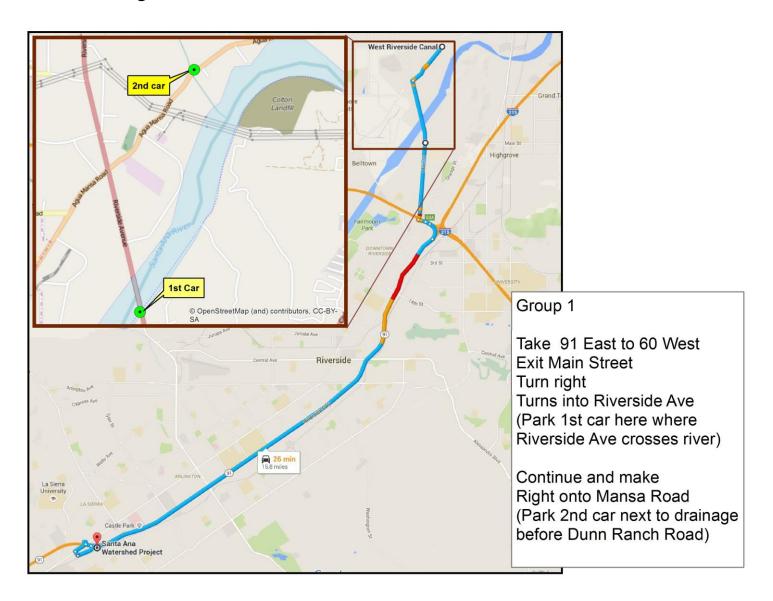
<u>Driving Directions</u>: Take 91 East to 60 West. Exit Main Street and turn right. Main Street turns into Riverside Avenue. Car #1 should park on Riverside Avenue where street and river cross. After parking first car, continue on Riverside Avenue and turn right onto Agua Mansa Road. Car #2 should park off of Agua Mansa Road in the turn out next to the drainage right before Dunn Ranch Road. Parking the cars as directed, will ensure you are walking downstream.



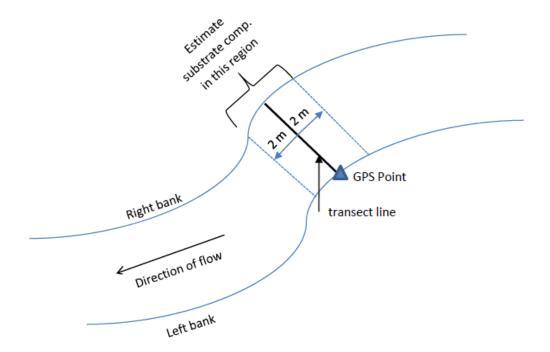
**Data Collection Instructions:** Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

Technical Questions: Call Bonnie Johnson at (951) 757-0782 or Mari Archer at (951) 966-1602. Coordination/Logistical Issues: Call Zyanya Blancas at (951) 354-4220

in the wetted river and record on your data sheet the actual GPS location on the left bank (note: the left bank is on your left when you face downstream). If there is more than one wetted river channel, record each channel's left bank GPS location.

Here are some helpful tips:

- Please record all measurements using the metric system;
- Set up your transect lines perpendicular to the river;
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%;
- Don't forget to take photos



When You Are Done: Return to SAWPA at 11615 Sterling Ave. in Riverside to check equipment in, submit datasheets and grab lunch. Zyanya Blancas will contact your group's lead photographer to instruct them on how your group submits all site photos.

**Driving Back to SAWPA:** From Car #2 location, take Agua Mansa Rd in the upstream direction of the Santa Ana River. Make a right on S. Rancho Ave, and then almost immediately make another right on S. La Cadena Dr. Follow La Cadena Dr. straight and then turn left to merge onto the 215 S. Keep left, and take the exit for the 91 W. Get off at Magnolia towards Pierce Street and then turn left onto Pierce, and left onto Sterling Ave.

Transect Name: SAS 9 Date  $\frac{|b/75/20|}{467461}$ Target UTM: 467461 3767169
Observers (writer/other)  $\frac{G_{VA}(Q)}{2}$ 

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	11 5 0467385		
	UTM (@ Left Bank*)	3767139		
	Channel position (L/C/R*)	Right		
	Width of Channel (m)	99 8 M		
	Max Depth (cm) &	10) cur 750		
	Location in Channel	17-CM 30.2 CM		
	$(L/C/R^*)$	Center		
	Depth @ Left Edge (cm) (~4" from bank edge)	Center 35.5cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	#cm		
	% Veg- Left Bank*	50%		
	% Veg- Right Bank*	90%		
	% Canopy Over	80		
	Transect Band	0 -		
tal	Substrate % mud/silt	10		
to %	Substrate % sand	20		
Should total 100%	Substrate % gravel	70		
hol 1	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	10 30 kM		
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank*			
	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,	actual point was		
	Obstructions)	actual point was dry want to nearest	wetted channel	

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between GI	PS Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		_ 3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Red algae present?	If so, please record coo	dinates below:	

Transect Name: SAS 10		Date 10/25/2017
Target UTM:	467340	3766938
Observers (writer/	other)	

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	4673403		
	UTM (@ Left Bank*)	4673403		
	Channel position (L/C/R*)	nght		
	Width of Channel (m)	10m FOCM		
	Max Depth (cm) &	17-CAT, 5 cm		
	Location in Channel (L/C/R*)	right		
	Depth @ Left Edge (cm) (~4" from bank edge)	17.50 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	7 cm		
	% Veg- Left Bank*	90		
	% Veg- Right Bank*	00		
	% Canopy Over	60		
	Transect Band			
tal	Substrate % mud/silt	30		
Should total 100%	Substrate % sand	40 35	_	
ould to	Substrate % gravel	40 35		
Sho	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	11 AM		
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank*			-
	(time & #)			
<b>⊢</b>	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
L_				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.



	Location between G	PS Points SAS and SAS	
	Tally	Gravel Patch Size  Min 3m 3m-5m 5m-10m 10m-15m 15m+	
Red algae present?	If so, please record coc	ordinates below:	

Transect Name: SAS 11 Date 10/75/70[7]
Target UTM: 467256 3766659

Observers (writer/other)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	467260		
	UTM (@ Left Bank*)	3766668		
	Channel position (L/C/R*)	naht		
	Width of Channel (m)	19ht		
	Max Depth (cm) & Location in Channel (L/C/R*)	-42		
	Depth @ Left Edge (cm) (~4" from bank edge)	13 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	30 cm		
	% Veg- Left Bank*	70		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	40		
al	Substrate % mud/silt	,		
Should total 100%	Substrate % sand			
plr 000	Substrate % gravel	15		
hou 1	Substrate % cobble	75		
S	Substrate % boulder	10		
	Photo Upstream (time & #)	11:45 AM		
	Photo Downstream (time & #)			
ļ	Photo Left Bank*			
	(time & #)			
	Photo Right Bank*			
	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	red algae hun		
Į				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between G	PS Points SAS $\overline{\mathbb{O}}$ and SAS $\_$	11-
	Tally	Gravel Patch Size  Min 3m 3m-5m 5m-10m 10m-15m 15m+	
Red algae present? 1	f so, please record coo	ordinates below:  3766795	at discharge point from plant

Transect Name: SAS 12
Target UTM: 467150
Observers (writer/other)

Date 10 / 25 / 20 17
3766398

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	467142		
	UTM (@ Left Bank*)	3766394		
	Channel position (L/C/R*)	nght		
	Width of Channel (m)	am		
	Max Depth (cm) &	10.		
	Location in Channel	67 cm,		
	(L/C/R*)	night		
	Depth @ Left Edge (cm) (~4" from bank edge)	39cm8		
	Depth @ Right Edge (cm) (~4" from bank edge)	44 cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	35 80		
	% Canopy Over	427 22		
	Transect Band	10 5)		
al	Substrate % mud/silt	7		
tol %	Substrate % sand	50		
uld to	Substrate % gravel	35 35		
Should total	Substrate % cobble	35		
N N	Substrate % boulder			
	Photo Upstream (time & #)	12:20 PM		
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank*			
	(time & #)			
ļ	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.



Loc	cation between G	PS Points SAS $\frac{1}{2}$ and SAS $\frac{1}{2}$ .
	Tally	Gravel Patch Size  Min 3m 3m-5m 5m-10m 10m-15m 15m+
Red algae present? If so	, please record coo	- 4 ( //

 Transect Name: SAS 13
 Date 10/25/2017

 Target UTM: 467044
 3766133

 Observers (writer/other)
 3766133

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	467067		
	UTM (@ Left Bank*)	3766131		
6	Channel position (L/C/R*)	'		
(+ra	Width of Channel (m)	9m to cm	9m 40cm	
	Max Depth (cm) &	22 cm	43	
	Location in Channel	22001		
	(L/C/R*)	conter	nght	
	Depth @ Left Edge (cm)	6 cm	13 cm	
	(~4" from bank edge)	0 01 1	1 3 00.1	
	Depth @ Right Edge (cm)	18.	9cm	
	(~4" from bank edge)	18cm		
	% Veg- Left Bank*	95	100	
	% Veg- Right Bank*	100	100	
	% Canopy Over	$(\tilde{c})$	5	
	Transect Band		50	
tal	Substrate % mud/silt	30	10	
Should total 100%	Substrate % sand	50	45	
ould to	Substrate % gravel	10	45	
- Sho	Substrate % cobble	10		
	Substrate % boulder			
	Photo Upstream	12:54 pm	12:54pm	
	(time & #)	1//-1	10. 3107-1	
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
}	(time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
	Obstructions)			
Ĺ				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.



Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 12 and SAS 13.

Tally Gravel Patch Size

Min 3m
3m-5m
5m-10m
10m-15m
15m+

Red algae present? If so, please record coordinates below:

3764164

Transect Name: SAS 14
Target UTM: 466961
Observers (writer/other)

Date 10/25/75/75/7
3765847

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	466914		
	UTM (@ Left Bank*)	3765869		
	Channel position (L/C/R*)	nght		
	Width of Channel (m)	6m 80 cm		
	Max Depth (cm) &	28 cm		
	Location in Channel	10 000		
	(L/C/R*)	center		
	Depth @ Left Edge (cm) (~4" from bank edge)	8 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	13 cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	3		
	% Canopy Over	2		
	Transect Band			
tai	Substrate % mud/silt	3		
Should total 100%	Substrate % sand	15		
ould to	Substrate % gravel	12		
- Sho	Substrate % cobble	70		
	Substrate % boulder			
	Photo Upstream (time & #)	1:15 PM		
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank*			
	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
ĺ				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between 6	iPS Points SAS and SAS	
	Tally	Gravel Patch Size	
	,	Min 3m	
		3m-5m	
		15m+	
Red algae present?	If so, please record cod	ordinates below:	

Transect Name: SAS 15
Target UTM: 466938
Observers (writer/other)

Date 10/25/1017
3765563

**OBSERVATIONS CHANNEL #1** CHANNEL #2 CHANNEL #3 Actual GPS coordinates in 466815 466806 3765586 UTM (@ Left Bank\*) 3765588 Channel position (L/C/R\*) nght 7m40cm 5m60 Width of Channel (m) Max Depth (cm) & Location in Channel Center (L/C/R\*)Depth @ Left Edge (cm) 26 Cm (~4" from bank edge) Depth @ Right Edge (cm) 10 (~4" from bank edge) % Veg- Left Bank\* WD % Veg- Right Bank\* 100 100 % Canopy Over Transect Band Substrate % mud/silt Should total Substrate % sand 15 60 Substrate % gravel 40 Substrate % cobble 40 Substrate % boulder 2 Photo Upstream 1:38 cm 1:38 cm (time & #) Photo Downstream (time & #) Photo Left Bank\* (time & #) Photo Right Bank\* (time & #) Photo other (describe) Notes (e.g. Islands, Obstructions)

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Location betwee	en GPS Points SAS and SAS
Tally	Gravel Patch Size
	Min 3m
	3m-5m
	5m-10m
	10m-15m
	15m+
Red algae present? If so, please record	coordinates below:

 Transect Name: SAS 16
 Date 10/25/75/75/7

 Target UTM: 466759
 3765354

 Observers (writer/other)
 3765354

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	446753	466714	
	UTM (@ Left Bank*)	3:165350	3765355	
	Channel position (L/C/R*)	left	nght	
	Width of Channel (m)	6 W	7m 50 50cm	
	Max Depth (cm) &	15cm	47	
	Location in Channel		1 1 /	
	(L/C/R*)	light	ienter	
	Depth @ Left Edge (cm) (~4" from bank edge)	Jan	10 cm	
	Depth @ Right Edge (cm)	7 cm	7 cm	
	(~4" from bank edge) % Veg- Left Bank*	0	1 011	
	% Veg- Right Bank*	7 10	100	
	% Canopy Over	70	100	
	Transect Band	100	5	
[E	Substrate % mud/silt	i)	in	
tota %	Substrate % sand	3D	<b>\$0</b> 40	
ould to 100%	Substrate % gravel	30	50 40	
Should total 100%	Substrate % cobble	50		
S	Substrate % boulder		ZE 10	
	Photo Upstream	2:03 84	2:11PM	
	(time & #)	2.0 > (19)	2.1147	
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank*			
-	(time & #)			
-	Photo other (describe)			
	Notes (e.g. Islands,			
Ì	Obstructions)			
L				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between G	PS Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		_ 5m-10m	
		_ 10m-15m	
		15m+	
Red algae present?	If so, please record cool	dinates below:	

Transect Name: SAS 17
Target UTM: 466587

Date 10/25/7017
3765111

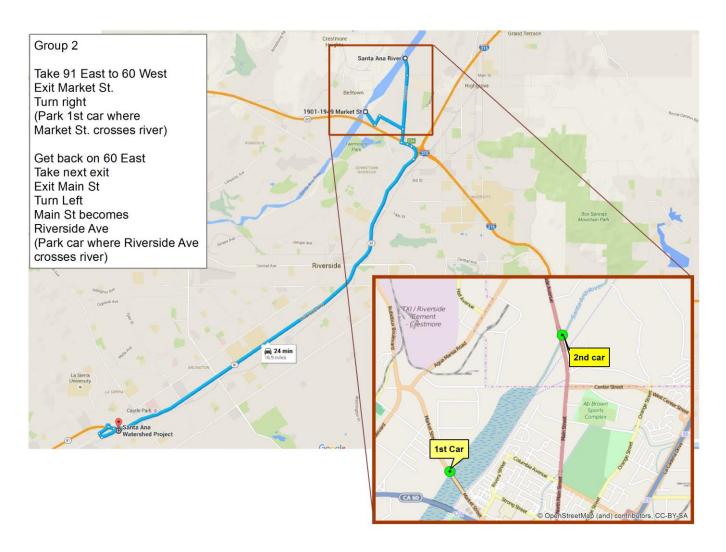
Observers (writer/other)\_\_\_\_

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	464586	466527	
	UTM (@ Left Bank*)	3465113	3765161	
	Channel position (L/C/R*)	eft	hight	
	Width of Channel (m)	4m 70 cm	12m 30 cm	
	Max Depth (cm) & Location in Channel	12 cm	31 Cm	
	(L/C/R*)	left	Center	
	Depth @ Left Edge (cm) (~4" from bank edge)	* 10 cm	Center 7 cm	
	Depth @ Right Edge (cm) (~4" from bank edge)	5 CM	13 cm	
	% Veg- Left Bank*	5	100	
	% Veg- Right Bank*	5	100	
	% Canopy Over Transect Band	100	5	
al	Substrate % mud/silt	10	30 30	
tot %	Substrate % sand	50	30	
Should total 100%	Substrate % gravel	30	20 20	
hor 1	Substrate % cobble	10	20	
<b>∞</b>	Substrate % boulder			
	Photo Upstream (time & #)	2.26 pm	2:34 PM	
	Photo Downstream (time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank*			
}	(time & #)			
-	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
L				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between GPS	S Points SAS a	nd SAS
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Pod algae myseruta i	Cara I		
keu algae present?	f so, please record coord	inates below:	

<u>Driving Directions</u>: Take 91 East to 60 West. Exit Market Street and turn right. Car #1 should park off of Market Street where the street crosses the river. After parking first car, turn around on Market Street and get back on 60 East. Take next exit which is Main Street and turn left. Main Street will turn into Riverside Avenue. Car #2 should park on Riverside Avenue where street and river cross. Parking the cars as directed, will ensure you are walking downstream.

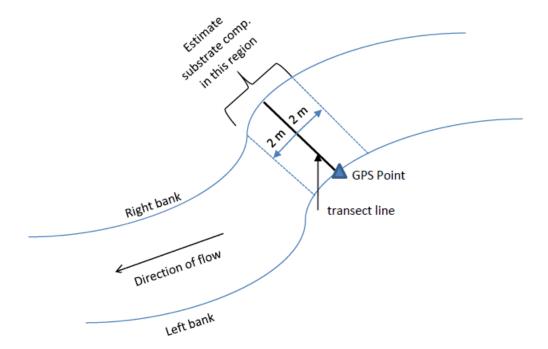


**Data Collection Instructions:** Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is in the wetted river and record on your data sheet the actual GPS location on the left bank (note: the left bank is on your left when you face downstream). If there is more than one wetted river channel, record each channel's left bank GPS location.

Technical Questions: Call Bonnie Johnson at (951) 757-0782 or Mari Archer at (951) 966-1602. Coordination/Logistical Issues: Call Zyanya Blancas at (951) 354-4220

Here are some helpful tips:

- Please record all measurements using the metric system;
- Set up your transect lines perpendicular to the river;
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%;
- Don't forget to take photos



When You Are Done: Return to SAWPA at 11615 Sterling Ave. in Riverside to check equipment in, submit datasheets and grab lunch. Zyanya Blancas will contact your group's lead photographer to instruct them on how your group submits all site photos.

**Driving Back to SAWPA:** From the Car #2 location, drive down Riverside Ave. away from the Santa Ana River, and follow it as it becomes Main St. Continue on Main St. and then turn left to merge onto the 60 E. Take the exit for the 91 W. Take the Magnolia Ave exit. Head down Magnolia in the direction of Pierce St. Take a left on Pierce and then a left on Sterling.

Transect Name: SAS 18

Date <u>/// 75-/7</u> 3764883

Target UTM:

Observers (writer/other)

		OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
		Actual GPS coordinates in	3401.994	3401.444	
2		UTM (@ Left Bank*)	11728 1835	11/21838	
		Channel position (L/C/R*)	R	C	
		Width of Channel (m)	Im 28 Cent	7m260	
		Max Depth (cm) &	ISM 80 cents		
		Location in Channel	30 100	3/cnc	
ar I		(L/C/R*)	1.9e   10.4	J.C.	
Tooking	ingstree	Depth @ Left Edge (cm)		6.5ch	
		(~4" from bank edge)	1.9cl 7.2		
		Depth @ Right Edge (cm)		9.5 cm	
		(~4" from bank edge)	7.2		
		% Veg- Left Bank*	100	100	
		% Veg- Right Bank*	100	100	
		% Canopy Over	<b>28</b> 2711	210	
г		Transect Band	92300		
	tal	Substrate % mud/silt	50 070	20	
	to %	Substrate % sand	80	30	
	ould to 100%	Substrate % gravel	20-15	70-45	
	Should total 100%	Substrate 76 cooble	<u>S</u>	10-5	
Ĺ		Substrate % boulder	Ü	U	
		Photo Upstream	10:00 am	11 20	
	-	(time & #)	10 00 am	10:30	
		Photo Downstream	10:00	10:20	
	-	(time & #)	10-00	10:30	
		Photo Left Bank*	10:00	10:30	
		(time & #)	10-00	10-70	
		Photo Right Bank*	10:00	10:30	
	-	(time & #)  Photo other (describe)	. 0. 00	(0.70	
	-	Photo other (describe)			
	-	Notes (e.g. Islands, Obstructions)	Istand : 409.	Homeless man made	
		Obstructions)	Island is 40% of width	Homeless man made bridge upstream	
	_				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

5A5 18

# **Additional Information**

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 18 and SAS 19

Tally	<b>Gravel Patch Size</b>
	Min 3m
	3m-5m
0	5m-10m
Ripple manuale	10m-15m
Splitinto 3rd channe	( 15m+

Red algae present? If so, please record coordinat	es below:
Talley: Fallentree created diversion	34.01.324, 11721949 13 m

Transect Name: SAS 19
Target UTM:

466227

Date 16-25-()
3764671

Observers (writer/other)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	34.01.329		
	UTM (@ Left Bank*)	11721,1949		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	13m 90 cont		
	Max Depth (cm) &			
	Location in Channel	39 cent/r/		
	(L/C/R*)			
	Depth @ Left Edge (cm)	1 cent		
	(~4" from bank edge)	, cN ,		
	Depth @ Right Edge (cm)	39 cent		
	(~4" from bank edge)			
	% Veg- Left Bank*	100		
	% Veg- Right Bank*			
	% Canopy Over Transect Band	20%		
	Substrate % mud/silt	10		
Should total 100%	Substrate % mud/sint Substrate % sand	A Comment		
uld to	Substrate % gravel	70		
luc 1001	Substrate % cobble	75-43		
Sh	Substrate % boulder	0		
	Photo Upstream	14.6		
	(time & #)	10:45		
	Photo Downstream	100 1. 0		
	(time & #)	10:45		
	Photo Left Bank*			
	(time & #)	10:45		
	Photo Right Bank*	10:45		
	(time & #)	(0, -(3)		
	Photo other (describe)			
	Notes (e.g. Islands,	annel bar		
	Obstructions)	unel bar 18th left side		
Ĺ				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS  $\frac{12}{12}$  and SAS  $\frac{20}{12}$ .

	Tally	Gravel Patch Size	
		_ Min 3m	
		_ 3m-5m	
		_ 5m-10m	
19m 6	revel bar 34 Island	_ 10m-15m	
-24	34. Island	_ 15m+	
Red algae prese	nt? If so, please record coor	dinates below:	
	·		
		v	

Transect Name: SAS 20 Date (6-25-17)

Target UTM: 466104 3764403

Observers (writer/other)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	79.01189		
	UTM (@ Left Bank*)	34.01.189		
	Channel position (L/C/R*)			
	Width of Channel (m)	7.m30c		
	Max Depth (cm) &	1		
	Location in Channel	(30c		
	(L/C/R*)			
	Depth @ Left Edge (cm)	P (		
	(~4" from bank edge)	5.5		
	Depth @ Right Edge (cm)	276		
	(~4" from bank edge)	<u> </u>		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over	60		
	Transect Band			
[a]	Substrate % mud/silt	10		
Should total 100%	Substrate % sand	80		
uld to	Substrate % gravel	10		
ho l	Substrate % cobble	0		
<u></u>	Substrate % boulder	0		
	Photo Upstream	10,00		
	(time & #)	(0458		
	Photo Downstream	10:58		
	(time & #)			
	Photo Left Bank*	10:58		
	(time & #)			
	Photo Right Bank*	10.58		
	(time & #)	,		
	Photo other (describe)			
	Notes (e.g. Islands,	2 down trees danstream		
	Obstructions)	danstreun		
Į				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 20 and SAS 7.

	Tally	<b>Gravel Patch Size</b>	
**************************************		_ Min 3m	
, 1—	W	_ 3m-5m	
denn tree	VV	5m-10m	
Grand bor	1	10m-15m	
		15m+	
Ded aless www.v.t2161		D	
Red algae present? If so, pl	ease record coord	dinates below:	

oper

Transect Name: SAS 21

Target UTM: 465953 3764146

Observers (writer/other)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	34,01,044		
	UTM (@ Left Bank*)	11722.26		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	9 /2		
	Max Depth (cm) &			
	Location in Channel	33 cm		
	(L/C/R*)			
	Depth @ Left Edge (cm)	8 cm		
	(~4" from bank edge)	UCK		
	Depth @ Right Edge (cm)	7cm		
	(~4" from bank edge)			
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over	30 90		
	Transect Band			
Should total 100%	Substrate % mud/silt	10		
uld to 00%	Substrate % sand	-3£ 30		
oulo 100	Substrate % gravel	30		
Shc	Substrate % cobble	30		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11.23		
	Photo Downstream	11:23		
	(time & #)	11.21		
j	Photo Left Bank*	11:23		
	(time & #)	11.07		
	Photo Right Bank*	11.23		
	(time & #)	11.63		
	Photo other (describe)			
	Notes (e.g. Islands,	not much shale		
	Obstructions)	not much shape Gravel barat		
		our brit (asi		

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Lo	cation between G	SPS Points SAS and SAS _	
- - - !	Tally	Gravel Patch Size  Min 3m 3m-5m 5m-10m 10m-15m 15m+	
Red algae present? If so	o, please record cod	ordinates below:	

Transect Name: SAS 22

Target UTM: 465757 3763921

Observers (writer/other)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	3700-922		
	UTM (@ Left Bank*)	117 72.758		
	Channel position (L/C/R*)	RC		
	Width of Channel (m)	6m		-
	Max Depth (cm) &	32 Em/L/		
	Location in Channel	9201/0/		
	(L/C/R*)			
	Depth @ Left Edge (cm)	32		
	(~4" from bank edge)	>-		
	Depth @ Right Edge (cm)	3 (m		
	(~4" from bank edge)			
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over	70		
	Transect Band	C0		
lal	Substrate % mud/silt			
to	Substrate % sand	409,		
Should total 100%	Substrate % gravel	30 %		
.ho	Substrate % cobble	30 90		
	Substrate % boulder	0 %		
	Photo Upstream	15-27		
,	(time & #)			
	Photo Downstream	1137		
-	(time & #)			
	Photo Left Bank*	11:37		
-	(time & #)			
İ	Photo Right Bank*	11:37		
-	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,	to narrow here		
	Obstructions)	to harrow here		

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.



Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS ZZ and SAS ZZ.

Tally Gravel Patch Size

Min 3m
3m-5m
5m-10m
10m-15m
15m+

Red algae present? If so, please record coordinates below:

Transect Name: SAS 23
Target UTM: 465548
Observers (writer/other)

Date // 25 / 7
3763710

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	34.00.807		
	UTM (@ Left Bank*)	111.20.300		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	8.20 cm		
	Max Depth (cm) &	28 L		
	Location in Channel	202		
	(L/C/R*)			
	Depth @ Left Edge (cm) (~4" from bank edge)	3 ch		
	Depth @ Right Edge (cm) (~4" from bank edge)	3ch		
	% Veg- Left Bank*	(U)		
	% Veg- Right Bank*	100		
	% Canopy Over	30		
	Transect Band			
व	Substrate % mud/silt	0		
Should total 100%	Substrate % sand	40 30 30		
uld to	Substrate % gravel	30		
ho 1	Substrate % cobble	50		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1[:46		
	Photo Downstream (time & #)	11-46		
	Photo Left Bank* (time & #)	11:46		
	Photo Right Bank* (time & #)	11:46		
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS  $\overline{2}$  and SAS  $\underline{2}$   $\underline{7}$ .

Tally	Gravel Patch Size	
	Min 3m	
	3m-5m	
	5m-10m	
	10m-15m	
$V_{V}$	15m+	
Red algae present? If so, please record co		

Transect Name: SAS 24
Target UTM: 465400 3763456
Observers (writer/other)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	3400,6784		
	UTM (@ Left Bank*)	117.22:489		
	Channel position (L/C/R*)			
	Width of Channel (m)	0 7		
	Max Depth (cm) & Location in Channel	Man (c)		
	(L/C/R*)	CC )		
	Depth @ Left Edge (cm) (~4" from bank edge)	17 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	14cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	90		
	% Canopy Over	So		
	Transect Band			
la]	Substrate % mud/silt	0		
5 %	Substrate % sand	0		
ould to 100%	Substrate % gravel	80		
Should total 100%	Substitute / 0 coole	10		
	Substrate % boulder	0 0		
	Photo Upstream (time & #)	11:57		
	Photo Downstream (time & #)	11:57		
	Photo Left Bank* (time & #)	11:57		
	Photo Right Bank* (time & #)	11:57		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.



Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 4 and SAS 25.

Tally	<b>Gravel Patch Size</b>	
Ş <u>=</u>	Min 3m	
	3m-5m	
2	5m-10m	
	10m-15m	
	15m+	
t? If so, please record co	ordinates below:	
t? If so, please record co	ordinates below: 	
	ordinates below:	
	ordinates below:	

Transect Name: SAS 25
Target UTM: 465129 Jate 10 25 17
Observers (writer/other) 3763345

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	3400.069		
	UTM (@ Left Bank*)	11722.659		
	Channel position (L/C/R*)			
	Width of Channel (m)	I'm yoch		
	Max Depth (cm) &	zzen C		
	Location in Channel			
	(L/C/R*)			
	Depth @ Left Edge (cm) (~4" from bank edge)	7 cm		
	Depth @ Right Edge (cm)	2 ch		
	(~4" from bank edge)			
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over	20%		
	Transect Band	//		
otal	Substrate % mud/silt Substrate % sand	2590		
Should total 100%	Substrate % gravel	7090		
luc 100	Substrate % cobble	5 90		
Sho	Substrate % boulder	3 10		
	Photo Upstream	12:08		
	(time & #)			
	Photo Downstream	12:08		
	(time & #)			
	Photo Left Bank*	12:08		
	(time & #)	( C. v 0		
	Photo Right Bank*	12:08		
	(time & #)	10.00		
*	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Tally Gravel Patch Size

Min 3m

3m-5m

5m-10m

10m-15m

15m+

Red algae present? If so, please record coordinates below:

Transect Name: S	SAS 26	Date	
Target UTM:	464939	3763126	
Observers (write	r/other)		

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	39.00.490 117.22.782		
	UTM (@ Left Bank*)	117.22,782		
	Channel position (L/C/R*)			
	Width of Channel (m)	40 8m 40 cm		
	Max Depth (cm) &	7.5 C		
	Location in Channel			
	(L/C/R*)	at. 0		
	Depth @ Left Edge (cm) (~4" from bank edge)	etcm C		
	Depth @ Right Edge (cm)	Scm		
	(~4" from bank edge)	1.00		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over	40		
	Transect Band			
tal	Substrate % mud/silt	5		
Should total 100%	Substrate % sand	65 20		
)ul 10(	Substrate % gravel Substrate % cobble			
Sho	Substrate % boulder	3		
	Photo Upstream	12:20		
	(time & #)	12.00		
	Photo Downstream (time & #)	12:20		
	Photo Left Bank* (time & #)	12:20		
	Photo Right Bank* (time & #)	12:20		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

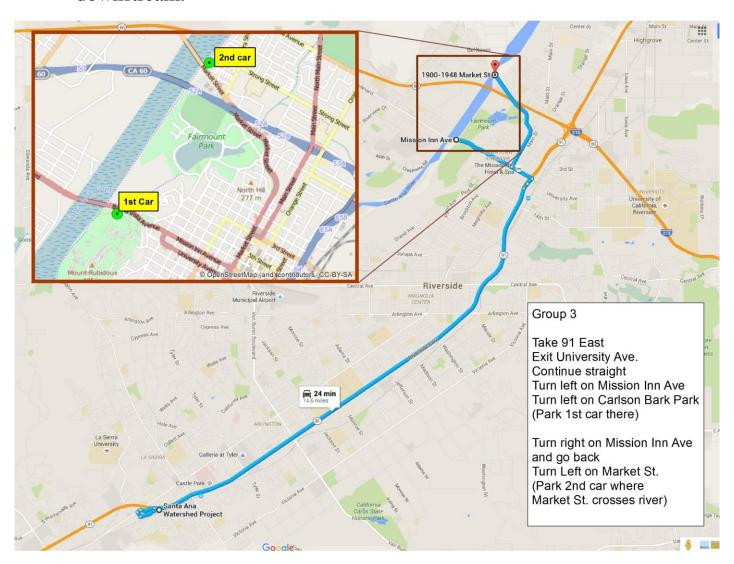
<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

	Location between G	PS Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
D. I.I. in			
Red algae present?	If so, please record coo	rdinates below:	

Group 3: Points 27-34

<u>Driving Directions</u>: Take 91 East and exit University Avenue. Go through light for University and continue on towards Mission Inn Avenue. Turn left onto Mission Inn Avenue. Car #1 should park at the Carlson Dog Park on the left hand side of Mission Inn Avenue. After parking first car, turn right back onto Mission Inn Avenue. Turn left when you reach Market Street. Car #2 should park upstream off of Market Street where the street crosses the river. Parking the cars as directed, will ensure you are walking downstream.



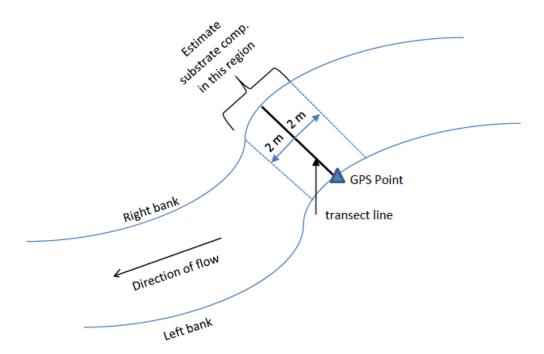
**Data Collection Instructions:** Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

Technical Questions: Call Bonnie Johnson at (951) 757-0782 or Mari Archer at (951) 966-1602. Coordination/Logistical Issues: Call Zyanya Blancas at (951) 354-4220

in the wetted river and record on your data sheet the actual GPS location on the left bank (note: the left bank is on your left when you face downstream). If there is more than one wetted river channel, record each channel's left bank GPS location.

Here are some helpful tips:

- Please record all measurements using the metric system;
- Set up your transect lines perpendicular to the river;
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%;
- Don't forget to take photos



When You Are Done: Return to SAWPA at 11615 Sterling Ave. in Riverside to check equipment in, submit datasheets and grab lunch. Zyanya Blancas will contact your group's lead photographer to instruct them on how your group submits all site photos.

**Driving Back to SAWPA:** From Car #2 location, begin by heading down Market Street away from the Santa Ana River. Keep going straight on Market Street until you reach the onramp for the 60 E, which will be on your left. Continue on to the 60, and then take the 91 W that appears on your right. Take the Magnolia Street exit, and head left on Magnolia towards Pierce, and make a left on Pierce. Turn left on Sterling.

Transect Name: SAS 27

Target UTM: 464730

Observers (writer/other) Dave B, Justin T, Tara, K Stephan III, Preston G

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	115:0464715		
	UTM (@ Left Bank*)	3762926		
	Channel position (L/C/R*)			
	Width of Channel (m)	9.1m		
	Max Depth (cm) &			
	Location in Channel	21cm		
	(L/C/R*)			
	Depth @ Left Edge (cm)	2 4		
	(~4" from bank edge)	2 cm		
	Depth @ Right Edge (cm)	4cm		
	(~4" from bank edge)			,
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	85		
	% Canopy Over Transect Band	15		
	Substrate % mud/silt			
Should total 100%	Substrate % sand	15		
uld to 00%	Substrate % gravel	40		
oul 10	Substrate % cobble	40		
Sh	Substrate % boulder	5		
	Photo Upstream	10:14		
	(time & #)	101409		
	Photo Downstream	10:14		
	(time & #)	101414		
Ì	Photo Left Bank*	10:14		. 🕬
	(time & #)	101423		
	Photo Right Bank*	10:14		
	(time & #)	101442		
	Photo other (describe)	7 1		
	Notes (e.g. Islands,			
	Obstructions)			
Ĺ				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 27 and SAS 28.

	Tally	Gravel Patch Size	
		_ Min 3m	
Popl		_ 3m-5m	
Right Leve	<u> </u>	5m-10m	
Leve		10m-15m	
7		15m+	
Red algae present?	If so, please record coor		
Nove			
		7	

Transect Name: SAS 28

Target UTM: 464595 3762657

Observers (writer/other) Dave 5 The Jun T, Throck, Stellmane F, Trends C,

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	1150464575		
	UTM (@ Left Bank*)	3762656		
	Channel position (L/C/R*)			
	Width of Channel (m)	7.9		
	Max Depth (cm) &			
	Location in Channel	19,0		
	(L/C/R*)	( (, 0		
	Depth @ Left Edge (cm)			
	(~4" from bank edge)	1.0		
	Depth @ Right Edge (cm)	~ -		
	(~4" from bank edge)	2,5		`
	% Veg- Left Bank*	.B		
	% Veg- Right Bank*	Ø		
	% Canopy Over	10% -noorganic		
<u></u>	Transect Band	Bridge only		
<u> </u>	Substrate % mud/silt	0 %		
t %	Substrate % sand	30%		
Should total 100%	Substrate % gravel	45%		
tho 1	Substrate % cobble	20%		
<u> </u>	Substrate % boulder	5%		
	Photo Upstream	10:43		1
	(time & #)	104351		
	Photo Downstream	10:44		
į	(time & #)	104401		
	Photo Left Bank*	10:44		
	(time & #)	104448		
	Photo Right Bank*	10:45		
	(time & #)	104510		
	Photo other (describe)			
	Notes (e.g. Islands,	ID's sucker in		
	Obstructions)	tire in stream		

FD'd live Opossum on river edge

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 29 and SAS 29

0	Tally	<b>Gravel Patch Size</b>	
Kight		Min 3m	
Kyht Levy		3m-5m	
revy		5m-10m	
	<del></del>	10m-15m	
		15m+	
Pod plane mysesuk?	(£)		
neu algae present?	If so, please record coord	inates below:	

Transect Name: SAS 29

Date 10/25/17

Target UTM: 464539 3762368

Observers (writer/other) Dave B, Tushin T, Tarak, Stephanie F, Preston G

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	115 0464533		
	UTM (@ Left Bank*)	3762374		
	Channel position (L/C/R*)			
	Width of Channel (m)	5.6		
	Max Depth (cm) &			
	Location in Channel	24		
	(L/C/R*)			
	Depth @ Left Edge (cm)	1.0		
	(~4" from bank edge)	10		
	Depth @ Right Edge (cm)	6		
	(~4" from bank edge)			
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	90		
	% Canopy Over	<b>-</b> )/		
	Transect Band	5%		
tal	Substrate % mud/silt	169/2		
Should total 100%	Substrate % sand	45%		
plu 00	Substrate % gravel	35%		
ho 1	Substrate % cobble	5%		
<u> </u>	Substrate % boulder	Ø		
	Photo Upstream	11:13		
	(time & #)	111318		
	Photo Downstream	11:13		
	(time & #)	111325		
	Photo Left Bank*	11:13		
	(time & #)	111 335		
	Photo Right Bank*			
	(time & #)	111354		
-	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
	/G/D I : G/G + /D': 1+ E	1 , 1 , 1	1 1 0 1 1 1 1	

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 29 and SAS 30.

Left	Tally	Gravel Patch Size Min 3m 3m-5m 5m-10m 10m-15m 15m+	
Red algae present? If	so, please record coordi	nates below:	

Transect Name: SAS 30

Date 10/25/17

Target UTM: 464467 3762083

Observers (writer/other) Dave B, Fushin T, Tera K, Skephanie F, Preston G

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	115016+455		
	UTM (@ Left Bank*)	3762086		
	Channel position (L/C/R*)			
	Width of Channel (m)	7.3		
	Max Depth (cm) &			
	Location in Channel	75		
	(L/C/R*)	23		
	Depth @ Left Edge (cm)			
	(~4" from bank edge)	6.5		
	Depth @ Right Edge (cm)	2.5		
	(~4" from bank edge)			
	% Veg- Left Bank*	100°/4		
	% Veg- Right Bank*	95%		
	% Canopy Over			
	Transect Band	15%		
न्न	Substrate % mud/silt	0		
Should total 100%	Substrate % sand	30		
uld to	Substrate % gravel	50		
hool 1	Substrate % cobble	(5%		
S	Substrate % boulder	Ø		
	Photo Upstream	11:37		
	(time & #)	113712		
	Photo Downstream	11:37		
	(time & #)	113717		
	Photo Left Bank*	(1:37		
	(time & #)	113728		
	Photo Right Bank*	11:39		
	(time & #)	113912		
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
ļ				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 30 and SAS 31.

	Tally	Gravel Patch Size	
<i>1</i>	·	Min 3m	
Left		3m-5m	
Levy		5m-10m	
/		10m-15m	
		15m+	
Dadalaa			
Red algae present?	If so, please record coord	linates below:	
		· · · · · · · · · · · · · · · · · · ·	
15 1 1	1		
IN d FACO	our trocks		

Transect Name: SAS 31

Target UTM: 464296 3761837

Observers (writer/other) Dave B. Justin T, Tarak, Stephane F, Preston G.

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	1150464790	1150164290	
	UTM (@ Left Bank*)	3761840	3761841	
	Channel position (L/C/R*)			
	Width of Channel (m)	7.0	0.7	
	Max Depth (cm) &			
	Location in Channel	39	3.5	
	(L/C/R*)			
	Depth @ Left Edge (cm)	8,5	2.5	
	(~4" from bank edge)	072	2.5	
	Depth @ Right Edge (cm)	2.0	1.6	
	(~4" from bank edge)		1.8	
	% Veg- Left Bank*	95%	Ø	
	% Veg- Right Bank*	Ø	Ø	
	% Canopy Over	5%	DS.	
	Transect Band		70	
tal	Substrate % mud/silt	Ø	Ø	
Should total 100%	Substrate % sand	30%	Ø	
uld to	Substrate % gravel	62/6	100%	
l olis	Substrate % cobble	65% 5%	Ø	
	Substrate % boulder		Ø	
	Photo Upstream	11:54	_>	
	(time & #)	11:57	/	
	Photo Downstream	£ .	<b>→</b>	
ļ	(time & #)	115 787		
	Photo Left Bank*	11157	7	
-	(time & #)	115717		
	Photo Right Bank*	11:57	-7	
}	(time & #) Photo other (describe)	115725	-	
F				
	Notes (e.g. Islands, Obstructions)			
	Oosh actions)			
L				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS  $\frac{3}{}$  and SAS  $\frac{3}{}$ 

	T-11		
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Red algae present? If so,	please record cod	ordinates below:	
Red algae present? If so,	please record cod	ordinates below:	
Red algae present? If so,	please record cod	ordinates below:	
Red algae present? If so,	please record cod	ordinates below:	
Red algae present? If so,	please record cod	ordinates below:	
Red algae present? If so,	please record cod	ordinates below:	
Red algae present? If so,	please record cod	ordinates below:	

Transect Name: SAS 32 Date 10/25/17

Target UTM: 464096 3761623

Observers (writer/other) Dave B, Tushn T, Tara K, Skephanie F, Preston 4

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	1150464142	1150464135	
	UTM (@ Left Bank*)	3761628	3761632	
	Channel position (L/C/R*)			
	Width of Channel (m)	4.4 test	10.1 Channel	
	Max Depth (cm) &			
	Location in Channel	23	25	
	(I)C/R*)			
	Depth @ Left Edge (cm)	11 0	2.5	
	(~4" from bank edge)	4.0	413	
	Depth @ Right Edge (cm)	3.8	11.0	
	(~4" from bank edge)		11,0	
	% Veg- Left Bank*	60%	0	
	% Veg- Right Bank*	Ø	50'10	
	% Canopy Over			
	Transect Band	30%	30%	
al	Substrate % mud/silt	ø	<b>10</b>	
Should total 100%	Substrate % sand	800/2	80%	
uld to	Substrate % gravel	20%	20%	
hol-	Substrate % cobble	Ø	Ø	
S	Substrate % boulder	P	9	
	Photo Upstream	12:14	->	
	(time & #)	121408		
	Photo Downstream	12:14	-	
]	(time & #)	121413		
	Photo Left Bank*	12:14	7	
	(time & #)	121423	/	
	Photo Right Bank*	12:14	-7	
	(time & #)	121418	/	
	Photo other (describe)		_	
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

	Location between G	PS Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
Red algae present?	If so, please record cool	rdinates below:	

Transect Name: SAS 33

Target UTM: 463908

Observers (writer/other) Dave B, Jushn T, Tarak, Stephanie F, Preston to

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	1150463937		
	UTM (@ Left Bank*)	3761376		
	Channel position (L/C/R*)			
	Width of Channel (m)	4.1		
	Max Depth (cm) &			
	Location in Channel	32.		
	(L/C/R*)			
	Depth @ Left Edge (cm)	5		
	(~4" from bank edge)	<u> </u>		
	Depth @ Right Edge (cm)	8	ž.	
	(~4" from bank edge)			
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over	E0/		
	Transect Band	0/6		
tal	Substrate % mud/silt	Ø		
Should total 100%	Substrate % sand	60		
oo]	Substrate % gravel	Ø 40		
   Sho	Substrate % cobble			
	Substrate % boulder	<u> </u>		
	Photo Upstream	12:36		
	(time & #)	123643		
	Photo Downstream	[2365]		
	(time & #) Photo Left Bank*	(2:38		
	(time & #)	123848		
	Photo Right Bank*	12:37		
	(time & #)	123713		
	Photo other (describe)	*// (1)		
	Notes (e.g. Islands,			
	Obstructions)			

\*L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Original Coordinates put us in a dry road bed. New transact is called directly East toward the Left levy

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
ed algae present? If so, p		linates below:	
		linates below:	
		linates below:	

Transect Name: SAS 34 Date 10/25/17
Target UTM: 463646 3761265
Observers (writer/other) Dave B, Twotin T, Tara K, Stephame F, Dreston S

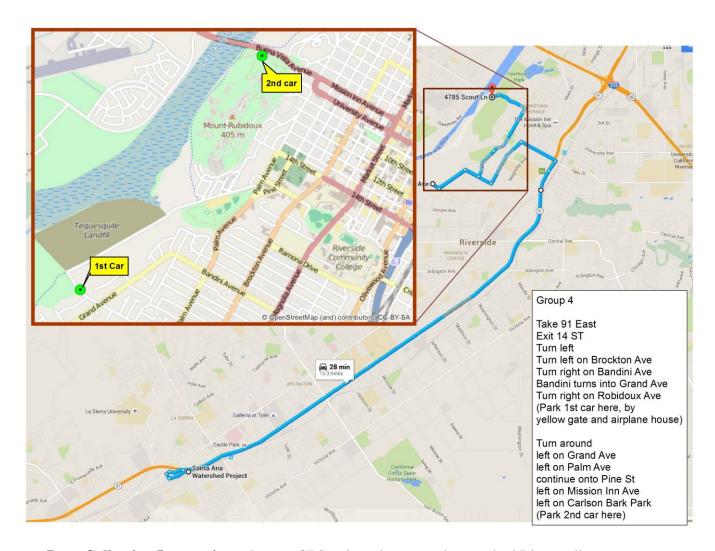
	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	1130463624		
	UTM (@ Left Bank*)	3761267		
	Channel position (L/C/R*)			
	Width of Channel (m)	13,9		
	Max Depth (cm) &			
	Location in Channel (L/C/R*)	20,0		
	Depth @ Left Edge (cm) (~4" from bank edge)	8		
	Depth @ Right Edge (cm) (~4" from bank edge)	10		
	% Veg- Left Bank*	20%0		*
	% Veg- Right Bank*	106 %		
	% Canopy Over Transect Band	25%		
	Substrate % mud/silt	5%		
Should total 100%	Substrate % sand	90%		
uld to 00%	Substrate % gravel	Ø		
100	Substrate % cobble	5%		
S	Substrate % boulder	Ø		
	Photo Upstream	12:56		
	(time & #)	125051		
	Photo Downstream	12:50		
	(time & #)	125056		
	Photo Left Bank*	12:51		
	(time & #)	125111		
	Photo Right Bank*	12.151		
	(time & #)	12/14/2		
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

1	Location between GI	PS Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		_ 3m-5m	
		_ 5m-10m	
		_ 10m-15m	
		_ 15m+	
Red algae present? If	so, please record coo	rdinates below:	
		-	
		-	
		-	

**Driving Directions**: Take 91 East. Exit 14<sup>th</sup> Street and turn left. Turn left onto Brockton Avenue. Turn right onto Bandini Avenue. Bandini Avenue will turn into Grand Avenue. Turn right onto Rubidoux Avenue. **Car #1** should park at the end of Rubidoux Avenue by the yellow gate and airplane house. After parking first car, turn around and turn left on Grand Avenue. Turn left onto Palm Avenue. Turn left onto Mission Inn Avenue. **Car #2** should park upstream off of Mission Inn Avenue at the Carlson Dog Park on the left side of the road. Parking the cars as directed, will ensure you are walking downstream.



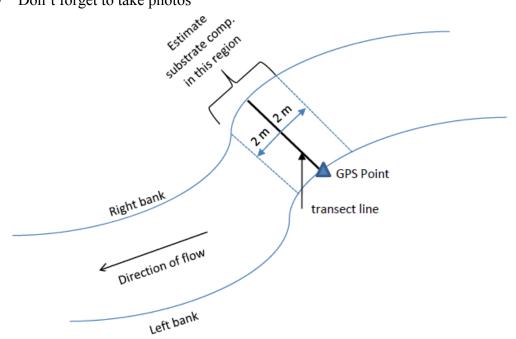
**Data Collection Instructions:** Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

Technical Questions: Call Bonnie Johnson at (951) 757-0782 or Mari Archer at (951) 966-1602. Coordination/Logistical Issues: Call Zyanya Blancas at (951) 354-4220

in the wetted river and record on your data sheet the actual GPS location on the left bank (note: the left bank is on your left when you face downstream). If there is more than one wetted river channel, record each channel's left bank GPS location.

Here are some helpful tips:

- Please record all measurements using the metric system;
- Set up your transect lines perpendicular to the river;
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%;
- Don't forget to take photos



When You Are Done: Return to SAWPA at 11615 Sterling Ave. in Riverside to check equipment in, submit datasheets and grab lunch. Zyanya Blancas will contact your group's lead photographer to instruct them on how your group submits all site photos.

**Directions Back to SAWPA:** From the second car location, leave Carlson Dog Park, turn right onto Mission Inn Ave, turn right on Market Street, shortly after turn left on Tenth Street, then enter the 91 West. Stay on 91 West to Magnolia Ave. After exiting continue on Magnolia Ave to the left hand turn lane so you turn left on Pierce Street. Shortly after turning left turn left again onto Sterling Ave. Continue to the end of Sterling Ave.

Date 10 /25 /37 3761054 **Transect Name: SAS 35** Target UTM: 463439 Observers (writer/other) SAWA & ROFC A Sawner J. (wenson K. Dreman **CHANNEL #1 OBSERVATIONS** CHANNEL #2 **CHANNEL #3** 0463429 Actual GPS coordinates in UTM (@ Left Bank\*) 3761065 Channel position (L/C/R\*) Width of Channel (m) 15.3 m Max Depth (cm) & Location in Channel 5 cm R (L/C/R\*)Depth @ Left Edge (cm) (~4" from bank edge) Depth @ Right Edge (cm) (~4" from bank edge) % Veg- Left Bank\* % Veg-Right Bank\* 00 % Canopy Over 20 Transect Band Substrate % mud/silt Substrate % sand ala Substrate % gravel Substrate % cobble 0 Substrate % boulder Photo Upstream 950 (time & #) 950 Photo Downstream (time & #) Photo Left Bank\* 956 (time & #) Photo Right Bank\* 956

Should total

(time & #)

Photo other (describe) Notes (e.g. Islands, Obstructions)

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

	Location between G	PS Points SAS and SAS	
	Tally	Gravel Patch Size  Min 3m 3m-5m 5m-10m 10m-15m 15m+	
Red algae present?	If so, please record coo	rdinates below:	

Transect Name: SAS 36
Target UTM: 463262
Observers (writer/other)

Date W/25 17
3760812
CAWA & RUCC

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0463254		
	UTM (@ Left Bank*)	3760817		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	9.1		
	Max Depth (cm) &			
	Location in Channel	25 L		
	(L/C/R*)			
	Depth @ Left Edge (cm)	a= -		
	(~4" from bank edge)	<b>3</b>		
	Depth @ Right Edge (cm)	2		
	(~4" from bank edge) % Veg- Left Bank*			
	% Veg- Right Bank*	100		
	% Canopy Over	100		
	Transect Band	20		
	Substrate % mud/silt	1		
ota	Substrate % sand	97	-	
Should total 100%	Substrate % gravel	2		
10u	Substrate % cobble	0		
S	Substrate % boulder	D		
	Photo Upstream	1012		
	(time & #)	10.2		
	Photo Downstream	1012		
	(time & #)	Ĭ		
	Photo Left Bank*	1012		
	(time & #)			
	Photo Right Bank*	1012		
	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
L				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 35 and SAS 36.

Tally	Gravel Patch Size	
	Min 3m	
	3m-5m	
	5m-10m	
	10m-15m	
	15m+	

Red algae present? If so, please record coordinates below:					

Transect Name: SAS 37

Target UTM: 463084

Observers (writer/other)

Date 10/25/17

3760573

Observers (writer/other)

SAWA = RUFO

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0463079		
	UTM (@ Left Bank*)	3760577		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	12.6		
	Max Depth (cm) &			
	Location in Channel	25 L		
	(L/C/R*)			
	Depth @ Left Edge (cm)	-		
	(~4" from bank edge)	7		
	Depth @ Right Edge (cm)	_		
	(~4" from bank edge)	5		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over	45		
_	Transect Band	45		
tal	Substrate % mud/silt	10		
\$ \$	Substrate % sand	90		
uld to	Substrate % gravel	0		
Should total 100%	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream	1030		
-	(time & #)			
	Photo Downstream	1030		
	(time & #)	*		
	Photo Left Bank*	1030		
	(time & #)			
		1030		
	(time & #)			
<u> </u>	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 37 and SAS 38.

	Tally	Gravel Patch Size	
	11	Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
d algae prese	ent? If so, please record co	ordinates below:	
ed algae prese	ent? If so, please record co	ordinates below:	
d algae prese	ent? If so, please record co	ordinates below: 	
d algae prese	ent? If so, please record co	ordinates below: 	
d algae prese	ent? If so, please record co	ordinates below:	
d algae prese	ent? If so, please record co	ordinates below:	

Transect Name: SAS 38

Target UTM: 462880

Observers (writer/other)

Date 10/25/17

3760354

Observers (writer/other)

SAWA Z LOFC

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0462877		
	UTM (@ Left Bank*)	3760357		
	Channel position (L/C/R*)	ρ.		
	Width of Channel (m)	14.9		
	Max Depth (cm) &			
	Location in Channel	201		
	(L/C/R*)	J1 V		
	Depth @ Left Edge (cm)	1		
	(~4" from bank edge)	15		
	Depth @ Right Edge (cm)	10		
	(~4" from bank edge)	6		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over	30		
	Transect Band	50		
tal	Substrate % mud/silt	25		
5 %	Substrate % sand	65		
Should total 100%	Substrate % gravel	10		-
ho!	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1046		
	Photo Downstream	1045		
	(time & #) Photo Left Bank*	1		
	(time & #)	1045		
	Photo Right Bank*	1045		
	(time & #)	10-13		
Ī	Photo other (describe)	وسين		
	Notes (e.g. Islands,			
	Obstructions)	_		

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Red

# **Additional Information**

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 38 and SAS 39.

	Tally	<b>Gravel Patch Size</b>	
		Min 3m	
		3m-5m	
3	<u> </u>	5m-10m	
		10m-15m	
	MI	15m+	
algae present? If so, j	please record coordi	inates below:	

Tally

Transect Name: SAS 39
Target UTM: 462706 3760111
Observers (writer/other) SAWA 2 RUFU

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0442696	0462691	
	UTM (@ Left Bank*)	3760114	3760116	
	Channel position (L/C/R*)	2	R	
	Width of Channel (m)	6	5.8	
	Max Depth (cm) &			
	Location in Channel	12 R	500 20 P	
	(L/C/R*)		1100011	
	Depth @ Left Edge (cm)	10	taren.	
	(~4" from bank edge)	6	Distriction (	
	Depth @ Right Edge (cm)	3	200 10	
	(~4" from bank edge)	_	020	
	% Veg- Left Bank*	80 75		
	% Veg- Right Bank*	D	100	
	% Canopy Over	446	10	
	Transect Band	10	10	
tal	Substrate % mud/silt	10	5	
uld to 00%	Substrate % sand	75	7	
)ulc	Substrate % gravel	16	7	
Should total 100%	Substrate % cobble Substrate % boulder			
	Photo Upstream	U	1101	
	(time & #)	1100	1,00	
	Photo Downstream	1100	1101	
	(time & #)	1100	1	
		11 20	1101	
	(time & #)			
	Photo Right Bank*	100	1101	
	(time & #)	163		
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)		_	

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Lo	ocation between GPS	Points SAS	_ and SAS	
· · · · · · · · · · · · · · · · · · ·	Tally	Gravel Patch S Min 3m 3m-5m 5m-10m 10m-15m 15m+	ize	
Red algae present? If s	o, please record coordir	nates below:		

Transect Name: SAS 40
Target UTM: 462526
Observers (writer/other)
Date D 25 17
3759882
SAWA 3 RUCU

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0462521		
	UTM (@ Left Bank*)	3759883		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	14		
	Max Depth (cm) &			
	Location in Channel	182		
	(L/C/R*)			
	Depth @ Left Edge (cm)	1.		
	(~4" from bank edge)	7		
	Depth @ Right Edge (cm)	10		
	(~4" from bank edge)			
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over	25		
	Transect Band	<i>a</i> -5		
tal	Substrate % mud/silt	4		
Should total 100%	Substrate % sand	93		
00]	Substrate % gravel	2		
hooling 1	Substrate % cobble	1		
	Substrate % boulder	0		
	Photo Upstream	1120		
	(time & #)	1.00		
	Photo Downstream	1120		
	(time & #) Photo Left Bank*	1100		
		1120		
	(time & #) Photo Right Bank*	h. O		
	(time & #)	1120		
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
	Obstructions)			
Į				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

L	ocation between G	GPS Points SAS and SAS	
	Tally	Gravel Patch Size  Min 3m 3m-5m 5m-10m 10m-15m 15m+	
Red algae present? If s	o, please record coo	ordinates below:	

Transect Name: SAS 41

Target UTM: 462388 3759638

Observers (writer/other) SAWA FOFC

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0462361		
	UTM (@ Left Bank*)	3759431		
	Channel position (L/C/R*)			
	Width of Channel (m)	17.2		
	Max Depth (cm) &	100		
	Location in Channel	19 12		
	(L/C/R*)			
	Depth @ Left Edge (cm)	1		
	(~4" from bank edge)	7		
	Depth @ Right Edge (cm)	1		
	(~4" from bank edge)	4		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over	20		
	Transect Band Substrate % mud/silt	20		
otal	Substrate % sand	33.77		
Should total	Substrate % gravel	3 77		
oul 100	Substrate % graver Substrate % cobble	3		
Sho	Substrate % boulder			
	Photo Upstream	1136		
	(time & #)			
	Photo Downstream	1136		
	(time & #)			
	Photo Left Bank*	طردا/		
	(time & #)			
	Photo Right Bank*	1136		
	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,	Marcd port.		
	Obstructions)	als as metas		
		due to camp		

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Locatio	on between G	PS Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Red algae present? If so, ple	ase record coo	rdinatos halour	
Trod algae present: 17 30, pre	ase record coo	runates below.	

Transect Name: SAS 42 Date 10 25/7

Target UTM: 462124 3759501 Observers (writer/other)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0462123		
	UTM (@ Left Bank*)	3759497		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	21.8		
	Max Depth (cm) &			
	Location in Channel	27 1		
	(L/C/R*)			
	Depth @ Left Edge (cm)	5		
	(~4" from bank edge)	7		
	Depth @ Right Edge (cm)	10		
	(~4" from bank edge)			
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	富 75		
	% Canopy Over	\$ 20		
	Transect Band			
[a]	Substrate % mud/silt	25		
5 %	Substrate % sand	74		
ould to	Substrate % gravel	1		
Should total 100%	Substrate % cobble	0		
<u> </u>	Substrate % boulder	0		
	Photo Upstream	1154		
	(time & #)			
	Photo Downstream	1154		
	(time & #)	P		
	Photo Left Bank*	lity		
	(time & #)			
	Photo Right Bank*	1154		
	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
Į				

1) no gravel bars 2)15-20 sucker in the gravel due to dam made 0461955; 3759469

\*L/C/R = Left/Center/Right. Face downstream to determine left and right banks.
by homelos camp. 3) 15-20 sucker 15 ft. dls from -dravel occurs affae dam structure.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 42 and SAS 43.

	Tally	Gravel Patch Size  Min 3m  3m-5m	
		5m-10m 10m-15m 15m+ Suckee present!	
Red algae present?	f so, please record coor	dinates below:	
			_

Transect Name: SAS 43 461833 Target UTM: Observers (writer/other) C. Thompson A. Sawyar 3 SAWA
(J. Swenson K. Drennen Republic Swenson **CHANNEL #3 CHANNEL #1 CHANNEL #2 OBSERVATIONS** Actual GPS coordinates in 0461830 3759453 UTM (@ Left Bank\*) Channel position (L/C/R\*) 0.5 Width of Channel (m) Max Depth (cm) & 12 Location in Channel (L/C/R\*)Depth @ Left Edge (cm) (~4" from bank edge) Depth @ Right Edge (cm) 133 (~4" from bank edge) 0 % Veg- Left Bank\* % Veg- Right Bank\* 100 % Canopy Over Transect Band Substrate % mud/silt Should total Substrate % sand 54 可包 Substrate % gravel Substrate % cobble Substrate % boulder 1214 Photo Upstream (time & #) 1214 Photo Downstream (time & #) 1214 Photo Left Bank\* (time & #) nu Photo Right Bank\*

(time & #)

Photo other (describe) Notes (e.g. Islands, Obstructions)

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

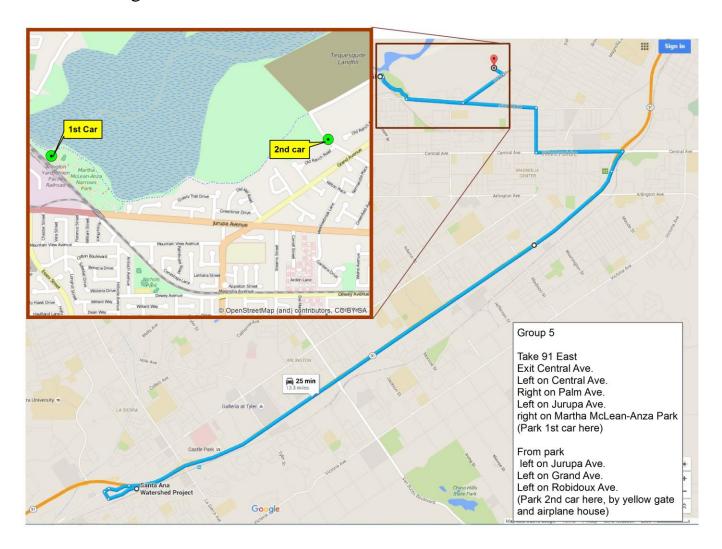
Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 43 and SAS 44.

Tally	Gravel Patch Size	
	Min 3m	
	3m-5m	
	5m-10m	
	10m-15m	
	15m+	
ed algae present? If so, please record coo	ordinates below:	

#### **Group 5: Points 44-51**

<u>Driving Directions</u>: Take 91 East. Exit Central Avenue and turn left. Turn right onto Palm Avenue. Turn left onto Jurupa Avenue. Martha McLean-Anza Narrows Park will be on the right side just before the railroad overpass. Car #1 should park at the Martha McLean-Anza Narrows Park off of Jurupa Avenue. After parking first car turn left onto Jurupa Avenue. Turn left onto Grand Avenue. Turn left onto Rubidoux Avenue. Car #2 should park upstream at the end of Rubidoux Avenue by the yellow gate and airplane house. Parking the cars as directed, will ensure you are walking downstream.



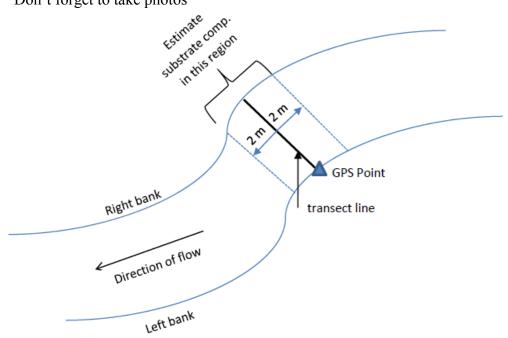
**Data Collection Instructions:** Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is in the wetted river and record on your data sheet the actual GPS location on the left bank

Technical Questions: Call Bonnie Johnson at (951) 757-0782 or Mari Archer at (951) 966-1602. Coordination/Logistical Issues: Call Zyanya Blancas at (951) 354-4220

(note: the left bank is on your left when you face downstream). If there is more than one wetted river channel, record each channel's left bank GPS location.

Here are some helpful tips:

- Please record all measurements using the metric system;
- Set up your transect lines perpendicular to the river;
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%;
- Don't forget to take photos



When You Are Done: Return to SAWPA at 11615 Sterling Ave. in Riverside to check equipment in, submit datasheets and grab lunch. Zyanya Blancas will contact your group's lead photographer to instruct them on how your group submits all site photos.

Getting Back to SAWPA: From the Second Car Location, start out taking Rubidoux Ave. in the direction away from the Santa Ana River. Turn right onto Grand Ave. Grand Ave becomes Streeter Ave and continue straight. Turn left onto Arlington Ave and then right onto Madison St. Keep heading down Madison St. and then turn right to merge onto the 91 W. Get off at Magnolia, and head down towards Pierce. Make a left on Pierce Ave and a left on Sterling.

Transect Name: SAS 44

Date 10/25/17 3759337

Target UTM:

461555

Observers (writer/other) Nicole Lafall

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0461553/3759340	461543/ /3759243	
	Channel position (L/C/R*)			
	Width of Channel (m)	8. U m	10,3	
	Max Depth (cm) & Location in Channel (L/C/R*)	27 cm , L	10 cm	
	Depth @ Left Edge (cm) (~4" from bank edge)	2.4 am	3 cm	
	Depth @ Right Edge (cm) (~4" from bank edge)	0.5 in.	3 cm	
	% Veg- Left Bank*	100	25	
	% Veg- Right Bank*	40	100	
	% Canopy Over Transect Band	25	10	
al	Substrate % mud/silt	0	40	
Should total 100%	Substrate % sand	85	60	
ould to	Substrate % gravel	15	trace	
hol	Substrate % cobble	0	0	
N	Substrate % boulder	0	0	
	Photo Upstream (time & #)	10:06 19	10:26 1019 319	
	Photo Downstream (time & #)	10:02 30	10:26 102443	
	Photo Left Bank* (time & #)	10:06 3/45	10:26  0309	
	Photo Right Bank* (time & #)	10:09 32	10:25 103023	
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	River flowing.	low flow Stagnest water. - Islands	

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 44 and SAS 45.

	Tally	<b>Gravel Patch Size</b>	
_		Min 3m	
_	<u> </u>	3m-5m	
_	1	5m-10m	
_	1	10m-15m	
_		15m+	
Red algae present? If so	, please record coord	linates below:	

Transect Name: SAS 45
Target UTM: 461287
3759267

Observers (writer/other) Nicole La Face

Actual GPS coordinates in UTM (@ Left Bank*) Channel position (L/C/R*) Width of Channel (m) Max Depth (cm) & 12.9 ~  Max Depth (cm) & 23 Location in Channel (L/C/R*) Depth @ Left Edge (cm) (~4" from bank edge) Depth @ Right Edge (cm) (~4" from bank edge) % Veg- Left Bank* % Veg- Right Bank* % Canopy Over Transect Band Substrate % sand by Substrate % sand by Substrate % gravel Substrate % gravel Substrate % boulder  Photo Upstream (time & #) Photo Downstream (time & #) Photo Right Bank* (time & #) Photo Right Bank* (time & #) Photo Right Bank* (time & #) Photo other (describe) Notes (e.g. Islands, Obstructions)		OBSERVATIONS	CHANN	VEL #1	CHANNEL #2	CHANNEL #3
Channel position (L/C/R*)  Width of Channel (m)  Max Depth (cm) & 23  Location in Channel (L/C/R*)  Depth @ Left Edge (cm) (-4" from bank edge)  Depth @ Right Edge (cm) (-4" from bank edge)  Depth @ Right Edge (cm) (-4" from bank edge)  % Veg- Left Bank* % Canopy Over  Transect Band  Substrate % mud/silt Substrate % gravel Substrate % gravel Substrate % cobble Substrate % boulder  Photo Upstream (time & #)  Photo Downstream (time & #)  Photo Right Bank*  (time & #)  Photo Right Bank*  (time & #)  Photo other (describe)  Notes (e.g. Islands,  1 islands		Actual GPS coordinates in	0461284	,		
Width of Channel (m)  Max Depth (cm) & Location in Channel (L/C/R*)  Depth @ Left Edge (cm) (-4" from bank edge)  Depth @ Right Edge (cm) (-4" from bank edge)  W Veg- Left Bank*  W Veg- Right Bank*  Canopy Over Transect Band  Substrate % mud/silt  Substrate % sand  Substrate % sand  Substrate % gravel  Substrate % oobble  Substrate % boulder  Photo Upstream (time & #)  Photo Downstream (time & #)  Photo Right Bank*  (time & #)  Photo other (describe)  Notes (e.g. Islands,  123  24  25  26  27  28  29  29  20  20  20  20  20  20  20  20		UTM (@ Left Bank*)	/3	159301		
Max Depth (cm) & Location in Channel (L/C/R*)  Depth @ Left Edge (cm) (~4" from bank edge)  Depth @ Right Edge (cm) (~4" from bank edge)  % Veg- Left Bank* 0 % Veg- Right Bank* 45 % Canopy Over Transect Band  Substrate % mud/silt 55 Substrate % sand 55 Substrate % gravel 20 Substrate % cobble 0 Substrate % boulder 0 Photo Upstream (time & #) Photo Downstream (time & #) Photo Right Bank* (time & #) Photo Right Bank* (time & #) Photo other (describe) Notes (e.g. Islands, 1 islands		Channel position (L/C/R*)	R			
Location in Channel (L/C/R*)  Depth @ Left Edge (cm) (~4" from bank edge)  Depth @ Right Edge (cm) (~4" from bank edge)  % Veg- Left Bank* % Canopy Over Transect Band  Substrate % mud/silt Substrate % sand Substrate % gravel Substrate % gravel Substrate % boulder  Photo Upstream (time & #)  Photo Downstream (time & #)  Photo Left Bank* (time & #)  Photo Right Bank* (time & #)  Photo Right Bank* (time & #)  Photo other (describe)  Notes (e.g. Islands,  1 islands		Width of Channel (m)	12.9 m			
Location in Channel (L/C/R*) Depth @ Left Edge (cm) (~4" from bank edge) Depth @ Right Edge (cm) (~4" from bank edge)  % Veg- Left Bank* % Canopy Over Transect Band Substrate % mud/silt Substrate % sand Substrate % sand Substrate % gravel Substrate % cobble Substrate % boulder Photo Upstream (time & #) Photo Downstream (time & #) Photo Right Bank* (time & #) Photo Right Bank* (time & #) Photo other (describe) Notes (e.g. Islands,  1 (sland)			13			
Depth @ Left Edge (cm) (~4" from bank edge)  Depth @ Right Edge (cm) (~4" from bank edge)  % Veg- Left Bank* % Veg- Right Bank* % Canopy Over Transect Band Substrate % mud/silt Substrate % sand Substrate % gravel Substrate % cobble Substrate % boulder  Photo Upstream (time & #) Photo Downstream (time & #) Photo Left Bank* (time & #) Photo Right Bank* (time & #) Photo Right Bank* (time & #) Photo other (describe) Notes (e.g. Islands,   Lo. 52  A Canopy		I .				
C-4" from bank edge   Depth @ Right Edge (cm) (-4" from bank edge)   Weg- Left Bank*   Weg- Right Bank*		,				
C-4" from bank edge   Depth @ Right Edge (cm) (-4" from bank edge			3 cm			
(~4" from bank edge) % Veg- Left Bank* % Veg- Right Bank* % Canopy Over Transect Band  Substrate % mud/silt Substrate % sand Substrate % gravel Substrate % boulder  Photo Upstream (time & #) Photo Downstream (time & #) Photo Right Bank* (time & #) Photo other (describe) Notes (e.g. Islands,  % Veg- Left Bank* 0 % Veg- Left Bank* 0 % Veg- Right Bank* 0 % Canopy Over Transect Bank* 0 % Substrate % sand 0 % Substrate % sond 0 %						
% Veg- Left Bank* % Veg- Right Bank* % Canopy Over Transect Band  Substrate % mud/silt Substrate % sand Substrate % gravel Substrate % cobble Substrate % boulder  Photo Upstream (time & #) Photo Downstream (time & #) Photo Left Bank* (time & #) Photo Right Bank* (time & #) Photo other (describe) Notes (e.g. Islands,  1 Sland			4 cm			
% Veg- Right Bank* % Canopy Over Transect Band  Substrate % mud/silt Substrate % sand Substrate % gravel Substrate % cobble Substrate % boulder  Photo Upstream (time & #) Photo Downstream (time & #) Photo Right Bank* (time & #) Photo other (describe) Notes (e.g. Islands,  15  Notes (e.g. Islands,						
Substrate % mud/silt   Substrate % sand   Substrate % sand   Substrate % gravel   Zo   Substrate % boulder						-
Transect Band  Substrate % mud/silt  Substrate % sand  Substrate % gravel  Substrate % cobble  Substrate % boulder  Photo Upstream (time & #)  Photo Downstream (time & #)  Photo Left Bank* (time & #)  Photo Right Bank* (time & #)  Photo other (describe)  Notes (e.g. Islands,  155  Substrate % mud/silt  155  Substrate % sand  105  Substrate % cobble  O  Substrate % boulder  O  10:52  10:52  10:52  10:52  10:52  10:52  10:52  10:52  10:52  10:52  10:52  10:53  1			45			
Substrate % mud/silt Substrate % sand Substrate % gravel Substrate % cobble Substrate % boulder  Photo Upstream (time & #) Photo Downstream (time & #) Photo Left Bank* (time & #) Photo Right Bank* (time & #) Photo other (describe) Notes (e.g. Islands,  Substrate % mud/silt Notes (e.g. Islands,  Io: Substrate % gravel  O Substrate % boulder  O Substrate % local l		1 1	0			
Substrate % sand Substrate % gravel Substrate % cobble Substrate % boulder  Photo Upstream (time & #) Photo Downstream (time & #) Photo Left Bank* (time & #) Photo Right Bank* (time & #) Photo other (describe) Notes (e.g. Islands,  Substrate % sand Substrate % gravel O Substrate % boulder O Io'.52 Io'.53 Io'.52 Io'.52 Io'.52 Io'.52 Io'.52 Io'.53 Io'.52 Io'.53 Io'.			1-	-		
Photo Upstream (time & #)   10:52   10:55	tal					
Photo Upstream (time & #)   10:52   10:55	d tc		05			
Photo Upstream (time & #)   10:52   10:55	oulk 100	-				
Photo Upstream (time & #)   10:52   10:55	Sho					
(time & #)  Photo Downstream (time & #)  Photo Left Bank* (time & #)  Photo Right Bank* (time & #)  Photo other (describe)  Notes (e.g. Islands,  10:52  10:52  10:52  10:52  10:52  10:52  10:52  10:52  10:52  10:52			6	1		
(time & #)  Photo Left Bank* (time & #)  Photo Right Bank* (time & #)  Photo other (describe)  Notes (e.g. Islands,  10:52  4  (sland)		(time & #)	10:52 -	result		
Photo Left Bank* (time & #)  Photo Right Bank* (time & #)  Photo other (describe)  Notes (e.g. Islands,  10:52  4			lm1/A	2		
(time & #)  Photo Right Bank* (time & #)  Photo other (describe)  Notes (e.g. Islands,  10:52  4	-		10.5gr T	-,		
Photo Right Bank* (time & #)  Photo other (describe)  Notes (e.g. Islands,  1 island			10:52	3		
(time & #) Photo other (describe) Notes (e.g. Islands, 1 island						
Photo other (describe) Notes (e.g. Islands, 1 island			10.52	4		
Notes (e.g. Islands, 1 island						
			1 Island			
			-			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between GF	S Points SAS and SAS	
	Tally	Gravel Patch Size	
		_ Min 3m	
		_ 3m-5m	
		_ 5m-10m	
		10m-15m	
		15m+	
Red algae present?	If so, please record coor	dinates below:	
_			
- <del></del>			

Transect Name: SAS 46
Target UTM: 461003
Observers (writer/other)

Date 10/25/17
3759182

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0460995/		
	UTM (@ Left Bank*)	3759206		
	Channel position (L/C/R*)			
	Width of Channel (m)	8.75 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	310, L		
	Depth @ Left Edge (cm) (~4" from bank edge)	3 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	4 cm		
	% Veg- Left Bank*	<5		
	% Veg- Right Bank*	15		
	% Canopy Over Transect Band	0		
al	Substrate % mud/silt	10		
tot	Substrate % sand	45		
plr	Substrate % gravel	40		
Should total	Substrate % cobble	50		
00	Substrate % boulder	0 ,		
	Photo Upstream (time & #)	11:15 65		
	Photo Downstream (time & #)	76		
	Photo Left Bank* (time & #)	3 7		
	Photo Right Bank* (time & #)	7 \$		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 46 and SAS 46.

	Tally	<b>Gravel Patch Size</b>	
	HT 111	_ Min 3m	
$\overline{A}$	H	3m-5m	
		_ 5m-10m	
	411	_ 10m-15m	
		_ 15m+	
Red algae present? If so,	please record coor	dinates below:	
	<del></del>		
·			

Transect Name: SAS 47
Target UTM: 460830
Observers (writer/other)

Date 10 / 25717
3758944

	OBSERVATIONS	CHAN	NEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0410083	NEL #1 0/ 315895/		
	UTM (@ Left Bank*)		13758951		
	Channel position (L/C/R*)				
	Width of Channel (m)	10.15	m		
	Max Depth (cm) &	30 cm			
	Location in Channel			1	
	(L/C/R*)	- mai			
	Depth @ Left Edge (cm)	5 cm			
	(~4" from bank edge)				
	Depth @ Right Edge (cm)	1.5 cm			
	(~4" from bank edge)	i a			
	% Veg- Left Bank*	lon			
	% Veg- Right Bank*	0			-
	% Canopy Over Transect Band	40			
	Substrate % mud/silt	10			
Should total 100%	Substrate % sand				
uld to	Substrate % gravel	80 10			
oul 10	Substrate % cobble	0			
Sh	Substrate % boulder	0			
<u>.                                    </u>	Photo Upstream				
	(time & #)	11:35	//		
	Photo Downstream	11:35	12		
	(time & #)	(1, 32	( )		
	Photo Left Bank*	11:35	\3		
	(time & #)	פביון			
	Photo Right Bank*	11:35	14		
	(time & #)		17		
	Photo other (describe)				
	Notes (e.g. Islands,				
	Obstructions)				
ĺ					

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 46 and SAS 47.

**Gravel Patch Size** 

Tally

	47111	IVIIN 3m	
	0.0	3m-5m	
	177	5m-10m	
		10m-15m	
	11	15m+	
Red algae present?	? If so, please record co	ordinates below:	

Transect Name: SAS 48
Target UTM: 460606 3758749
Observers (writer/other)

	Actual GPS coordinates in UTM (@ Left Bank*) Channel position (L/C/R*) Width of Channel (m)	62160le		271.0		
	Channel position (L/C/R*) Width of Channel (m)	R	137	10 JUN 2		
	Width of Channel (m)	K		58760		
į		5.2	M			
	Max Depth (cm) & Location in Channel (L/C/R*)	34	em,	2		
	Depth @ Left Edge (cm) (~4" from bank edge)	2 cm				
	Depth @ Right Edge (cm) (~4" from bank edge)	4.50	m			
	% Veg- Left Bank*	75				
Ľ	% Veg- Right Bank*	0				
	% Canopy Over Transect Band	10				
-	Substrate % mud/silt	A STATE OF THE PARTY OF THE PAR	5		· ·	
tot	Substrate % sand	75	65			
ould to	Substrate % gravel	2/3	25			
h T	Substrate % cobble	Ø.	5			
j.	Substrate % boulder	0	0			
	Photo Upstream (time & #)	(p:54	+	ile		
-	Photo Downstream (time & #)	11:54		17		
	Photo Left Bank* (time & #)	11:54		18		
I		11:54		19		
I	Photo other (describe)					
1	Notes (e.g. Islands, Obstructions)					

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS  $\frac{47}{}$  and SAS  $\frac{48}{}$ .

Tally	<b>Gravel Patch Size</b>	
Jtn.	_ Min 3m	
	3m-5m	
	5m-10m	
	10m-15m	
1/	15m+	
Red algae present? If so, please record coord	dinates below:	

Transect Name: SAS 49
Target UTM: 460324
Observers (writer/other)

Date 10 /25/17
3758705

	OBSERVATIONS	СНА	NNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0460	52-3/3758712	-	
	Channel position (L/C/R*)	3.6	R		
	Width of Channel (m)	6			
	Max Depth (cm) & Location in Channel (L/C/R*)	19,	R		
	Depth @ Left Edge (cm) (~4" from bank edge)	15cm			
	Depth @ Right Edge (cm) (~4" from bank edge)	11 cm			
	% Veg- Left Bank*	100		-	
	% Veg- Right Bank*	100			
	% Canopy Over Transect Band	15			
[a]	Substrate % mud/silt	19			
Should total 100%	Substrate % sand				
nld 00	Substrate % gravel	80			
hol 1	Substrate % cobble				
S S	Substrate % boulder	0			
	(time & #)	12:10	21		
ĺ	Photo Downstream (time & #)	1240	22		
	Photo Left Bank* (time & #)	12:10	23		
	Photo Right Bank* (time & #)	12:10	24		
	Photo other (describe)				
	Notes (e.g. Islands, Obstructions)				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS  $\frac{48}{4}$  and SAS  $\frac{49}{4}$ .

Tally	Gravel Patch Size
	Min 3m
	3m-5m
	5m-10m
	10m-15m
141	15m+

possible	Red algae present? If so, please record coordina	inates below: 3758709		

 Transect Name: SAS 50
 Date 10 / 25/11

 Target UTM: 460046
 3758748

 Observers (writer/other)
 3758748

	OBSERVATIONS	CHANNEL #1		CHANN	EL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0460043	1 8758760			
	Channel position (L/C/R*)					
	Width of Channel (m)	10.85	m	2.30	m	
	Max Depth (cm) & Location in Channel (L/C/R*)	22, L		5, R	I	
	Depth @ Left Edge (cm) (~4" from bank edge)	10 cm		2.5 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	3,5 cm		4 cm		
	% Veg- Left Bank*	100		100		
	% Veg- Right Bank*	0		25		
	% Canopy Over Transect Band	10		50		
la l	Substrate % mud/silt	5		0		
Should total 100%	Substrate % sand	85		90		
uld to	Substrate % gravel	10		10		
hou 1	Substrate % cobble	<i>(</i> 0		Ø		
S	Substrate % boulder	0		<b>O</b>		
	Photo Upstream (time & #)	12:24	26	12:24	31	
	Photo Downstream (time & #)	12:24	27	12:24	32	
	Photo Left Bank* (time & #)	12:24	28	12:24	33	
	Photo Right Bank* (time & #)	12:24	29	12:24	34	
	Photo other (describe)					
	Notes (e.g. Islands, Obstructions)	island sepa channels				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 49 and SAS 50.

Tally	<b>Gravel Patch Size</b>
	Min 3m
1	3m-5m
	5m-10m
	10m-15m
111	15m+

Red algae present? If so, please record coordinates below:						

Transect Name: SAS 51 Date 10/25/17
Target UTM: 459807 3758720

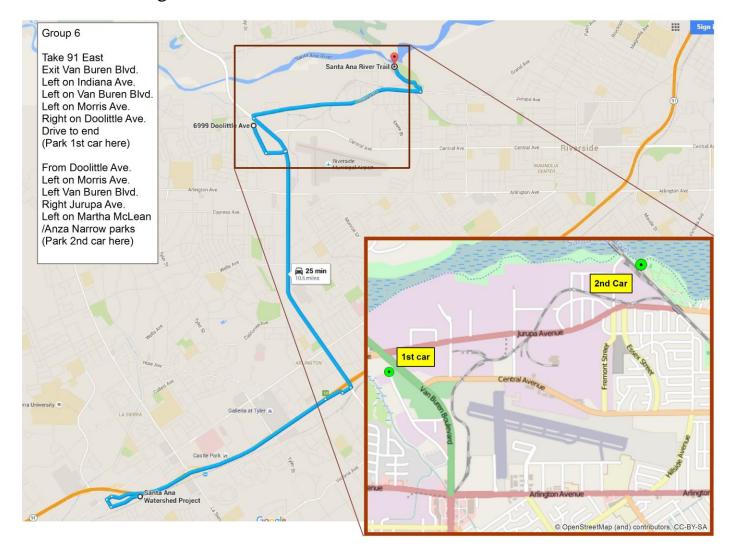
Observers (writer/other)\_\_\_\_\_

	OBSERVATIONS	CHANNEL #1		CHANN	VEL #2	CHANNEL #3
	Actual GPS coordinates in	0459305		1459813/		
	UTM (@ Left Bank*)		3726	13	158141	
	Channel position (L/C/R*)	L		L		
	Width of Channel (m)	10.20 m		7.80 m	<u> </u>	
	Max Depth (cm) & Location in Channel (L/C/R*)	25 cm		18cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	5.5 cm		1.5 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	2 cm		7 cm		
	% Veg- Left Bank*	ì		0		
	% Veg- Right Bank*	0		100		
	% Canopy Over Transect Band	O		50		
al	Substrate % mud/silt	0		0		
tot %	Substrate % sand	95		95		
ould to	Substrate % gravel	5		5		
Should total 100%	Substrate % cobble	trace		0		
S	Substrate % boulder	Ö		0		
	Photo Upstream (time & #)	12:43	36	12:43	41	
	Photo Downstream (time & #)	12:43	37	12:43	42	
j-	Photo Left Bank* (time & #)	12:43	38	12:43	43	
	Photo Right Bank* (time & #)	12:43	39	12:43	44	
Ī	Photo other (describe)			_		
	Notes (e.g. Islands, Obstructions)	Tree tronk Obstruction				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Loca	tion between GP	S Points SAS and	d SAS	
_	Tally	Gravel Patch Size Min 3m		
* 3		_ 3m-5m		
$\overline{T}_{I}$		5m-10m		
		10m-15m		
		15m+		
Red algae present? If so, p	olease record coor	dinates below:		

**Driving Directions**: Take 91 East and exit Van Buren Boulevard. Turn left onto Indiana Avenue, then a quick left onto Van Buren Boulevard. Take Van Buren Boulevard past Arlington Avenue and turn left onto Jurupa Avenue. **Car** #1 should park at Van Buren Boulevard and Jurupa Avenue. After parking first car, turn around and take Jurupa Avenue to Martha McLean-Anza Narrows Park. Park is located on the left side of Jurupa Avenue after the railroad overpass. **Car** #2 should park upstream at the Martha McLean-Anza Narrows Park. Parking the cars as directed, will ensure you are walking downstream.



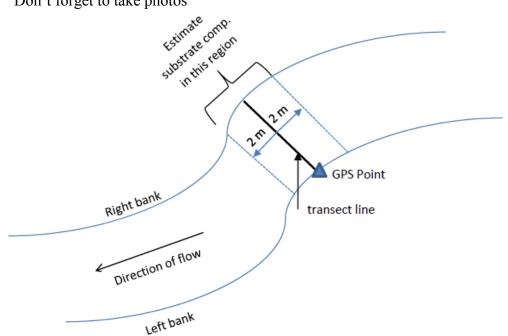
**Data Collection Instructions:** Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

Technical Questions: Call Bonnie Johnson at (951) 757-0782 or Mari Archer at (951) 966-1602. Coordination/Logistical Issues: Call Zyanya Blancas at (951) 354-4220

in the wetted river and record on your data sheet the actual GPS location on the left bank (note: the left bank is on your left when you face downstream). If there is more than one wetted river channel, record each channel's left bank GPS location.

Here are some helpful tips:

- Please record all measurements using the metric system;
- Set up your transect lines perpendicular to the river;
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%;
- Don't forget to take photos



When You Are Done: Return to SAWPA at 11615 Sterling Ave. in Riverside to check equipment in, submit datasheets and grab lunch. Zyanya Blancas will contact your group's lead photographer to instruct them on how your group submits all site photos.

**Driving Back to SAWPA:** From the Car #2 location, leave Martha McLean-Anza Narrows Park towards Jurupa Ave. Turn left onto Jurupa Ave, turn right onto Streeter Ave which will merge with Grand Ave. Turn Left onto Arlington Ave, turn right onto Madison St and turn right to merge onto 91 West to Magnolia Ave exit. After exiting, continue on Magnolia Ave to the left hand turn lane so you turn left on Pierce Street. Shortly after turning left turn left again onto Sterling Ave. Continue to the end of Sterling Ave.

Date 10/25/17 **Transect Name: SAS 52** 

3758820 Target UTM: 459545

Observers (writer/other) FC / MAF / AB

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	459545		
	UTM (@ Left Bank*)	3752820		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	30.1m		
	Max Depth (cm) &			
	Location in Channel	21cm/C		
	(L/C/R*)	210m / C		
	Depth @ Left Edge (cm)	1. –		
	(~4" from bank edge)	4,5		
	Depth @ Right Edge (cm)			
	(~4" from bank edge)	2cm		
	% Veg- Left Bank*	95%		
	% Veg- Right Bank*	100%		
	% Canopy Over	15%		
_	Transect Band			
tal	Substrate % mud/silt	3%		
Should total 100%	Substrate % sand	95%		
uld to	Substrate % gravel	2%		
ho 1	Substrate % cobble	- Actions		
	Substrate % boulder			
	Photo Upstream			
	(time & #)	7		
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank*			
	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,			
ĺ	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		4.5	
	ase record coo		
esent? If so, plea	ase record coo		
	ase record coo		
esent? If so, plea	ase record coo		
esent? If so, plea	ase record coo		

Transect Name: SAS 53
Target UTM: 459260

Date 10/25/17
3758737

Observers (writer/other)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	459 235		
	UTM (@ Left Bank*)	3758756		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	13.7 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	28 / R		
	Depth @ Left Edge (cm) (~4" from bank edge)	4.5cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	12 cm		
	% Veg- Left Bank*	90%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	30°/0		
17	Substrate % mud/silt	3%		
tota 6	Substrate % sand	96%		
Should total 100%	Substrate % gravel	1%		
100 l	Substrate % cobble			
22	Substrate % boulder			
	Photo Upstream (time & #)			_
	Photo Downstream (time & #)			
	Photo Left Bank* (time & #)			
	Photo Right Bank*			
	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Tally	Gravel Patch Size	
	<u> </u>	Min 3m	
		3m-5m	
-		5m-10m	
_		15m+	
d algae present? If so,	please record cod	ordinates below:	
l algae present? If so,	please record cod	ordinates below: 	
l algae present? If so,	please record cod	ordinates below:	
l algae present? If so,	please record cod	ordinates below:	
l algae present? If so,	please record cod	ordinates below:	
l algae present? If so,	please record cod	ordinates below:	
		ordinates below:	
	bass.	ordinates below:	

 Transect Name: SAS 54
 Date 10/25/17

 Target UTM: 458984
 3758633

 Observers (writer/other)
 3758633

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	458984		
	UTM (@ Left Bank*)	3758633		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	20,3 m		
	Max Depth (cm) &			
	Location in Channel	27 cm/C		
	(L/C/R*)			
	Depth @ Left Edge (cm) (~4" from bank edge)	13 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	9cm		
	% Veg- Left Bank*	0 %		
	% Veg- Right Bank*	80°/0		
	% Canopy Over			
	Transect Band	25%		
Te a	Substrate % mud/silt	25%		
Should total 100%	Substrate % sand	73%		
uld to	Substrate % gravel	2%		
hor 1	Substrate % cobble			
8	Substrate % boulder			
	Photo Upstream			
	(time & #)			
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank*			
	(time & #)			
,	Photo other (describe)			
į	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Location between (	GPS Points SAS and SAS
Tally	5m-10m 10m-15m
Red algae present? If so, please record cod	ordinates below:
53-54 - 8m 5m 8m 29m 6m 5m	

Transect Name: SAS 55
Target UTM: 458706

Date 10/25//7
3758704

Observers (writer/other)\_\_\_\_\_

UTM (@ Left Bank*)   3758735   3758745     Channel position (L/C/R*)   C   C     Width of Channel (m)   7.9 m   9.4m     Max Depth (cm) & 36 cm/C   28/C     (L/C/R*)   Depth @ Left Edge (cm) (c4" from bank edge)   9 cm   2 cm     Depth @ Right Edge (cm) (c4" from bank edge)   1.5cm   7.5cm     % Veg. Left Bank*   100%   100%   5%     % Veg. Right Bank*   100%   5%     % Canopy Over   7 cansect Band   45%   45%     Substrate % mud/silt   30%   33%     Substrate % gravel   5 colored   1.6cm   7.5cm     % Usubstrate % sand   70%   5%   5%     Substrate % solder   1.6cm   7.5cm     % Veg. Right Bank*   100%   5%   5%     % Veg. Right Bank*   100%   5%   66%     % Veg. Right Bank*   100%   5%   66%     % Veg. Right Bank*   100%   5%   66%     % Veg. Right Bank*   100%   100%   100%     % Veg. Right Bank*   100%   100%		OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Channel position (L/C/R*)  Width of Channel (m)  Max Depth (cm) & Location in Channel (L/C/R*)  Depth @ Left Edge (cm) (~4" from bank edge)  Depth @ Right Edge (cm) (~4" from bank edge)  % Veg. Left Bank*  % Veg. Left Bank*  % Veg. Right Bank*  % Canopy Over Transect Band  Substrate % mud/silt  Substrate % sand  Substrate % gravel  Substrate % cobble  Substrate % boulder  Photo Upstream (time & #)  Photo Downstream (time & #)  Photo Right Bank*		Actual GPS coordinates in	458 709	458 711	
Width of Channel (m)  Max Depth (cm) & 36 cm/C  Location in Channel (L/C/R*)  Depth @ Left Edge (cm) (~4" from bank edge)  Depth @ Right Edge (cm) (~4" from bank edge)  % Veg- Left Bank*  % Veg- Right Bank*  % Canopy Over Transect Band  Substrate % mud/silt  Substrate % sand  Substrate % sand  Substrate % gravel  Substrate % cobble  Substrate % boulder  Photo Upstream (time & #)  Photo Left Bank*  (time & #)  Photo Right Bank*  (time & #)  Photo Right Bank*		UTM (@ Left Bank*)	3758735	3758745	
Max Depth (cm) & Location in Channel (L/C/R*)   Depth @ Left Edge (cm) (~4" from bank edge)   9cm   2cm     Depth @ Right Edge (cm) (~4" from bank edge)   1.6cm   7.5cm     % Veg- Left Bank*		Channel position (L/C/R*)	C	C	
Location in Channel (L/C/R*)		Width of Channel (m)	7,9 m	9.4m	
CL/C/R*)   Depth @ Left Edge (cm) (~4" from bank edge)   Qcm   2 cm     Depth @ Right Edge (cm) (~4" from bank edge)   1.5cm   7.5cm     % Veg- Left Bank*		1	36 cm/C	08/1	
Carr		(L/C/R*)		2010	
(~4" from bank edge)		1 0	9cm	2 cm	
% Veg- Right Bank*  % Canopy Over Transect Band  Substrate % mud/silt  Substrate % sand  70%  Substrate % gravel  Substrate % cobble  Substrate % boulder  Photo Upstream (time & #)  Photo Downstream (time & #)  Photo Left Bank* (time & #)  Photo Right Bank*			1.5cm	7.5cm	
% Veg- Right Bank*   10 0 %   5%   % Canopy Over   45%   45%   Transect Band   30%   33%   Substrate % mud/silt   30%   66%   Substrate % sand   70%   66%   Substrate % gravel   1%   Substrate % cobble   Substrate % boulder   Photo Upstream (time & #) Photo Downstream (time & #) Photo Left Bank* (time & #) Photo Right Bank*		% Veg- Left Bank*	100%	1003/0	
% Canopy Over Transect Band  Substrate % mud/silt  Substrate % sand  Substrate % gravel  Substrate % cobble  Substrate % boulder  Photo Upstream (time & #)  Photo Downstream (time & #)  Photo Left Bank* (time & #)  Photo Right Bank*		% Veg- Right Bank*		5%	
Substrate % mud/silt 30°/o 33%o Substrate % sand 70% 66% Substrate % gravel Substrate % cobble Substrate % boulder Photo Upstream (time & #) Photo Downstream (time & #) Photo Left Bank* (time & #) Photo Right Bank*		1 1		45%	
Substrate % sand 70% 66% Substrate % gravel 9% Substrate % cobble 5ubstrate % boulder Photo Upstream (time & #) Photo Downstream (time & #) Photo Left Bank* (time & #) Photo Right Bank*			7.0/	,	
Photo Upstream (time & #) Photo Downstream (time & #) Photo Left Bank* (time & #) Photo Right Bank*	tal				
Photo Upstream (time & #) Photo Downstream (time & #) Photo Left Bank* (time & #) Photo Right Bank*	dtc %		/0 / <sub>e</sub>		
Photo Upstream (time & #) Photo Downstream (time & #) Photo Left Bank* (time & #) Photo Right Bank*	)ul(			170	
Photo Upstream (time & #)  Photo Downstream (time & #)  Photo Left Bank* (time & #)  Photo Right Bank*	Shc				
(time & #) Photo Downstream (time & #) Photo Left Bank* (time & #) Photo Right Bank*					
Photo Downstream (time & #) Photo Left Bank* (time & #) Photo Right Bank*		*			
(time & #) Photo Left Bank* (time & #) Photo Right Bank*	-				
Photo Left Bank* (time & #) Photo Right Bank*					
(time & #) Photo Right Bank*	-				
Photo Right Bank*					
	-				
FILLIDE (V #)		(time & #)			
Photo other (describe)	-				
Notes (e.g. Islands,	-	`			
Obstructions)		` •			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

L	ocation between	GPS Points SAS and SAS
	Tally	3m-5m 5m-10m
Red algae present? If	so, please record co	
	13m 10m 9m 4m 16m 6m	

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	458414		
	UTM (@ Left Bank*)	3758743		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	27,3m		
	Max Depth (cm) &			
	Location in Channel (L/C/R*)	18 cm /		
	Depth @ Left Edge (cm) (~4" from bank edge)			
	Depth @ Right Edge (cm) (~4" from bank edge)	4cm		
	% Veg- Left Bank*	10%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	30°/o		
TH.	Substrate % mud/silt	25%		
tota %	Substrate % sand	73%		
ould to 100%	Substrate % gravel	2%		
Should total 100%	Substrate % cobble			
S	Substrate % boulder			
	Photo Upstream			
	(time & #)			
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank*			
ļ	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Min 3m  3m-5m  5m-10m  10m-15m  15m+  resent? If so, please record coordinates below:	3m-5m 5m-10m 10m-15m 15m+
5m-10m15m+15m+  resent? If so, please record coordinates below:	5m-10m 10m-15m 15m+
	10m-15m 15m+
resent? If so, please record coordinates below:	15m+
resent? If so, please record coordinates below:	
	es below: 
Ilm	

Transect Name: SAS 57
Target UTM: 458138
Observers (writer/other)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	458127	458 120	
	UTM (@ Left Bank*)	3758644	3758653	
	Channel position (L/C/R*)	R	K	
	Width of Channel (m)	9,4m	10.4m	
	Max Depth (cm) & Location in Channel (L/C/R*)	29/R	25/L	
	Depth @ Left Edge (cm) (~4" from bank edge)	14 cm	3, Sim	
	Depth @ Right Edge (cm) (~4" from bank edge)	2 cm	llcm	
	% Veg- Left Bank*	75%	100%	
	% Veg- Right Bank*	100%	90%	
	% Canopy Over Transect Band	33%	40°/0	
al	Substrate % mud/silt	8%	30%	
tot %	Substrate % sand	910/.	69%	
uld to	Substrate % gravel	10/0	10/0	
Should total 100%	Substrate % cobble	aleron,		
8	Substrate % boulder	-	-	
	Photo Upstream (time & #)			
	Photo Downstream (time & #)			
	Photo Left Bank* (time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

L	ocation between	GPS Points SAS and SAS	
	Tally	5m-10m	
	so, please record co		
	6m 3m		
	5m		

Transect Name: S	SAS 58	Date	
Target UTM:	457904	3758451	
Observers (writer	/other)		

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	457904		
	UTM (@ Left Bank*)	3758451		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	27, 2m		
	Max Depth (cm) & Location in Channel (L/C/R*)	31 / R		
	Depth @ Left Edge (cm) (~4" from bank edge)	7.5 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	15cm		
	% Veg- Left Bank*	50°/0		
	% Veg- Right Bank*	90%		
	% Canopy Over Transect Band	15%		-
al	Substrate % mud/silt	30%		
Should total	Substrate % sand	67%		
	Substrate % gravel	3%		
hol	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream			
	(time & #)			
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,	<u></u>		
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

L	ocation between G	PS Points SAS and SAS
	Tally	5m-10m 10m-15m
	so, please record coo	
	7m 4m 6m	

Transect Name: S	SAS 59	<b>Date</b>	
Target UTM:	457622	3758348	
Observers (writer	/other)		

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	457622		
	UTM (@ Left Bank*)	3758348		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	13.8m		
	Max Depth (cm) &			
	Location in Channel (L/C/R*)	12/R		
	Depth @ Left Edge (cm) (~4" from bank edge)	5cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	7cm		
	% Veg- Left Bank*	1000/0		
	% Veg- Right Bank*	95%		
	% Canopy Over Transect Band	10%		
	Substrate % mud/silt	80/0		
Should total 100%	Substrate % sand	91%		
ould to 100%	Substrate % gravel	10/0		
hou 1(	Substrate % cobble			
S	Substrate % boulder			
	Photo Upstream			
	(time & #)			
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
ļ	(time & #)			
	Photo Right Bank*			
	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Red algae present? If so,	please record co		
	Ем		
	5m 14m 8m 4m		

Transect Name: S	SAS 60	Date_10/25/17
Target UTM:	457350	3758251
Observers (writer	r/other)	

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	457331		
	UTM (@ Left Bank*)	3758274		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	14.6		
	Max Depth (cm) &			
	Location in Channel (L/C/R*)	28 / R		
	Depth @ Left Edge (cm) (~4" from bank edge)	2cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	10 cm.		
	% Veg- Left Bank*	95%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	15 %		
	Substrate % mud/silt	30%		
Should total 100%	Substrate % sand	70%		
ould to 100%	Substrate % gravel	(0,0)		
100	Substrate % cobble			
<b>S</b>	Substrate % boulder			
	Photo Upstream (time & #)			
	Photo Downstream (time & #)			
	Photo Left Bank* (time & #)			
-	Photo Right Bank*			
-	(time & #)			
-	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between GPS	Points SAS	_ and SAS
	Tally	Gravel Patch S Min 3m 3m-5m 5m-10m 10m-15m 15m+	iize
Red algae present?	f so, please record coord	inates below: 	
	10m		
	14m		
	6m		
	10m		
	8m		
	7h		
	10m		
	13m		
	2.5m		
	25m		

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	457069		
	UTM (@ Left Bank*)	3758165		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	19.9		
	Max Depth (cm) & Location in Channel (L/C/R*)	10/1		
	Depth @ Left Edge (cm) (~4" from bank edge)	9 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	lcm		
	% Veg- Left Bank*	5%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	40°/0		
al	Substrate % mud/silt	30°/°		
tot %	Substrate % sand	690/0		
Should total 100%	Substrate % gravel	1%		
hou 1	Substrate % cobble			
S	Substrate % boulder			
	Photo Upstream (time & #)			
	Photo Downstream (time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

L	ocation between	GPS Points SAS and SAS
	Tally	5m-10m 10m-15m
<del></del>	so, please record co	
60-61	9m 7m 4m 3m 15m	61-Exit 7

Driving Directions: Take 91 East and exit Van Buren Boulevard. Turn left onto Indiana Avenue then a quick left onto Van Buren Boulevard. Take Van Buren Boulevard over the river to Limonite Avenue. Turn left onto Limonite Avenue. Turn left onto Downey Street. Car #1 should park at the corner of Downey Street and 64<sup>th</sup> Street. After parking first car, turn around on Downey Street. Turn right onto Limonite Avenue. Turn right onto Van Buren Boulevard. Turn right onto Jurupa Avenue. Car #2 should park upstream off of Jurupa Avenue at Van Buren Boulevard. Parking the cars as directed, will ensure you are walking downstream.



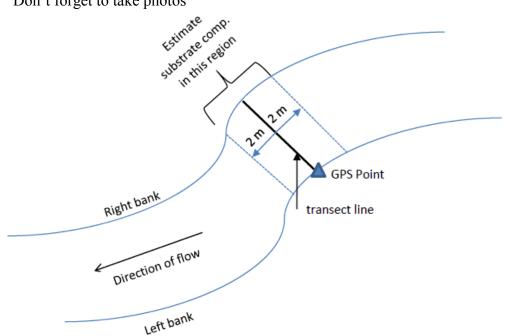
**Data Collection Instructions:** Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

Technical Questions: Call Bonnie Johnson at (951) 757-0782 or Mari Archer at (951) 966-1602. Coordination/Logistical Issues: Call Zyanya Blancas at (951) 354-4220

in the wetted river and record on your data sheet the actual GPS location on the left bank (note: the left bank is on your left when you face downstream). If there is more than one wetted river channel, record each channel's left bank GPS location.

Here are some helpful tips:

- Please record all measurements using the metric system;
- Set up your transect lines perpendicular to the river;
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%;
- Don't forget to take photos



When You Are Done: Return to SAWPA at 11615 Sterling Ave. in Riverside to check equipment in, submit datasheets and grab lunch. Zyanya Blancas will contact your group's lead photographer to instruct them on how your group submits all site photos.

**Directions Back to SAWPA:** From the Car #2 location, drive down Doolittle Ave away from the river, towards Van Buren Blvd. Turn right onto Van Buren Blvd. and turn right to merge onto 91 West. After taking 91 West, exit onto Magnolia Ave., head west to Pierce Street and make a left onto Pierce Street. After taking a left, take another left onto Sterling Ave. Stay on Sterling Ave. all the way to the end of the street and arrive at SAWPA.

Transect Name: SAS 62
Target UTM: 456796
Observers (writer/other)

Date 6/17
Observers (writer/other)

3758032

		9476793		
	OBSERVATIONS	CHANNEL #12	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0456794	0456794	
	UTM (@ Left Bank*)	3768043	3758038	
	Channel position (I)CA	5	3000	
	Width of Channel (m)	5.4m	8.5	
	Max Depth (cm) &			
	Location in Channel (L)C/R*)	41 cm	43cm	
	Depth @ Left Edge (cm)	93-CM		
	(~4" from bank edge)	16	2 cm	
	Depth @ Right Edge (cm)	1	6	
	(~4" from bank edge)	3 cm	6 cm	
	% Veg- Left Bank*	30%	20%	
	% Veg- Right Bank*	30%	100%	
	% Canopy Over	1000	1 /3	
	Transect Band	16%	10%	
tal	Substrate % mud/silt			
Should total 100%	Substrate % sand	60%	10% 15% 50%	
oule 100	Substrate % gravel	5%	50%	
Sho	Substrate % cobble	35%	50/6 35%	
	Substrate % boulder			
	Photo Upstream	1)10:12	5 10 13	
	(time & #)	y ( )	5 10 15	
	Photo Downstream	2)	6	
	(time & #) Photo Left Bank*			
	(time & #)	3)	7	
		/ /		
	(time & #)	4 1	8	
	Photo other (describe)		2 0	
	Notes (e.g. Islands,		Arvado	
	Obstructions)			
L				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

you mid oo	Total of your point		
	0456	6873	3756073
Location between	GPS Points SAS		_•
	riffle	below	3756073 - bridge
Tally	Gravel Patch S	ize	
	Min 3m		
	9 <sub>m-5m</sub>		
	5m-10m		
_	10m-15m		
	15m+		
Red algae present? If so, please record co	oordinates below: 		

Transect Name: SAS 63
Target UTM: 456516

Observers (writer/other)

Date 10/26/17
3758092

Date 10/26/17

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0456515	0456512	CHILITATE #3
	UTM (@ Left Bank*)	3758096	3758104	
	Channel position (C/R*)			
	Width of Channel (m)	181 m	166 m	
	Max Depth (cm) &	70771	16.6 m	
	Location in Channel	3	100	
	(L/C/R*)	3em	40 CW	
	Depth @ Left Edge (cm)			
	(~4" from bank edge)	3cm	1 cm	
	Depth @ Right Edge (cm)			
	(~4" from bank edge)	3 cm	9 can	
	% Veg- Left Bank*	100%	100%	
	% Veg- Right Bank*	100°0	100%	
	% Canopy Over		T'ac	
	Transect Band	100%	5%	
tal	Substrate % mud/silt	100%		
uld to	Substrate % sand		60%	
Should total 100%	Substrate % gravel		40%	
Sho	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream			
ļ	(time & #)	10:30	10:40	
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
}	(time & #)			
	Photo Right Bank* (time & #)			
}	Photo other (describe)			
-	Notes (e.g. Islands,			
	Obstructions)			
	Obstructions)			
L				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Lo	cation between GP	S Points SAS and SAS	
	Tally	Gravel Patch Size	
_		_ Min 3m	
_		_ 3m-5m	
_		_ 5m-10m	
_		_ 10m-15m	
		15m+	
<b>led algae present</b> ? If s	o, please record cool	rdinates below:	

Transect Name: SAS 64
Target UTM: 456219
Observers (writer/other)

Date | G | 36 | 17 | 3758120

Down Welfel

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0456222		
	UTM (@ Left Bank*)	2758156		
	Channel position (L/C/R*)			
	Width of Channel (m)	22,20		
	Max Depth (cm) &	,		
	Location in Channel	34 cm		
	(L/C/R*)			
	Depth @ Left Edge (cm)	7cm		
	(~4" from bank edge)			
	Depth @ Right Edge (cm)	7cm		
	(~4" from bank edge)			
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over			
	Transect Band	-701	_	
tal	Substrate % mud/silt Substrate % sand	3%		
Should total 100%		87% 10%		
oulo 10(	Substrate % gravel Substrate % cobble	1010		
Shc	Substrate % coople Substrate % boulder			
		4.00		
	Photo Upstream (time & #)	10:50		
	Photo Downstream			
ĺ	(time & #)			
	Photo Left Bank*			
	(time & #)			
ļ	Photo Right Bank*			
	(time & #)			
-	Photo other (describe)			
	Notes (e.g. Islands,	Toland		
	Obstructions)	Island In wide		
	,	IM WILL		

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between G	PS Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Red algae present	? If so, please record co	ordinates below:	

Transect Name: SAS 65
Target UTM: 455953
Observers (writer/other)

Date 10/26/17
3758238

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0455995		
	UTM (@ Left Bank*)	3758281		
	Channel position (L/C/R*)			
	Width of Channel (m)	11.1 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	49 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	13 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	2 cm		
	% Veg- Left Bank*	100%		· · · · · · · · · · · · · · · · · · ·
	% Veg- Right Bank*	1000		
	% Canopy Over Transect Band	5%		
ਬ	Substrate % mud/silt	5%		
tot %	Substrate % sand	90% 89%		
Should total 100%	Substrate % gravel	10/0		
hor 1	Substrate % cobble	5%		
S	Substrate % boulder			
	Photo Upstream (time & #)	11:04		
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank*			
	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between G	GPS Points SAS and	SAS
	Tally	Gravel Patch Size  Min 3m  3m-5m  5m-10m  10m-15m  15m+	
Red algae present?	f so, please record co	ordinates below:	
		1	

Transect Name: SAS 66 Target UTM: 455786 Date 6/26/17

Observers (writer/other)\_\_\_\_

	OBSERVATIONS	CHANNEL #1	CHANNEL #2 0 455 827	CHANNEL #3
	Actual GPS coordinates in	0455815		
	UTM (@ Left Bank*)	3758511	3758525	
	Channel position (L/CR*)			
	Width of Channel (m)	9.7m	19 m	
	Max Depth (cm) &			
	Location in Channel	46 cm		
	$(L/C/R^*)$		38cm	
	Depth @ Left Edge (cm)	3cm	7cm	
	(~4" from bank edge)	Dem	/cm	
	Depth @ Right Edge (cm)	3cm	23cm	
	(~4" from bank edge)		The state of the s	
	% Veg- Left Bank*	10000	100%	
	% Veg- Right Bank*	100°D	100%	
	% Canopy Over	15 %		
	Transect Band		10%	
[a]	Substrate % mud/silt	100 20%		
to %	Substrate % sand	65%	100%	
Should total 100%	Substrate % gravel	15%		
ho.	Substrate % cobble			
02	Substrate % boulder			
	Photo Upstream	1120		
	(time & #)	1120		
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank*			
	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

		GPS Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Red algae present? If:	so, please record co	ordinates below:	

Transect Name: SAS 67
Target UTM: 455537
Observers (writer/other)

Date 10/36/17
3758623

31.5

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0455563		CHAITIEL #3
	UTM (@ Left Bank*)	3758649		
	Channel position (LCR*)			
	Width of Channel (m)	30.5		
	Max Depth (cm) &			
	Location in Channel	35 cm		
	(L/C/R*)	30.5 35 cm		
	Depth @ Left Edge (cm)	13cm		
	(~4" from bank edge)			
	Depth @ Right Edge (cm)	14cm		
	(~4" from bank edge)			
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	1000		
	% Canopy Over	10%		
	Transect Band	•		
	Substrate % mud/silt	3% 48% 95%		
%	Substrate % sand	98 / 95%		
100%	Substrate % gravel	2%		
	Substrate % cobble			
_	Substrate % boulder			
	Photo Upstream	1140		
	(time & #)			
	Photo Downstream			
	(time & #)			
i	Photo Left Bank*			
-	(time & #)			
	Photo Right Bank*			
-	(time & #)			
-	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
L				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Location between GPS Points SAS and SAS 7.0 455733  Tally Gravel Patch Size Min-3m 3m-5m 5m-10m 10m-15m 15m+  dialgae present? If so, please record coordinates below:	_		(200	67
	Lo	ocation between G	SPS Points SAS and	d SAS
				0455733
		Taliv	Gravel Patch Size	3758583
3m-5m 5m-10m 10m-15m 15m+		· any		
5m-10m 10m-15m 15m+				
10m-15m 15m+	-			
15m+				
	-		10m-15m	
l algae present? If so, please record coordinates below:			15m+	
	algae present? If s	o, please record co	ordinates below: 	
	l <b>algae present</b> ? If s	o, please record co	ordinates below: 	
	algae present? If s	o, please record cod	ordinates below: — ——————————————————————————————————	
	l <b>algae present</b> ? If s	o, please record co	ordinates below:	
	<b>I algae present</b> ? If s	o, please record co	ordinates below:	

Transect Name: SAS 68
Target UTM: 455246
Observers (writer/other)

Date 10/26
3758601

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0455749		CHARTITED #3
	UTM (@ Left Bank*)	3758637		
	Channel position (L/C/R*)			
	Width of Channel (m)	28.70		
	Max Depth (cm) &			
	Location in Channel	18:10		
	(L/C/R*)	33cm Gen Gen		
	Depth @ Left Edge (cm)	Section		
	(~4" from bank edge)	GCM		
	Depth @ Right Edge (cm)	7cm		
	(~4" from bank edge)	1000		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over	5%		
	Transect Band	510		
tal	Substrate % mud/silt			
% T	Substrate % sand	100°b		
ould to 100%	Substrate % gravel			
Should total 100%	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream	1200		
	(time & #)			
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank*			
ŀ	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
L				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between G	PS Points SAS and SAS	
	Tally	10m-15m	
Red algae present? I	f so, please record cod	ordinates below:	

Transect Name: SAS 69

Target UTM:

455019

Observers (writer/other)\_

Date 10/26 3758411

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0454981		
	UTM (@ Left Bank*)	3758474		
	Channel position (L(C/R*)	1 0		
	Width of Channel (m)	14.6		
	Max Depth (cm) &			
	Location in Channel	STAR		
	(L/C/R*)	57cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	8cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	5 cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over	10%		
	Transect Band	10%		
aj	Substrate % mud/silt	10%		
Should total 100%	Substrate % sand	85%		
ould to 100%	Substrate % gravel			
) ho	Substrate % cobble	50		
	Substrate % boulder			
	Photo Upstream	1210		
-	(time & #)	101		
	Photo Downstream			
	(time & #)			
{	Photo Left Bank*			
-	(time & #)			
	Photo Right Bank* (time & #)			
-	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
	Obstructions)			
_				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Loc	cation between GF	PS Points SAS and SAS	
_	Tally	Gravel Patch Size Min 3m	
		3m-5m 5m-10m	
		10m-15m	
-		15m+	
Red algae present? If so	, please record coo	rdinates below:	
		_	
		-	

Transect Name: SAS 70
Target UTM: 454789
Observers (writer/other)

Date 10 26/17
3758479

Date 10 26/17

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0454837		
	UTM (@ Left Bank*)	3758563		
	Channel position (LQ/R*)			
	Width of Channel (m)	17.5		
	Max Depth (cm) &			
	Location in Channel	100cm		
	(L/C/R*)			
	Depth @ Left Edge (cm)	T'a.		
	(~4" from bank edge)	5cm		
	Depth @ Right Edge (cm)	~ ? .		·
	(~4" from bank edge)	7) CW		
	% Veg- Left Bank*	100%		
1	% Veg- Right Bank*	23cm		
	% Canopy Over			
	Transect Band	5%		
tal	Substrate % mud/silt	(3-/3/		
uld to	Substrate % sand	90%		
Should total 100%	Substrate % gravel	5%		
St	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream	1220		
	(time & #)			
	Photo Downstream			
-	(time & #)			
	Photo Left Bank*			
-	(time & #)			
	Photo Right Bank*			
	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			
	Oosit defioris)			
l_				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 3758434.

Tally Gravel Patch Size Min 3m 3m-5m 5m-10m 10m-15m 15m+

Red algae present? If so, please record coordinates below:

Transect Name: SAS 71

Target UTM: 454863

Observers (writer/other)

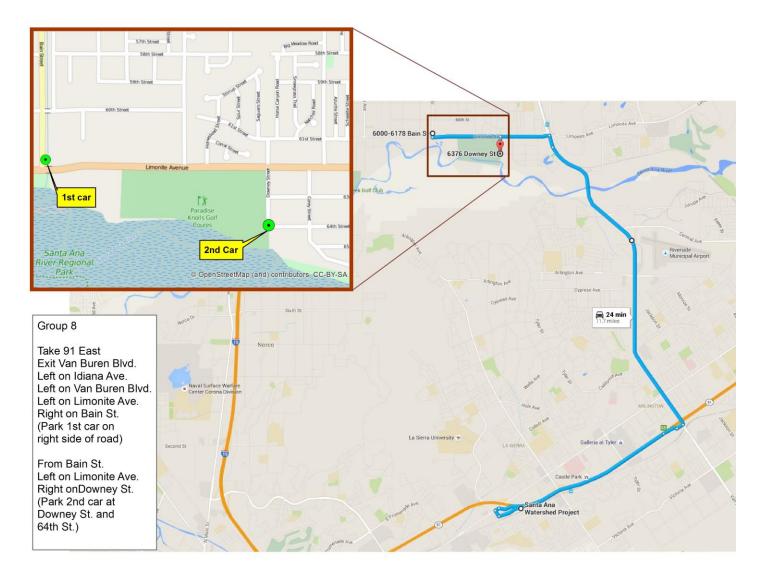
Date // 17

		OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	I	tual GPS coordinates in	0454900		111111111111111111111111111111111111111
		TM (@ Left Bank*)	3758715		
		annel position (L/C/R*)			
	Wi	dth of Channel (m)	12.3		
		x Depth (cm) &	43 cm		
		cation in Channel	43 cm		
	<u> </u>	C/R*)			
		pth @ Left Edge (cm)	70		
		" from bank edge)	/cm		
		oth @ Right Edge (cm)	7cm 7cm		
		" from bank edge)			
		Veg- Left Bank*	100%		·
		Veg- Right Bank*	100%		
		Canopy Over	10%	×2	
		nsect Band	10%		
tal	-	strate % mud/silt			
l to	$\sim$ $-$	strate % sand	100%		
oulc	Sub	strate % gravel			
Should total		strate % cobble			
		strate % boulder			
		to Upstream	1235		
		e & #)	124.70		
		o Downstream			
		e & #) o Left Bank*			
		e & #)			
		o Right Bank*			
		e & #)			
		o other (describe)			
		s (e.g. Islands,			
		ructions)			
	0030	(dello115)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Lo	ocation between GPS	Points SAS	_ and SAS
	Tally	Gravel Patch Si	ize
	<u></u>	Min 3m	
		3m-5m	
•		5m-10m	
		10m-15m	
•		15m+	
ē.			
15			
Red algae present? If s	so, please record coord	inates below:	

**Driving Directions**: Take 91 East and exit Van Buren Boulevard. Turn left onto Indiana Avenue then a quick left onto Van Buren Boulevard. Take Van Buren Boulevard over the river to Limonite Avenue. Turn left onto Limonite Avenue. Turn right onto Bain Street. **Car** #1 should park off on Bain Street and Limonite Avenue. After parking first car, turn left onto Limonite Avenue. Turn right onto Downey Street. **Car** #2 should park upstream at the corner of Downey Street and 64<sup>th</sup> Street. Parking the cars as directed, will ensure you are walking downstream.



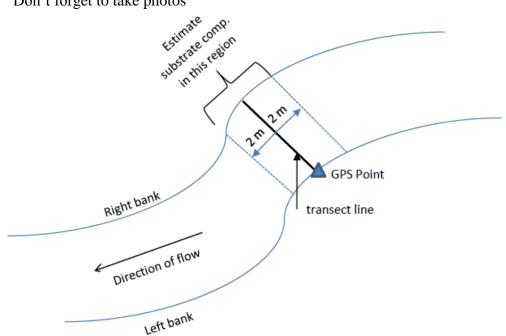
**Data Collection Instructions:** Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

Technical Questions: Call Bonnie Johnson at (951) 757-0782 or Mari Archer at (951) 966-1602. Coordination/Logistical Issues: Call Zyanya Blancas at (951) 354-4220

in the wetted river and record on your data sheet the actual GPS location on the left bank (note: the left bank is on your left when you face downstream). If there is more than one wetted river channel, record each channel's left bank GPS location.

Here are some helpful tips:

- Please record all measurements using the metric system;
- Set up your transect lines perpendicular to the river;
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%;
- Don't forget to take photos



When You Are Done: Return to SAWPA at 11615 Sterling Ave. in Riverside to check equipment in, submit datasheets and grab lunch. Zyanya Blancas will contact your group's lead photographer to instruct them on how your group submits all site photos.

**Driving Back to SAWPA:** From the Car #2 locations, drive on Downey Street away from the Santa Ana River, and turn right onto Limonite Ave. After turning right on Limonite, turn right to merge onto Van Buren Blvd. Continue driving at Van Buren Blvd and turn right to merge onto 91 West. Take the 91 West to Magnolia Ave exit. After exiting on Magnolia Ave., head west to Pierce Street and make a left onto Pierce Street. After taking a left, take another left onto Sterling Ave. Stay on Sterling Ave. all the way to the end of the street and arrive at SAWPA.

Transect Name: SAS 72

Target UTM: 454748

Observers (writer/other)

Tavish

Sturdivant,

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	11 -		
	UTM (@ Left Bank*)	115 0454910		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	40.0 m		
	Max Depth (cm) &			
	Location in Channel	27 cm; C		
	(L/C/R*)			
	Depth @ Left Edge (cm)	11-8-45		
	(~4" from bank edge)	4.5 cm		
	Depth @ Right Edge (cm)	2.0 cm		
	(~4" from bank edge)			
	% Veg- Left Bank*	0%		
	% Veg- Right Bank*	50 %.		
	% Canopy Over	2 %		
	Transect Band			
Should total 100%	Substrate % mud/silt	0%		
uld to	Substrate % sand	87 11 %		
Jul 100	Substrate % gravel Substrate % cobble	-		
Sho	Substrate % boulder	0,5%		
	Photo Upstream	0%		
	(time & #)	10:30 An		
-	Photo Downstream	\$10\$°		
	(time & #)	10:30 am Alan		
	Photo Left Bank*	संया		
	(time & #)	10:30 An #130		
	Photo Right Bank*			
	(time & #)	10-30 Am 1198		
	Photo other (describe)			
_	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS  $\frac{72}{}$  and SAS  $\frac{73}{}$ .

Tally	Croval Batala Cia	
Tany	Gravel Patch Size	
-	Min 3m	
	3m-5m	
	5m-10m	
	10m-15m	
	15m+	
Red algae present? If so, please recor	rd coordinates below:	
Red algae present? If so, please recor	rd coordinates below:	
Red algae present? If so, please recor	rd coordinates below:	
Red algae present? If so, please recor	rd coordinates below:	
Red algae present? If so, please recor	rd coordinates below:	
Red algae present? If so, please recor	rd coordinates below:	
Red algae present? If so, please recor	rd coordinates below:	
Red algae present? If so, please recor	rd coordinates below:	

Transect Name: SAS 73 Date 10/25
Target UTM: 454455 3758993

Observers (writer/other) Tavish Sturdings

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	(Same ) the Mildely		
	UTM (@ Left Bank*)	( and		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	50.5 m		
	Max Depth (cm) &	HI Water A		
	Location in Channel	THE WANTED		
	(L/C/R*)	26 cm; C		
	Depth @ Left Edge (cm)	19 ch		
	(~4" from bank edge)	19 cm		
	Depth @ Right Edge (cm)	21, cm		
	(~4" from bank edge)	21,000		
	% Veg- Left Bank*	100 %		
	% Veg- Right Bank*	100 %		
	% Canopy Over	5%		
	Transect Band	> 10		
tal	Substrate % mud/silt	0%		
Should total 100%	Substrate % sand	92%		
oulc 100	Substrate % gravel	7%		
Shc	Substrate % cobble	1 %		
<u></u>	Substrate % boulder	0%		
	Photo Upstream	10:55 Am		
	(time & #)	#Auf		
	Photo Downstream	10:51 An		
	(time & #) Photo Left Bank*	the total		
	(time & #)	10:51 An HADA		
-	Photo Right Bank*	(0.5) An #M		
	(time & #)	lo:35 AM HARV		
-	· · · · · · · · · · · · · · · · · · ·			
_	Notes (e.g. Islands,	10:53 Am		
	Obstructions)	Santa suckeh		
		observed, costile		
L		observes		

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Tally Gravel Patch Size

Min 3m
3m-5m
5m-10m
10m-15m
15m+

Red algae present? If so, please record coordinates below:

Transect Name: SAS 74

Target UTM: 454159

Observers (writer/other)

Date 10/25

3759037

Observers (writer/other)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	(same)		
	UTM (@ Left Bank*)			
	Channel position (L/C/R*)	R		
	Width of Channel (m)	40.5 m		
	Max Depth (cm) &	F2		
	Location in Channel	52 cm; c		
	(L/C/R*)			
	Depth @ Left Edge (cm) (~4" from bank edge)	7.5 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	4 cm		
	% Veg- Left Bank*	100 %		
	% Veg- Right Bank*	100 %		
	% Canopy Over	20%		
	Transect Band			
tal	Substrate % mud/silt	0.5%		
Should total 100%	Substrate % sand	96.5% 3%		
100 Jal	Substrate % gravel	3 %		
Shc	Substrate % cobble	0%		
	Substrate % boulder	0%		
,	Photo Upstream (time & #)	11:20 Am		
_	Photo Downstream			
	(time & #)	11:20 Am		
_	Photo Left Bank*			
	(time & #)	11:20 Am		
	Photo Right Bank*			
	(time & #)	11:20 AM		
_	Photo other (describe)			
	Notes (e.g. Islands,			
(	Obstructions)			
L				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Transect Name: SAS 75

Target UTM: 453874

Observers (writer/other)

Taving Stand/vax

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	(same)		
	UTM (@ Left Bank*)	C7 - 50 7		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	24.0 m		
	Max Depth (cm) &			
	Location in Channel	34 cm; L		
	(L/C/R*)			
	Depth @ Left Edge (cm)	3 cm		
	(~4" from bank edge)			
	Depth @ Right Edge (cm)	19 cm	!	
	(~4" from bank edge)			
	% Veg- Left Bank*  % Veg- Right Bank*	100 %		
	% Canopy Over	100 %.		
	Transect Band	20 %		
	Substrate % mud/silt	10 %		
Should total 100%	Substrate % sand	87 1/2		
uld to	Substrate % gravel	3 %		
10 J	Substrate % cobble	0%		
S	Substrate % boulder	0%		
	Photo Upstream	1.50.7		
	(time & #)	11240 Am		
	Photo Downstream	1.15.11		
	(time & #)	11:40 Am		
	Photo Left Bank*	11:16.		
	(time & #)	11,40 AM		
	Photo Right Bank*	11:40 Am		
	(time & #)	(1 - 00 1500)		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			
	Obstructions)			
l				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 75 and SAS 76.

	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Thash on	right bank		
	right bank so, please record coo	ordinates below:	
		ordinates below:	
		ordinates below:	
		ordinates below:	

Transect Name: SAS 76
Target UTM: 453587

Date (0/2)
3759156

Target UTM: 453587 3759156
Observers (writer/other) Tavish Sturdingt

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	(same)		
	UTM (@ Left Bank*)	(5/140)		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	21.4 m		
	Max Depth (cm) &			
	Location in Channel	35 cm 1, L		
	(L/C/R*)	,		
	Depth @ Left Edge (cm)	35 cm		
	(~4" from bank edge)	33 CM		-
	Depth @ Right Edge (cm)	11 cm		
	(~4" from bank edge)			
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*			
	% Canopy Over Transect Band	25%		
	Substrate % mud/silt	3 %		
Should total 100%	0.1., 0/ 1			
uld to	Substrate % gravel	4 4 % 3 %		
oul 10	Substrate % cobble	0%		
Sh	Substrate % boulder	0 %.		
	Photo Upstream			
	(time & #)	11:35 Am		
	Photo Downstream			
	(time & #)	11:33 An		
	Photo Left Bank*			
	(time & #)	11:55 AM		
	Photo Right Bank*	14:55		
	(time & #)	11:55 AM		
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS \_\_\_\_\_\_\_\_ and SAS \_\_\_\_\_\_\_\_.

Tally Gravel Patch Size
\_\_\_\_\_\_\_\_ Min 3m
\_\_\_\_\_\_\_\_ 3m-5m
\_\_\_\_\_\_\_\_\_ 5m-10m
\_\_\_\_\_\_\_\_ 10m-15m
\_\_\_\_\_\_\_\_ 15m+

Red algae present? If so, please record coordinates below:

 Transect Name: SAS 77
 Date (0/2)

 Target UTM: 453294
 3759167

 Observers (writer/other) Tavish 5turlivut

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	(same)		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	21.2 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	38 cm; C		
	Depth @ Left Edge (cm) (~4" from bank edge)	3 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	21 cm		
	% Veg- Left Bank*	100 %		
	% Veg- Right Bank*	700%		
	% Canopy Over Transect Band	to %		
al	Substrate % mud/silt	2 %		
Should total 100%	Substrate % sand	46%		
pli 000	Substrate % gravel	2%		
hou 1	Substrate % cobble	0%		
<u></u> \( \sigma \)	Substrate % boulder	0%		
	Photo Upstream (time & #)	12:11 pm		
	Photo Downstream (time & #)	12:11 PM		
	Photo Left Bank* (time & #)	12:11 PM		
	Photo Right Bank* (time & #)	12:11 pm		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

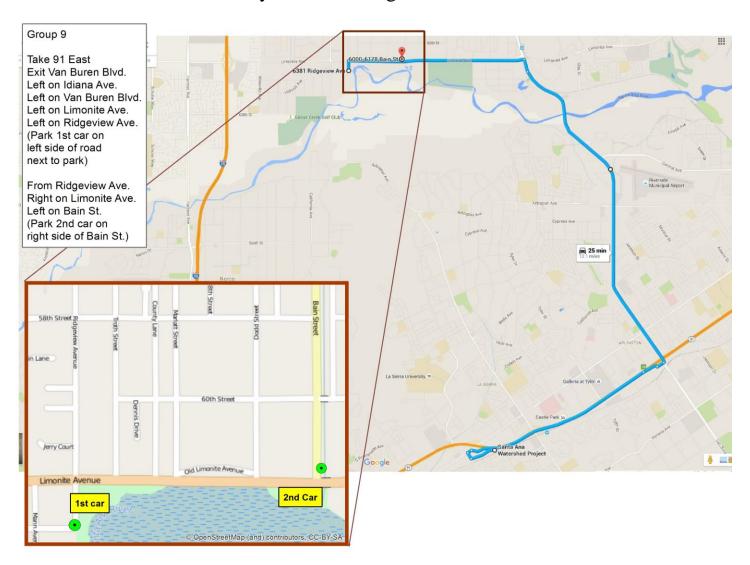
Tally Gravel Patch Size

Min 3m
3m-5m
5m-10m
10m-15m
15m+

Red algae present? If so, please record coordinates below:

#### Group 9: Points 78-82

Driving Directions: Take 91 East and exit Van Buren Boulevard. Turn left onto Indiana Avenue then a quick left onto Van Buren Boulevard. Take Van Buren Boulevard over the river to Limonite Avenue. Turn left onto Limonite Avenue. Turn left onto Ridgeview Avenue and turn left into the Horse Park on left side of road. Car #1 should park at the Horse Park off of Ridgeview Avenue. After parking first car, turn around and turn right onto Limonite Avenue. Turn left onto Bain Street. Car #2 should park upstream on Bain Street and Limonite Avenue. Parking the cars as directed, will ensure you are walking downstream.



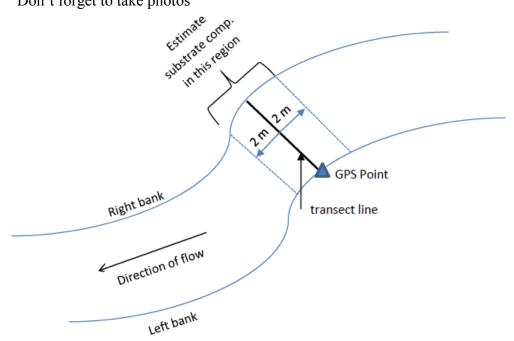
**Data Collection Instructions:** Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

Technical Questions: Call Bonnie Johnson at (951) 757-0782 or Mari Archer at (951) 966-1602. Coordination/Logistical Issues: Call Zyanya Blancas at (951) 354-4220

in the wetted river and record on your data sheet the actual GPS location on the left bank (note: the left bank is on your left when you face downstream). If there is more than one wetted river channel, record each channel's left bank GPS location.

Here are some helpful tips:

- Please record all measurements using the metric system;
- Set up your transect lines perpendicular to the river;
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%;
- Don't forget to take photos



When You Are Done: Return to SAWPA at 11615 Sterling Ave. in Riverside to check equipment in, submit datasheets and grab lunch. Zyanya Blancas will contact your group's lead photographer to instruct them on how your group submits all site photos.

**Driving Back to SAWPA:** From the Car #2 location, drive down Bain St. toward Limonite Ave and turn left onto Limonite Ave. After turning left on Limonite, turn right to merge onto Van Buren Blvd. Continue driving at Van Buren Blvd and turn right to merge onto 91 West. Take the 91 West to Magnolia Ave exit. After exiting on Magnolia Ave., head west to Pierce Street and make a left onto Pierce Street. After taking a left, take another left onto Sterling Ave. Stay on Sterling Ave. all the way to the end of the street and arrive at SAWPA.

Transect Name: SAS 78

Date 10 - 25 - 17 3759212

Target UTM:

453010

Observers (writer/other) Ana, Note, Comeron

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	453009 3759217		OLL HAME HO
	Channel position (L/C/R*)	С		
	Width of Channel (m)	25.2 m		
	Max Depth (cm) &	1 01		
	Location in Channel	39 cm Edge		
	$(L/C/R^*)$	rage		
	Depth @ Left Edge (cm) (~4" from bank edge)	2.5 cm		
	Depth @ Right Edge (cm)	25.5cm		
	% Veg- Left Bank*	100 -/-		
	% Veg- Right Bank*	100 %		
	% Canopy Over			
	Transect Band	0 -/-		
tal	Substrate % mud/silt	2.1.		
Should total 100%	Substrate % sand	91.1.		
uld to	Substrate % gravel	2-/-		
hodis 1	Substrate % cobble	5./.		
	Substrate % boulder	0 -/ -		
	Photo Upstream (time & #)			
	Photo Downstream (time & #)	V		
	Photo Left Bank* (time & #)	1		
II	Photo Right Bank* (time & #)			
I	Photo other (describe)			
1	Notes (e.g. Islands,			
(	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS  $\frac{78}{2}$  and SAS  $\frac{79}{2}$ .

	Tally	Gravel Patch Size	
	11/1/1	Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
1. 1	•216	a alian kana kalaun	
l algae presen	t? If so, please record co	ordinates below:	
l algae presen	<b>t</b> ? If so, please record co	ordinates below: 	
	t? If so, please record co		

Transect Name: SAS 79

Date 10 - 25 - 17 3759199

Target UTM:

452731

Observers (writer/other) Ana / Date, Canevar

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	452734		CINTITUED 113
	UTM (@ Left Bank*)	3759214		
	Channel position (L/C/R*)	Center		
	Width of Channel (m)	21.4 m		
	Max Depth (cm) &	32 cm		
	Location in Channel	center		
	(L/C/R*)			
	Depth @ Left Edge (cm)	3 cm		
}	(~4" from bank edge)			
	Depth @ Right Edge (cm)	31 cm		
	(~4" from bank edge)	100		
	% Veg- Left Bank*	100./		
-	% Veg- Right Bank* % Canopy Over	100 -/-		
	Transect Band	3 - / .		
	Substrate % mud/silt	3./.		
Should total 100%	Substrate % sand	94.1.		
uld to	Substrate % gravel	3.1.		
lou 10	Substrate % cobble	0.7.		
S	Substrate % boulder	0.1		
	Photo Upstream			
	(time & #)			
	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
	(time & #)			
	Photo Right Bank*			
	(time & #)			
_	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS <u>79</u> and SAS <u>80</u>.

	Tally	Gravel Patch Size	
	1111	Min 3m	
		3m-5m	
	_ \ \	5m-10m	
	·	10m-15m	
		4.5	
i algae nrese	nt? If so, please record co	15m+	
d algae prese	nt? If so, please record co		1
l algae prese	nt? If so, please record co		
algae prese	nt? If so, please record co		
	nt? If so, please record co		

Transect Name: SAS 80

Date 10 - 25 - 17

Target UTM:

452566

3758961

Observers (writer/other) Ana, Nate, Cameron

		Left	Right	
	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	452495	452582	
	UTM (@ Left Bank*)	3758943	3759018	
	Channel position (L/C/R*)			
	Width of Channel (m)	7.9 m	8-6 m	
	Max Depth (cm) &	45 cm	52 cm	
	Location in Channel	Center		
	(L/C/R*)	Cerrie	Left	
	Depth @ Left Edge (cm)		/	
	(~4" from bank edge)	6 cm	6 cm	
	Depth @ Right Edge (cm)	10 - 1		
	(~4" from bank edge)	10 cm	18 cm	
	% Veg- Left Bank*	60./-	80.1.	
	% Veg- Right Bank*	80 /	100.1-	
	% Canopy Over	10 -/-	2 -/-	
	Transect Band	.,		
otal	Substrate % mud/silt	10-/-	10-/-	
Should total 100%	Substrate % sand	90.1.	85./-	
oulo 100	Substrate % gravel	0./	0 · /·	
Sho	Substrate % cobble	0./	5.1.	
	Substrate % boulder	0-/	0 · / ·	
	Photo Upstream (time & #)	V		
}	Photo Downstream			
	(time & #)			
	Photo Left Bank*			
	(time & #)	V		
	Photo Right Bank*			
	(time & #)	V		
-	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
L.				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Tally Gravel Patch Size

| Min 3m
| 3m-5m
| 5m-10m
| 10m-15m
| 15m+

| Red algae present? If so, please record coordinates below:

Transect Name: SAS 81

Date 10 - 25 - 17

Target UTM:

452441

3758698

Observers (writer/other) Ana, Date, Concron

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	452548		
	UTM (@ Left Bank*)	3758938		
	Channel position (L/C/R*)	Center		
	Width of Channel (m)	17.4 m		
	Max Depth (cm) &	40 cm		
	Location in Channel (L/C/R*)	reft		
	Depth @ Left Edge (cm) (~4" from bank edge)	8 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	18 cm		
	% Veg- Left Bank*	100.1.		
	% Veg- Right Bank*	100.1.		
	% Canopy Over	A /		
	Transect Band	0 . /.		
Should total 100%	Substrate % mud/silt	2 · / ·		
uld to	Substrate % sand	98.1.		
oule 100	Substrate % gravel	0.1		
Shc	Substrate % cobble	0 /		
	Substrate % boulder	0./		
	Photo Upstream (time & #)			
	Photo Downstream (time & #)			
	Photo Left Bank* (time & #)	V		
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 81 and SAS 62.

Tally Gravel Patch Size

Min 3m
3m-5m
5m-10m
10m-15m
15m+

Red algae present? If so, please record coordinates below:

Transect Name: SAS 82

Date 16 - 25 - 17

Target UTM:

452149

3758681

Observers (writer/other) Anon, Date, Carevor

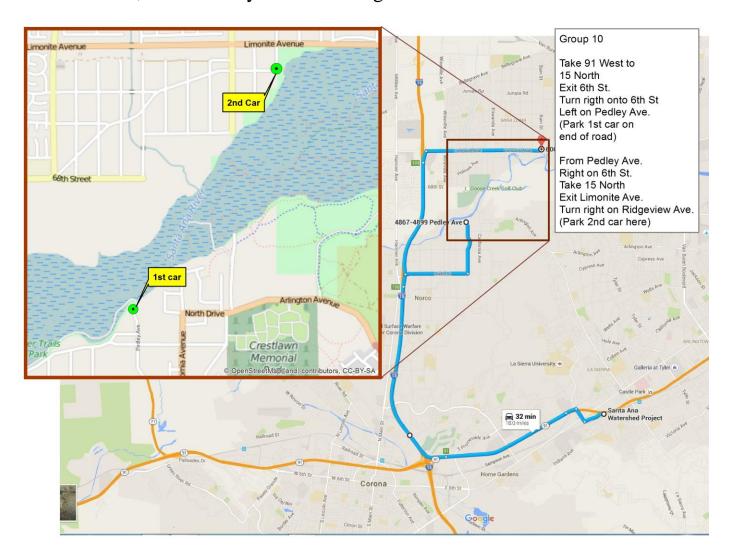
	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	452485		
	UTM (@ Left Bank*)	3758652		
	Channel position (L/C/R*)	center		
	Width of Channel (m)	33m		
	Max Depth (cm) & Location in Channel	38cm		
	(L/C/R*)	Center		
	Depth @ Left Edge (cm) (~4" from bank edge)	6 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	10 cm		
	% Veg- Left Bank*	100.1.		
	% Veg- Right Bank*	0 . /.		
	% Canopy Over Transect Band	0-1-		
ਫ਼ਿ	Substrate % mud/silt	1 - /-		
tot %	Substrate % sand	99.1.		
Should total 100%	Substrate % gravel	0.1		
hon	Substrate % cobble	0.7		
	Substrate % boulder	0.1.		
	Photo Upstream (time & #)			
	Photo Downstream (time & #)			
	Photo Left Bank* (time & #)	V		
	Photo Right Bank* (time & #)	V		
	Photo other (describe)	y		
1	Notes (e.g. Islands, Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

	Taily	Gravel Patch Size	
-		Min 3m	
-		3m-5m	
-		5m-10m	
		10m-15m	
_	,	15m+	
algae present? If s		ordinates below:	
algae present? If s		ordinates below: 	
		ordinates below: 	

**Driving Directions**: Take 91 West to the 15 North. Exit 6<sup>th</sup> Street and turn right onto 6<sup>th</sup> Street. Turn left onto Pedley Avenue. **Car** #1 should park at the end of Pedley Avenue. After parking first car, turn around and take Pedley Avenue back to 6<sup>th</sup> Street and turn right. Enter the 15 North. Exit Limonite Avenue. Turn right onto Limonite Avenue. Turn right onto Ridgeview Avenue and left into Horse Park on the left side of street. **Car** #2 should park upstream at the Horse Park off of Ridgeview Avenue. Parking the cars as directed, will ensure you are walking downstream.



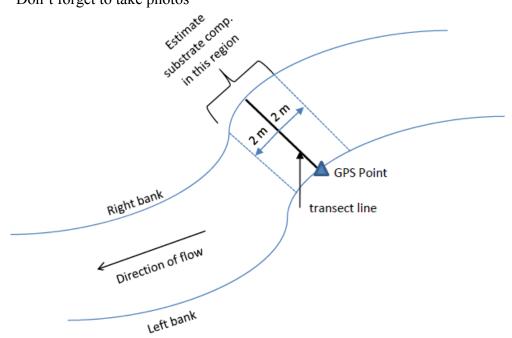
**Data Collection Instructions:** Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

Technical Questions: Call Bonnie Johnson at (951) 757-0782 or Mari Archer at (951) 966-1602. Coordination/Logistical Issues: Call Zyanya Blancas at (951) 354-4220

in the wetted river and record on your data sheet the actual GPS location on the left bank (note: the left bank is on your left when you face downstream). If there is more than one wetted river channel, record each channel's left bank GPS location.

Here are some helpful tips:

- Please record all measurements using the metric system;
- Set up your transect lines perpendicular to the river;
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%;
- Don't forget to take photos



When You Are Done: Return to SAWPA at 11615 Sterling Ave. in Riverside to check equipment in, submit datasheets and grab lunch. Zyanya Blancas will contact your group's lead photographer to instruct them on how your group submits all site photos.

**Driving Back to SAWPA:** From the Car #2 location, take Ridgeview Ave. towards Limonite Ave. Turn left onto Limonite Ave. and turn left to merge onto 15 South. Continue driving on 15 South and take exit 96B to merge onto 91 East toward Riverside. Take exit 54 onto Pierce St. After exiting, make a right onto Pierce Street. After taking a right, turn left onto Sterling Ave. Stay on Sterling Ave. all the way to the end of the street and arrive at SAWPA.

Transect Name: SAS 83

Target UTM: 451873

Observers (writer/other)

Date 10/25

3758631

Chuck, Electronic El

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	451872		
	UTM (@ Left Bank*)	3756655		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	19 00		
	Max Depth (cm) &			
	Location in Channel			
	(L/C/R*)	36 cac.		
	Depth @ Left Edge (cm)	36 cm C		
	(~4" from bank edge)	36 cm		
	Depth @ Right Edge (cm)			
	(~4" from bank edge)	24 cm		
	% Veg- Left Bank*	100-1		
	% Veg- Right Bank*	100%		
	% Canopy Over	•		
	Transect Band	20%		
la la	Substrate % mud/silt ,	0		
tot %	Substrate % sand	100%		
plu 00	Substrate % gravel	<u> </u>		
Should total 100%	Substrate % cobble	0		
\sqrt{\sq}\}}}\sqrt{\sq}}}}}}\sqrt{\sq}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}	Substrate % boulder	O		
	Photo Upstream			
	(time & #)	10:51		
	Photo Downstream	,		
	(time & #)	10:51		
	Photo Left Bank*			
	(time & #)	10:31		
	Photo Right Bank*			
	(time & #)	10:51		
	Photo other (describe)			
	Notes (e.g. Islands,	NA		
	Obstructions)	MA		

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

	Tally	Gravel Patch Size	
		Min 3m	
_		3m-5m	
_		5m-10m	
i=-		10m-15m	
		1 F	
_		15m+	
l algae present? If so			
l algae present? If so			
	o, please record cod		

Transect Name: SAS 84

Target UTM: 451638

Observers (writer/other)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	451577		
	UTM (@ Left Bank*)	3758506		
	Channel position (L/C/R*)	Ċ		
	Width of Channel (m)	18		
	Max Depth (cm) &			
	Location in Channel			
	(L/C/R*)	28 L		
	Depth @ Left Edge (cm)			
	(~4" from bank edge)	20		
	Depth @ Right Edge (cm)			
	(~4" from bank edge)	28		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over	_ 301		
	Transect Band	58/0		
tal	Substrate % mud/silt	(B) 4		
Should total 100%	Substrate % sand	95 1006		
oulc 100	Substrate % gravel	Ø 5%		
Shc	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream			
	(time & #) Photo Downstream	11:213		
	(time & #)			
	Photo Left Bank*	11.13		
	(time & #)	33.19		
-	Photo Right Bank*	11:13		
	(time & #)	11:13		
}	Photo other (describe)	11.0		
-	Notes (e.g. Islands,			
	Obstructions)	NA		
_				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Lo	ocation between G	iPS Points SAS and SAS	
	Tally	Gravel Patch Size Min 3m 3m-5m 5m-10m	
		10m-15m 15m+	
Red algae present? If s	so, please record cod	ordinates below:	

Transect Name: SAS 85

Target UTM: 451443

Observers (writer/other)

Charles SAS 85

Date 10/25/17

3758279

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	451452		
	UTM (@ Left Bank*)	3756292		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	37		
	Max Depth (cm) &			
	Location in Channel			
	(L/C/R*)	23 C		
	Depth @ Left Edge (cm)			
	(~4" from bank edge)	16		
	Depth @ Right Edge (cm)			
	(~4" from bank edge)	29		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100 /		
	% Canopy Over	n.l		
	Transect Band	5%		
tal	Substrate % mud/silt	0		
Should total 100%	Substrate % sand	93%		
uld to	Substrate % gravel	540		
ho 1	Substrate % cobble	0		
<b>O</b> 2	Substrate % boulder	0		
	Photo Upstream			
	(time & #)	11:26		
	Photo Downstream			
	(time & #)	11:2b		
	Photo Left Bank*			
	(time & #)	11:26		
	Photo Right Bank*	1. 51		
	(time & #)	11:76		
	Photo other (describe)			
	Notes (e.g. Islands,	1		
	Obstructions)	PLA		1

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

	Location between G	SPS Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Red algae present?	If so, please record cod	ordinates below:	

Transect Name: SAS 86
Target UTM: 451303
Observers (writer/other)

Date 10/25/17
3758016

ual GPS coordinates in M (@ Left Bank*) unnel position (L/C/R*) Ith of Channel (m) x Depth (cm) & ation in Channel C/R*) th @ Left Edge (cm) from bank edge) th @ Right Edge (cm) from bank edge) eg- Left Bank* eg- Right Bank* anopy Over sect Band strate % mud/silt	30 30 30 30 30 30 30 30 30 30		
Innel position (L/C/R*) Ith of Channel (m) Ith of Channel (m) Ith of Channel (m) Ith of Channel & Ith of Cha	30 30 30 30 30 100%		
Ith of Channel (m)  X Depth (cm) & ation in Channel C/R*)  th @ Left Edge (cm) Y from bank edge)  th @ Right Edge (cm) Y from bank edge) Y from bank edge) Y eg- Left Bank* eg- Right Bank* anopy Over sect Band	30 30 30 30 30 100%		
c Depth (cm) & ation in Channel C/R*) th @ Left Edge (cm) c' from bank edge) th @ Right Edge (cm) c' from bank edge) eg- Left Bank* eg- Right Bank* anopy Over sect Band	30L 30L 30 30 30 100%		
ation in Channel C/R*)  th @ Left Edge (cm) from bank edge)  th @ Right Edge (cm) from bank edge) eg- Left Bank* eg- Right Bank* anopy Over sect Band	30L 30 30 30 100% 100%		
th @ Left Edge (cm) from bank edge) th @ Right Edge (cm) from bank edge) eg- Left Bank* eg- Right Bank* anopy Over sect Band	30 20 25 100% 100%		
th @ Left Edge (cm) 'from bank edge) th @ Right Edge (cm) 'from bank edge) 'eg- Left Bank* eg- Right Bank* anopy Over sect Band	30 20 25 100% 100%		
'from bank edge) th @ Right Edge (cm) 'from bank edge) 'eg- Left Bank* eg- Right Bank* anopy Over sect Band	30 20 25 100% 100%		
th @ Right Edge (cm) from bank edge) eg- Left Bank* eg- Right Bank* anopy Over sect Band	100°6 100°6		
rfrom bank edge) eg- Left Bank* eg- Right Bank* anopy Over sect Band	100%		
eg- Left Bank* eg- Right Bank* anopy Over sect Band	100%		
eg- Right Bank* anopy Over sect Band	OUTO		
anopy Over sect Band	OUTO		
sect Band			
	10%	,	
strate % mud/silt			
	()		
trate % sand	100%		
trate % gravel	6		
trate % cobble	G		
trate % boulder	D		
o Upstream			
2 & #)	11:42		
o Downstream	- ( )		
· & #)	11:42		
Left Bank*			
& #)	11:42		
Right Bank*			
& #)	11142		
other (describe)	·		
s (e.g. Islands,	,		
uctions)	PA		
	trate % boulder  O Upstream  & #)  O Downstream  & #)  O Left Bank*  & #)  O Right Bank*  & #)  O ther (describe)  (e.g. Islands, suctions)	trate % boulder  Destroy  Dest	trate % boulder  D Upstream  & #)  D Downstream  & #)  Left Bank*  & #)  Right Bank*  & #)  other (describe)  (e.g. Islands.

\*L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS & and SAS &.

	Tally	<b>Gravel Patch Size</b>	
	10	Min 3m	
	3	3m-5m	
	2	5m-10m	
		10m-15m	
		15m+	
		131111	
ed algae present? If	so, please record coord	inates below:	
	· · · · · · · · · · · · · · · · · · ·	<u></u>	
		<del></del>	
0-			
2			
4			

Transect Name: SAS 87

Target UTM: 451176

Date 0 (5) (3757746)

Observers (writer/other)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	451068	451087	451099
	UTM (@ Left Bank*)	3757635	3757635	3757632
	Channel position (L/C/R*)	0	C	
	Width of Channel (m)	9	11	NI.
	Max Depth (cm) &		,	
	Location in Channel			
	(L/C/R*)	181	33	20
	Depth @ Left Edge (cm)			
	(~4" from bank edge)	11 @ cm	22	17
	Depth @ Right Edge (cm)			,
	(~4" from bank edge)	18 cm	17	18
	% Veg- Left Bank*	100	100%	160
	% Veg- Right Bank*	100	1006	100
	% Canopy Over		an e	01
	Transect Band	10%	56	5 80%
al	Substrate % mud/silt	0	<b>3</b> 0%	
Should total 100%	Substrate % sand	92	90%	100
uld to	Substrate % gravel	5%	107	6
hol	Substrate % cobble	0	6	0
S	Substrate % boulder	0	9	0
	Photo Upstream			
	(time & #)	11:08	121.13	11:16
	Photo Downstream			
	(time & #)	11:08	12113	17:46
	Photo Left Bank*			
	(time & #)	305	(1):13	12:16
	Photo Right Bank*			
	(time & #)	11:08	12:13	17:16
-	Photo other (describe)	PILIS		
	Notes (e.g. Islands,	Wight center uft		
	Obstructions)	ufx		
L				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

		87	96
1	Location between G	GPS Points SAS <u></u> and S	AS
	<b>-</b> 0		
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		 15m+	
Red algae present? If	Foo please record co	ordinates below:	
neu algae present: n	iso, please record co	ordinates below.	
		_	
· · · · · · · · · · · · · · · · · · ·		<del></del>	

Transect Name: SAS 88

Target UTM: 451034

Observers (writer/other)

Check, Edge C

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	456999		
	UTM (@ Left Bank*)	3757439		·
	Channel position (L/C/R*)	C		
	Width of Channel (m)	37		
	Max Depth (cm) &			
	Location in Channel			
	(L/C/R*)	296		
	Depth @ Left Edge (cm)			
	(~4" from bank edge)	15		
	Depth @ Right Edge (cm)			
	(~4" from bank edge)	29		
	% Veg- Left Bank*	70%		
	% Veg- Right Bank*	100%		
	% Canopy Over	- 91		
	Transect Band	10%		
[a]	Substrate % mud/silt			
to %	Substrate % sand	96		
uld to	Substrate % gravel	10		
Should total 100%	Substrate % cobble	6		
$\sim$	Substrate % boulder	D		
	Photo Upstream			
	(time & #)	15:51		
	Photo Downstream	12:28		
	(time & #)	(C. L°		
	Photo Left Bank*			
	(time & #)	15:58		
	Photo Right Bank*	12:28		
	(time & #)	(2,60		
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)	D.C.		
Ĺ				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

	Taily	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
ed algae present	? If so, please record co		

Transect Name: SAS 89
Target UTM: 450811
3757315

Observers (writer/other) Owel, Edge

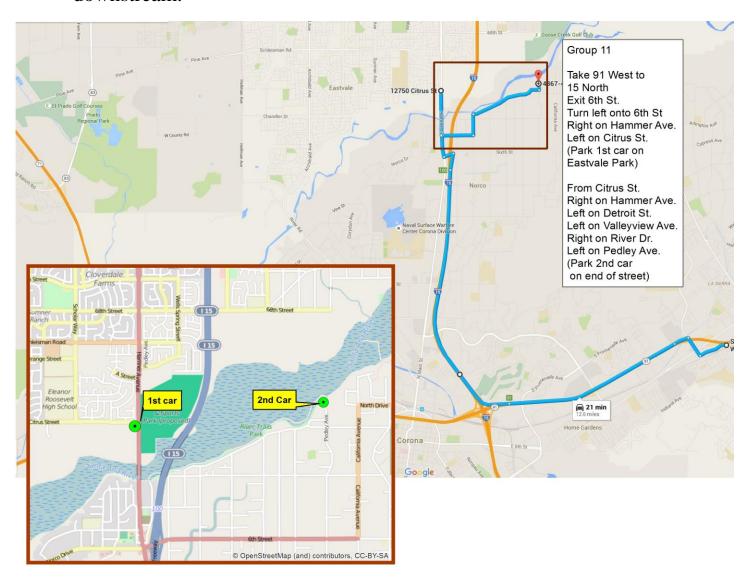
	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	450804		
	UTM (@ Left Bank*)	3757821		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	26		
	Max Depth (cm) &			
	Location in Channel			
	(L/C/R*)	20 3004		
	Depth @ Left Edge (cm)			
	(~4" from bank edge)	16		
	Depth @ Right Edge (cm)	01		
	(~4" from bank edge)	26		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	500 vo 6		
	% Canopy Over	- ==1		
	Transect Band	5%		
tal	Substrate % mud/silt	Ю		
Should total	Substrate % sand	90		
plu 00	Substrate % gravel	10%		
Sho	Substrate % cobble	O		
	Substrate % boulder	0		
	Photo Upstream	12.75		
	(time & #)	15:37		
	Photo Downstream			
	(time & #)	():37		
i	Photo Left Bank*			
	(time & #)	12:37		
	Photo Right Bank* (time & #)			
-	Photo other (describe)	15;37		
ļ	Notes (e.g. Islands,			
	Obstructions)			
	Obstructions)			
L				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between G	PS Points SAS and SAS	
	Tally	Gravel Patch Size	
	Y <del></del>	Min 3m	
	÷	3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Red algae present? I	f so, please record cod	ordinates below:	
-			
		-	

#### **Group 11: Points 90-98**

**Driving Directions**: Take 91 West to the 15 North. Exit 6<sup>th</sup> Street and turn right onto 6<sup>th</sup> Street. Turn left onto Sierra Avenue. Turn left onto Detroit Street. Turn right on Old Hamner Road. **Car #1** should park at the end of Old Hamner Road. After parking first car, from Old Hamner Road turn left onto Detroit Street. Turn left onto Valley View Avenue. Turn right onto River Drive. Turn left onto Pedley Avenue. **Car #2** should park upstream at the end of Pedley Avenue. Parking the cars as directed, will ensure you are walking downstream.



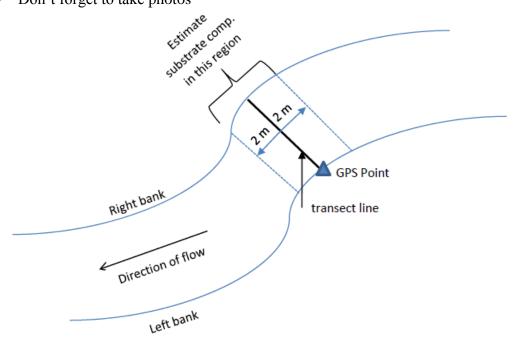
**Data Collection Instructions:** Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

Technical Questions: Call Bonnie Johnson at (951) 757-0782 or Mari Archer at (951) 966-1602. Coordination/Logistical Issues: Call Zyanya Blancas at (951) 354-4220

in the wetted river and record on your data sheet the actual GPS location on the left bank (note: the left bank is on your left when you face downstream). If there is more than one wetted river channel, record each channel's left bank GPS location.

Here are some helpful tips:

- Please record all measurements using the metric system;
- Set up your transect lines perpendicular to the river;
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%;
- Don't forget to take photos



When You Are Done: Return to SAWPA at 11615 Sterling Ave. in Riverside to check equipment in, submit datasheets and grab lunch. Zyanya Blancas will contact your group's lead photographer to instruct them on how your group submits all site photos.

**Driving Back to SAWPA:** From the Car #2 location, take Pedly Ave. away from the River, towards Sixth St. Turn right onto Sixth St. and turn left to merge onto 15 South. Continue driving on 15 South and take exit 96B to merge onto 91 East toward Riverside. Take exit 54 onto Pierce St. After exiting, make a right onto Pierce Street. After taking a right, turn left onto Sterling Ave. Stay on Sterling Ave. all the way to the end of the street and arrive at SAWPA.

**Transect Name: SAS 90** 

Date 10/25 17 3757255

Target UTM:

450524

Observers (writer/other) Linear (mina)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0450503		
	UTM (@ Left Bank*)	3757284		
	Channel position (L/C/R*)	Center		
	Width of Channel (m)	30.5 m		
	Max Depth (cm) &	goon		
	Location in Channel	21cm		
	(L/C/R*)	Men		
	Depth @ Left Edge (cm)	11 cm		
	(~4" from bank edge)	11 Cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	21cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over			
	Transect Band	4%		
tal	Substrate % mud/silt	Ö		
to.	Substrate % sand	90%		
Should total 100%	Substrate % gravel	107e		
) ho	Substrate % cobble	0		
01	Substrate % boulder	0		
	Photo Upstream			
	(time & #)	10:13 #1		
	Photo Downstream	· ·		
-	(time & #) Photo Left Bank*	10:13 #2		
	(time & #) Photo Right Bank*	16.13 +3		
	(time & #)	.,17		
	Photo other (describe)	10.13 #1		
}	Notes (e.g. Islands,	small patchot		
	Obstructions)	small patchot arrundo both books		
		house crossing yestream		

no red algen

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 40 and SAS 7.

Tally Gravel Patch Size

Min 3m
3m-5m
5m-10m
10m-15m
15m+

Red algae present? If so, please record coordinates below:

Transect Name: SAS 91 Date 10/25/17
Target UTM: 450228 3757211

Observers (writer/other) Linksey Miscanel

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0450200		
	UTM (@ Left Bank*)	3757222		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	40.3 m		
	Max Depth (cm) &			
	Location in Channel	20cm		
	(L/C/R*)	A CIT		
	Depth @ Left Edge (cm)	7		
	(~4" from bank edge)	17cm		
	Depth @ Right Edge (cm)	111		
	(~4" from bank edge)	14cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100°4		
	% Canopy Over	G107		
_	Transect Band	g Le		
tal	Substrate % mud/silt	0		
5 %	Substrate % sand	92%		
Should total 100%	Substrate % gravel	82		
ho 1	Substrate % cobble	0		
	Substrate % boulder	Ö		
	Photo Upstream			
	(time & #)	10:28 #5		
	Photo Downstream			
	(time & #)	10.28 #4		
	Photo Left Bank*	,		
	(time & #)	10:28 17		
	Photo Right Bank*	1		
-	(time & #)	10.28 #		
	Photo other (describe)			
		) ist downstream of		
	Obstructions)	Island		
		amanskon left be	nk	
	()	rrundo night barr		

\*L/C/R = Left/Center/Right. Face downstream to determine left and right banks. about 10:37

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS  $\underline{a}$  and SAS  $\underline{q}$ .

	Tally  HH HHHH HHT 1	Gravel Patch S Min 3m 3m-5m 5m-10m 10m-15m	1ft <sup>2</sup> small patenes	near-fon found
Red algae present? If	f so, please record coordi			

Transect Name: SAS 92

Target UTM: 449957

Observers (writer/other) Und Sey Myangly

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0449938		
	UTM (@ Left Bank*)	3757106		
	Channel position (L/C/R*)	3 (		
	Width of Channel (m)	33,8 m		
	Max Depth (cm) &			
	Location in Channel	32cm		
	(L/C/R*)			
nt	Depth @ Left Edge (cm)	26		
	(~4" from bank edge)	26cm		
	Depth @ Right Edge (cm)	19 cm		
	(~4" from bank edge)			
	% Veg- Left Bank*	1004		
1	% Veg- Right Bank*	100 ac		
	% Canopy Over Transect Band	42		
	Substrate % mud/silt	0		
Should total 100%	Substrate % sand	100%		
uld to	Substrate % gravel			
luo 10	Substrate % cobble	0		
Sh	Substrate % boulder	0		
	Photo Upstream	U		
	(time & #)	10:52 #9		
	Photo Downstream	10/52 411		
	(time & #)	10:52 #10		
	Photo Left Bank*	1077		
	(time & #)	16:52 411		
	Photo Right Bank*			
_	(time & #)	10:52 #12		
<del>-</del>	Photo other (describe)			
	Notes (e.g. Islands,	island downstream		
	Obstructions)	horses upstream		
		10.000		

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 92 and SAS 93.

Tally Gravel Patch Size

Min 3m
3m-5m
5m-10m
10m-15m
15m+

Red algae present? If so, please record coordinates below:

Transect Name: SAS 93
Target UTM: 449781

Date | 0/25/17 | 3756859

Observers (writer/other) Interprogram

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0449750		
	UTM (@ Left Bank*)	3756880		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	50.2 m		
	Max Depth (cm) &			
	Location in Channel	26cm		
	(L/C/R*)	014(11		
	Depth @ Left Edge (cm)	1-7		
	(~4" from bank edge)	17cm		
	Depth @ Right Edge (cm)	14cm		
	(~4" from bank edge)			
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	1002		
	% Canopy Over	42		
	Transect Band	·		
tal	Substrate % mud/silt	0		
\$ 2	Substrate % sand	0		
Should total 100%	Substrate % gravel	0		
od;	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream			
	(time & #)	11.09 #13		
	Photo Downstream			
-	(time & #)	1110a #14		
	Photo Left Bank*			
-	(time & #)	11.0a 185		
	Photo Right Bank*			
_	(time & #)	11.00 #4		
	Photo other (describe)	is Avintonia ais		
	Notes (e.g. Islands,	send bar		
	Obstructions)	,		

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS  $\frac{99}{12}$  and SAS  $\frac{99}{12}$ .

	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		 15m+	
algae present? If so, ple	ease record coo		
	ease record cod		
	ease record co		
	ease record co		
	ease record co		

Transect Name: SAS 94

Date 10/25/17 3756630 Target UTM: 449669

Observers (writer/other) Lingsey Mscane 1)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0449725		
	UTM (@ Left Bank*)	375 (e(ele0		
	Channel position (L/C/R*)	L		,
	Width of Channel (m)	18.8 m		
	Max Depth (cm) &			
	Location in Channel	53cm		
	(L/C/R*)	7 )(11		
	Depth @ Left Edge (cm)	24cm		
	(~4" from bank edge)	ATICM		
	Depth @ Right Edge (cm)	17 .		
	(~4" from bank edge)	13cm		
	% Veg- Left Bank*	22		
	% Veg- Right Bank*	1007		
	% Canopy Over Transect Band	EM.		
	Substrate % mud/silt	5%		
Should total 100%	0.1	0		
uld to	Substrate % sand	100		
luc 100	Substrate % gravel Substrate % cobble	0		
Sho	Substrate % boulder	0		
	Photo Upstream			
	(time & #)			
	Photo Downstream	1132 #17		
	(time & #)	11.7		
ļ	Photo Left Bank*	112 A18	·	
	(time & #)	11.25 m		
	Photo Right Bank*	11120		
	(time & #)	11:22 1120		
	Photo other (describe)			
		snails on right back		
		dounsing an from snarturn		
		deep pools next to		
		11611 10/2 100hl		

wall left book

 $<sup>\</sup>text{*L/C/R} = \text{Left/Center/Right. Face downstream to determine left and right banks.}$ 

	Tally	<b>Gravel Patch Size</b>	
_		Min 3m	
_		3m-5m	
_		5m-10m	
_		10m-15m	
_		15m+	
<b>Red algae present</b> ? If so	o, please record co	ordinates below:	
Red algae present? If so	o, please record co	ordinates below: 	
Red algae present? If so	o, please record co	ordinates below: 	
Red algae present? If so	o, please record co	ordinates below: 	
Red algae present? If so	o, please record co	ordinates below:	
Red algae present? If so	o, please record co	ordinates below:	

Transect Name: SAS 95
Target UTM: 449377

Observers (writer/other) Lindsey Monnell

	<b>OBSERVATIONS</b>	CHANN		CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0449368	3		
	UTM (@ Left Bank*)				
	Channel position (L/C/R*)	37565			
	Width of Channel (m)	25.4m			
	Max Depth (cm) &				
	Location in Channel	50 cm			
	(L/C/R*)	J			
	Depth @ Left Edge (cm)	al cm			
	(~4" from bank edge)	210			
	Depth @ Right Edge (cm)	17.			
	(~4" from bank edge)	17em			
	% Veg- Left Bank*	100			
	% Veg- Right Bank*	100			
	% Canopy Over Transect Band	5			
	Substrate % mud/silt	0			
Should total 100%	Substrate % mud/sint Substrate % sand				
uld to	Substrate % gravel	100			
oul 10	Substrate % cobble	0			
Sh	Substrate % boulder	0			
	Photo Upstream				
	(time & #)	11 212			
	Photo Downstream	11.40	_极		
	(time & #)	17,41	Sh-a		
	Photo Left Bank*	1 1 1	#22		
	(time & #)	11:41	# 23		
	Photo Right Bank*	11111	17 21		
	(time & #)	11,41	424		
	Photo other (describe)		1 0		
		tamansk			
	Obstructions)				
			'		

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 96.

	Tally	<b>Gravel Patch Size</b>	
_		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Red algae present? If so,	please record co		
Red algae present? If so,	please record co		
ed algae present? If so,	please record co		
ed algae present? If so,	please record co		

Transect Name: SAS 96 Date 10/25/17
Target UTM: 449118 3756431
Observers (writer/other) Linder/MYONNE 1

	OBSERVATIONS	CHANNE	L #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0449115			
	UTM (@ Left Bank*)	375(	430		
	Channel position (L/C/R*)	L	-		
	Width of Channel (m)	12.2			
	Max Depth (cm) &				
	Location in Channel	47cm			
	(L/C/R*)	77 67			
	Depth @ Left Edge (cm)	10			
	(~4" from bank edge)	12cm			
	Depth @ Right Edge (cm)	1			
	(~4" from bank edge)	15 cm			
	% Veg- Left Bank*	0			
	% Veg- Right Bank*	100			
	% Canopy Over	54			
	Transect Band				
tal	Substrate % mud/silt	0			
Should total 100%	Substrate % sand	[00]			
uld to	Substrate % gravel	0			
iho 1	Substrate % cobble	Ô			
<u> </u>	Substrate % boulder				
	Photo Upstream				
	(time & #)	lliste	构5		
	Photo Downstream				
	(time & #)	11:54	124		
	Photo Left Bank*		į		
-	(time & #)	11.5le	\$27		
	Photo Right Bank*				
	(time & #)	11154	#28		
-	Photo other (describe)	Calat pacing of a	will on		
	Notes (e.g. Islands,	light against a Left bank	- DI		
	Obstructions)				
L		deep saind			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 46 and SAS 97.

	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
· · · · · · · · · · · · · · · · · · ·		10m-15m	
		15m+	
Red algae present? If so, ple	ase record co	ordinates below:	
		ordinates below: 	
		ordinates below: 	
		ordinates below: 	
		ordinates below:	
		ordinates below:	

Transect Name: SAS 97

Date 10/25 3756408

Target UTM:

448822

Observers (writer/other) Lindsey We Canall

	OBSERVATIONS	CHANNE	L #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	0448820			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	UTM (@ Left Bank*)	3756	+16		
	Channel position (L/C/R*)		. / -		
	Width of Channel (m)	25.1 W	1		
	Max Depth (cm) &				
	Location in Channel	38cm			
	(L/C/R*)				
	Depth @ Left Edge (cm)	0 %			
	(~4" from bank edge)	29 cm			
	Depth @ Right Edge (cm)	17 4 10			
	(~4" from bank edge)	13cm			
	% Veg- Left Bank*	100			
	% Veg- Right Bank*	00			
	% Canopy Over				
	Transect Band	150			
tal	Substrate % mud/silt	0			
to %	Substrate % sand	_ 100			
uld to	Substrate % gravel	0			
Should total 100%	Substrate % cobble	0			
S	Substrate % boulder	0			
	Photo Upstream				
	(time & #)	12:09	#30		
	Photo Downstream				
	(time & #)	12:09	#30		
	Photo Left Bank*				
	(time & #)	12.09	#3)		
	Photo Right Bank*				
F	(time & #)	12.69	H32		
	Photo other (describe)				
		105tdown Stren 2 nomelesser	roper	200	
	Obstructions)	+ nomerson	c my re	MD	

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS  $\underline{47}$  and SAS  $\underline{48}$  .

	Tally	<b>Gravel Patch Size</b>	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
ed algae present? If so, ple			
ed algae present? If so, ple			

Transect Name: SAS 98

5 98 Date 10/25/17 448534 3756384

Target UTM:

Observers (writer/other) Linder McCameil

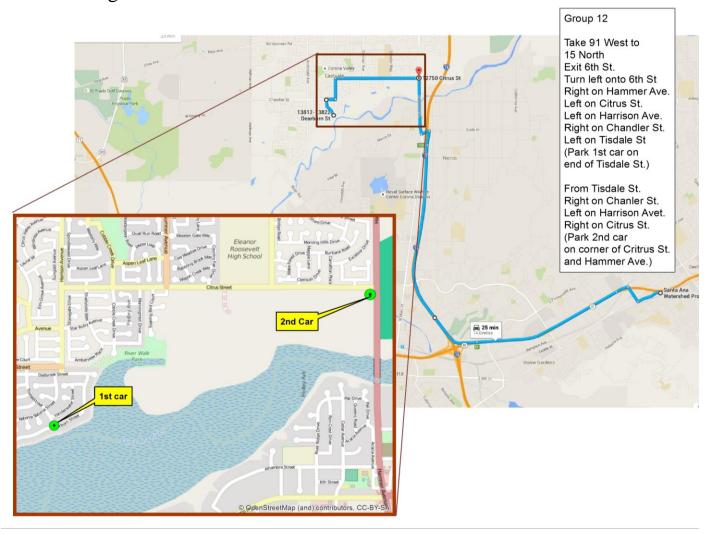
		OBSERVATIONS	CHANNE	L #1	CHANNEL #2	CHANNEL #3
		Actual GPS coordinates in	0448520			CHARTITAL
		UTM (@ Left Bank*)	3750	39 G		
		Channel position (L/C/R*)	R	VIX		
		Width of Channel (m)	22.5 m			
	Max Depth (cm) &					
		Location in Channel	37 cm			
		(L/C/R*)	JEM			
		Depth @ Left Edge (cm)	2/1			
		(~4" from bank edge)	24cm			
		Depth @ Right Edge (cm)	. 7			
		(~4" from bank edge)	37cm			
		% Veg- Left Bank*	100			
		% Veg- Right Bank*	160			
		% Canopy Over	574			
_		Transect Band	- J U			
	tal	Substrate % mud/silt	0			
	% 5	Substrate % sand	100			
	uld to .00%	Substrate % gravel				
,	Should total 100%	Substrate % cobble	0			
L	<b>/</b> 1	Substrate % boulder	0			
		Photo Upstream				
		(time & #)	12,22	#33		
		Photo Downstream				
		(time & #)	12:22	#34		
		Photo Left Bank*				
		(time & #)	12:22	H35		
		Photo Right Bank*				
	-	(time & #)	12,22	PSLE		
	-	Photo other (describe)				
		Notes (e.g. Islands, Obstructions)	small paten currendo Riban casterbaco	K		

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between GP	S Points SAS a	and SAS	
	Tally	Gravel Patch Size		
		_ Min 3m		
		_ 3m-5m		
		5m-10m		
		10m-15m		
		15m+		
Red algae present?	If so, please record coord	dinates below:		
		_	-	
		<del></del>		
		<del></del>		

#### **Group 12: Points 99-108**

**Driving Directions**: Take 91 West to the 15 North. Exit 6<sup>th</sup> Street and turn left onto 6<sup>th</sup> Street. Turn right onto Hamner Avenue. Turn left onto Citrus Street. Turn left on Harrison Avenue. Turn right on Chandler Street. Turn left onto Tisdale Street. **Car #1** should park at the end of Tisdale Street. After parking first car, from Tisdale Street return to Chandler Street and turn right. Turn left onto Harrison Avenue. Turn right onto Citrus Street. Turn right onto Hamner Avenue. Turn left onto Detroit Street. Turn left onto Old Hamner Road. **Car #2** should park upstream at the end of Old Hamner Road. Parking the cars as directed, will ensure you are walking downstream.



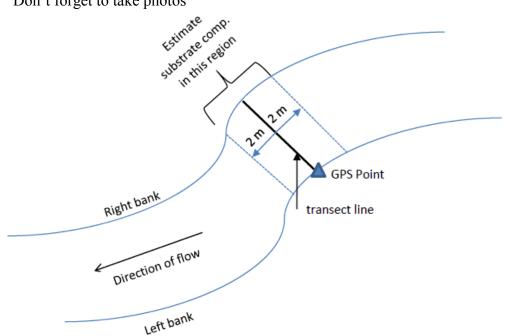
**Data Collection Instructions:** Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

Technical Questions: Call Bonnie Johnson at (951) 757-0782 or Mari Archer at (951) 966-1602. Coordination/Logistical Issues: Call Zyanya Blancas at (951) 354-4220

in the wetted river and record on your data sheet the actual GPS location on the left bank (note: the left bank is on your left when you face downstream). If there is more than one wetted river channel, record each channel's left bank GPS location.

Here are some helpful tips:

- Please record all measurements using the metric system;
- Set up your transect lines perpendicular to the river;
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%;
- Don't forget to take photos



When You Are Done: Return to SAWPA at 11615 Sterling Ave. in Riverside to check equipment in, submit datasheets and grab lunch. Zyanya Blancas will contact your group's lead photographer to instruct them on how your group submits all site photos.

**Driving Back to SAWPA:** From the Car #2 location, take Hamner Ave. towards the Santa Ana River, to Sixth St. Turn left onto Sixth St. and turn right to merge onto 15 South. Continue driving on 15 South and take exit 96B to merge onto 91 East toward Riverside. Take exit 54 onto Pierce St. After exiting, make a right onto Pierce Street. After taking a right, turn left onto Sterling Ave. Stay on Sterling Ave. all the way to the end of the street and arrive at SAWPA.

Transect Name: SAS 99

Target UTM: 448253 3756327

Observers (writer/other) J. Wilson C. Gregory

E. Tellez-Foster, R. Hirano

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	04482605		
	UTM (@ Left Bank*)	3756325		
	Channel position (L/C/R*)			
	Width of Channel (m)	85		
	Max Depth (cm) &			
	Location in Channel (L/C/R*)	L28		
	Depth @ Left Edge (cm) (~4" from bank edge)	35		
	Depth @ Right Edge (cm) (~4" from bank edge)	2.5		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	<u>a</u>		
	% Canopy Over			
	Transect Band	5		
tal	Substrate % mud/silt	10		
Should total 100%	Substrate % sand	90		
uld to	Substrate % gravel			
) ho	Substrate % cobble			
	Substrate % boulder			· · · · · · · · · · · · · · · · · · ·
	Photo Upstream			
	(time & #)	10:17 am		
	Photo Downstream (time & #)	( /		
	Photo Left Bank* (time & #)	17		
	Photo Right Bank* (time & #)	Fi		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between GP	S Points SAS and	
	Tally	Gravel Patch Size	
		_ Min 3m	
		3m-5m	
		5m-10m	
		_ _ 10m-15m	
		15m+	
	f so, please record coor		
Hed alga	e- Right b	and	 
····		· · · · · · · · · · · · · · · · · · ·	

Transect Name: SAS 100
Target UTM: 447963
Observers (writer/other)

Date 10 | 25 | 17 | 3756361

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	11 South 13	754381	
	UTM (@ Left Bank*)	0047965		
	Channel position (L/C/R*)			
	Width of Channel (m)	73		
	Max Depth (cm) & Location in Channel (L/C/R*)	R 37		
	Depth @ Left Edge (cm) (~4" from bank edge)	15,5		
	Depth @ Right Edge (cm) (~4" from bank edge)	20.5		
-	% Veg- Left Bank*	90		
	% Veg- Right Bank*	(00		
	% Canopy Over Transect Band	10		
[a]	Substrate % mud/silt			
\\ \[ \bar{\text{5}} \  \  \  \  \  \  \  \  \  \  \  \  \	Substrate % sand	90		
	Substrate % gravel	90 5 5		
ho l	Substrate % cobble	5		
	Substrate % boulder			
	Photo Upstream			
	(time & #)	10:31 any		
1	Photo Downstream (time & #)	,1		
	Photo Left Bank* (time & #)	(1		
(	Photo Right Bank* (time & #)	11		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between G	iPS Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Red algae present?	If so, please record cod	ordinates below:	

Transect Name: SAS 101

Target UTM: 447680

Observers (writer/other)

Date (0 | 28 | 17 | 3756377

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	11 Sa 04476	53	
	UTM (@ Left Bank*)	3756392		
	Channel position (L/C/R*)			
	Width of Channel (m)	55		
	Max Depth (cm) & Location in Channel (L/C/R*)	R40 35.5.		
	Depth @ Left Edge (cm) (~4" from bank edge)	10.5		
	Depth @ Right Edge (cm) (~4" from bank edge)	9		
	% Veg- Left Bank*	10		
	% Veg- Right Bank*	15		
	% Canopy Over			
	Transect Band	5		
tal	Substrate % mud/silt			
1to	Substrate % sand	100		
uld to	Substrate % gravel			
Should total 100%	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	10:59am		
	Photo Downstream (time & #)	11	,	
	Photo Left Bank* (time & #)	11		
	Photo Right Bank* (time & #)	17		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between G	PS Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Red algae present?	If so, please record coo	rdinates below:	

Transect Name: SAS 102 Target UTM: 447620 Date 10 25/17
3756088

Observers (writer/other)\_\_\_

4

_	OBSERVATIONS	CHANNEL #1	CHANNET #2	CITANINET 1/2
	Actual GPS coordinates in	1) S 04475	CHANNEL #2	CHANNEL #3
	UTM (@, Left Bank*)	3756065	10	
	Channel position (L/C/R*)	2136063		
	Width of Channel (m)	92		
	Max Depth (cm) &	100		
	Location in Channel	1.41		
	(L/C/R*)	LTI		
	Depth @ Left Edge (cm)	22 [		
	(~4" from bank edge)	22.5		
	Depth @ Right Edge (cm)	10.5		
	(~4" from bank edge)			
	% Veg- Left Bank*	5		
	% Veg- Right Bank*	10		
	% Canopy Over			
	Transect Band	2		
ומו	Substrate % mud/silt			
100%	Substrate % sand	100		
100	Substrate % gravel			
7110	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	11 100		
	Photo Downstream	11:17 an		
	(time & #)	11		
	Photo Left Bank*			
	(time & #)	11		
	Photo Right Bank*			
	(time & #)	/1		
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
_				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between G	PS Points SAS and SAS	
	Tally	Gravel Patch Size Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Dod alose was suit?	lfl		
ked algae present?	If so, please record coo	ordinates below:	
		_	

Transect Name: SAS 103
Target UTM: 447481Observers (writer/other)

Date  $100 \times 100$  3755829

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	115 04471	4604	
	UTM (@ Left Bank*)	3755843		
	Channel position (L/C/R*)			
	Width of Channel (m)	110		
	Max Depth (cm) &			
	Location in Channel	R 44		
	$(L/C/R^*)$			
	Depth @ Left Edge (cm)	~ ~		
	(~4" from bank edge)	2.5		
	Depth @ Right Edge (cm)	21		
	(~4" from bank edge)	36		
	% Veg- Left Bank*	2.5 36 5		
}	% Veg- Right Bank*	5		
	% Canopy Over	~		
	Transect Band	2		
Should total 100%	Substrate % mud/silt Substrate % sand	1.00		
uld to		100		
100	Substrate % gravel Substrate % cobble			
Sho	Substrate % boulder			
	Photo Upstream			
,	(time & #)	11:31 am		
	Photo Downstream	- Cram		
	(time & #)	c1		
-	Photo Left Bank*			
I .	(time & #)	( )		
<u> </u>	Photo Right Bank*			-
	(time & #)	1)		
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between G	iPS Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Red algae present	? If so, please record cod	ordinates below:	
<del></del>			

Transect Name: SAS 104
Target UTM: 447240
Observers (writer/other)

Date 10 25 17
3755663

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	115 04478	106	
	UTM (@ Left Bank*)	37551,84		
	Channel position (L/C/R*)			
	Width of Channel (m)	\$ 97		
	Max Depth (cm) &			
	Location in Channel	C 28		
	(L/C/R*)			
	Depth @ Left Edge (cm)	,		
	(~4" from bank edge)	6		
	Depth @ Right Edge (cm)	171		
	(~4" from bank edge)	14		
	% Veg- Left Bank*	<b>3</b> 5		
	% Veg- Right Bank*	3		
	% Canopy Over			
	Transect Band	2		
al	Substrate % mud/silt			
to %	Substrate % sand	100		
Should total 100%	Substrate % gravel			
hoi 1	Substrate % cobble			
$\infty$	Substrate % boulder			
	Photo Upstream	11:50		
	(time & #)	11:50am		
	Photo Downstream	()		
	(time & #)			
	Photo Left Bank*	11		
	(time & #)			
	Photo Right Bank*	1)		
ļ	(time & #)	. ,		
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
L				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between G	PS Points SAS and SAS	
	Tally	Gravel Patch Size	
		_ Min 3m	
		_ 3m-5m	
		_ 5m-10m	
		_ 10m-15m	
		15m+	
	_		
Red algae present?	If so, please record coor	dinates below:	
		*1	

Transect Name: SAS 105
Target UTM: 446983
Observers (writer/other)

Date 10 25/17
3755713

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	115 0446988	\$	
	UTM (@ Left Bank*)	3755725		
	Channel position (L/C/R*)			
	Width of Channel (m)	60		
	Max Depth (cm) &			
	Location in Channel	C, 29.5		
	(L/C/R*)			
	Depth @ Left Edge (cm)			
	(~4" from bank edge)	13		
	Depth @ Right Edge (cm)	1.1		
	(~4" from bank edge)	19		
	% Veg- Left Bank*	5		
	% Veg- Right Bank*	0		
	% Canopy Over			
	Transect Band	2		
tal	Substrate % mud/silt			
to %	Substrate % sand	100		
Should total 100%	Substrate % gravel			
lho 1	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream	12'00		
	(time & #)	12'00pm		
	Photo Downstream	(1		
	(time & #)			
	Photo Left Bank*	U		
	(time & #)			
	Photo Right Bank*	()		
	(time & #)			
-	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
Ĺ				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Tally Gravel Patch Size  Min 3m  3m-5m  5m-10m  10m-15m  15m+  Red algae present? If so, please record coordinates below:
3m-5m 5m-10m 10m-15m
5m-10m 10m-15m 15m+
10m-15m 15m+
15m+
Red algae present? If so, please record coordinates below:

 Transect Name: SAS 106
 Date 10 ≥ 5/17

 Target UTM: 446735
 3755827

 Observers (writer/other)
 446735

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	115 0446	749	
	UTM (@ Left Bank*)	3755841	/	
	Channel position (L/C/R*)			
	Width of Channel (m)	50		
	Max Depth (cm) &			
	Location in Channel	C 33.2		
	(L/C/R*)			
	Depth @ Left Edge (cm)	114		
	(~4" from bank edge)	17		
	Depth @ Right Edge (cm)	10		
	(~4" from bank edge)	12		
	% Veg- Left Bank*	多る		
	% Veg- Right Bank*	7		
	% Canopy Over	70		
	Transect Band	10		
ta1	Substrate % mud/silt			
Should total 100%	Substrate % sand	100		
ould to 100%	Substrate % gravel			
ho	Substrate % cobble			
<u> </u>	Substrate % boulder			
	Photo Upstream	19:15		
	(time & #)	12:15 pm		
	Photo Downstream	1)		
	(time & #)			
	Photo Left Bank*			
	(time & #)	11		
,	Photo Right Bank*	1)		
-	(time & #)	· · · · · · · · · · · · · · · · · · ·		
	Photo other (describe)			
	Notes (e.g. Islands,			
ļ	Obstructions)			
ĺ				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Lo	cation between GF	PS Points SAS and SA	AS	
				252
	Tally	<b>Gravel Patch Size</b>		
_		_ Min 3m		
_		_ 3m-5m		
_		_ 5m-10m		
-		_ 10m-15m		
_		_ 15m+		
Red algae present? If so	o, please record coor	dinates below:		
		<del></del> -		

Transect Name: SAS 107
Target UTM: 446461
Observers (writer/other)

Date (0/25)17
3755771

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	115 044647	,	
	UTM (@ Left Bank*)	3755779		
	Channel position (L/C/R*)			
	Width of Channel (m)	16.5		
	Max Depth (cm) &			
	Location in Channel (L/C/R*)	L 43		
	Depth @ Left Edge (cm) (~4" from bank edge)	20		
	Depth @ Right Edge (cm) (~4" from bank edge)	23.5		
	% Veg- Left Bank*	10		
	% Veg- Right Bank*	10		
	% Canopy Over Transect Band	30		
Test .	Substrate % mud/silt			
tota	Substrate % sand	100		
Should total 100%	Substrate % gravel			
hou	Substrate % cobble			
S	Substrate % boulder			
	Photo Upstream (time & #)	12:30		
	Photo Downstream (time & #)			
	Photo Left Bank*			
	(time & #) Photo Right Bank*			
	(time & #)			
	Photo other (describe)			
ļ	Notes (e.g. Islands,			
	Obstructions)			
ł				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

L	ocation between GPS	S Points SAS and	d SAS	
	Tally	Gravel Patch Size		
		Min 3m		
		3m-5m		
		5m-10m		
		10m-15m		
		15m+		
Red algae present? If	so, please record coord	dinates below:		
		29		

Transect Name: SAS 108
Target UTM: 446169
Observers (writer/other)

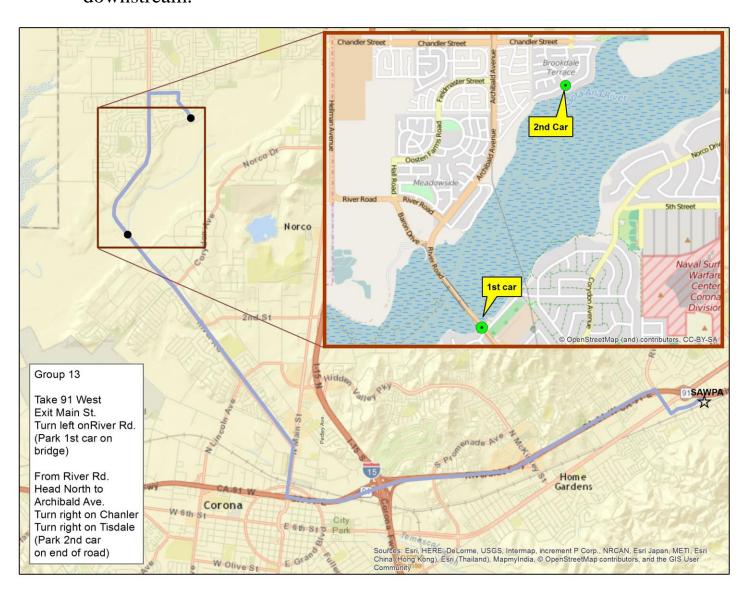
	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	115044614	97	
	UTM (@ Left Bank*)	L 375854		
	Channel position (L/C/R*)			
	Width of Channel (m)	32-5		
	Max Depth (cm) & Location in Channel (L/C/R*)	R43		
	Depth @ Left Edge (cm) (~4" from bank edge)	16		
	Depth @ Right Edge (cm) (~4" from bank edge)	25		
	% Veg- Left Bank*	5		
	% Veg- Right Bank*	40		
	% Canopy Over Transect Band	2		
<u></u>	Substrate % mud/silt			
tot %	Substrate % sand	100		
ould to	Substrate % gravel			
Should total 100%	Substrate % cobble			
82	Substrate % boulder			
	Photo Upstream (time & #)	12:45 pm		
	Photo Downstream (time & #)	()		
	Photo Left Bank* (time & #)	11		
	Photo Right Bank* (time & #)	1)		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between G	PS Points SAS and SAS	
	Tally	Gravel Patch Size Min 3m 3m-5m	
		5m-10m	
		_ 15m+	
Red algae present?	If so, please record coo	rdinates below:	

#### **Group 13: Points 109-118**

<u>Driving Directions</u>: Take 91 West and exit Main Street. Turn right onto Main Street. Turn left onto River Road. **Car #1** should park at the River Road bridge where it crosses the river. After parking first car, return to River Road. River Road turns into Archibald Ave. Turn right Chandler Street. Turn right Tisdale Street. **Car #2** should park upstream at the end of Tisdale Street. Parking the cars as directed, will ensure you are walking downstream.



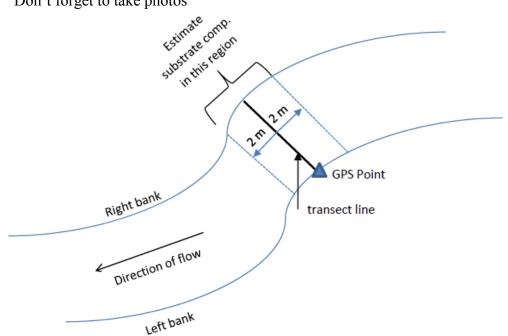
**Data Collection Instructions:** Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

Technical Questions: Call Bonnie Johnson at (951) 757-0782 or Mari Archer at (951) 966-1602. Coordination/Logistical Issues: Call Zyanya Blancas at (951) 354-4220

in the wetted river and record on your data sheet the actual GPS location on the left bank (note: the left bank is on your left when you face downstream). If there is more than one wetted river channel, record each channel's left bank GPS location.

Here are some helpful tips:

- Please record all measurements using the metric system;
- Set up your transect lines perpendicular to the river;
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%;
- Don't forget to take photos



When You Are Done: Return to SAWPA at 11615 Sterling Ave. in Riverside to check equipment in, submit datasheets and grab lunch. Zyanya Blancas will contact your group's lead photographer to instruct them on how your group submits all site photos.

**Driving Back to SAWPA:** From the Car #2 location, start driving on Tisdale St. onto Chandler St. Turn left onto Chandler St. and turn left again onto Archibald Ave. Archibald Ave. turns into River Rd. Continue driving River Rd. and turn right onto N Main St. Take ramp left onto 91 East towards Riverside. Continue driving 91 East and take exit 54 onto Pierce St. After exiting, make a right onto Pierce Street. After taking a right, turn left onto Sterling Ave. Stay on Sterling Ave. all the way to the end of the street and arrive at SAWPA.

Transect Name: SAS 109

Target UTM:

445940

Observers (writer/other) JMB/LEM, MRW, CXG

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	445925		
	UTM (@ Left Bank*)	3755676		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	19.2 20.0		
	Max Depth (cm) &	36		
	Location in Channel			
	(L/C/R*)	,		
	Depth @ Left Edge (cm)	10		
	(~4" from bank edge)			
	Depth @ Right Edge (cm)	10.5		
	(~4" from bank edge)		_	
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over	20		
Γ	Transect Band Substrate % mud/silt			
Should total 100%	Substrate % mud/siit Substrate % sand	100		
ould to	Substrate % gravel	100		
oul 100	Substrate % cobble			
Sho	Substrate % boulder			
	Photo Upstream			
	(time & #)	0959 001		
	Photo Downstream	051 001		
	(time & #)	662		
ŀ	Photo Left Bank*	002		
	(time & #)	663		
	Photo Right Bank*			
	(time & #)	1 004		
Ī	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Lo	cation between GI	PS Points SAS and SAS
	Tally	Gravel Patch Size Min 3m
		3m-5m
_		
		10m-15m
×=		15m+
Red algae present? If so	o, please record coo	rdinates below:

Transect Name: SAS 110
Target UTM: 446000 3755385
Observers (writer/other) JMB, LEM, CXG, MRW

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	446005		011111111111111111111111111111111111111
	UTM (@ Left Bank*)	3755388		
	Channel position (L/C/R*)			
	Width of Channel (m)	18.0		
	Max Depth (cm) &	·		
	Location in Channel	44.0		
	(L/C/R*)			
	Depth @ Left Edge (cm)	11.2 000		
	(~4" from bank edge)	11.3 cm		
	Depth @ Right Edge (cm)	2000		
-	(~4" from bank edge)	29.0 ^		
-	% Veg- Left Bank*	100		
_	% Veg- Right Bank*	100		
	% Canopy Over			
	Transect Band	40		
tal	Substrate % mud/silt	0		
uld to	Substrate % sand	100		
	Substrate % gravel	0		
	Substrate % cobble	0		
	Substrate % boulder	0		
I	Photo Upstream			
_	(time & #)	1026 005		
	Photo Downstream			
	(time & #)	004		
	Photo Left Bank*			
`	(time & #)	007		· ·
	Photo Right Bank*	200		
	time & #)	008		
	Photo other (describe)	000011 101 11 11 11 11		
	Notes (e.g. Islands, Obstructions)	small island afour		
	Josh actions)	Man said in		
L				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	el Patch	Size			
Min 3m					
	3m-5m				
	5m-10m				
	l0m-15n				
	15m+				
ates b	below:				
	*				 
	-	·			
	-	,	_		 

Transect Name: SAS 111 Date 10/25/17
Target UTM: 445935 3755100

Observers (writer/other) JMB, LEM, CX6, MKW

	OBSERVATIONS	CHA	ANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	445	933		
	UTM (@ Left Bank*)	375	5103		
	Channel position (L/C/R*)				
	Width of Channel (m)	1 2	20,4		
	Max Depth (cm) &				
	Location in Channel	31			
	(L/C/R*)				
	Depth @ Left Edge (cm)	0.0			
	(~4" from bank edge)	9.9			
	Depth @ Right Edge (cm)				
	(~4" from bank edge)	16	1.2		
	% Veg- Left Bank*	# L	10		
	% Veg- Right Bank*	3.5 + 3	00		
	% Canopy Over	3.5 + >			
	Transect Band		2		
tal	Substrate % mud/silt	0			
uld to	Substrate % sand				
	Substrate % gravel	O	)		
Should total 100%	Substrate % cobble	C			
	Substrate % boulder		>		
1	Photo Upstream	1054	009		
_	(time & #)				
	Photo Downstream		010		
	(time & #)				
	Photo Left Bank*	}	011		
	(time & #)				
	Photo Right Bank*		012		
	(time & #)	4			
	Photo other (describe)				
	Notes (e.g. Islands,				
	Obstructions)				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Loca	tion between GP	S Points SAS and SAS	i
	Tally	Gravel Patch Size	
		_ Min 3m	
<del>,,</del>		_ 3m-5m 5m-10m	
		10m-15m	
		15m+	
***************************************			
<b>.</b>			
Red algae present? If so, p	olease record coor	dinates below:	
<u>-</u>		· · · · · · · · · · · · · · · · · · ·	

Transect Name: SAS 112

Date 10/25/17 3754896

Target UTM:

445723

Observers (writer/other) JMB/ LEM, CXG, MRW

	OBSERVATIONS	СНА	NNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	445		0.22.2.1.1.1.2.2.17.2	CHITITIES #5
	UTM (@ Left Bank*)	379	54896		
	Channel position (L/C/R*)				
	Width of Channel (m)	32	.73		
	Max Depth (cm) &				
	Location in Channel	30			
	(L/C/R*)				
	Depth @ Left Edge (cm)	211			
	(~4" from bank edge)	3.4			
	Depth @ Right Edge (cm)	4.5			
	(~4" from bank edge)	ري. ي			
	% Veg- Left Bank*	10	0		
	% Veg- Right Bank*	20			
	% Canopy Over	20			
	Transect Band	20			
la l	Substrate % mud/silt	0			
Should total	Substrate % sand	100			
ould to	Substrate % gravel	0			
hol	Substrate % cobble	0			
S	Substrate % boulder	0			
1	Photo Upstream	11:11	013		
	(time & #)				
	Photo Downstream		014		
<b>⊢</b>	(time & #)				
-	Photo Left Bank*		015		
	(time & #)				
	Photo Right Bank*		016		
<u> </u>	(time & #)				
	Photo other (describe)				
1	Notes (e.g. Islands,				
(	Obstructions)				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between GPS	Points SAS and	SAS	
	Tally	Gravel Patch Size		
		Min 3m		
		3m-5m		
		5m-10m		
		10m-15m		
		15m+		
Red algae present? If	so, please record coordi	nates below:		
				_
				***
				_
		<del></del>	·	

Transect Name: SAS 113

Date 10/25/17 3754961

Target UTM:

445456

Observers (writer/other) INB/ LEM, CXG, MRW

	OBSERVATIONS	CHAN	NEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	44	5452		
	UTM (@ Left Bank*)	37	54968		
	Channel position (L/C/R*)	_			
	Width of Channel (m)	32.9	3		
	Max Depth (cm) &				
	Location in Channel	28	)		
	(L/C/R*)				
	Depth @ Left Edge (cm)	8.	2		
	(~4" from bank edge)				
	Depth @ Right Edge (cm) (~4" from bank edge)	8.0	<i>v</i>		
	% Veg- Left Bank*	90		<b>Y</b>	
	% Veg- Right Bank*				
	% Canopy Over		15-W		
	Transect Band	20			
la la	Substrate % mud/silt				
Should total 100%	Substrate % sand	100	0		
ould to	Substrate % gravel	0			
ho 1	Substrate % cobble				
\(\int_{\infty}\)	Substrate % boulder	0			
	Photo Upstream	N35	017		
	(time & #)	_ }			
	Photo Downstream		018		
-	(time & #) Photo Left Bank*				
	(time & #)		019		
The second second	Photo Right Bank*				
	(time & #)		20		
<u> </u>	Photo other (describe)				
_	Notes (e.g. Islands,				
	Obstructions)				
L_		_			

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between G	PS Points SAS and SAS	
	Tally	Gravel Patch Size	
	,	Min 3m	
		 3m-5m	
		 5m-10m	
		 10m-15m	
		15m+	
Red algae present?	If so, please record co	ordinates below:	
		_	

Transect Name: SAS 114

S 114 Date 10/25/17 445308 3754771

Target UTM:

Observers (writer/other) JMB/ LEM, CXG, MRN

	OBSERVATIONS		HANNEI		CHAN	NEL #2	CHANNEL #3
	Actual GPS coordinates in	44	5283			1,222,772	CITATIVEE #3
	UTM (@ Left Bank*)		15477	2			
	Channel position (L/C/R*)	_	2.75				
	Width of Channel (m)	-	1				
	Max Depth (cm) &						
	Location in Channel		30				
	(L/C/R*)						
	Depth @ Left Edge (cm)		B				
	(~4" from bank edge)	8					
	Depth @ Right Edge (cm)	19_					
	(~4" from bank edge)						
	% Veg- Left Bank*	100					
	% Veg- Right Bank*	98					
	% Canopy Over	96 <del>38 40</del>					
	Transect Band	15%					
tal	Substrate % mud/silt	0					
Should total 100%	Substrate % sand	100					
ould to	Substrate % gravel		0				
설 _	Substrate % cobble		0				
	Substrate % boulder		0				
	Photo Upstream	115	7 02	1.			
	(time & #)						
	Photo Downstream		02	2			
	(time & #)						
I	Photo Left Bank*		02	3			
	time & #)						
	Photo Right Bank*		02	4			
<u> </u>	time & #)	سك.		-			
	Photo other (describe)						
	Notes (e.g. Islands, Obstructions)						
	Josu actions)						

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Location betwe	en GPS	Points SAS	_ and SAS	
Tally		Gravel Patch S Min 3m 3m-5m 5m-10m 10m-15m 15m+	ize	
 f so, please recor		nates below: ——— ———		
\ /				

Transect Name: SAS 115 Date 10/25/17
Target UTM: 445271 3754475
Observers (writer/other) 0MB/LEM, CY6, MRW

	OBSERVATIONS		NEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	4452	[e]		
	UTM (@ Left Bank*)	3754472			
	Channel position (L/C/R*)				
	Width of Channel (m)	32	2		-
	Max Depth (cm) &	27			
	Location in Channel				
	(L/C/R*)				
	Depth @ Left Edge (cm)	2.0			
	(~4" from bank edge)	2.0			
	Depth @ Right Edge (cm)	_ ,	_		
	(~4" from bank edge)	5.0			
	% Veg- Left Bank*	100			
	% Veg- Right Bank*	100			
	% Canopy Over	2-2-10	3 <del>-50</del>		
	Transect Band	18%			
tal	Substrate % mud/silt	0			
t %	Substrate % sand	100			
uld to	Substrate % gravel	0			
Should total 100%	Substrate % cobble	0			
02	Substrate % boulder	0			
	Photo Upstream (time & #)	1255	025		
Ì	Photo Downstream		026		
	(time & #)				
	Photo Left Bank*		027		
	(time & #)				
	Photo Right Bank*		028		
	(time & #)	1			
	Photo other (describe)				
	Notes (e.g. Islands,				
	Obstructions)				
L					

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between GPS	S Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Red algae present?	If so, please record coord	inates below:	

Transect Name: SAS 116

5 116 Date 10/25/17 445069 3754300

Target UTM:

Observers (writer/other) UMB/ LEM, CXG, MRW

	OBSERVATIONS	CHAN	NEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	4450	064		
	UTM (@ Left Bank*)	3754298			
	Channel position (L/C/R*)	-			
	Width of Channel (m)	29.8	9		
	Max Depth (cm) &		,		
	Location in Channel	3	3		
	(L/C/R*)				
	Depth @ Left Edge (cm)				
	(~4" from bank edge)	11			
	Depth @ Right Edge (cm)	1.	2		
	(~4" from bank edge)	1 '	0		
	% Veg- Left Bank*	25 75			
	% Veg- Right Bank*	75			
	% Canopy Over	200	4		
	Transect Band	20%			
tal	Substrate % mud/silt	0			
Should total 100%	Substrate % sand	100			
ould to	Substrate % gravel	0		· · · · · · · · · · · · · · · · · · ·	
ho	Substrate % cobble	0			
	Substrate % boulder	0			
	Photo Upstream (time & #)	1308	029		
	Photo Downstream (time & #)		030		
-	Photo Left Bank*				
	(time & #)		031		
	Photo Right Bank*		032		
	(time & #)	<i>_</i>			
_	Photo other (describe)				
	Notes (e.g. Islands,				
	Obstructions)				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between G	GPS Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		3m-5m	
		5m-10m	
		10m-15m	
		15m+	
Red algae preser	nt? If so, please record cod	ordinates below:	
		g .	
-			
		_	

Transect Name: SAS 117 Date 10/25/17
Target UTM: 444878 3754208
Observers (writer/other) JMB, LEM, CY6, MRW

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	444878		OIIII II III II II
	UTM (@ Left Bank*)	3754207		
	Channel position (L/C/R*)			
	Width of Channel (m)	26.70		
	Max Depth (cm) &			
	Location in Channel	33		•
	(L/C/R*)			
	Depth @ Left Edge (cm)	IA E		
	(~4" from bank edge)	10.5		
	Depth @ Right Edge (cm)	34 7 05		
	(~4" from bank edge)	26.7 9.5		
	% Veg- Left Bank*	80		
	% Veg- Right Bank*	100		
	% Canopy Over	ten et		
	Transect Band	25 N		
a	Substrate % mud/silt			
Should total 100%	Substrate % sand	100		
ould to	Substrate % gravel			
ho 1	Substrate % cobble			
	Substrate % boulder			E
	Photo Upstream	1322 033		
_	(time & #)			
I	Photo Downstream	034		
-	(time & #)			
1	Photo Left Bank*	035		
_	(time & #)			
	Photo Right Bank*	036		
-	(time & #)			
	Photo other (describe)			
	Notes (e.g. Islands,			
	Obstructions)			
_				

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

	Location between 6	GPS Points SAS and SAS	
	Tally	Gravel Patch Size	
		Min 3m	
		 3m-5m	
		5m 10m	
		 10m-15m	
		 15m+	
Red algae present?	If so, please record coo	ordinates below:	

Transect Name: SAS 118 Date 10/25/17
Target UTM: 444830 3753915
Observers (writer/other) JMB, LEM, (XG, MP.W)

	OBSERVATIONS	CHANNEL #1		CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in	4447	Polo		
	UTM (@ Left Bank*)	3753			
	Channel position (L/C/R*)				
	Width of Channel (m)	27.6			
	Max Depth (cm) &				
	Location in Channel	32			
	(L/C/R*)				
	Depth @ Left Edge (cm)	5,0			
	(~4" from bank edge)				
	Depth @ Right Edge (cm)	21			
	(~4" from bank edge)	21			
	% Veg- Left Bank*	100			
	% Veg- Right Bank*				
	% Canopy Over	3M			
	Transect Band				
tal	Substrate % mud/silt				
to %	Substrate % sand	100			
Should total 100%	Substrate % gravel				
ho.	Substrate % cobble				
<u>~</u>	Substrate % boulder				
	Photo Upstream	1338	037		
	(time & #)				
	Photo Downstream		038		
	(time & #)		000		
_	Photo Left Bank*		039		
	(time & #)		2112		
	Photo Right Bank* (time & #)	1	040		
	Photo other (describe)				
	Notes (e.g. Islands,				
	Obstructions)				
	Obstructions)				
_					

<sup>\*</sup>L/C/R = Left/Center/Right. Face downstream to determine left and right banks.

Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

s 25

	Location between GP	S Points SAS	and SAS
	Tally	Gravel Patçh Siz	e
		_ Min 3m	
		_ 3m-5m	
		_ 5m-10m	
		_ 10m-15m	
		_ 15m+	
Red algae present? If	f so, please record coor	dinates below:	
		-	
		<del></del>	