N		
	2			
	3			
	4			
90	5			20
	6			
	7			
	8			
	9			
	1	N		
	2			
	3			
	4			
100	5			17
	6			
	7			
	8			
	9			

Secchi depth	.3
Estimated?	N

# 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- 2019-02-01-78

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%.

Field ID/WIN ID

G4SD0165

62-160.800, F.A.C.

Location

Grassy Creek @CR621E

Revision Date: January 2017

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

Waterbody: Lake Huntley | Date: 2/7/17 | County: Highlands | Storet Number: G4SD0165

Analyst: Gary Snarski | Signature:

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if $1m^2$ 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.

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Alternanthera philoxeroides											
Bacopa caroliniana											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Ceratophyllum demersum											
Chara											
Cicuta maculata											
Cladium jamaicense											
Colocasia esculenta											
Commelina diffusa											
Commelina virginica											
Crinum americanum											
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous)											
Hydrilla verticillata											
Hydrocotle											
Hygrophila polysperma											
Hymenocallis											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna											
Limnophila sessiflora											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana											
Ludwigia repens											
Luziola fluitans											
If no Dominant or Co-Dominant were selected, indicate with "X"											
Indicate % cover macrophytes per section											
0-5% Macrophyte Coverage											
>5 and ≤10% Macrophyte Coverage											
>10 and ≤25% Macrophyte Coverage											
>25 and ≤50% Macrophyte Coverage											
> 50% Macrophyte Coverage											

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Micranthemum glomeratum											
Micranthemum umbrosum											
Myriophyllum aquaticum											
Najas guadelupensis											
Nuphar luteum											
Orontium aquaticum											
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Pistia stratioides											
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontedaria cordata											
Potamogeton illinoensis											
Ruellia simplex											
Sacciolepis striata											
Sagittaria kurziana											
Sagittaria lancifolia											
Sagittaria latifolia											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Sparganium americanum											
Typha											
Vallisneria americana											
Zizania aquatica											

Field ID/WIN ID G4SD0165

Location Grassy Creek @CR621E

62-160.800, F.A.C.

Revision Date:January 2017

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

SAMPLING AGENCY:	STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
SOROC / 8052	G4SD0165	02/07/19	LAKE HUNTLEY
REMARKS:	**COUNTY:**	**LOCATION:**	**FIELD ID/NAME:**
	HIGHLANDS	GRASSY CREEK	GRASSY CREEK

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 12	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 **(12)** 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 3	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 15	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 14 Primary Score 44	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 **Artificial Channelization** 11	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. 20 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered. 15 14 13 12 **(11)**	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 8 7 6	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. 5 4 3 2 1
Bank Stability (Right Bank) 4 (Left Bank) 6	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful to top of bank. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 **(6)**	Only meets 1 of the 3 requirements for optimal bank stability. 5 **[4]**	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width (Right Bank) 9 (Left Bank) 3	Width of vegetation greater than 18 m 10 **[9]**	Width of vegetation >12 to 18m 8 7 6	Width of vegetation 6 to 12 m. human activities close to system 5 4	Less than 6 m of buffer zone due to intensive human activities **(3)** 2 1
Riparian Zone Vegetation Quality (Right Bank) 5 (Left Bank) 3 Secondary Score 41	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. 10 9	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. 8 7 6	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. **[5]** 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). **(3)** 2 1

85 **TOTAL SCORE**

Date:	Analyst:	Signature:
2/7/19	STEVE COFOR	

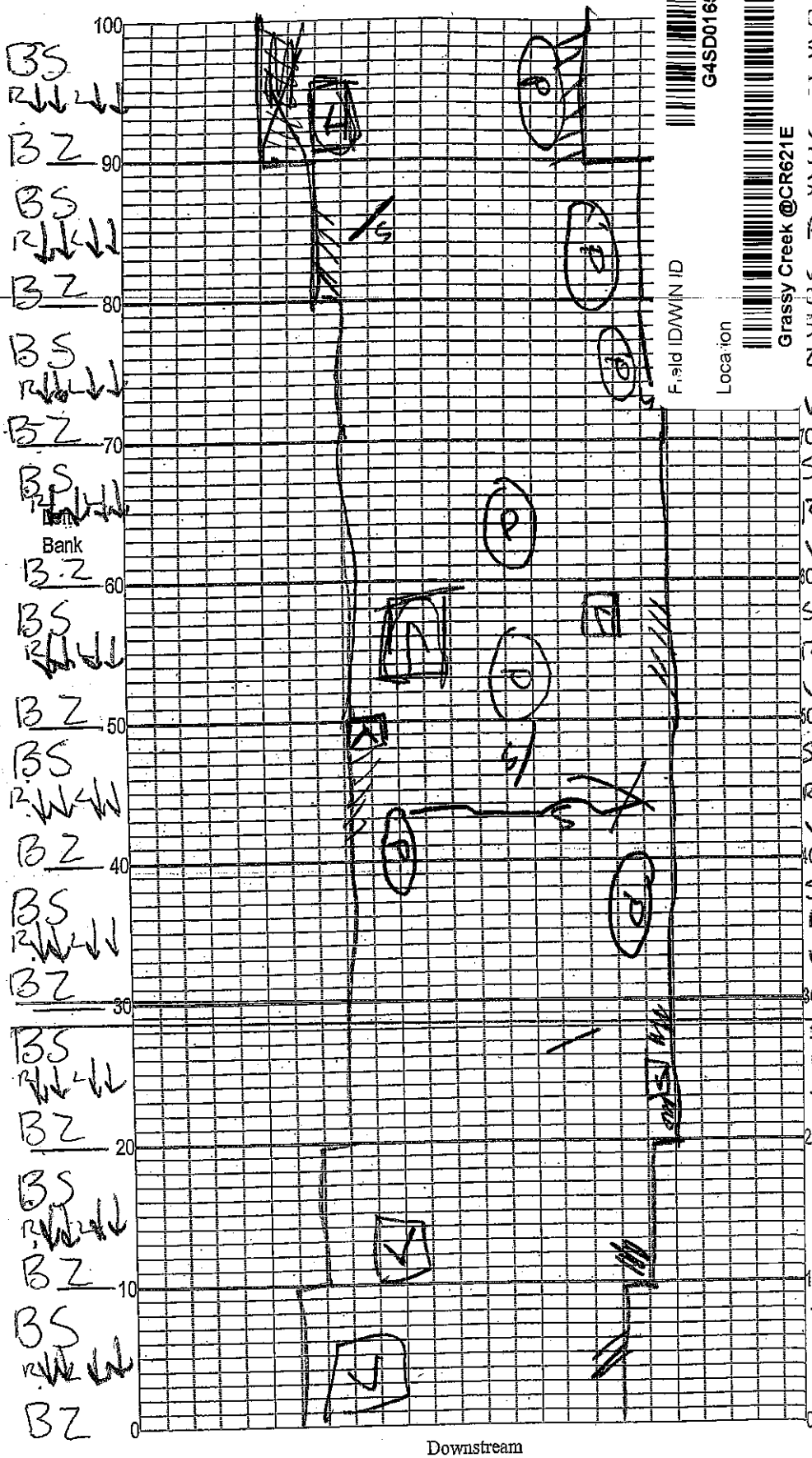
Field ID/WIN ID

Location

62-160.800, F.A.C.

Revision Date: March 1, 2014

DEP Form FD 9000-4 Stream/River Habitat Assessm



G4SD0165

Field ID/WIN ID

Grassy Creek @CR621E

Location

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

Location: GRASSY CREEK

Date: 2/7/19

Sampler: STAN COFONE

100 m: Latitude	27.302783
Longitude	-81.34664
0 m: Latitude	27.303340
Longitude	-81.347176

Substrates: Code key, draw proportionate habitat abundance. %

S	Snags	.4
R	Roots/undercut banks	.3
L	Leaf Packs (or mats)	SMOTHERED
V	Aquatic Macrophytes	1.1
HS	HABITAT SMOTH	→
BS	BANK STABILITY	↓
P	Pools	total # observed = 7; # range expected = 3-4

Average width 6 m

Average depth .4 m

Velocity measured at 10 meter mark.

WQ & chemistry taken at 10 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: VELOCITY .5 m/s

SNAGS - 2.0 m^2

ROOTS/UND - 2.1 m^2

VEG - 6.7 m^2

62-160.800, F.A.C

Revision Date: January 2017

POOLS - 1 S W 1 1 S 1 1

S = SMOTHERED

W = WEAK

6000M TOTAL