



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2016

PAGE ____ OF ____

Check box if data qualified

STORET Station Name: Mizner's Branch @ Falls Way Drive Date: 02/10/2016
(mm/dd/yyyy)

STORET Station ID: G 260T 27010068 Latitude: 29.2670
(Decimal Degrees)

WBID: 2645 RQ - 2016-02-01-66 ORG ID: 21FLCEN Longitude: -81.0876
(Decimal Degrees)

Receiving Body of Water: _____ Field ID: G5CE0050 County: Volusia

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Duplicate Collection	Blank Collection
Mike Linger		☒		☒				
Mike Drennon			☒		☒	☒		
Terry Riodan								
Katie Williams								

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# Betty - Boop Photos: Yes / No Tide Falling: Yes / No / NA

Time Zone	Time	Total Depth (m)	Sample Depth	Temp (°C)	DO (mg/L)	DO (%SAT)	COND (µmhos/cm)	Salinity (ppt)	pH	Secchi Disk (m)
<u>EST</u>	<u>11:40</u>	<u>0.2</u>	<u>0.1</u>	<u>15.8</u>	<u>7.8</u>	<u>79</u>	<u>364</u>	<u>0.2</u>	<u>7.4</u>	<u>0.2(s)</u>
CEN										

Biological Samples Collected: None HA SCI LVS RPS LVI Other _____

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ TKN / TP / NOx / NH3 / TOC / TN ☐ Other _____	☒ Ice ☒ H2SO4	<u>5259020</u>	<u>9/16/16</u>	☒ < 2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ < 2
Filtered Nutrients	☒ oP ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Microbiology	☐ E Coli ☐ F Coli ☐ Enteroc ☐ QPCR	☐ Ice			
Periphyton	☐ ALGAE-ID	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PSCL-TQA ☐ W-UHERB-AA ☐ W-GLYPH ☐ Other _____	☐ Ice ☐ Other _____			

Notes: _____ Date: 02-10-2016 Time: 11:40
RQ-2016-02-01-66

G5CE0050

Field ID ↑

STORET ↓

27010068

Signature: Mike Linger Date: 2/10/16

Field Parameters Entered into LIMS: MKL 2/23/16 (Initials/Date) Field Parameters QC in LIMS: 2/23/16 (Initials/Date)
Date Migrated to STORET: KMW 3/1/16 (Initials/Date) Field Sheets Scanned/Saved: _____ (Initials/Date)

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

SAMPLE ID RQ-2016-02-01-66 ORG ID 21FLCEN LATITUDE 29.2670
 COUNTY Vol STORET # 27010068 LONGITUDE -81.0876
 DATE 2/10/16 TIME 11:20 SAMPLING AGENCY FDEP
 SITE NAME Mizner's Branch @ Falls Way Drive
 FIELD ID/NAME G5CF0050 RECEIVING BODY OF WATER _____

RIPARIAN ZONE / STREAM FEATURES

Visit 10-75881

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>20</u> Silviculture <u>0</u> Field/Pasture <u>0</u> Agricultural <u>0</u> Residential <u>80</u> Commercial <u>0</u> Industry <u>0</u> Other (Specify) <u>0</u>								Landscape Development Intensity Index (LDI) <u>0</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>2.5</u> m wide <u>0.4</u> m/s <u>0.1</u> m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>>20</u> Right Bank: <u>15</u>				Hydrologic Modification Score (per FT 3101) <u>0</u>					
High Water Mark: <u>0.5</u> + <u>0.1</u> = <u>0.6</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 <table border="1"> <thead> <tr> <th></th> <th>Depth (M)</th> <th>Temp. (°C)</th> <th>pH (SU)</th> <th>D.O. (MG/L)</th> <th>D.O. Sat (%)</th> <th>Cond. (UMHO/CM)</th> <th>Salinity (PPT)</th> <th>SECCHI (M)</th> </tr> </thead> <tbody> <tr> <td>Top:</td> <td><u>0.1</u></td> <td><u>15.8</u></td> <td><u>7.4</u></td> <td><u>7.8</u></td> <td><u>79</u></td> <td><u>364</u></td> <td><u>0.2</u></td> <td><u>0.2</u></td> </tr> <tr> <td>Mid:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>☒ VOB</td> </tr> <tr> <td>Bottom:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><u>0.2</u></td> </tr> </tbody> </table>					Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)	Top:	<u>0.1</u>	<u>15.8</u>	<u>7.4</u>	<u>7.8</u>	<u>79</u>	<u>364</u>	<u>0.2</u>	<u>0.2</u>	Mid:								☒ VOB	Bottom:								<u>0.2</u>
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Bottom:								<u>0.2</u>																																	
Woody Debris (Snags) <u>0</u> Undercut Banks / Roots <u>0</u> Leaf Packs or Mat <u>0</u> Aquatic Vegetation <u>0</u> Rock or Shell Rubble <u>0</u> Sand <u>0</u> Mud / Muck / Silt <u>0</u> Other <u>0</u> Other <u>0</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: _____ Exp: _____		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) ☐		AMBIENT FIELD CONDITIONS / NOTES: <u>60% Clear, Windy</u> ☐ The antecedent hydrologic conditions have been met to my best knowledge.																																					

SAMPLING TEAM

SIGNATURE:

DATE:

Terry Rordan

Terry Rordan

2-10-16

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

FDEP - CEROC

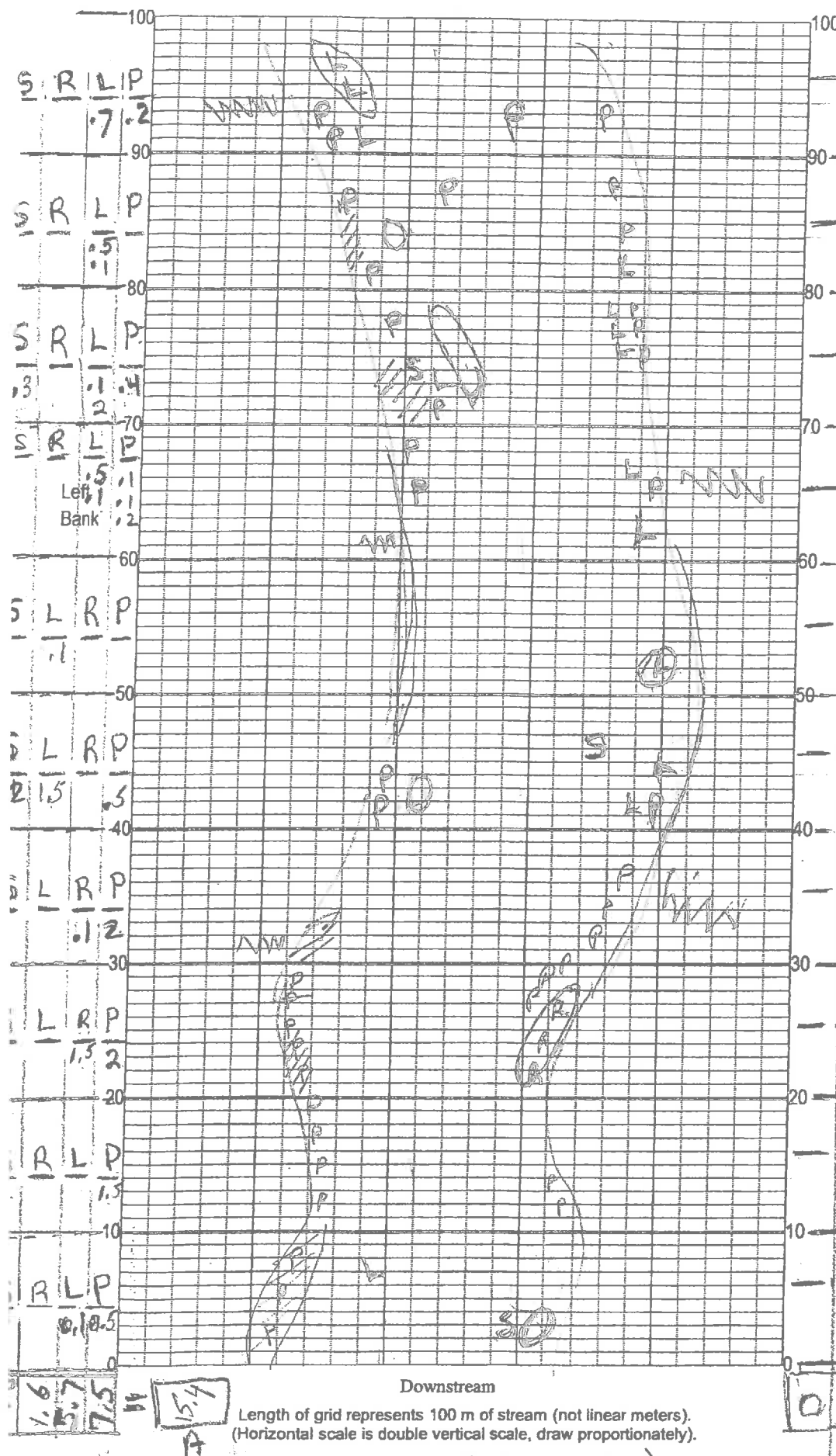
SAMPLING AGENCY: <u>Mizner's Branch @ Falls Way Drive</u>		STORET STATION NUMBER: <u>27010068</u>	DATE (MM/DD/YY): <u>2/10/16</u>	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: <u>Volusia</u>	LOCATION:	FIELD ID/NAME: <u>G5CE0050</u>	

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>4</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 <u>4</u> <u>3</u> 2 1
Substrate Availability <u>2</u> <u>4/30%</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 <u>2</u> <u>1</u>
Water Velocity <u>13</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 <u>13</u> 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>11</u> Primary Score <u>30</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 <u>12</u> <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>9</u>	20 19 18 17 16	15 14 13 12 11	<u>10</u> <u>9</u> 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>5</u> Left Bank <u>5</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. <u>0</u> <u>5</u> 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>5</u> Left Bank <u>5</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>2</u> Left Bank <u>7</u> Secondary Score <u>35</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

65

TOTAL SCORE

Date: <u>2/10/16</u>	Analyst: <u>Mike Linger</u>	Signature: <u>[Signature]</u>
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Location: Mizner Branch

Date: 2/10/16

Sampler: Terry Riordan

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

S Snags 3.8

R Roots/undercut banks 10.1

L Leaf Packs (or mats) 37.0 ✓

P Aquatic Macrophytes 48.7 ✓

O Pools total # observed = 6
range expected = 3 *

Average width 2.5 m

Average depth 0.1 m

Velocity measured at 90 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:

colocassia
lemna minor
hidwiga per. E repens
hydrilla
pontedaria
cicuta
common Fish rare
Guineagrass

00 = 0 B

% = $\frac{X(S, R, L, or P, \dots)}{A + B}$

15.4
(A + B)

$\frac{15.4}{250} = 6.2\% \times 8.333 = \text{range}$

Revision Date: March 1, 2014

Waterbody: Mizner's Branch @ Falls Way Driveway	Date: 2/10/16	County: Volusia	Store Number: 27010068
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Analyst: <u>Katie Williams</u>	Signature: _____
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Comments:

[illegible][illegible]

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Mizner's Branch @ Falls Way Drive County: Volusia Date: 2/10/16 Investigators: Mike Liger

STORET Station Number: 27010068

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	3		32	0	1	3		20
	2	2							
	3	2							
	4	2							
	5	2							
	6	2							
	7	2							
	8	4							
	9	2							
10	1	3		52	10	1	3		28
	2	3							
	3	2							
	4	2							
	5	2							
	6	2							
	7	2							
	8	2							
	9	2							
20	1	2		24	20	1	2		60
	2	2							
	3	2							
	4	2							
	5	2							
	6	2							
	7	2							
	8	2							
	9	2							
30	1	2		44	30	1	2		24
	2	2							
	3	2							
	4	2							
	5	2							
	6	2							
	7	2							
	8	2							
	9	2							
40	1	2		64	40	1	2		56
	2	2							
	3	2							
	4	2							
	5	2							
	6	2							
	7	2							
	8	2							
	9	2							
50	1	2		32	50	1	2		
	2	2							
	3	2							
	4	2							
	5	2							
	6	2							
	7	2							
	8	2							
	9	2							

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 0.2
Estimated?

points ranked 4-6 3
total points assessed 99
% points ranked 4-6 3

Check accompanying data collected at same site/date.
Algal mat sample
Linear Veg Survey ✓
Habitat Assessment ✓
SCI/Biorecon
Water sample ✓
RQ- 2016-02-01-66

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

L - 3.5
M - 10
S - 1
R - 4