



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV

Yes / No

WIN Station Name:	CANNON CREEK AT CR 341 (SISTERS WELCOME RD)				Sample Date:	1/25/2024	
WIN / Field ID:	21030090	ORG ID:	21FLA	ENR:	-	Latitude:	30.15878
County:	COLUMBIA	WBID:	3520	STREAM		Longitude:	-82.66803
Receiving Body of Water:	Clay Hole Creek				RQ-	2024-01-29-39	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Jeremy Parrish		x		x	x
Katherine Halbert	x		x		
Haylee Brown	x		x		

Sampling Equipment			
x	Sample Container	Carboy	
	Dipper	Van Dorn	
	Syringe	Pole	
Syringe Lot#		Filter Lot#	
Secchi Equipment ID:		Disco	
Collection Method			
x	Wading	Canoe/Kayak	
	From Shore	Electric Motor	
		Gasoline Motor	
Depth Measured With		Meter	

Water Level:	Normal
Flow:	Flowing
Matrix:	Fresh
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	Yes
Meter ID:	Desi
Depth Gauge ID:	depth_gauge

Time Zone	Time	Total Depth (m)	Sample Depth (m)	DO (mg/L)	DO (%SAT)	Temp. (°C)	pH	Secchi Disk (m)	Sp COND (µmhos/cm)	Salinity (PPTth)
EST	1120	0.2	0.1	8.35	85.3	16.4	7.22	0.2	137.4	0.06
								VOB (s)		

Biological Samples Collected:	HA LVS SCI			
SBIO Visit ID:	HA ID:	RPS ID:	Macrophyte ID:	LIMS Sample ID
In The Macrophyte Module:				

Parameter Suite	Parameter Methods (LIMS Test Codes)			Preservation				
	E. coli			Type	Lot#	Expiration Date	pH Check	
Microbiology				ICE				
Chlorophyll	CHLSUITE-W			ICE				
Physical/Aggregate	ALKALINITY, TURBIDITY, W-F, W-TSS			ICE				
Nutrients	W-CL-IC, W-COLOR, W-SO4-IC, W-TDS			ICE				
Filtered Nutrients	W-PO4-F	Field Filtered 0.45 µm Filter		ICE	Syringe Lot#; Filter Lot#:0000175533			
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP			ICE	H2SO4*	SA3193140	07/31/2024	H2SO4 pH<2
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**	NA3193130	07/27/2024	HNO3 pH<2
Organics (LC)	W-E8321-DI	W-E8321-MS						
Macroinvertebrates	MI-FW-QLDC			Formalin	8280122TR			
Organics (GC)	W-PSNP-TQ	W-TR-SQ-R		Ice	*2.0 ml of H2SO4 Used Unless Noted Otherwise **2.0 ml of HNO3 Used Unless Noted Otherwise			
Molecular	PCR-HF183	PCR-BacR	PCR-DG3	Ice				
Periphyton								
Phytoplankton								
BOD								
DOC								
Other(s)					SyringeLot#		FilterLot#	
Field Comments:	/ SCI Collection Time: 1120							
Comments on COC:								
Relinquish Date:	01/25/2024	Signature:						

LIMS EVENT ID: _____ WIN Import ID: _____

Enter Field Parameters, Verify Station ID In LIMS DMT: _____ QC Station ID, Field Parameters In LIMS DMT: _____

Save Field Sheets on Network: KH 01/25/2024 (Initials/Date) Migrate Data to WIN: _____ (Initials/Date)

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

SAMPLING AGENCY:		STORET STATION NUMBER: 21030090	DATE (MM/DD/YYYY): 1/25/24	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: Columbia	LOCATION: Cannon Creek @ Sisters		FIELD ID/NAME:

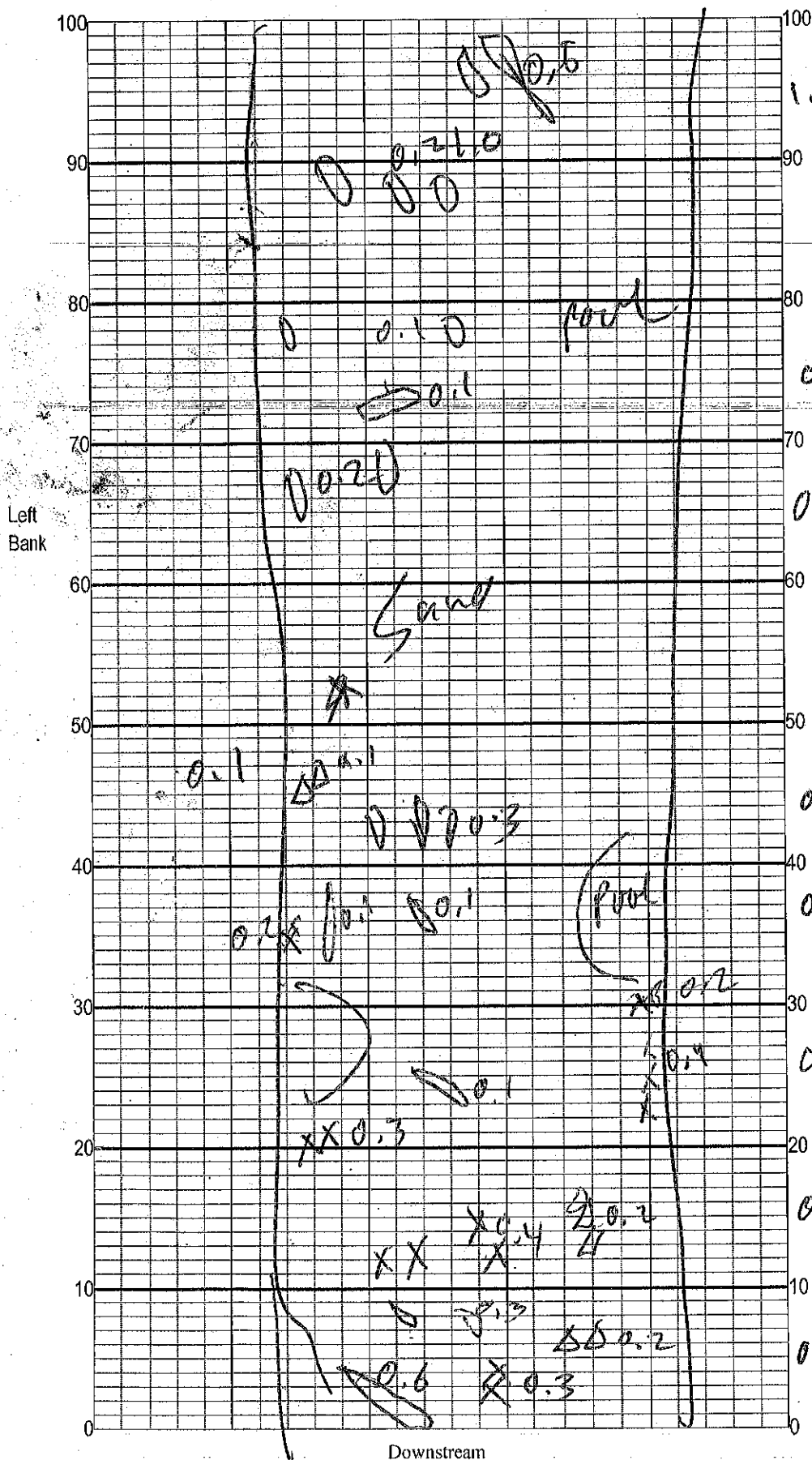
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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>5</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>14</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>35</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 or straightening 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 <u>4</u> Right Bank <u>4</u> Left Bank <u>4</u>	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the woody 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 woody root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width <u>10</u> Right Bank <u>6</u> Left Bank <u>6</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 <u>9</u> Right Bank <u>8</u> Left Bank <u>8</u> ----- Secondary Score <u>54</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

89

TOTAL SCORE

Date:	Analyst: Jerry Parn	Signature: Jerry Parn
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: Canyon Cr 341
 Date: 1/25/24
 Sampler: JP

100 m: Latitude _____	Longitude _____
0 m: Latitude _____	Longitude _____
Substrates: Code key, draw proportionate habitat abundance. %	
☒ Snags	2
☒ Roots/undercut banks	< 1
☒ Leaf Packs (or mats)	< 1
☒ Aquatic Macrophytes	< 1
☐ _____	_____
☐ _____	_____
☐ Pools	total # observed = _____ # range expected = _____
Average width _____ m	
Average depth _____ m	
Velocity measured at _____ meter mark.	
WQ & chemistry taken at _____ 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:

74-N
 0.2
 0.6
 2m wide 0.2m sec
 1175

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

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET			
Waterbody: <u>Canyon @ 341 Sisters</u>	Date: <u>1/25/24</u>	County: <u>Columbus</u>	Storet Number: <u>21030090</u>
Analyst: <u>JPM sh</u>	Signature: <u>[Signature]</u>		
Comments:			

[illegible]

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

SAMPLE ID _____ ORG ID 21030090 LATITUDE _____
 COUNTY Calvernia STORET # CHAVE GIVE LONGITUDE _____
 DATE 1/25/2024 TIME 1:20 SAMPLING AGENCY _____
 SITE NAME Canon @ Sistersville 341
 FIELD ID/NAME _____ RECEIVING BODY OF WATER _____

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 _____ m/s <u>0.21</u> m/s _____ m/s _____ m deep <u>0.2</u> m deep _____ m deep
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>12</u> Right Bank: <u>18</u>			Hydrologic Modification Score (per FT-3101) _____			
High Water Mark: <u>0.6</u> + <u>0.2</u> = <u>0.8</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>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></td> <td></td> <td></td> <td></td> <td></td> <td></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>☒ VOB</td> </tr> <tr> <td>Bottom</td> <td><u>0.2</u></td> <td><u>16.4</u></td> <td><u>7.22</u></td> <td><u>8.35</u></td> <td><u>85.3</u></td> <td><u>137.4</u></td> <td><u>0.06</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>0.2</u>	Mid:							☒ VOB	Bottom	<u>0.2</u>	<u>16.4</u>	<u>7.22</u>	<u>8.35</u>	<u>85.3</u>	<u>137.4</u>	<u>0.06</u>
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Woody Debris (Snags) <u>2</u> <u>10</u> _____ Undercut Banks / Roots <u>21</u> <u>3</u> _____ Leaf Packs or Mat <u>21</u> _____ Aquatic Vegetation <u>21</u> _____ Rock or Shell Rubble.. _____ Sand..... <u>96</u> <u>7</u> _____ Mud / Muck / Silt _____ Other _____ Other _____			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ 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 <table border="1"> <thead> <tr> <th></th> <th>Not Obs.</th> <th>Rare</th> <th>Common</th> <th>Abundant</th> </tr> </thead> <tbody> <tr> <td>Periphyton:</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Fish:</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Aquatic Plants:</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Iron/Sulfur Bacteria:</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> </tbody> </table>				Not Obs.	Rare	Common	Abundant	Periphyton:	☒	☐	☐	☐	Fish:	☒	☐	☐	☐	Aquatic Plants:	☐	☒	☐	☐	Iron/Sulfur Bacteria:	☐	☒	☐	☐	System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) _____ AMBIENT FIELD CONDITIONS / NOTES: ☐ The antecedent hydrologic conditions have been met to my best knowledge.												
	Not Obs.	Rare	Common	Abundant																																				
Periphyton:	☒	☐	☐	☐																																				
Fish:	☒	☐	☐	☐																																				
Aquatic Plants:	☐	☒	☐	☐																																				
Iron/Sulfur Bacteria:	☐	☒	☐	☐																																				

SAMPLING TEAM Jerry Lamm / K. Halbert / H. Brown

SIGNATURE: Jerry Lamm

DATE: 1/25/23

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Lanon e 341 gisken</u>					County: <u>1</u>		Date: <u>1/25/24</u>		Investigators: <u>JP</u>	
					STORET Station Number: <u>21030090</u>					
Transect t (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect t (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	
0	1	N	N	96	60	1	N	N	96	
	2						2			
	3						3			
	4						4			
	5						5			
	6						6			
	7						7			
	8						8			
	9						9			
10	1			74	70	1			82	
	2						2			
	3						3			
	4						4			
	5						5			
	6						6			
	7						7			
	8						8			
	9						9			
20	1			96	80	1			80	
	2						2			
	3						3			
	4						4			
	5						5			
	6						6			
	7						7			
	8						8			
	9						9			
30	1			72	90	1			56	
	2						2			
	3						3			
	4						4			
	5						5			
	6						6			
	7						7			
	8						8			
	9						9			
40	1			80	100	1			44	
	2						2			
	3						3			
	4						4			
	5						5			
	6						6			
	7						7			
	8						8			
	9						9			
50	1			56	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%.					
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									

Secchi depth	<u>1028</u>
Estimated?	<u>10</u>
# points ranked 4-6	<u>0</u>
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- <u>2024-01-29-39</u>	

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