



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

June 2016

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Data Qualified?

Yes / No

STORET Station Name: GITLHR0035 Suwannee River @ Elbowville Date: 07/26/2016

STORET Station ID: 3341 WBID: 3341 Latitude: 30°23'28.615

County: Suwannee RQ: 2016-07-25-49 ORG ID: 21FGLHR Longitude: -83°10'08.142

Receiving Body of Water: Gulf of Mexico Field ID: 21FGLHR GITLHR0035

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Chris Green									
Colby Marshall									
Jen Wood									

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ 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 / Low / Normal / High / Flooded Matrix: Fresh / Marine / DI

Meter ID# 600 VLM #12 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	1030	0.3	1.1	3.7	45	7.2	0.14	1.1(5)	294	24.8
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	<u>SA-73488</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-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			

Notes:

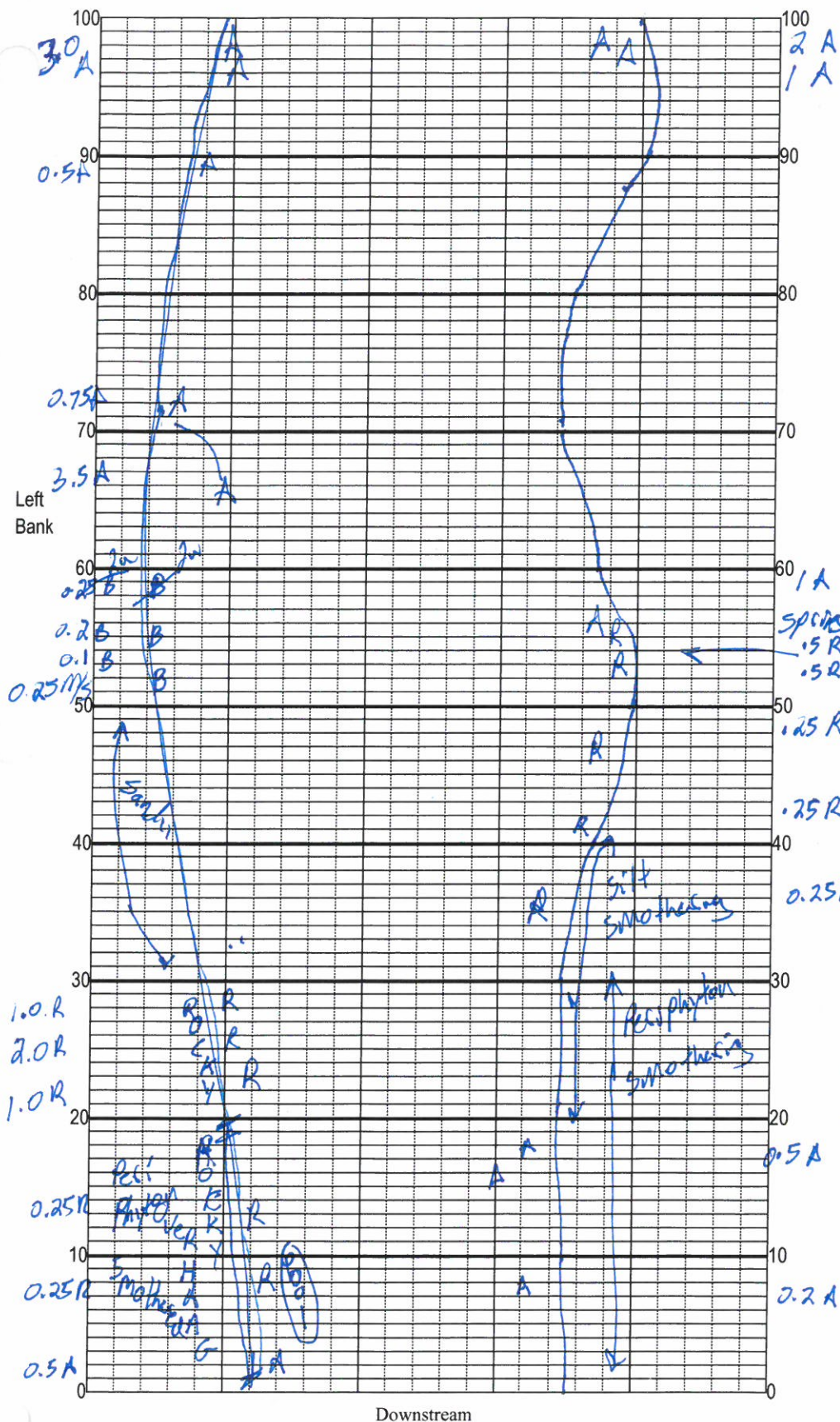
Place Label Here (If Available)

Signature: Ch-3 - [Signature] Date: 7/26/2016

Field Parameters Entered into LIMS: [Signature] 7/28/16 Field Parameters QC in LIMS: [Signature] 8/15/16

Date Migrated to STORET: [Signature] 8/29/2016 Field Sheets Scanned/Saved: [Signature]

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).

Location: GITHAR0035
SUNNYSIDE R @ ELKVILLE
Date: 2/26/16
Sampler: Jon Woods / C. Madala

100 m: Latitude	_____
Longitude	_____
0 m: Latitude	_____
Longitude	_____
Substrates: Code key, draw proportionate habitat abundance. %	
☒ A	Snags <u>0.19</u>
☒ B	Roots/undercut banks <u>0.0043</u>
☐	Leaf Packs (or mats) _____
☐	Aquatic Macrophytes _____
☒ R	<u>Rock</u> <u>0.002</u>
☐	_____
☐	Pools total # observed = _____ # range expected = _____
Average width <u>70</u> m	
Average depth _____ m	
Velocity measured at <u>50</u> meter mark.	
WQ & chemistry taken at <u>50</u> 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:

12.95 A
0.3 B
5.75 R

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

SAMPLE ID _____ ORG ID 8034 LATITUDE 30.39128
 COUNTY Swain STORET # GILHR0035 LONGITUDE -83.16893
 DATE 7/26/16 TIME 1030 SAMPLING AGENCY 8034
 SITE NAME GILHR0035
 FIELD ID/NAME Swain River @ Ellaville RECEIVING BODY OF WATER Gulf of Mexico

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>60</u> Silviculture <u>20</u> Field/Pasture <u>10</u> Agricultural <u>10</u> Residential <u>10</u> Commercial <u>10</u> Industry <u>10</u> Other (Specify) <u>10</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) Depth (m)/Velocity (m/sec) Transect <u>70</u> m wide <u>0.25</u> m/s <u>0.25</u> m/s <u>0.25</u> m/s <u>0.5</u> m deep <u>1.1</u> m deep <u>0.5</u> m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>718</u> Right Bank: <u>716</u>				Hydrologic Modification Score (per FT 3101) <u> </u>					
High Water Mark: <u>4</u> + <u>1.1</u> = <u>5.1</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No					
Artificially Channelized: ☒ No ☐ Some recovery ☐ Mostly recovered, more sinuous ☐ 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): <u> </u>	Smothering of Substrates Sand Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐ Silt Smothering: None ☐ Slight ☐ Moderate ☒ Severe ☐ Algae Smothering: None ☐ Slight ☐ Moderate ☒ Severe ☐
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SUBSTRATE TYPE

Assessment Tool: ☒ SCI ☒ RPS ☒ LVS

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	<u>0.19</u>	<u>7</u>	
Undercut Banks / Roots	<u>0.0043</u>		
Leaf Packs or Mat			
Aquatic Vegetation			
Rock or Shell Rubble	<u>0.082</u>	<u>7</u>	
Sand	<u>99.7</u>	<u>6</u>	
Mud / Muck / Silt			
Other			
Other			

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MGL)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top	<u>15.3</u>	<u>24.6</u>	<u>7.2</u>	<u>3.7</u>	<u>45</u>	<u>294</u>	<u>0.14</u>	<u>1.1</u>
Mid								☒ VOB
Bottom								
Meter ID:	<u>600XLM #1</u>							

Water Odors Normal ☒ Petroleum ☐
 Sewage ☐ Chemical ☐ Other ☐
 Water Sample Taken? ☒ Yes ☐ No
 Sample Preserved? ☒ Yes ☐ No
 Lot Number: 73486 Exp:
 Algae Sample Taken? ☐ Yes ☒ No
 Sample Preserved? ☐ Yes ☐ No
 Lot Number: Exp:

Water Surface Oils Normal ☒ Sheen ☐
 Globbs ☐ 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:	☒	☐	☐	☐

System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☒ River

AMBIENT FIELD CONDITIONS / NOTES:

SCI @ 1100
☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM

Chris Green / Colby Marshall / Jon Woods

SIGNATURE :

Chris Green

DATE :

7/26/2016

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

SAMPLING AGENCY: <u>6034</u>		STORET STATION NUMBER: <u>GITLH0035</u>	DATE (MM/DD/YY): <u>7/26/16</u>	RECEIVING BODY OF WATER: <u>Gulf of Mexico</u>
REMARKS:	COUNTY: <u>Sumner</u>	LOCATION: <u>Sumner @ Elaville</u>	FIELD ID/NAME: <u>GITLH0035</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>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>1</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>15</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>13</u> ----- Primary Score <u>37</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>20</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>8</u> Left Bank <u>8</u>	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. 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 <u>10</u> Left Bank <u>10</u>	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 <u>10</u> Left Bank <u>10</u> ----- Secondary Score <u>76</u>	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

113 TOTAL SCORE

Date: <u>7/26/2016</u>	Analyst: <u>Chris Green</u>	Signature: <u>CK3</u>
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DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

Waterbody: Suwannee River @ Ellaville	Date:	County: Suwannee	Storet Number: GITHR0035
Analyst: Colby Marshall	Signature: Colby Marshall		
Comments: LVS 6.7 m2			

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]

Swansee

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>GITLHR0035</u>					County: <u>Madison</u>		Date: <u>7-26-2016</u>		Investigators: <u>Chris Green</u>	
Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	
0	1	N			60	1	N			
	2	X/N	✓			2	X/N	✓		
	3	X/N	✓			3	X/N	✓		
	4	X/N	✓			4	X/N	✓		
	5	X/N	✓	96		5	X/N	✓	96	
	6	X/N	✓			6	X/N	✓		
	7	X/N	✓			7	X/N	✓		
	8	X/N	✓			8	X/N	✓		
	9	3				9	N			
10	1	N			70	1	N			
	2	X/N	✓			2	X/N	✓		
	3	X/N	✓			3	X/N	✓		
	4	X/N	✓			4	X/N	✓		
	5	X/N	✓	96		5	X/N	✓	96	
	6	X/N	✓			6	X/N	✓		
	7	X/N	✓			7	X/N	✓		
	8	X/N	✓			8	X/N	✓		
	9	N				9	3			
20	1	3			80	1	N			
	2	X/N	✓			2	X/N	✓		
	3	X/N	✓			3	X/N	✓		
	4	X/N	✓			4	X/N	✓		
	5	X/N	✓	96		5	X/N	✓	96	
	6	X/N	✓			6	X/N	✓		
	7	X/N	✓			7	X/N	✓		
	8	X/N	✓			8	X/N	✓		
	9	N				9	N			
30	1	3			90	1	3			
	2	X/N	✓			2	X/N	✓		
	3	X/N	✓			3	X/N	✓		
	4	X/N	✓			4	X/N	✓		
	5	X/N	✓	96		5	X/N	✓	96	
	6	X/N	✓			6	X/N	✓		
	7	X/N	✓			7	X/N	✓		
	8	X/N	✓			8	X/N	✓		
	9	N				9	N			
40	1	N			100	1	4			
	2	X/N	✓			2	X/N	✓		
	3	X/N	✓			3	X/N	✓		
	4	X/N	✓			4	X/N	✓		
	5	X/N	✓	96		5	X/N	✓	96	
	6	X/N	✓			6	X/N	✓		
	7	X/N	✓			7	X/N	✓		
	8	X/N	✓			8	X/N	✓		
	9	N				9	3			
50	1	N								
	2	X/N	✓							
	3	X/N	✓							
	4	X/N	✓							
	5	X/N	✓	96						
	6	X/N	✓							
	7	X/N	✓							
	8	X/N	✓							
	9	3								

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%.

Secchi depth 1.1
Estimated? NO

points ranked 4-6 1
total points assessed 22
% points ranked 4-6 4.5

Check accompanying data collected at same site/date.

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

RQ- 2016-07-25-49

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