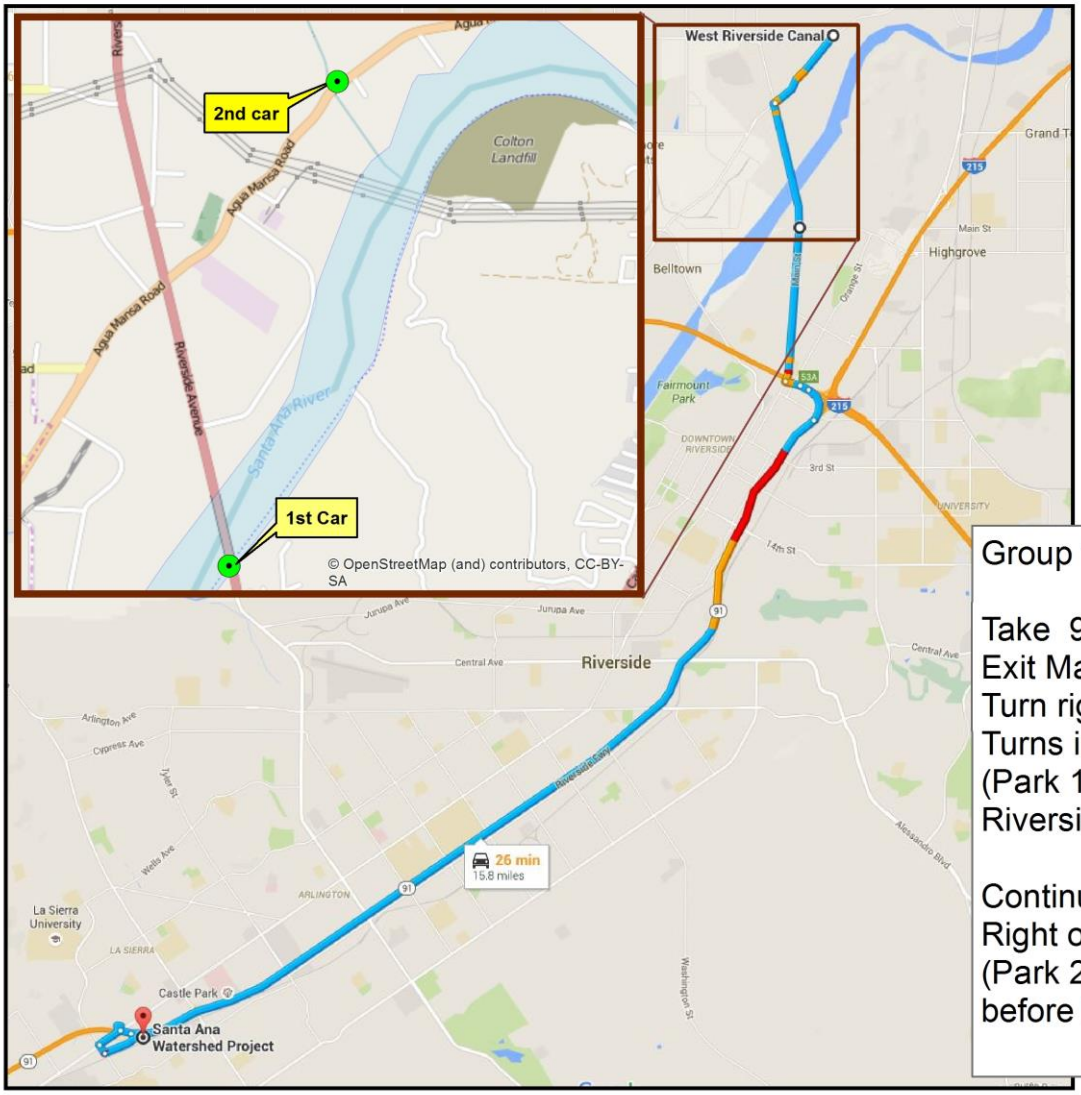
Group 1: Points 9-17

Driving Directions: 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.



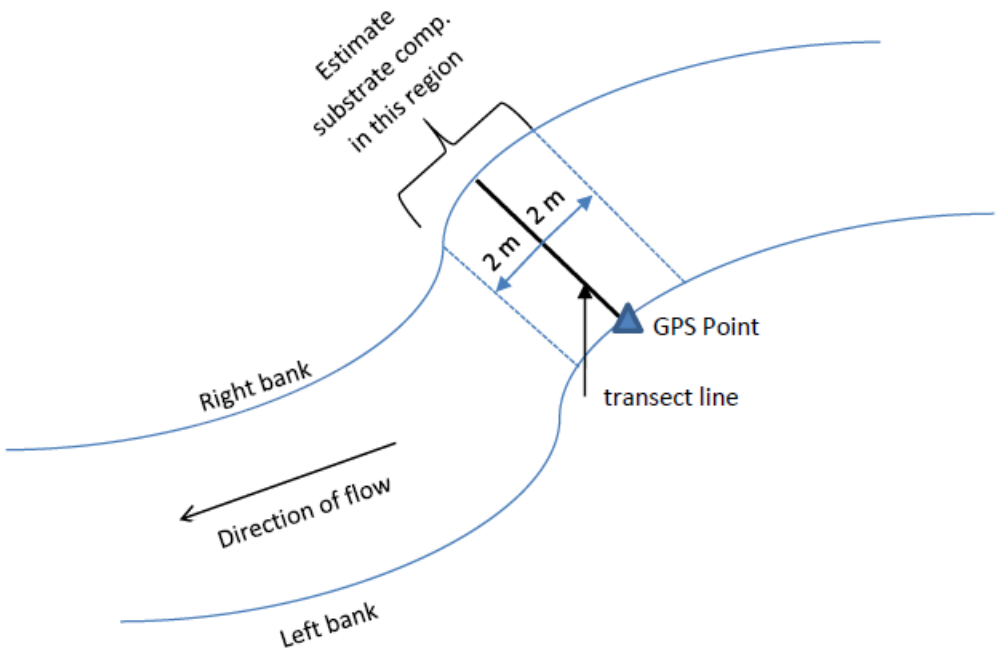
Data Collection Instructions: Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

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.

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 9 **Date** 10/25/2017
Target UTM: **467461** **3767169**
Observers (writer/other) Grace Ng

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11 S 0467385 3767139		
	Channel position (L/C/R*)	Right		
	Width of Channel (m)	~~8~~ 8m		
	Max Depth (cm) & Location in Channel (L/C/R*)	~~14 cm~~ 35.5 cm Center		
	Depth @ Left Edge (cm) (~4" from bank edge)	~~35~~ cm 38		
	Depth @ Right Edge (cm) (~4" from bank edge)	*cm 28		
	% Veg- Left Bank*	50%		
	% Veg- Right Bank*	90%		
	% Canopy Over Transect Band	80		
Should total 100%	Substrate % mud/silt	10		
	Substrate % sand	20		
	Substrate % gravel	70		
	Substrate % cobble	—		
	Substrate % boulder	—		
	Photo Upstream (time & #)	10 30AM		
	Photo Downstream (time & #)			
	Photo Left Bank* (time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	actual point was dry. went to nearest wetted channel		

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

SAS9

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

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 UTM (@ Left Bank*)	467340 3766952		
	Channel position (L/C/R*)	right		
	Width of Channel (m)	10m 70cm		
	Max Depth (cm) & Location in Channel (L/C/R*)	17cm, 5 cm right		
	Depth @ Left Edge (cm) (~4" from bank edge)	17.5 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	7 cm		
	% Veg- Left Bank*	90		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	60		
Should total 100%	Substrate % mud/silt	30		
	Substrate % sand	~~40~~ 35		
	Substrate % gravel	~~40~~ 35		
	Substrate % cobble	———		
	Substrate % boulder	———		
	Photo Upstream (time & #)	11 AM		
	Photo Downstream (time & #)			
	Photo Left Bank* (time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS10

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 11 **Date** 10/25/2017
Target UTM: 467256 3766659
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	467260 3766668		
	Channel position (L/C/R*)	right		
	Width of Channel (m)	60 m		
	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		
Should total 100%	Substrate % mud/silt	—		
	Substrate % sand	—		
	Substrate % gravel	15		
	Substrate % cobble	75		
	Substrate % boulder	10		
	Photo Upstream (time & #)	11:45 AM		
	Photo Downstream (time & #)			
	Photo Left Bank* (time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	red algae here		

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

SAS 11

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 10 and SAS 11.

Tally	Gravel Patch Size
	Min 3m
1	3m-5m
	5m-10m
	10m-15m
	15m+

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

467278 3766795 at discharge point from plant

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 12 **Date** 10/25/2017
Target UTM: **467150** **3766398**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	467142 3766394		
	Channel position (L/C/R*)	right		
	Width of Channel (m)	9m		
	Max Depth (cm) & Location in Channel (L/C/R*)	69cm right		
	Depth @ Left Edge (cm) (~4" from bank edge)	~~0~~ cm 8		
	Depth @ Right Edge (cm) (~4" from bank edge)	44 cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	~~35~~ 80		
	% Canopy Over Transect Band	~~40~~ 35		
Should total 100%	Substrate % mud/silt	———		
	Substrate % sand	30		
	Substrate % gravel	35		
	Substrate % cobble	35		
	Substrate % boulder	———		
	Photo Upstream (time & #)	12:20 PM		
	Photo Downstream (time & #)			
	Photo Left Bank* (time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 12

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 11 and SAS 12.

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

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

467196 3766543

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 13 **Date** 10/25/2017
Target UTM: **467044** **3766133**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	467067 3766131		
Channel position (L/C/R*)			
Width of Channel (m) (7m)	~~9m 40cm~~	9m 40cm	
Max Depth (cm) & Location in Channel (L/C/R*)	22 cm center	13 right	
Depth @ Left Edge (cm) (~4" from bank edge)	6cm	13 cm	
Depth @ Right Edge (cm) (~4" from bank edge)	18cm	9cm	
% Veg- Left Bank*	95	100	
% Veg- Right Bank*	100	100	
% Canopy Over Transect Band	0	50	
Substrate % mud/silt (Should total 100%)	30	10	
Substrate % sand	50	45	
Substrate % gravel	10	45	
Substrate % cobble	10	—	
Substrate % boulder	—	—	
Photo Upstream (time & #)	12:54 pm	12:54pm	
Photo Downstream (time & #)			
Photo Left Bank* (time & #)			
Photo Right Bank* (time & #)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 13

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 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:

467066	3766164

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 14 **Date** 10/25/2017
Target UTM: **466961** **3765847**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	466914 3765869		
	Channel position (L/C/R*)	right		
	Width of Channel (m)	6m 80 cm		
	Max Depth (cm) & Location in Channel (L/C/R*)	28 cm 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 Transect Band	2		
Should total 100%	Substrate % mud/silt	3		
	Substrate % sand	15		
	Substrate % gravel	12		
	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)			

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

SAS 14

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 15 **Date** 10/25/2017
Target UTM: **466938** **3765563**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	466815 3765586	466806 3765588	
Channel position (L/C/R*)	right	right	
5m 60 Width of Channel (m)	~~7m 40 cm~~	7m 40 cm	
Max Depth (cm) & Location in Channel (L/C/R*)	~~39~~ 33 left cm	30 center	
Depth @ Left Edge (cm) (~4" from bank edge)	26 cm	5 cm	
Depth @ Right Edge (cm) (~4" from bank edge)	10	7 cm	
% Veg- Left Bank*	100	0	
% Veg- Right Bank*	100	100	
% Canopy Over Transect Band	3	1	
Should total 100% Substrate % mud/silt	———	5	
Substrate % sand	60	15	
Substrate % gravel	19	40	
Substrate % cobble	19	40	
Substrate % boulder	2	———	
Photo Upstream (time & #)	1:38 cm	1:38 cm	
Photo Downstream (time & #)			
Photo Left Bank* (time & #)			
Photo Right Bank* (time & #)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 15

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 16 **Date** 10/25/2017
Target UTM: **466759** **3765354**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	466753 3765350	466714 3765355	
	Channel position (L/C/R*)	left	right	
	Width of Channel (m)	6 m	7m ~~50~~ 50cm	
	Max Depth (cm) & Location in Channel (L/C/R*)	15 cm right	43 inter	
	Depth @ Left Edge (cm) (~4" from bank edge)	5 cm	10 cm	
	Depth @ Right Edge (cm) (~4" from bank edge)	7 cm	7 cm	
	% Veg- Left Bank*	0	1	
	% Veg- Right Bank*	20	100	
	% Canopy Over Transect Band	100	5	
Should total 100%	Substrate % mud/silt	10	10	
	Substrate % sand	~~30~~ 30	~~50~~ 40	
	Substrate % gravel	30	~~50~~ 40	
	Substrate % cobble	30		
	Substrate % boulder		~~20~~ 10	
	Photo Upstream (time & #)	2:03 PM	2:11 PM	
	Photo Downstream (time & #)			
	Photo Left Bank* (time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 16

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 17 **Date** 10/25/2017
Target UTM: **466587** **3765111**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	466586 3765113	466527 3765161	
Channel position (L/C/R*)	left	right	
Width of Channel (m)	4m 70cm	12m 30cm	
Max Depth (cm) & Location in Channel (L/C/R*)	12cm left	31cm center	
Depth @ Left Edge (cm) (~4" from bank edge)	* 10cm	7cm	
Depth @ Right Edge (cm) (~4" from bank edge)	5cm	13cm	
% Veg- Left Bank*	0	100	
% Veg- Right Bank*	5	100	
% Canopy Over Transect Band	100	5	
Should total 100% — Substrate % mud/silt	10	30	
Substrate % sand	50	30	
Substrate % gravel	30	20	
Substrate % cobble	10	20	
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/C/R = Left/Center/Right. Face downstream to determine left and right banks.

SAS 17

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 ____ and SAS _____.

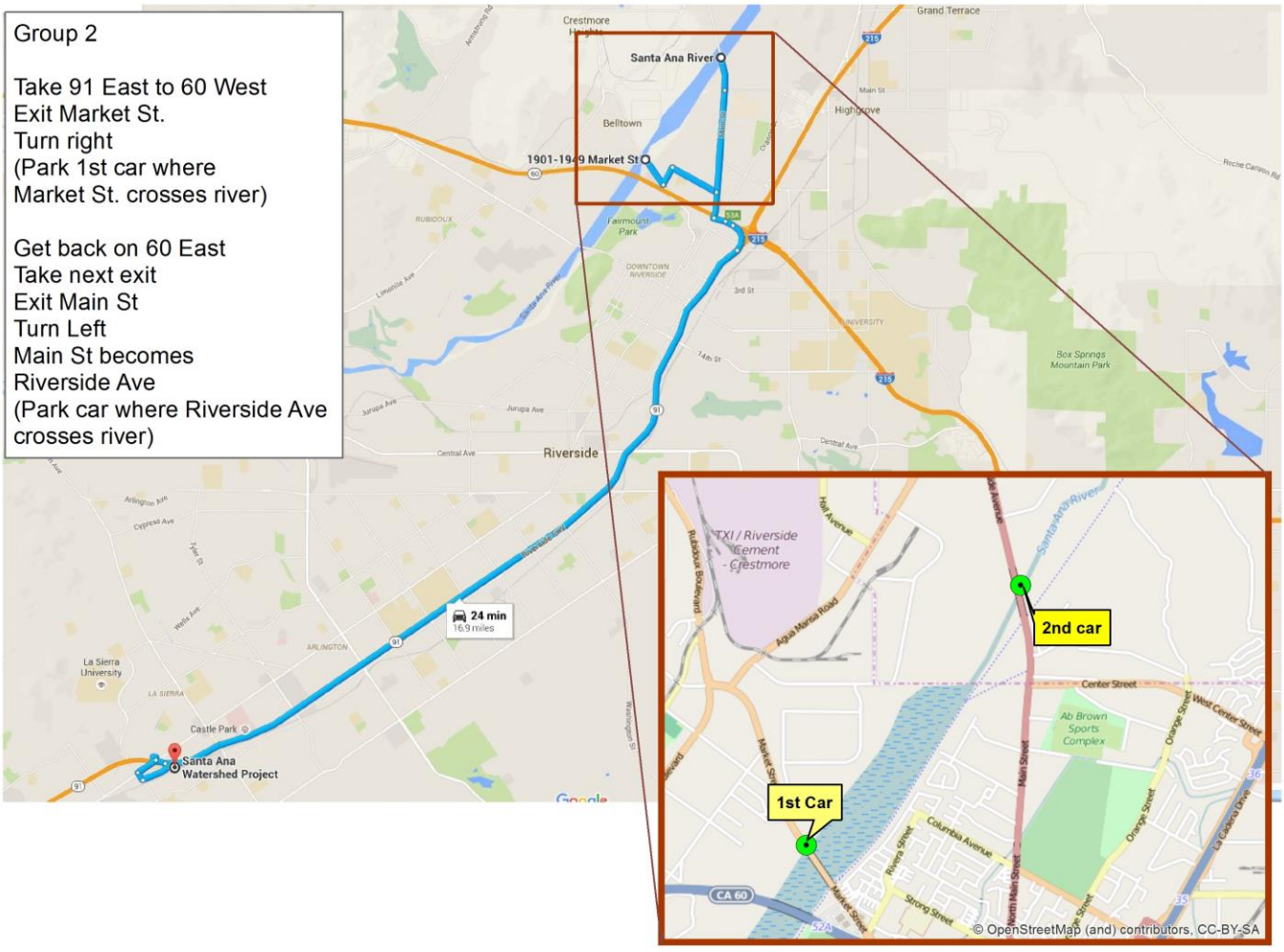
Tally	Gravel Patch Size
_____	Min 3m
_____	3m-5m
_____	5m-10m
_____	10m-15m
_____	15m+

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

Group 2: Points 18-26

<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.

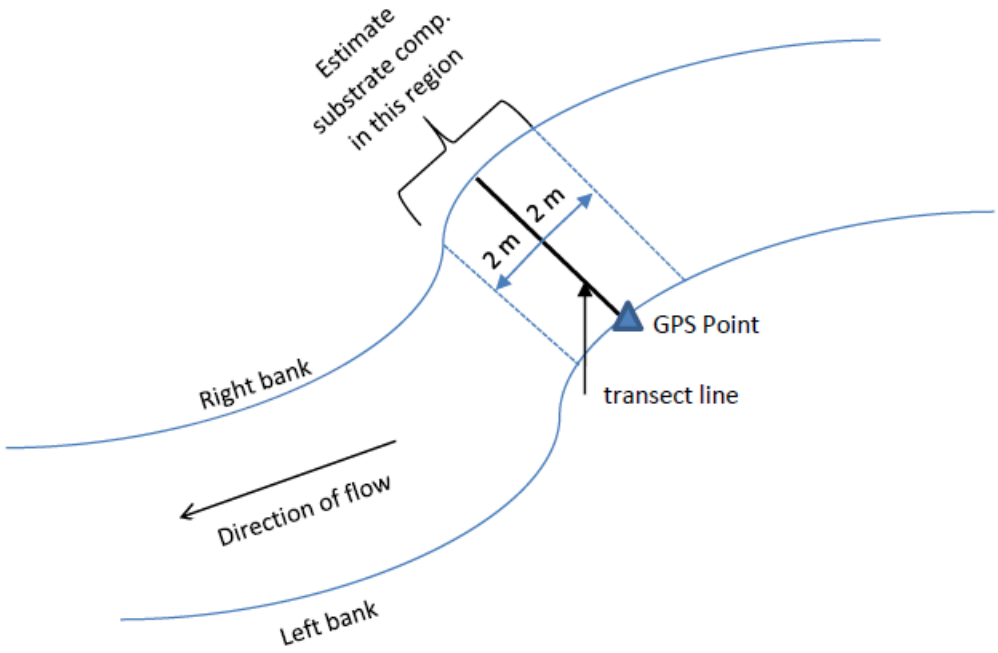


Data Collection Instructions: Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is in the wetted river and record on your data sheet the actual GPS location on the left bank (note: the left bank is on your left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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 18 **Date** 10-25-17
Target UTM: 466399 3764883
Observers (writer/other) Andre

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	3401.944 1771835	3401.944 1721838	
Channel position (L/C/R*)	R	C	
Width of Channel (m)	~~3m 25 cm~~	7m 20 c	
Max Depth (cm) & Location in Channel (L/C/R*)	5m 80 cm ~~19c~~ 10.4	31 cm C	
Looking upstream Depth @ Left Edge (cm) (~4" from bank edge)	1.9c1 ~~7.2~~	6.5cm	
Depth @ Right Edge (cm) (~4" from bank edge)	7.2	9.5 cm	
% Veg- Left Bank*	100	100	
% Veg- Right Bank*	100	100	
% Canopy Over Transect Band	~~90~~ 30	20	
Should total 100% Substrate % mud/silt	~~50~~ 0%	20	
Substrate % sand	80	30	
Substrate % gravel	~~20~~ 15	~~10~~ 45	
Substrate % cobble	5	~~10~~ 5	
Substrate % boulder	0	0	
Photo Upstream (time & #)	10:00 am	10:30	
Photo Downstream (time & #)	10:00	10:30	
Photo Left Bank* (time & #)	10:00	10:30	
Photo Right Bank* (time & #)	10:00	10:30	
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	Island is 40% of width	Homeless man made bridge upstream	

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

SAS 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	Gravel Patch Size
	Min 3m
	3m-5m
	5m-10m
Ripple mammoth	10m-15m
Split into 3rd channel	15m+

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

N/a

Tally: Fallen tree created diversion

39.01.324, 1172149 13 m

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 19 **Date** 10-25-17
Target UTM: **466227** 3764671
Observers (writer/other) Andy

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	34.01.329 117 21.1949		
Channel position (L/C/R*)	C		
Width of Channel (m)	13m 90 cent		
Max Depth (cm) & Location in Channel (L/C/R*)	39 cent/r/		
Depth @ Left Edge (cm) (~4" from bank edge)	1 cent		
Depth @ Right Edge (cm) (~4" from bank edge)	39 cent		
% Veg- Left Bank*	100		
% Veg- Right Bank*	100		
% Canopy Over Transect Band	20%		
Should total 100%: Substrate % mud/silt	10		
Substrate % sand	~~95~~		
Substrate % gravel	~~0~~ 45		
Substrate % cobble	5		
Substrate % boulder	0		
Photo Upstream (time & #)	10:45		
Photo Downstream (time & #)	10:45		
Photo Left Bank* (time & #)	10:45		
Photo Right Bank* (time & #)	10:45		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	gravel bar ~~+5m~~ left side		

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

SAS 19

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 19 and SAS 20.

Tally	Gravel Patch Size
	Min 3m
	3m-5m
	5m-10m
14m Gravel bar ✓	10m-15m
~~Hitch~~ 34. Island ✓	15m+

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 20 **Date** 10-25-17
Target UTM: **466104** **3764403**
Observers (writer/other) Andy

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	34.01189 117 22.029		
Channel position (L/C/R*)	R		
Width of Channel (m)	7.m 30 c		
Max Depth (cm) & Location in Channel (L/C/R*)	C30c		
Depth @ Left Edge (cm) (~4" from bank edge)	5.5		
Depth @ Right Edge (cm) (~4" from bank edge)	27 c		
% Veg- Left Bank*	100		
% Veg- Right Bank*	100		
% Canopy Over Transect Band	60		
Substrate % mud/silt	10		
Substrate % sand	80		
Substrate % gravel	10		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	10:58		
Photo Downstream (time & #)	10:58		
Photo Left Bank* (time & #)	10:58		
Photo Right Bank* (time & #)	10:58		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	2 down trees downstream		

Should total 100%

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

SAS 20

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 20 and SAS 21.

	Tally	Gravel Patch Size
		Min 3m
	✓✓	3m-5m
down tree	✓✓	5m-10m
Gravel bar	✓	10m-15m
		15m+

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

Three

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 21 **Date** 10-25-17
Target UTM: **465953** **3764146**
Observers (writer/other) Andrea

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	34.01.044 117 22.26		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	9m		
	Max Depth (cm) & Location in Channel (L/C/R*)	33 cm C		
	Depth @ Left Edge (cm) (~4" from bank edge)	8 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	7 cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	30 %		
Should total 100%	Substrate % mud/silt	10		
	Substrate % sand	~~20~~ 30		
	Substrate % gravel	50		
	Substrate % cobble	30		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:23		
	Photo Downstream (time & #)	11:23		
	Photo Left Bank* (time & #)	11:23		
	Photo Right Bank* (time & #)	11:23		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	not much shade Gravel bar at our limit range		

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

SAS 21

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 ____ and SAS _____.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 22 **Date** 10/25/17
Target UTM: 465757 3763921
Observers (writer/other) Andy

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	34°00.922 117°22.258		
	Channel position (L/C/R*)	~~R~~ C		
	Width of Channel (m)	6m		
	Max Depth (cm) & Location in Channel (L/C/R*)	32cm/L		
	Depth @ Left Edge (cm) (~4" from bank edge)	32		
	Depth @ Right Edge (cm) (~4" from bank edge)	3cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	20		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	40 %		
	Substrate % gravel	30 %		
	Substrate % cobble	30 %		
	Substrate % boulder	0 %		
	Photo Upstream (time & #)	11:37		
	Photo Downstream (time & #)	1137		
	Photo Left Bank* (time & #)	11:37		
	Photo Right Bank* (time & #)	11:37		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	Channel starts to narrow here		

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

SAS 22

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 22 and SAS 23.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 23 **Date** 10·25·17
Target UTM: **465548** 3763710
Observers (writer/other) Andie

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	34.00.807 117.22.388		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	8.20 cm		
	Max Depth (cm) & Location in Channel (L/C/R*)	28 L		
	Depth @ Left Edge (cm) (~4" from bank edge)	5cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	3cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	30		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	40		
	Substrate % gravel	30		
	Substrate % cobble	30		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:46		
	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)			

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

SAS 23

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 23 and SAS 24.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 24 **Date** 10-25-17
Target UTM: 465400 3763456
Observers (writer/other) Andre

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	34°00.678 117.22.484		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	8 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	24cm (C)		
	Depth @ Left Edge (cm) (~4" from bank edge)	19 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	14 cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	90		
	% Canopy Over Transect Band	50		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	10		
	Substrate % gravel	80		
	Substrate % cobble	10		
	Substrate % boulder	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)			

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

SAS 24

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 24 and SAS 25.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 25 **Date** 10.25.17
Target UTM: **465129** 3763345
Observers (writer/other) Andrea

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	3400.069 11722.659		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	11m 40cm		
	Max Depth (cm) & Location in Channel (L/C/R*)	27cm C		
	Depth @ Left Edge (cm) (~4" from bank edge)	7cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	2cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	20%		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	25%		
	Substrate % gravel	70%		
	Substrate % cobble	5%		
	Substrate % boulder			
	Photo Upstream (time & #)	12:08		
	Photo Downstream (time & #)	12:08		
	Photo Left Bank* (time & #)	12:08		
	Photo Right Bank* (time & #)	12:08		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 25

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 25 and SAS 26.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 26 **Date**_____
Target UTM: **464939** **3763126**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	34.00.490 117.22.782		
	Channel position (L/C/R*)			
	Width of Channel (m)	8m 40cm		
	Max Depth (cm) & Location in Channel (L/C/R*)	25 C		
	Depth @ Left Edge (cm) (~4" from bank edge)	25cm C		
	Depth @ Right Edge (cm) (~4" from bank edge)	5cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	40		
Should total 100%	Substrate % mud/silt	5		
	Substrate % sand	65		
	Substrate % gravel	20		
	Substrate % cobble	5		
	Substrate % boulder	0		
	Photo Upstream (time & #)	12:20		
	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)			

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

SAS 26

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 ____ and SAS _____.

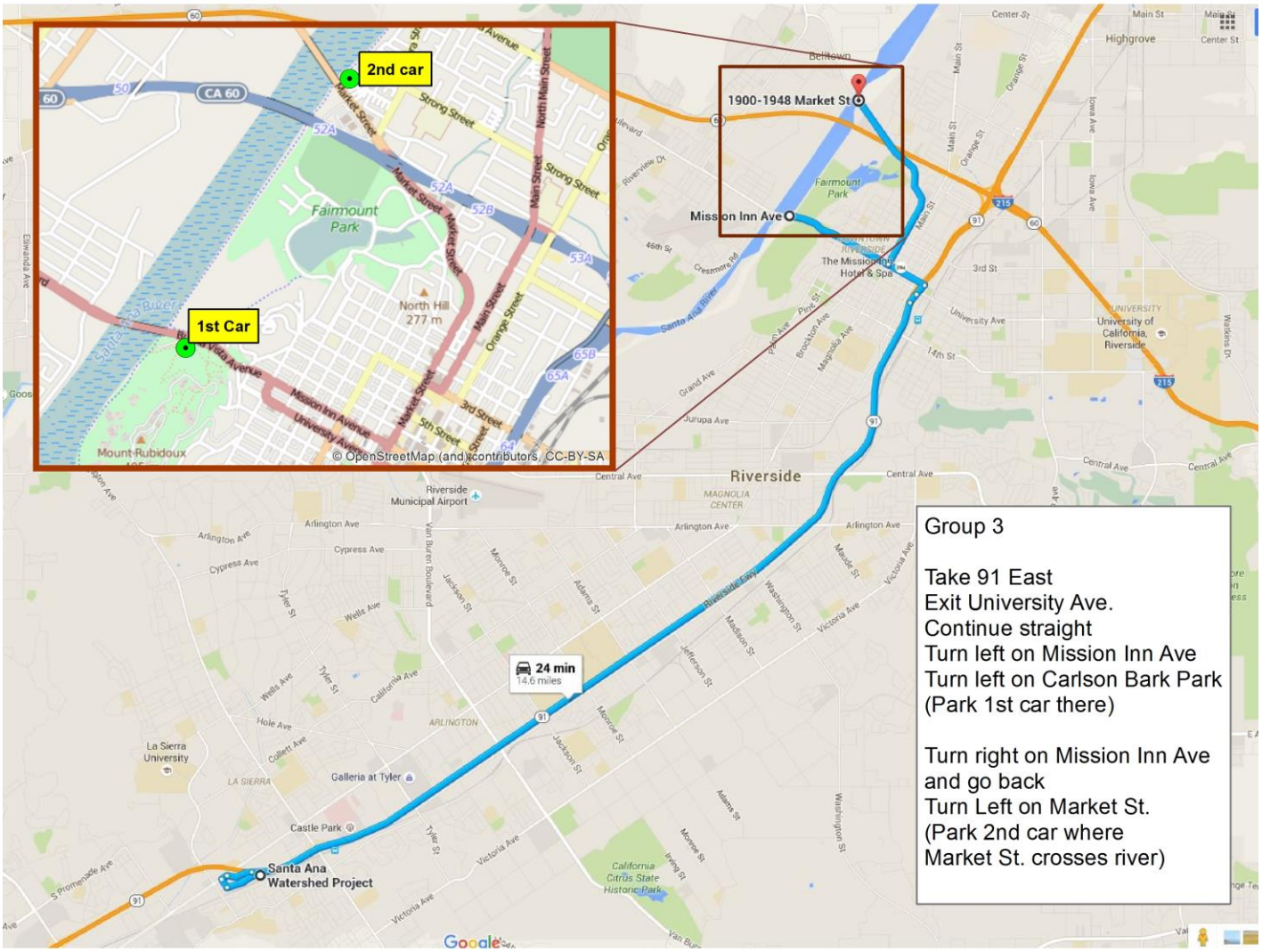
Tally	Gravel Patch Size
_____	Min 3m
_____	3m-5m
_____	5m-10m
_____	10m-15m
_____	15m+

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

Group 3: Points 27-34

Driving Directions: 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.



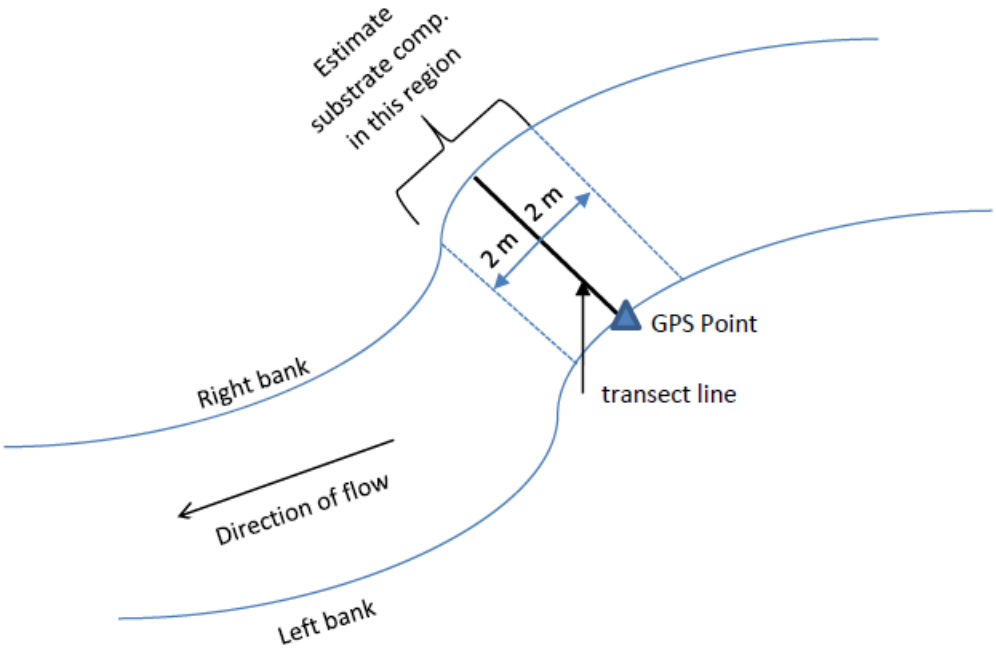
Data Collection Instructions: Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

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.

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 27 **Date** 10/25/17
Target UTM: 464730 3762923
Observers (writer/other) Dave B, Justin T, Tara K, Stephanie F, Preston G

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0464715 3762926		
	Channel position (L/C/R*)			
	Width of Channel (m)	9.1m		
	Max Depth (cm) & Location in Channel (L/C/R*)	21cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	2cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	4cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	85		
	% Canopy Over Transect Band	15		
Should total 100%	Substrate % mud/silt	Ø		
	Substrate % sand	15		
	Substrate % gravel	40		
	Substrate % cobble	40		
	Substrate % boulder	5		
	Photo Upstream (time & #)	10:14 101409		
	Photo Downstream (time & #)	10:14 101414		
	Photo Left Bank* (time & #)	10:14 101423		
	Photo Right Bank* (time & #)	10:14 101442		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 27

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 27 and SAS 28.

	Tally	Gravel Patch Size
		Min 3m
		3m-5m
Right	1	5m-10m
Leg		10m-15m
	1	15m+

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

None

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 28 **Date** 10/25/17
Target UTM: 464595 3762657
Observers (writer/other) Dave B, Justin T, Tara K, Stephanie F, Preston G

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S0464575 3762656		
	Channel position (L/C/R*)			
	Width of Channel (m)	7.9		
	Max Depth (cm) & Location in Channel (L/C/R*)	19.0		
	Depth @ Left Edge (cm) (~4" from bank edge)	1.0		
	Depth @ Right Edge (cm) (~4" from bank edge)	2.5		
	% Veg- Left Bank*	Ø		
	% Veg- Right Bank*	Ø		
	% Canopy Over Transect Band	100% - no organic Bridge only		
Should total 100%	Substrate % mud/silt	0%		
	Substrate % sand	30%		
	Substrate % gravel	45%		
	Substrate % cobble	20%		
	Substrate % boulder	5%		
	Photo Upstream (time & #)	10:43 104351		
	Photo Downstream (time & #)	10:44 104401		
	Photo Left Bank* (time & #)	10:44 104448		
	Photo Right Bank* (time & #)	10:45 104510		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	ID's sucker in first instream		

ID'd live Opossum on river edge

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

SAS 28

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 28 and SAS 29.

Right levy

Tally	Gravel Patch Size
	Min 3m
1	3m-5m
	5m-10m
	10m-15m
1	15m+

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 29 **Date** 10/25/17
Target UTM: 464539 3762368
Observers (writer/other) DaveB, JoshnT, Tarak, ~~Stephanie~~F, Preston G

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0464533 3762374		
	Channel position (L/C/R*)			
	Width of Channel (m)	5.6		
	Max Depth (cm) & Location in Channel (L/C/R*)	24		
	Depth @ Left Edge (cm) (~4" from bank edge)	10		
	Depth @ Right Edge (cm) (~4" from bank edge)	6		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	90		
	% Canopy Over Transect Band	5%		
Should total 100%	Substrate % mud/silt	10%		
	Substrate % sand	45%		
	Substrate % gravel	35%		
	Substrate % cobble	5%		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:13 111318		
	Photo Downstream (time & #)	11:13 111325		
	Photo Left Bank* (time & #)	11:13 111335		
	Photo Right Bank* (time & #)	11:13 111354		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 29

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 29 and SAS 30.

Left levy

Tally	Gravel Patch Size
	Min 3m
	3m-5m
	5m-10m
1	10m-15m
11	15m+

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 30 **Date** 10/25/17
Target UTM: 464467 3762083
Observers (writer/other) Dave B, Justin T, Tera K, Stephanie F, Preston G

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11504 64455 3762086		
	Channel position (L/C/R*)			
	Width of Channel (m)	7.3		
	Max Depth (cm) & Location in Channel (L/C/R*)	23		
	Depth @ Left Edge (cm) (~4" from bank edge)	6.5		
	Depth @ Right Edge (cm) (~4" from bank edge)	2.5		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	95%		
	% Canopy Over Transect Band	15%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	30		
	Substrate % gravel	50		
	Substrate % cobble	<5%		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:37 113712		
	Photo Downstream (time & #)	11:37 113717		
	Photo Left Bank* (time & #)	11:37 113728		
	Photo Right Bank* (time & #)	11:39 113912		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 30

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 30 and SAS 31.

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

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

Did Raccoon tracks

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 31 **Date** 10/25/17
Target UTM: 464296 3761837
Observers (writer/other) Dave B, Justin T, Tarak, Stephanie F, Preston L

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	11S 0464290 3761840	11S 0464290 3761841	
Channel position (L/C/R*)			
Width of Channel (m)	7.0	0.7	
Max Depth (cm) & Location in Channel (L/C/R*)	39	3.5	
Depth @ Left Edge (cm) (~4" from bank edge)	8.5	2.5	
Depth @ Right Edge (cm) (~4" from bank edge)	2.0	1.8	
% Veg- Left Bank*	95%	Ø	
% Veg- Right Bank*	Ø	Ø	
% Canopy Over Transect Band	5%	Ø	
Should total 100% — Substrate % mud/silt	Ø	Ø	
Substrate % sand	30%	Ø	
Substrate % gravel	65%	100%	
Substrate % cobble	5%	Ø	
Substrate % boulder	Ø	Ø	
Photo Upstream (time & #)	11:56 115649 →		
Photo Downstream (time & #)	11:57 115707 →		
Photo Left Bank* (time & #)	11:57 115717 →		
Photo Right Bank* (time & #)	11:57 115725 →		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 31

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 31 and SAS 32

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 32 **Date** 10/25/17
Target UTM: 464096 3761623
Observers (writer/other) Dave B, Justin T, Tara K, Stephanie F, Preston H

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	11504641 42 3761628	11504641 35 3761632	
Channel position (L/C/R*)			
Width of Channel (m)	4.4 Left Channel	10.1 Right Channel	
Max Depth (cm) & Location in Channel (L/C/R*)	23	25	
Depth @ Left Edge (cm) (~4" from bank edge)	4.0	2.5	
Depth @ Right Edge (cm) (~4" from bank edge)	3.8	11.0	
% Veg- Left Bank*	60%	Ø	
% Veg- Right Bank*	Ø	50%	
% Canopy Over Transect Band	30%	30%	
Should total 100%: Substrate % mud/silt	Ø	Ø	
Substrate % sand	80%	80%	
Substrate % gravel	20%	20%	
Substrate % cobble	Ø	Ø	
Substrate % boulder	Ø	Ø	
Photo Upstream (time & #)	12:14 121408 →		
Photo Downstream (time & #)	12:14 121413 →		
Photo Left Bank* (time & #)	12:14 121423 →		
Photo Right Bank* (time & #)	12:14 121418 →		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 32

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 33 **Date** 12/25/17
Target UTM: 463908 3761402
Observers (writer/other) Dave B, Justin T, Tara K, Stephanie F, Preston G

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	11S0463937 3761376		
Channel position (L/C/R*)			
Width of Channel (m)	4.1		
Max Depth (cm) & Location in Channel (L/C/R*)	32		
Depth @ Left Edge (cm) (~4" from bank edge)	5		
Depth @ Right Edge (cm) (~4" from bank edge)	8		
% Veg- Left Bank*	100		
% Veg- Right Bank*	100		
% Canopy Over Transect Band	5%		
Should total 100% — Substrate % mud/silt	Ø		
Substrate % sand	60		
Substrate % gravel	Ø		
Substrate % cobble	40		
Substrate % boulder	Ø		
Photo Upstream (time & #)	12:36 123643		
Photo Downstream (time & #)	12:36 123651		
Photo Left Bank* (time & #)	12:38 123848		
Photo Right Bank* (time & #)	12:37 123713		
Photo other (describe)			
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 transect located directly East toward the Left levy

SAS 33

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 34 **Date** 10/25/17
Target UTM: 463646 3761265
Observers (writer/other) Dave B, Justin T, Tara K, Stephanie F, Preston G

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0463024 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%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	25%		
Should total 100%	Substrate % mud/silt	5%		
	Substrate % sand	90%		
	Substrate % gravel	Ø		
	Substrate % cobble	5%		
	Substrate % boulder	Ø		
	Photo Upstream (time & #)	12:56 125051		
	Photo Downstream (time & #)	12:50 125056		
	Photo Left Bank* (time & #)	12:51 125111		
	Photo Right Bank* (time & #)	12:51 121142		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 34

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 ____ and SAS _____.

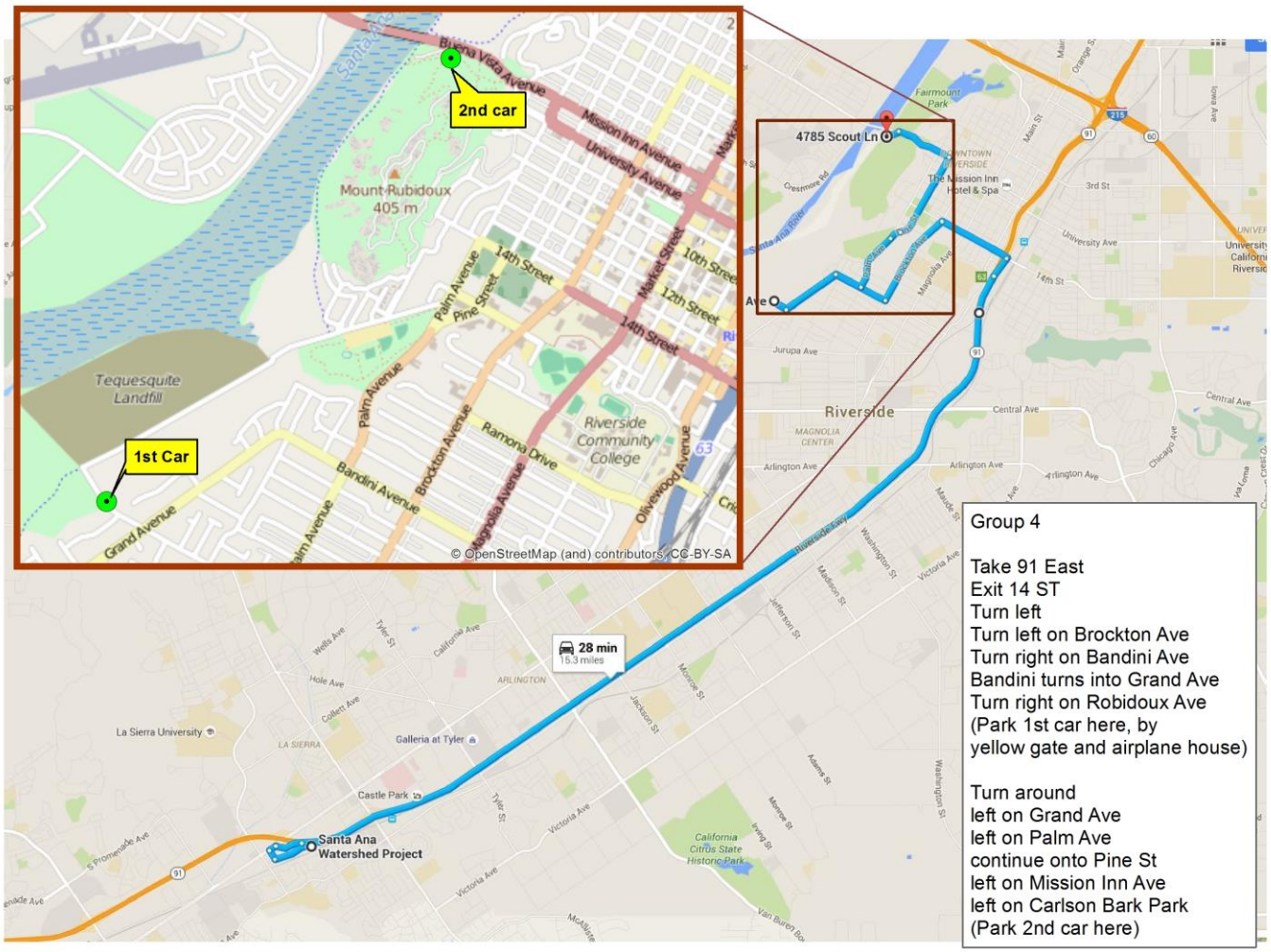
Tally	Gravel Patch Size
_____	Min 3m
_____	3m-5m
_____	5m-10m
_____	10m-15m
_____	15m+

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

Group 4: Points 35-43

Driving Directions: Take 91 East. Exit 14th 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.



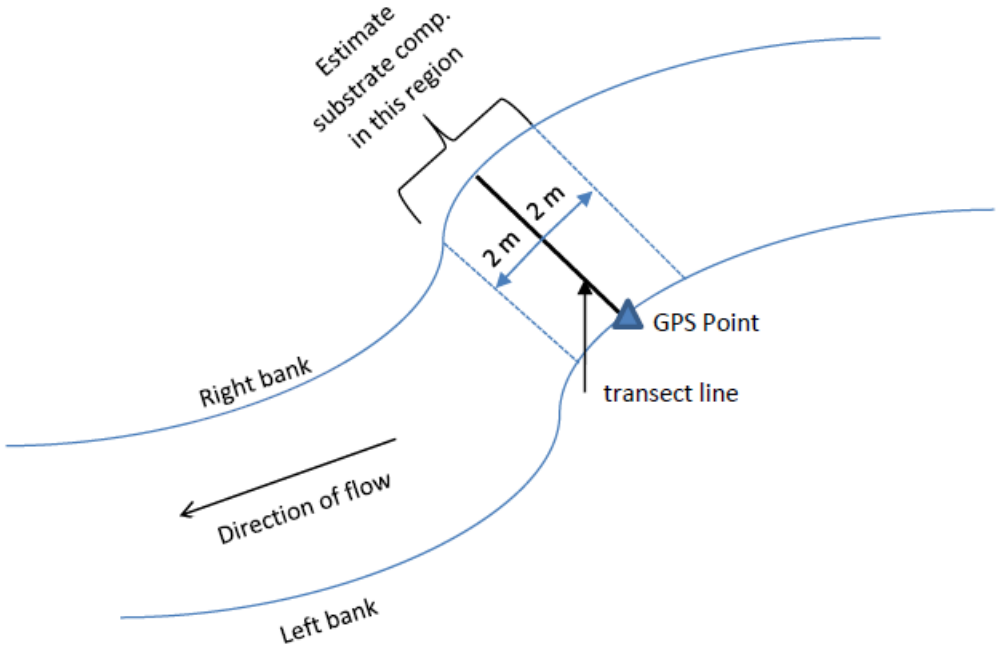
Data Collection Instructions: Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

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.

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 35 **Date** 10/25/17
Target UTM: 463439 3761054
Observers (writer/other) SAWA & RCFC
A. Sawyer C. Thompson
K. Drennan J. Swanson

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0463429 3761065		
Channel position (L/C/R*)	R		
Width of Channel (m)	15.3 m		
Max Depth (cm) & Location in Channel (L/C/R*)	25 cm R		
Depth @ Left Edge (cm) (~4" from bank edge)	17 ~~17cm~~		
Depth @ Right Edge (cm) (~4" from bank edge)	9 ~~9cm~~		
% Veg- Left Bank*	10		
% Veg- Right Bank*	100		
% Canopy Over Transect Band	20		
Substrate % mud/silt	1		
Substrate % sand	96		
Substrate % gravel	3		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	956		
Photo Downstream (time & #)	956		
Photo Left Bank* (time & #)	956		
Photo Right Bank* (time & #)	956		
Photo other (describe)	—		
Notes (e.g. Islands, Obstructions)	—		

Should total 100%

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

SAS 35

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 ____ and SAS _____.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 36 **Date** 10/25/17
Target UTM: **463262** **3760812**
Observers (writer/other) SAWA & RCFC

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0463254 3760617		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	9.1		
	Max Depth (cm) & Location in Channel (L/C/R*)	25 L		
	Depth @ Left Edge (cm) (~4" from bank edge)	3		
	Depth @ Right Edge (cm) (~4" from bank edge)	2		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	20		
Should total 100%	Substrate % mud/silt	1		
	Substrate % sand	97		
	Substrate % gravel	2		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1012		
	Photo Downstream (time & #)	1012		
	Photo Left Bank* (time & #)	1012		
	Photo Right Bank* (time & #)	1012		
	Photo other (describe)	—		
	Notes (e.g. Islands, Obstructions)	—		

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

>AS 36

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 35 and SAS 36.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 37 **Date** 10/25/17
Target UTM: **463084** **3760573**
Observers (writer/other) SAWA & RCFC

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0463079 3760577		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	12.6		
	Max Depth (cm) & Location in Channel (L/C/R*)	25 L		
	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 Transect Band	45		
Should total 100%	Substrate % mud/silt	10		
	Substrate % sand	90		
	Substrate % gravel	0		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1030		
	Photo Downstream (time & #)	1030		
	Photo Left Bank* (time & #)	1030		
	Photo Right Bank* (time & #)	1030		
	Photo other (describe)	—		
	Notes (e.g. Islands, Obstructions)	—		

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

5 AS 37

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 37 and SAS 38.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 38 **Date** 10/25/17
Target UTM: 462880 3760354
Observers (writer/other) SAWA & RCFC

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0462877 3760357		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	14.9		
	Max Depth (cm) & Location in Channel (L/C/R*)	29 L		
	Depth @ Left Edge (cm) (~4" from bank edge)	15		
	Depth @ Right Edge (cm) (~4" from bank edge)	6		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	30		
Should total 100%	Substrate % mud/silt	~~25~~		
Should total 100%	Substrate % sand	65		
Should total 100%	Substrate % gravel	10		
Should total 100%	Substrate % cobble	0		
Should total 100%	Substrate % boulder	0		
	Photo Upstream (time & #)	1045		
	Photo Downstream (time & #)	1045		
	Photo Left Bank* (time & #)	1045		
	Photo Right Bank* (time & #)	1045		
	Photo other (describe)	—		
	Notes (e.g. Islands, Obstructions)	—		

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

SAS 38

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	Gravel Patch Size
II	Min 3m
	3m-5m
𝍸	5m-10m
I	10m-15m
𝍸 I	15m+

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 39 **Date** 10/25/17
Target UTM: **462706** **3760111**
Observers (writer/other) SAWA & RCFC

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0462696 3760114	0462691 3760116	
	Channel position (L/C/R*)	R	R	
	Width of Channel (m)	6	5.8	
	Max Depth (cm) & Location in Channel (L/C/R*)	12 R	29 R	
	Depth @ Left Edge (cm) (~4" from bank edge)	6	1	
	Depth @ Right Edge (cm) (~4" from bank edge)	3	6	
	% Veg- Left Bank*	75	0	
	% Veg- Right Bank*	0	100	
	% Canopy Over Transect Band	10	10	
Should total 100%	Substrate % mud/silt	10	5	
	Substrate % sand	75	79	
	Substrate % gravel	15	7	
	Substrate % cobble	0	2	
	Substrate % boulder	0	0	
	Photo Upstream (time & #)	1100	1101	
	Photo Downstream (time & #)	1100	1101	
	Photo Left Bank* (time & #)	1100	1101	
	Photo Right Bank* (time & #)	1100	1101	
	Photo other (describe)	—	—	
	Notes (e.g. Islands, Obstructions)	—	—	

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

SAS 39

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 _____ and SAS _____.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 40 **Date** 10/25/17
Target UTM: **462526** **3759882**
Observers (writer/other) SAWA & RCFC

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0462521 3759883		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	14		
	Max Depth (cm) & Location in Channel (L/C/R*)	18 L		
	Depth @ Left Edge (cm) (~4" from bank edge)	4		
	Depth @ Right Edge (cm) (~4" from bank edge)	10		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	25		
Should total 100%	Substrate % mud/silt	4		
	Substrate % sand	93		
	Substrate % gravel	2		
	Substrate % cobble	1		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1120		
	Photo Downstream (time & #)	1120		
	Photo Left Bank* (time & #)	1120		
	Photo Right Bank* (time & #)	1120		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 40

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 ____ and SAS _____.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 41 **Date** 10/25
Target UTM: 462388 3759638
Observers (writer/other) SAWA & RCFC

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0462361 3759631		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	17.2		
	Max Depth (cm) & Location in Channel (L/C/R*)	19 R		
	Depth @ Left Edge (cm) (~4" from bank edge)	4		
	Depth @ Right Edge (cm) (~4" from bank edge)	4		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	20		
Should total 100%	Substrate % mud/silt	20		
	Substrate % sand	77		
	Substrate % gravel	3		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1136		
	Photo Downstream (time & #)	1136		
	Photo Left Bank* (time & #)	1136		
	Photo Right Bank* (time & #)	1136		
	Photo other (describe)	—		
	Notes (e.g. Islands, Obstructions)	moved pnt. dfs 20 meters due to camp		

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

SAS 41

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 42 **Date** 10/25/17
Target UTM: **462124** **3759501**
Observers (writer/other) SAWA & ECFC

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

1) no gravel bars due to dam made by homeless camp. -gravel occurs after dam structure

2) 15-20 sucker in the gravel 0461955 ; 3759469

3) 15-20 sucker 15 ft. d/s from

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

SAS 42

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 42 and SAS 43.

Tally	Gravel Patch Size
	Min 3m
	3m-5m
	5m-10m
	10m-15m
III	15m+ Sucker present!!

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 43 **Date** 10/25/17
Target UTM: **461833** **3759443**
Observers (writer/other) C. Thompson A. Sawyer } SAWA
RCFC } J. Swenson K. Drennen }

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0461830 3759453		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	6.5		
	Max Depth (cm) & Location in Channel (L/C/R*)	20 R		
	Depth @ Left Edge (cm) (~4" from bank edge)	~~0~~ 1		
	Depth @ Right Edge (cm) (~4" from bank edge)	~~[illegible]~~		
	% Veg- Left Bank*	0		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	5		
Should total 100%	Substrate % mud/silt	1		
	Substrate % sand	54 ~~[illegible]~~		
	Substrate % gravel	45		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1214		
	Photo Downstream (time & #)	1214		
	Photo Left Bank* (time & #)	1214		
	Photo Right Bank* (time & #)	1214		
	Photo other (describe)	—		
	Notes (e.g. Islands, Obstructions)	—		

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

SAS 43

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 43 and SAS 44.

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

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

Group 5: Points 44-51

Driving Directions: 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.

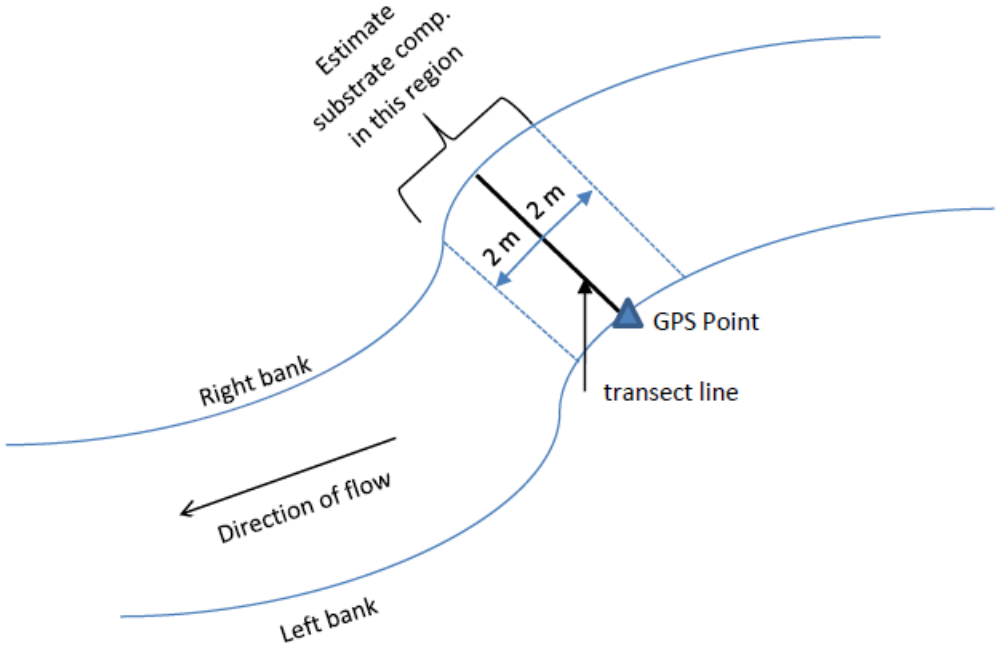
Data Collection Instructions: Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is in the wetted river and record on your data sheet the actual GPS location on the left bank

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.

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 44 **Date** 10/25/17
Target UTM: 461555 3759337
Observers (writer/other) Nicole Lafave

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0461553/3759340	461548/3759343	
	Channel position (L/C/R*)	L		
	Width of Channel (m)	8.4 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 cm	3 cm	
	Depth @ Right Edge (cm) (~4" from bank edge)	0.5 in. 4 cm	3 cm	
	% Veg- Left Bank*	100	25	
	% Veg- Right Bank*	40	100	
	% Canopy Over Transect Band	25	10	
Should total 100%	Substrate % mud/silt	0	40	
	Substrate % sand	85	60	
	Substrate % gravel	15	trace	
	Substrate % cobble	0	0	
	Substrate % boulder	0	0	
	Photo Upstream (time & #)	10:06 29	10:26 102939	
	Photo Downstream (time & #)	10:02 30	10:26 102443	
	Photo Left Bank* (time & #)	10:06 3145	10:26 10309	
	Photo Right Bank* (time & #)	10:07 32	10:25 103023	
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	River flowing	- low flow stagnant water. - Islands	

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

SAS 44

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 44 and SAS 45.

Tally	Gravel Patch Size
	Min 3m
1|i	3m-5m
1	5m-10m
i	10m-15m
	15m+

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 45 **Date** 10/25/17
Target UTM: **461287** **3759267**
Observers (writer/other) Nicole LaFave

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0461284/3759301		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	12.9 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	23		
	Depth @ Left Edge (cm) (~4" from bank edge)	3 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	4 cm		
	% Veg- Left Bank*	0		
	% Veg- Right Bank*	45		
	% Canopy Over Transect Band	0		
Should total 100%	Substrate % mud/silt	15		
	Substrate % sand	65		
	Substrate % gravel	20		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	10:52 1		
	Photo Downstream (time & #)	10:53 2		
	Photo Left Bank* (time & #)	10:52 3		
	Photo Right Bank* (time & #)	10:52 4		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	1 island		

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

SAS 45

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 _____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 46 **Date** 10/25/17
Target UTM: **461003** **3759182**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	461099S/3759206		
Channel position (L/C/R*)			
Width of Channel (m)	8.75 m		
Max Depth (cm) & Location in Channel (L/C/R*)	31cm, 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		
Should total 100% — Substrate % mud/silt	10		
Substrate % sand	45		
Substrate % gravel	40		
Substrate % cobble	5		
Substrate % boulder	0		
Photo Upstream (time & #)	11:15 6 5		
Photo Downstream (time & #)	7 6		
Photo Left Bank* (time & #)	8 7		
Photo Right Bank* (time & #)	9 8		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 46

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 45 and SAS 46.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 47 **Date** 10/25/17
Target UTM: **460830** **3758944**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0460830/3758951		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	10.15 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	30 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	5 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	1.5 cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	0		
	% Canopy Over Transect Band	40		
Should total 100%	Substrate % mud/silt	10		
	Substrate % sand	80		
	Substrate % gravel	10		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:35 11		
	Photo Downstream (time & #)	11:35 12		
	Photo Left Bank* (time & #)	11:35 13		
	Photo Right Bank* (time & #)	11:35 14		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 47

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 46 and SAS 47.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 48 **Date** 10/25/17
Target UTM: **460606** **3758749**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0460607 / 3758760		
Channel position (L/C/R*)	R		
Width of Channel (m)	5.2 m		
Max Depth (cm) & Location in Channel (L/C/R*)	34 cm, R		
Depth @ Left Edge (cm) (~4" from bank edge)	2 cm		
Depth @ Right Edge (cm) (~4" from bank edge)	4.5 cm		
% Veg- Left Bank*	75		
% Veg- Right Bank*	0		
% Canopy Over Transect Band	10		
Should total 100% — Substrate % mud/silt	~~10~~ 5		
Substrate % sand	~~75~~ 65		
Substrate % gravel	~~25~~ 25		
Substrate % cobble	~~0~~ 5		
Substrate % boulder	0 0		
Photo Upstream (time & #)	10:54 16		
Photo Downstream (time & #)	11:54 17		
Photo Left Bank* (time & #)	11:54 18		
Photo Right Bank* (time & #)	11:54 19		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 48

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 47 and SAS 48.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 49 **Date** 10/25/17
Target UTM: **460324** **3758705**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0246032 3/3758712		
	Channel position (L/C/R*)	8.6 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)	15 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	11 cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	15		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	19		
	Substrate % gravel	80		
	Substrate % cobble	1		
	Substrate % boulder	0		
	Photo Upstream (time & #)	12:10 21		
	Photo Downstream (time & #)	12:10 22		
	Photo Left Bank* (time & #)	12:10 23		
	Photo Right Bank* (time & #)	12:10 24		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 49

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 48 and SAS 49.

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

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

possible

0460430	3758709

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 50 **Date** 10/25/17
Target UTM: **460046** **3758748**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0460048/3758760		
	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	
	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	
Should total 100%	Substrate % mud/silt	5	0	
	Substrate % sand	85	90	
	Substrate % gravel	10	10	
	Substrate % cobble	0	0	
	Substrate % boulder	0	0	
	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 separating channels		

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

SAS 50

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 49 and SAS 50.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 51 **Date** 10/25/17
Target UTM: **459807** **3758720**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0459805/3758726	0459813/3758741	
Channel position (L/C/R*)	L	L	
Width of Channel (m)	10.20 m	7.80 m	
Max Depth (cm) & Location in Channel (L/C/R*)	25 cm	18 cm	
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*	1	0	
% Veg- Right Bank*	0	100	
% Canopy Over Transect Band	0	50	
Should total 100% — Substrate % mud/silt	0	0	
Substrate % sand	95	95	
Substrate % gravel	5	5	
Substrate % cobble	trace	0	
Substrate % boulder	0	0	
Photo Upstream (time & #)	12:43 36	12:43 41	
Photo Downstream (time & #)	12:43 37	12:43 42	
Photo Left Bank* (time & #)	12:43 38	12:43 43	
Photo Right Bank* (time & #)	12:43 39	12:43 44	
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	-tree trunk obstruction		

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

SAS 51

Additional Information

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

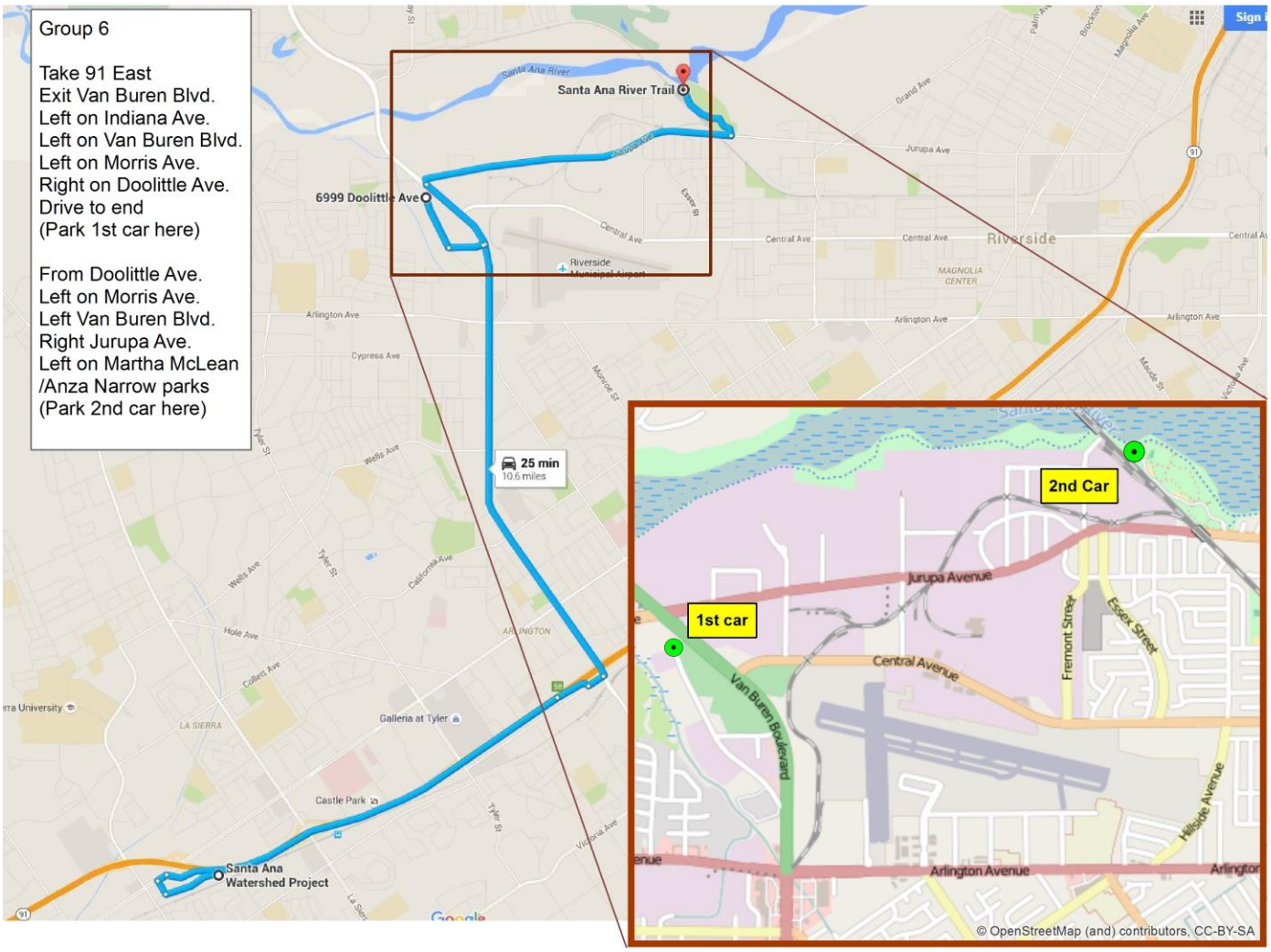
Location between GPS Points SAS ____ and SAS _____.

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

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

Group 6: Points 52-61

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.



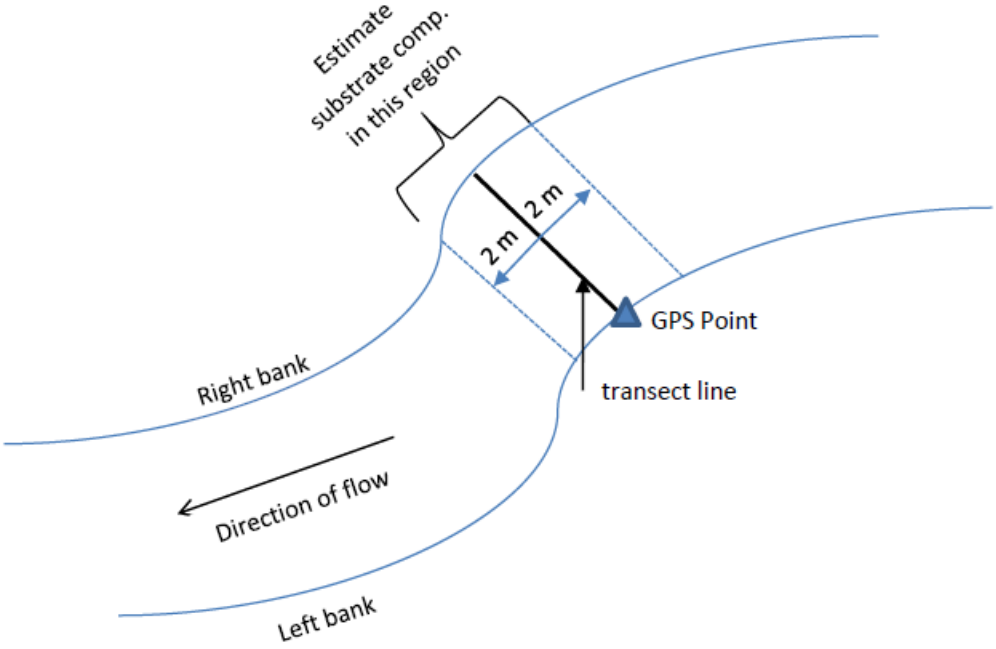
Data Collection Instructions: Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

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.

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 52 **Date** 10/25/17
Target UTM: **459545** **3758820**
Observers (writer/other) FC / MAP / AB

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	459545 3758820		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	30.1m		
	Max Depth (cm) & Location in Channel (L/C/R*)	21cm / C		
	Depth @ Left Edge (cm) (~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 Transect Band	15%		
Should total 100%	Substrate % mud/silt	3%		
	Substrate % sand	95%		
	Substrate % gravel	2%		
	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, Obstructions)			

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

SAS 52

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 ____ and SAS _____.

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

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

From SI - S2 - 1 gravel bar, 5-10m.

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 53 **Date** 10/25/17
Target UTM: **459260** **3758737**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	459235 3758756		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	13.7m		
	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%		
Should total 100%	Substrate % mud/silt	3%		
	Substrate % sand	96%		
	Substrate % gravel	1%		
	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, Obstructions)			

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

SAS 53

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

Gravel bars.
52-53 - 5-10m
" " 11m

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 54 **Date** 10/25/17
Target UTM: **458984** **3758633**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	458984 3758633		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	20.3 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	27 cm / C		
	Depth @ Left Edge (cm) (~4" from bank edge)	13cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	9cm		
	% Veg- Left Bank*	0%		
	% Veg- Right Bank*	80%		
	% Canopy Over Transect Band	25%		
Should total 100%	Substrate % mud/silt	25%		
	Substrate % sand	73%		
	Substrate % gravel	2%		
	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, Obstructions)			

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

SAS 54

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

53-54 - 8m
5m
8m
29m
6m
5m

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 55 **Date** 10/25/17
Target UTM: **458706** **3758704**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	458 709 3758735	458 711 3758745	
Channel position (L/C/R*)	C	C	
Width of Channel (m)	7.9 m	9.4m	
Max Depth (cm) & Location in Channel (L/C/R*)	36 cm/C	28/C	
Depth @ Left Edge (cm) (~4" from bank edge)	9cm	2 cm	
Depth @ Right Edge (cm) (~4" from bank edge)	1.5cm	7.5cm	
% Veg- Left Bank*	100%	100%	
% Veg- Right Bank*	100%	5%	
% Canopy Over Transect Band	45%	45%	
Should total 100% — Substrate % mud/silt	30%	33%	
Substrate % sand	70%	66%	
Substrate % gravel		1%	
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, Obstructions)			

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

SAS 55

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

13m
10m
9m
4m
16m
6m
7

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 56 **Date** 10/25/17
Target UTM: **458409** **3758736**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	458414 3758743		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	27.3m		
	Max Depth (cm) & Location in Channel (L/C/R*)	18cm /		
	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%		
Should total 100%	Substrate % mud/silt	25%		
	Substrate % sand	73%		
	Substrate % gravel	2%		
	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, Obstructions)			

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

SAS 56

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

11m
6m
15.5m.

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 57 **Date** 10/25/17
Target UTM: **458138** **3758633**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	458127 3758644	458120 3758653	
	Channel position (L/C/R*)	R	R	
	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)	14cm	3.5cm	
	Depth @ Right Edge (cm) (~4" from bank edge)	2cm	11cm	
	% Veg- Left Bank*	75%	100%	
	% Veg- Right Bank*	100%	90%	
	% Canopy Over Transect Band	33%	40%	
Should total 100%	Substrate % mud/silt	8%	30%	
	Substrate % sand	91%	69%	
	Substrate % gravel	1%	1%	
	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, Obstructions)			

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

SAS 57

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

6m
3m
5m
5.5

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

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

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	457904 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)	7.5cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	15cm		
	% Veg- Left Bank*	50%		
	% Veg- Right Bank*	90%		
	% Canopy Over Transect Band	15%		
Should total 100%	Substrate % mud/silt	30%		
	Substrate % sand	67%		
	Substrate % gravel	3%		
	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, Obstructions)			

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

SAS 58

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 ____ and SAS _____.

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

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

_____
_____
_____
_____
_____
_____
_____

_____
_____
_____
_____
_____
_____
_____

7m
4m
6m
19m

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 59 **Date**_____
Target UTM: **457622** **3758348**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	457622 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*	100%		
	% Veg- Right Bank*	95%		
	% Canopy Over Transect Band	10%		
Should total 100%	Substrate % mud/silt	8%		
	Substrate % sand	91%		
	Substrate % gravel	1%		
	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, Obstructions)			

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

SAS 59

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

5m
14m
8m
4m
3m ✓
6m
3m

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 60 **Date** 10/25/17
Target UTM: **457350** **3758251**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	457331 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%		
Should total 100%	Substrate % mud/silt	30%		
	Substrate % sand	70%		
	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, Obstructions)			

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

SAS 60

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 ____ and SAS _____.

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

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

_____
_____
_____
_____
_____
_____
_____

_____
_____
_____
_____
_____
_____
_____

10m
14m
6m
10m
8m
7m
10m
13m
25m
9m

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 61 **Date** 10/25/17
Target UTM: **457069** **3758165**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	457069 3758165		
Channel position (L/C/R*)	C		
Width of Channel (m)	19.9		
Max Depth (cm) & Location in Channel (L/C/R*)	10/L		
Depth @ Left Edge (cm) (~4" from bank edge)	9cm		
Depth @ Right Edge (cm) (~4" from bank edge)	1cm		
% Veg- Left Bank*	5%		
% Veg- Right Bank*	100%		
% Canopy Over Transect Band	40%		
Should total 100% — Substrate % mud/silt	30%		
Substrate % sand	69%		
Substrate % gravel	1%		
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, Obstructions)			

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

SAS 61

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

60-61

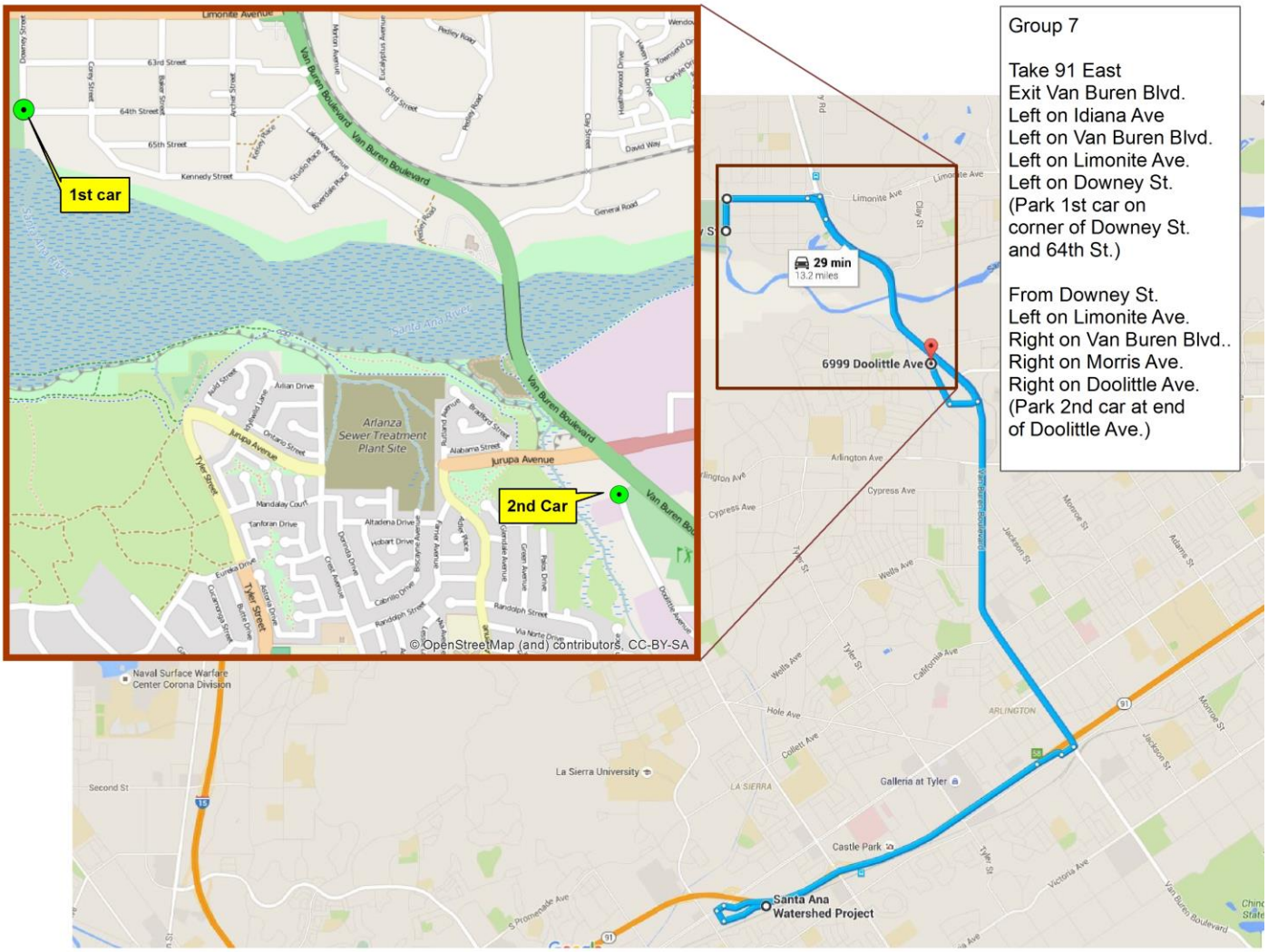
9m
7m
4m
3m
15m

61 - Exit

7

Group 7: Points 62-71

<u>Driving Directions</u>: 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 64th 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.



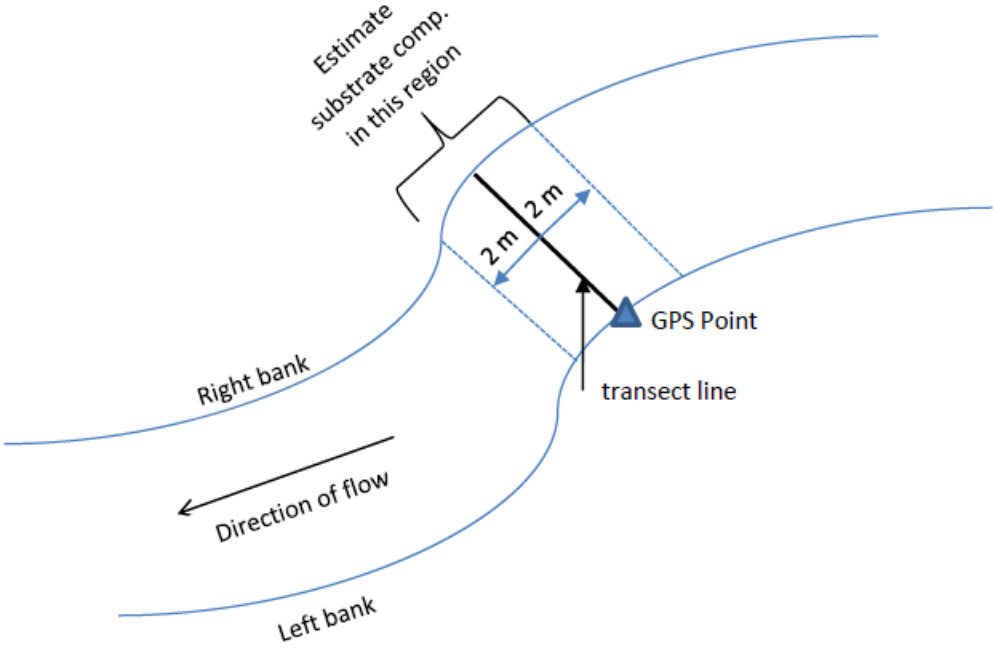
Data Collection Instructions: Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

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.

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 62 **Date** 10/25/17
Target UTM: ~~456796~~ 3758041
Observers (writer/other) Dave Woelfel

3758032
0456795
~~3758032~~

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	~~0456744~~ ~~3758043~~	0456794 3758038	
Channel position (L/C/R*)	~~5.4m~~		
Width of Channel (m)	5.4m	8.5	
Max Depth (cm) & Location in Channel (L/C/R*)	41 cm	43 cm	
Depth @ Left Edge (cm) (~4" from bank edge)	~~22~~ 16 cm	2 cm	
Depth @ Right Edge (cm) (~4" from bank edge)	3 cm	6 cm	
% Veg- Left Bank*	100%	20%	
% Veg- Right Bank*	30%	100%	
% Canopy Over Transect Band	10%	10%	
Should total 100% — Substrate % mud/silt			
Substrate % sand	60%	~~10%~~ 15%	
Substrate % gravel	5%	50%	
Substrate % cobble	35%	~~50%~~ 35%	
Substrate % boulder			
Photo Upstream (time & #)	1) 10:12	5 10:13	
Photo Downstream (time & #)	2)	6	
Photo Left Bank* (time & #)	3)	7	
Photo Right Bank* (time & #)	4	8	
Photo other (describe)		9 Arundo	
Notes (e.g. Islands, Obstructions)			

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

SAS 62

Additional Information

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

0456873 3756073

Location between GPS Points SAS ____ and SAS _____.

riffle below bridge

Tally	Gravel Patch Size
_____	Min 3m
_____	~~3m-5m~~ (circled)
_____	5m-10m
_____	10m-15m
_____	15m+

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 63 **Date** 10/26/17
Target UTM: **456516** **3758092**
Observers (writer/other) Dave Wolfe

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0456515 3758096	0456512 3758104	
Channel position (L/C/R*)	[redacted]		
Width of Channel (m)	81 m	16.6 m	
Max Depth (cm) & Location in Channel (L/C/R*)	3cm	40 cm	
Depth @ Left Edge (cm) (~4" from bank edge)	3cm	1 cm	
Depth @ Right Edge (cm) (~4" from bank edge)	3 cm	9 cm	
% Veg- Left Bank*	100%	100%	
% Veg- Right Bank*	100%	100%	
% Canopy Over Transect Band	100%	5%	
Should total 100% — Substrate % mud/silt	100%		
Substrate % sand		60%	
Substrate % gravel		40%	
Substrate % cobble			
Substrate % boulder			
Photo Upstream (time & #)	10:30	10:40	
Photo Downstream (time & #)			
Photo Left Bank* (time & #)			
Photo Right Bank* (time & #)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 63

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 _____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 64 **Date** 10/25/17
Target UTM: **456219** 3758120
Observers (writer/other) Dave Wolfe

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0456222 3758156		
Channel position (L/C/R*)			
Width of Channel (m)	22.20		
Max Depth (cm) & Location in Channel (L/C/R*)	34 cm		
Depth @ Left Edge (cm) (~4" from bank edge)	7cm		
Depth @ Right Edge (cm) (~4" from bank edge)	7cm		
% Veg- Left Bank*	100%		
% Veg- Right Bank*	100%		
% Canopy Over Transect Band			
Substrate % mud/silt	3%		
Substrate % sand	87%		
Substrate % gravel	10%		
Substrate % cobble			
Substrate % boulder			
Photo Upstream (time & #)	10:50		
Photo Downstream (time & #)			
Photo Left Bank* (time & #)			
Photo Right Bank* (time & #)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	Island 1m wide		

Should total 100%

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

SAS 64

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 _____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 65 **Date** 10/~~26~~/25/17
Target UTM: **455953** **3758238**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0455995 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*	100%		
% Canopy Over Transect Band	5%		
Should total 100% — Substrate % mud/silt	5%		
Substrate % sand	~~90%~~ 89%		
Substrate % gravel	1%		
Substrate % cobble	5%		
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)			

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

SAS 65

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 66 **Date** 10/~~20~~25/17
Target UTM: 455786 3758478
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0455815 3758511	0455827 3758525	
Channel position (L/C/R*)			
Width of Channel (m)	9.7m	19m	
Max Depth (cm) & Location in Channel (L/C/R*)	46cm	38cm	
Depth @ Left Edge (cm) (~4" from bank edge)	3cm	7cm	
Depth @ Right Edge (cm) (~4" from bank edge)	3cm	23cm	
% Veg- Left Bank*	100%	100%	
% Veg- Right Bank*	100%	100%	
% Canopy Over Transect Band	15%	10%	
Should total 100% — Substrate % mud/silt	~~60~~ 20%		
Should total 100% — Substrate % sand	65%	100%	
Should total 100% — Substrate % gravel	15%		
Should total 100% — Substrate % cobble			
Should total 100% — Substrate % boulder			
Photo Upstream (time & #)	1120		
Photo Downstream (time & #)			
Photo Left Bank* (time & #)			
Photo Right Bank* (time & #)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 66

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 _____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 67 **Date** 10/~~26~~/25/17
Target UTM: 455537 3758623
Observers (writer/other) DW

~~31.5~~

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	~~8~~455563 3758649		
Channel position (L/C/R*)	C		
Width of Channel (m)	30.5		
Max Depth (cm) & Location in Channel (L/C/R*)	35 cm		
Depth @ Left Edge (cm) (~4" from bank edge)	13cm		
Depth @ Right Edge (cm) (~4" from bank edge)	14cm		
% Veg- Left Bank*	100%		
% Veg- Right Bank*	100%		
% Canopy Over Transect Band	10%		
Should total 100% — Substrate % mud/silt	3%		
Substrate % sand	~~48%~~ 95%		
Substrate % gravel	2%		
Substrate % cobble			
Substrate % boulder			
Photo Upstream (time & #)	1140		
Photo Downstream (time & #)			
Photo Left Bank* (time & #)			
Photo Right Bank* (time & #)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 67

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 GC and SAS 67.

0455733
3756583

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 68 **Date** 10/~~26~~/17
Target UTM: 455246 3758601
Observers (writer/other) DW

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0455249 3758637		
Channel position (L/C/R*)			
Width of Channel (m)	28.70		
Max Depth (cm) & Location in Channel (L/C/R*)	~~28.70~~ 33cm		
Depth @ Left Edge (cm) (~4" from bank edge)	~~[illegible]~~ 6cm		
Depth @ Right Edge (cm) (~4" from bank edge)	7cm		
% Veg- Left Bank*	100%		
% Veg- Right Bank*	100%		
% Canopy Over Transect Band	5%		
Should total 100% — Substrate % mud/silt			
Substrate % sand	100%		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo Upstream (time & #)	1200		
Photo Downstream (time & #)			
Photo Left Bank* (time & #)			
Photo Right Bank* (time & #)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 6B

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 _____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 69 **Date** 10/~~26~~ 25/17
Target UTM: 455019 3758411
Observers (writer/other) DW

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0454981 3758474		
Channel position (L/C/R*)	C		
Width of Channel (m)	14.6		
Max Depth (cm) & Location in Channel (L/C/R*)	~~8cm C~~ 57 cm		
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 Transect Band	10%		
Should total 100% — Substrate % mud/silt	10%		
Substrate % sand	85%		
Substrate % gravel			
Substrate % cobble	5%		
Substrate % boulder			
Photo Upstream (time & #)	1210		
Photo Downstream (time & #)			
Photo Left Bank* (time & #)			
Photo Right Bank* (time & #)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 69

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 _____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 70 **Date** 10/25/17
Target UTM: 454789 3758479
Observers (writer/other) DW

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0454837 3758563		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	17.5		
	Max Depth (cm) & Location in Channel (L/C/R*)	100cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	5cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	23cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	5%		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	90%		
	Substrate % gravel	5%		
	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	1220		
	Photo Downstream (time & #)			
	Photo Left Bank* (time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 70

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 045920 and SAS 375848.

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

algae

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 71 **Date** 10/25/17
Target UTM: **454863** · **3758759**
Observers (writer/other) DW

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0454903 3758725		
	Channel position (L/C/R*)			
	Width of Channel (m)	12.3		
	Max Depth (cm) & Location in Channel (L/C/R*)	43 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	7cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	7cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	10%		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	100%		
	Substrate % gravel			
	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	1235		
	Photo Downstream (time & #)			
	Photo Left Bank* (time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 71

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 ____ and SAS _____.

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

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

_____ _____

_____ _____

_____ _____

_____ _____

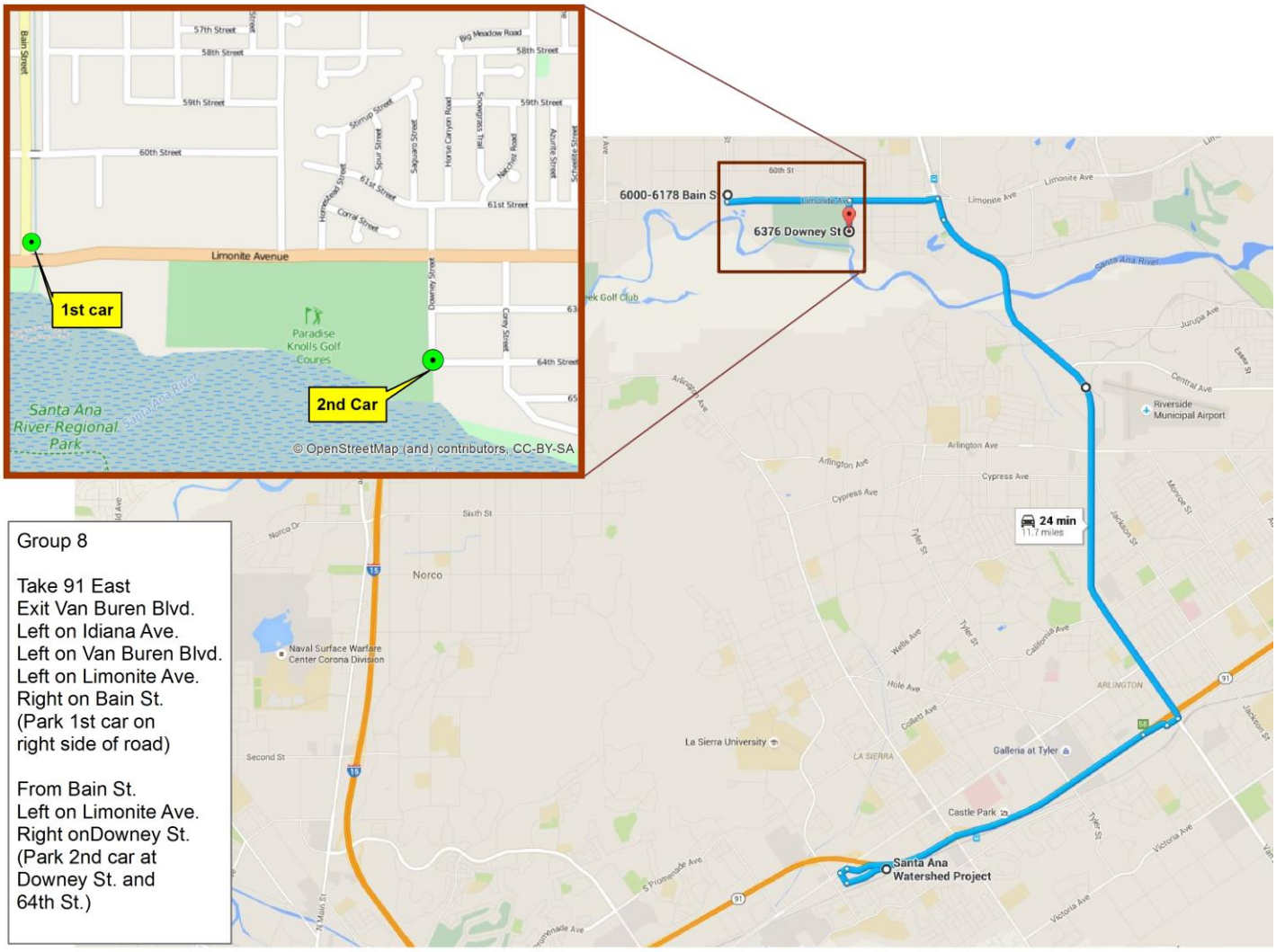
_____ _____

_____ _____

_____ _____

Group 8: Points 72-77

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 64th Street. Parking the cars as directed, will ensure you are walking downstream.



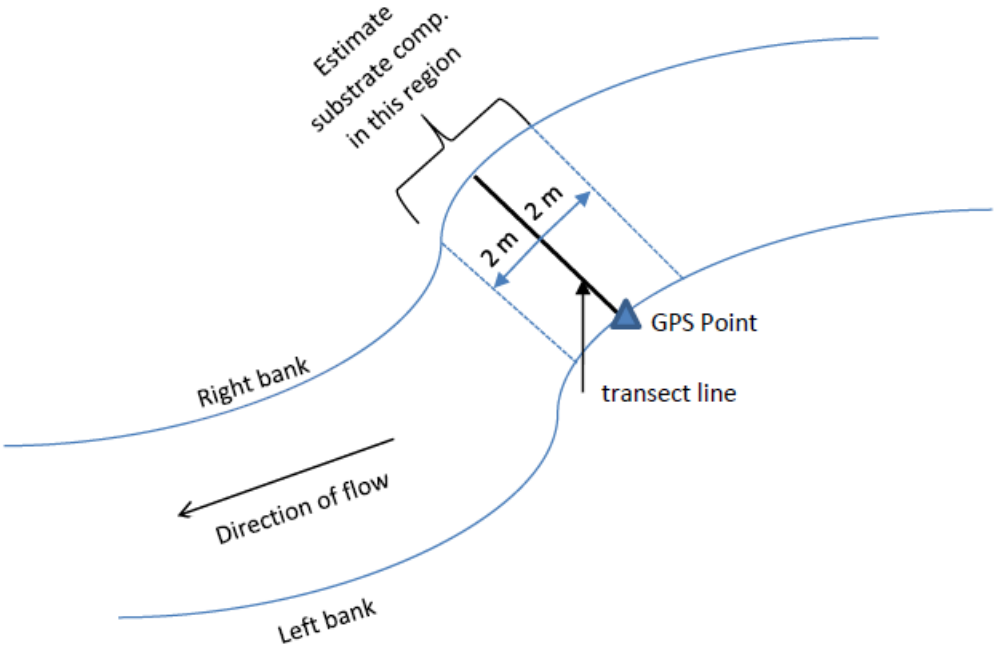
Data Collection Instructions: Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

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.

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 72 **Date** 10/25
Target UTM: **454748** **3758936**
Observers (writer/other) Tavish Sturdivant,

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0454910 3758947		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	90.0 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	27 cm ; C		
	Depth @ Left Edge (cm) (~4" from bank edge)	4.5 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	2.0 cm		
	% Veg- Left Bank*	0 %		
	% Veg- Right Bank*	50 %		
	% Canopy Over Transect Band	2%		
Should total 100%	Substrate % mud/silt	0%		
	Substrate % sand	87 %		
	Substrate % gravel	12.5 %		
	Substrate % cobble	0.5%		
	Substrate % boulder	0%		
	Photo Upstream (time & #)	10:30 AM		
	Photo Downstream (time & #)	10:30 AM		
	Photo Left Bank* (time & #)	10:30 AM		
	Photo Right Bank* (time & #)	10:30 AM		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 72

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 72 and SAS 73.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 73 **Date** 10/25
Target UTM: **454455** **3758993**
Observers (writer/other) Tavish Stoddard

	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)	50.5 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	26 cm ; C		
	Depth @ Left Edge (cm) (~4" from bank edge)	19 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	21 cm		
	% Veg- Left Bank*	100 %		
	% Veg- Right Bank*	100 %		
	% Canopy Over Transect Band	5%		
Should total 100%	Substrate % mud/silt	0%		
	Substrate % sand	92%		
	Substrate % gravel	7%		
	Substrate % cobble	1%		
	Substrate % boulder	0%		
	Photo Upstream (time & #)	10:55 AM		
	Photo Downstream (time & #)	10:55 AM		
	Photo Left Bank* (time & #)	10:55 AM		
	Photo Right Bank* (time & #)	10:55 AM		
	Photo other (describe)	10:55 AM		
	Notes (e.g. Islands, Obstructions)	Santa Ana Sucker observed, cobble observed		

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

SAS 73

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 73 and SAS 74.

Tally	Gravel Patch Size
	Min 3m
	3m-5m
	5m-10m
	10m-15m
111	15m+

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

1

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 74 **Date** 10/25
Target UTM: **454159** **3759037**
Observers (writer/other) Tavish Sturdivant

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)	40.5 m		
Max Depth (cm) & Location in Channel (L/C/R*)	52 cm; C		
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 Transect Band	20 %		
Should total 100%: Substrate % mud/silt	0.5 %		
Substrate % sand	96.5 %		
Substrate % gravel	3 %		
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/C/R = Left/Center/Right. Face downstream to determine left and right banks.

SAS 74

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 73 and SAS 74.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 75 **Date** 10/21
Target UTM: **453874** **3759120**
Observers (writer/other) Tavish Stanislaus

	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)	24.0 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	34cm ; L		
	Depth @ Left Edge (cm) (~4" from bank edge)	3 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	19 cm		
	% Veg- Left Bank*	100 %		
	% Veg- Right Bank*	100 %		
	% Canopy Over Transect Band	20 %		
Should total 100%	Substrate % mud/silt	10 %		
	Substrate % sand	87 %		
	Substrate % gravel	3 %		
	Substrate % cobble	0 %		
	Substrate % boulder	0 %		
	Photo Upstream (time & #)	11:40 AM		
	Photo Downstream (time & #)	11:40 AM		
	Photo Left Bank* (time & #)	11:40 AM		
	Photo Right Bank* (time & #)	11:40 AM		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 75

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 75 and SAS 76.

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

Trash on right bank

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 76 **Date** 10/25
Target UTM: **453587** **3759156**
Observers (writer/other) Tavish Sturdivant

	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)	21.4 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	35 cm ; L		
	Depth @ Left Edge (cm) (~4" from bank edge)	35 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	11 cm		
	% Veg- Left Bank*	100 %		
	% Veg- Right Bank*	100 %		
	% Canopy Over Transect Band	25 %		
Should total 100%	Substrate % mud/silt	3 %		
	Substrate % sand	94 %		
	Substrate % gravel	3 %		
	Substrate % cobble	0 %		
	Substrate % boulder	0 %		
	Photo Upstream (time & #)	11:55 AM		
	Photo Downstream (time & #)	11:55 AM		
	Photo Left Bank* (time & #)	11:55 AM		
	Photo Right Bank* (time & #)	11:55 AM		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 76

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 76 and SAS 77.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 77 **Date** 10/25
Target UTM: **453294** **3759167**
Observers (writer/other) Tavish Sturdivant

	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*	100 %		
	% Canopy Over Transect Band	40 %		
Should total 100%	Substrate % mud/silt	2 %		
	Substrate % sand	96 %		
	Substrate % gravel	2 %		
	Substrate % cobble	0 %		
	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)			

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

SAS 77

Additional Information

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

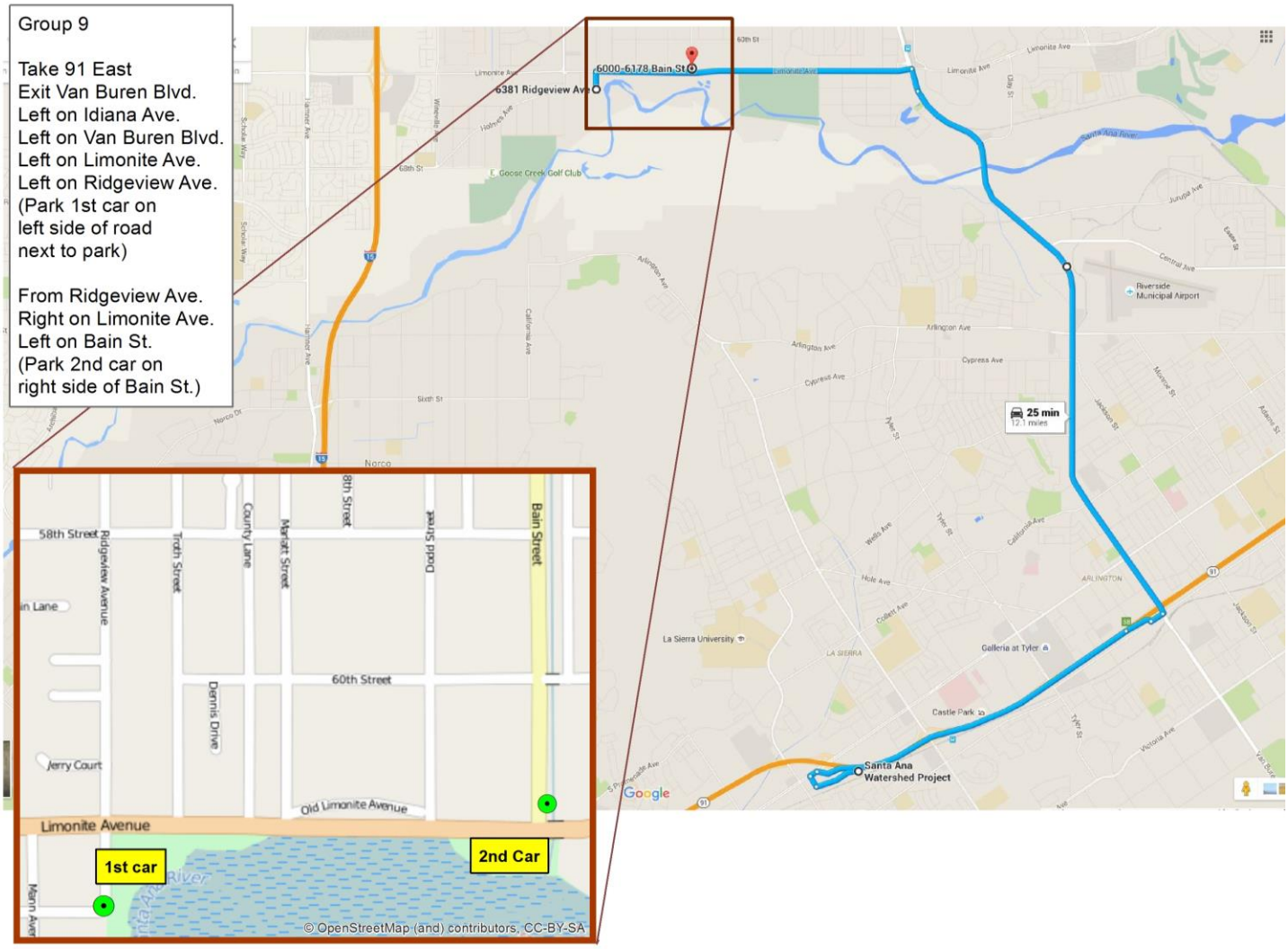
Location between GPS Points SAS 77 and SAS 78.

Tally	Gravel Patch Size
	Min 3m
1	3m-5m
1	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.



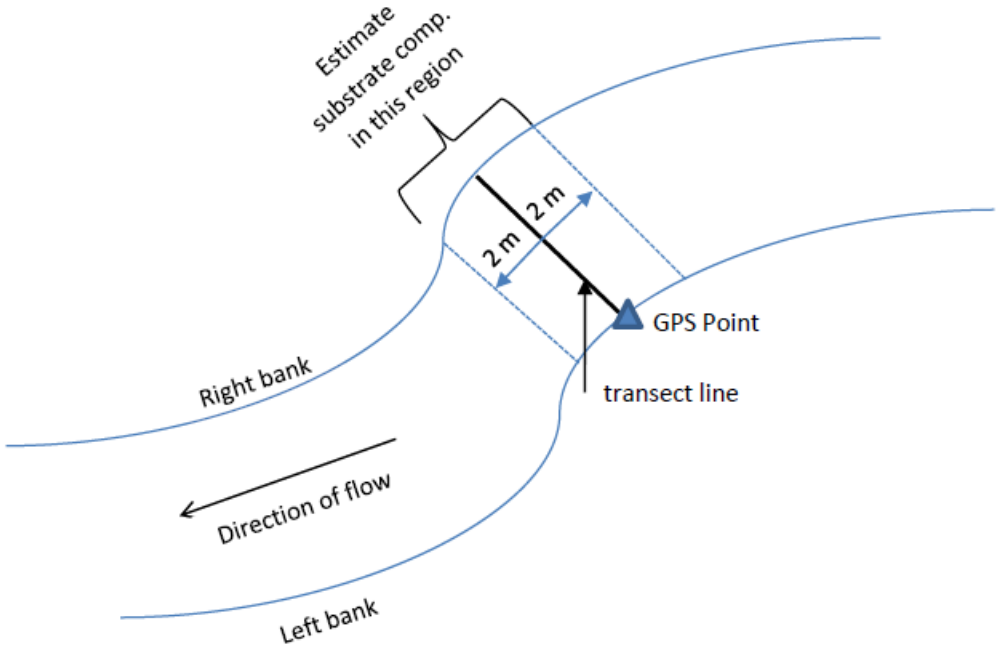
Data Collection Instructions: Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

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.

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 78 **Date** 10-25-17
Target UTM: **453010** **3759212**
Observers (writer/other) Ana, Nate, Cameron

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	453009 3759217		
Channel position (L/C/R*)	C		
Width of Channel (m)	25.2 m		
Max Depth (cm) & Location in Channel (L/C/R*)	39 cm Left Edge		
Depth @ Left Edge (cm) (~4" from bank edge)	2.5 cm		
Depth @ Right Edge (cm) (~4" from bank edge)	25.5cm		
% Veg- Left Bank*	100 %		
% Veg- Right Bank*	100 %		
% Canopy Over Transect Band	0 %		
Should total 100% — Substrate % mud/silt	2 %		
Substrate % sand	91 %		
Substrate % gravel	2 %		
Substrate % cobble	5 %		
Substrate % boulder	0 %		
Photo Upstream (time & #)	✓		
Photo Downstream (time & #)	✓		
Photo Left Bank* (time & #)	✓		
Photo Right Bank* (time & #)	✓		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 78

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 78 and SAS 79.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 79 **Date** 10-25-17
Target UTM: **452731** **3759199**
Observers (writer/other) Ana / Nate, Cameron

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	452734. 3759214		
Channel position (L/C/R*)	Center		
Width of Channel (m)	21.4 m		
Max Depth (cm) & Location in Channel (L/C/R*)	32 cm center		
Depth @ Left Edge (cm) (~4" from bank edge)	3 cm		
Depth @ Right Edge (cm) (~4" from bank edge)	31 cm		
% Veg- Left Bank*	100 /.		
% Veg- Right Bank*	100 /.		
% Canopy Over Transect Band	3 /.		
Should total 100% — Substrate % mud/silt	3 /.		
Substrate % sand	94 /.		
Substrate % gravel	3 /.		
Substrate % cobble	0 /.		
Substrate % boulder	0 /.		
Photo Upstream (time & #)	✓		
Photo Downstream (time & #)	✓		
Photo Left Bank* (time & #)	✓		
Photo Right Bank* (time & #)	✓		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 79

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 79 and SAS 80.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 80 **Date** 10-25-17
Target UTM: **452566** **3758961**
Observers (writer/other) Ana, Nate, Cameron

	OBSERVATIONS	CHANNEL #1 (Left)	CHANNEL #2 (Right)	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	452495 3758943	452582 3759018	
	Channel position (L/C/R*)			
	Width of Channel (m)	7.9 m	8.6 m	
	Max Depth (cm) & Location in Channel (L/C/R*)	45 cm Center	52 cm Left	
	Depth @ Left Edge (cm) (~4" from bank edge)	6 cm	6 cm	
	Depth @ Right Edge (cm) (~4" from bank edge)	10 cm	18 cm	
	% Veg- Left Bank*	60 %	80 %	
	% Veg- Right Bank*	80 %	100 %	
	% Canopy Over Transect Band	10 %	2 %	
Should total 100%	Substrate % mud/silt	10 %	10 %	
	Substrate % sand	90 %	85 %	
	Substrate % gravel	0 %	0 %	
	Substrate % cobble	0 %	5 %	
	Substrate % boulder	0 %	0 %	
	Photo Upstream (time & #)	✓		
	Photo Downstream (time & #)	✓		
	Photo Left Bank* (time & #)	✓		
	Photo Right Bank* (time & #)	✓		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 80

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 80 and SAS 81.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 81 **Date** 10-25-17
Target UTM: **452441** **3758698**
Observers (writer/other) Ana, Nate, Cameron

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	452548 3758938		
	Channel position (L/C/R*)	Center		
	Width of Channel (m)	17.4 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	40 cm Left		
	Depth @ Left Edge (cm) (~4" from bank edge)	8 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	18 cm		
	% Veg- Left Bank*	100 %		
	% Veg- Right Bank*	100 %		
	% Canopy Over Transect Band	0 %		
Should total 100%	Substrate % mud/silt	2 %		
	Substrate % sand	98 %		
	Substrate % gravel	0 %		
	Substrate % cobble	0 %		
	Substrate % boulder	0 %		
	Photo Upstream (time & #)	✓		
	Photo Downstream (time & #)	✓		
	Photo Left Bank* (time & #)	✓		
	Photo Right Bank* (time & #)	✓		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 81

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 81 and SAS 82.

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

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

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 82 **Date** 10-25-17
Target UTM: **452149** **3758681**
Observers (writer/other) Ana, Nate, Cameron

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	452485 3758652		
Channel position (L/C/R*)	Center		
Width of Channel (m)	33m		
Max Depth (cm) & Location in Channel (L/C/R*)	38cm 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 %		
% Veg- Right Bank*	0 %		
% Canopy Over Transect Band	0 %		
Should total 100%: Substrate % mud/silt	1 %		
Substrate % sand	99 %		
Substrate % gravel	0 %		
Substrate % cobble	0 %		
Substrate % boulder	0 %		
Photo Upstream (time & #)	✓		
Photo Downstream (time & #)	✓		
Photo Left Bank* (time & #)	✓		
Photo Right Bank* (time & #)	✓		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 82

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 ____ and SAS _____.

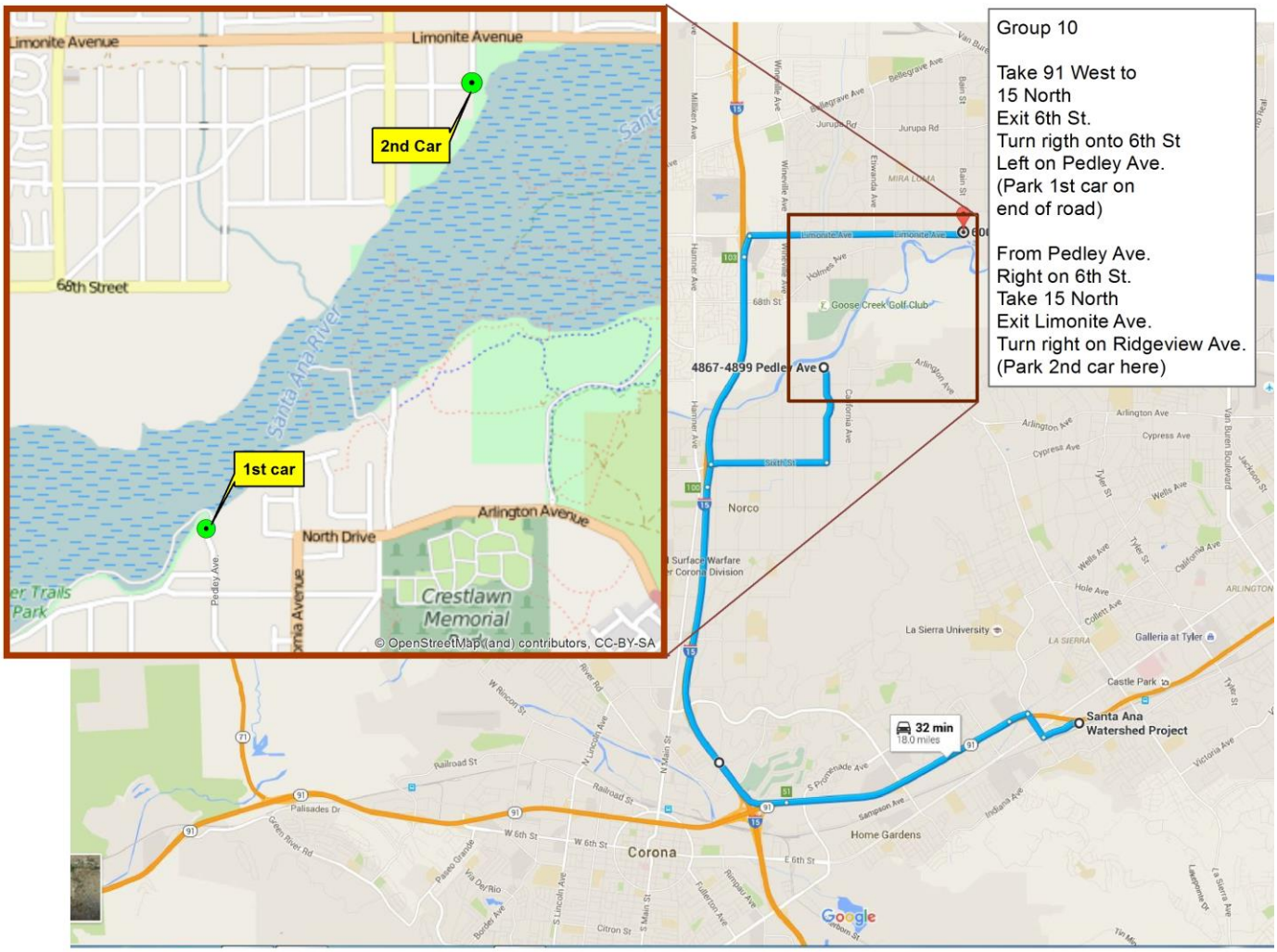
Tally	Gravel Patch Size
_____	Min 3m
_____	3m-5m
_____	5m-10m
_____	10m-15m
_____	15m+

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

Group 10: Points 83-89

Driving Directions: Take 91 West to the 15 North. Exit 6th Street and turn right onto 6th 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 6th 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.



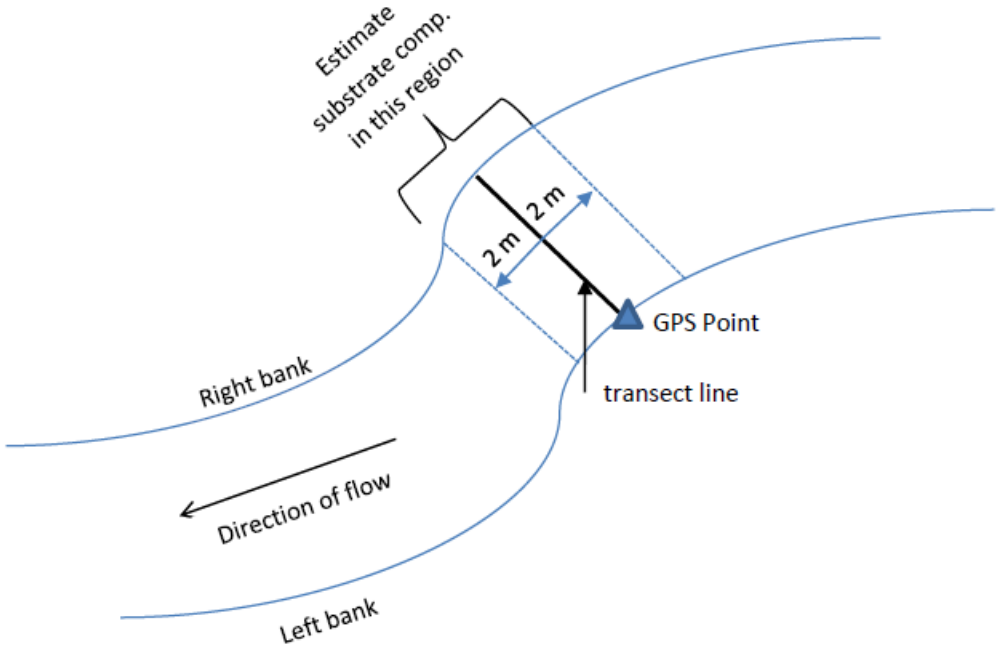
Data Collection Instructions: Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

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.

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 83 **Date** 10/25
Target UTM: 451873 3758631
Observers (writer/other) Chuck, Edgar

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	451872 3758655		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	19.00		
	Max Depth (cm) & Location in Channel (L/C/R*)	36 cm C		
	Depth @ Left Edge (cm) (~4" from bank edge)	36 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	24 cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	20%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	100%		
	Substrate % gravel	0		
	Substrate % cobble	0		
	Substrate % boulder	0		
	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, Obstructions)	N/A		

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

SAS 83

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 84 **Date** 10/25
Target UTM: **451638** **3758497**
Observers (writer/other) Edgar C., Claudia

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	451577 3758506		
Channel position (L/C/R*)	C		
Width of Channel (m)	28		
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 Transect Band	58%		
Should total 100% — Substrate % mud/silt	0%		
Substrate % sand	95 100%		
Substrate % gravel	5%		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	11:13		
Photo Downstream (time & #)	11:13		
Photo Left Bank* (time & #)	11:13		
Photo Right Bank* (time & #)	11:13		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	n/a		

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

SAS 84

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 85 **Date** 10/25/17
Target UTM: **451443** **3758279**
Observers (writer/other) Chuck, Edgar

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	451452 3758292		
	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 Transect Band	5%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	95%		
	Substrate % gravel	5%		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:26		
	Photo Downstream (time & #)	11:26		
	Photo Left Bank* (time & #)	11:26		
	Photo Right Bank* (time & #)	11:26		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	N/A		

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

SAS 85

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 86 **Date** 10/25/17
Target UTM: **451303** **3758016**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	451278 3758032		
Channel position (L/C/R*)	C		
Width of Channel (m)	24		
Max Depth (cm) & Location in Channel (L/C/R*)	30L		
Depth @ Left Edge (cm) (~4" from bank edge)	30		
Depth @ Right Edge (cm) (~4" from bank edge)	25		
% Veg- Left Bank*	100%		
% Veg- Right Bank*	100%		
% Canopy Over Transect Band	10%		
Should total 100% — Substrate % mud/silt	0		
Substrate % sand	100%		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	11:42		
Photo Downstream (time & #)	11:42		
Photo Left Bank* (time & #)	11:42		
Photo Right Bank* (time & #)	11:42		
Photo other (describe)	12:01 •		
Notes (e.g. Islands, Obstructions)	N/A		

• look pic of gravel patches

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

SAS 86

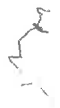
Additional Information

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 86 and SAS 87.

Tally	Gravel Patch Size
10	Min 3m
3	3m-5m
2	5m-10m
	10m-15m
	15m+

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



2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 87 **Date** 10/25/17
Target UTM: **451176** **3757746**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	451068 3757635	451087 3757635	451099 3757632
	Channel position (L/C/R*)	L	C	L
	Width of Channel (m)	9	11	11
	Max Depth (cm) & Location in Channel (L/C/R*)	18 L	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%	100
	% Veg- Right Bank*	100	100%	100
	% Canopy Over Transect Band	10%	5%	5 ~~80~~%
Should total 100%	Substrate % mud/silt	0	0%	
Should total 100%	Substrate % sand	95	90%	100
Should total 100%	Substrate % gravel	5%	10%	0
Should total 100%	Substrate % cobble	0	0	0
Should total 100%	Substrate % boulder	0	0	0
	Photo Upstream (time & #)	12:08	12:13	12:16
	Photo Downstream (time & #)	12:09	12:13	12:16
	Photo Left Bank* (time & #)	12:08	12:13	12:16
	Photo Right Bank* (time & #)	12:08	12:13	12:16
	Photo other (describe)	pics		
	Notes (e.g. Islands, Obstructions)	Right Center Left		

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

SAS 87

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 87 and SAS 86.

Tally	Gravel Patch Size
111	Min 3m
1111	3m-5m
	5m-10m
	10m-15m
	15m+

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 88 **Date** 10/25/17
Target UTM: **451034** **3757486**
Observers (writer/other) Chuck, Edgar C

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	-150999 3757439		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	37		
	Max Depth (cm) & Location in Channel (L/C/R*)	29 L		
	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 Transect Band	10%		
Should total 100%	Substrate % mud/silt	6		
	Substrate % sand	90		
	Substrate % gravel	10		
	Substrate % cobble	6		
	Substrate % boulder	0		
	Photo Upstream (time & #)	12:24		
	Photo Downstream (time & #)	12:28		
	Photo Left Bank* (time & #)	12:28		
	Photo Right Bank* (time & #)	12:28		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	N/A		

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

SAS 88

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 89 **Date** 10/25/17
Target UTM: 450811 3757315
Observers (writer/other) Chuck, Edgar

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	450804 3757821		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	26		
	Max Depth (cm) & Location in Channel (L/C/R*)	28 R		
	Depth @ Left Edge (cm) (~4" from bank edge)	16		
	Depth @ Right Edge (cm) (~4" from bank edge)	26		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	5%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	90		
	Substrate % gravel	10%		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	12:37		
	Photo Downstream (time & #)	12:37		
	Photo Left Bank* (time & #)	12:37		
	Photo Right Bank* (time & #)	12:37		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 89

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 ____ and SAS _____.

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

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

_____ _____

_____ _____

_____ _____

_____ _____

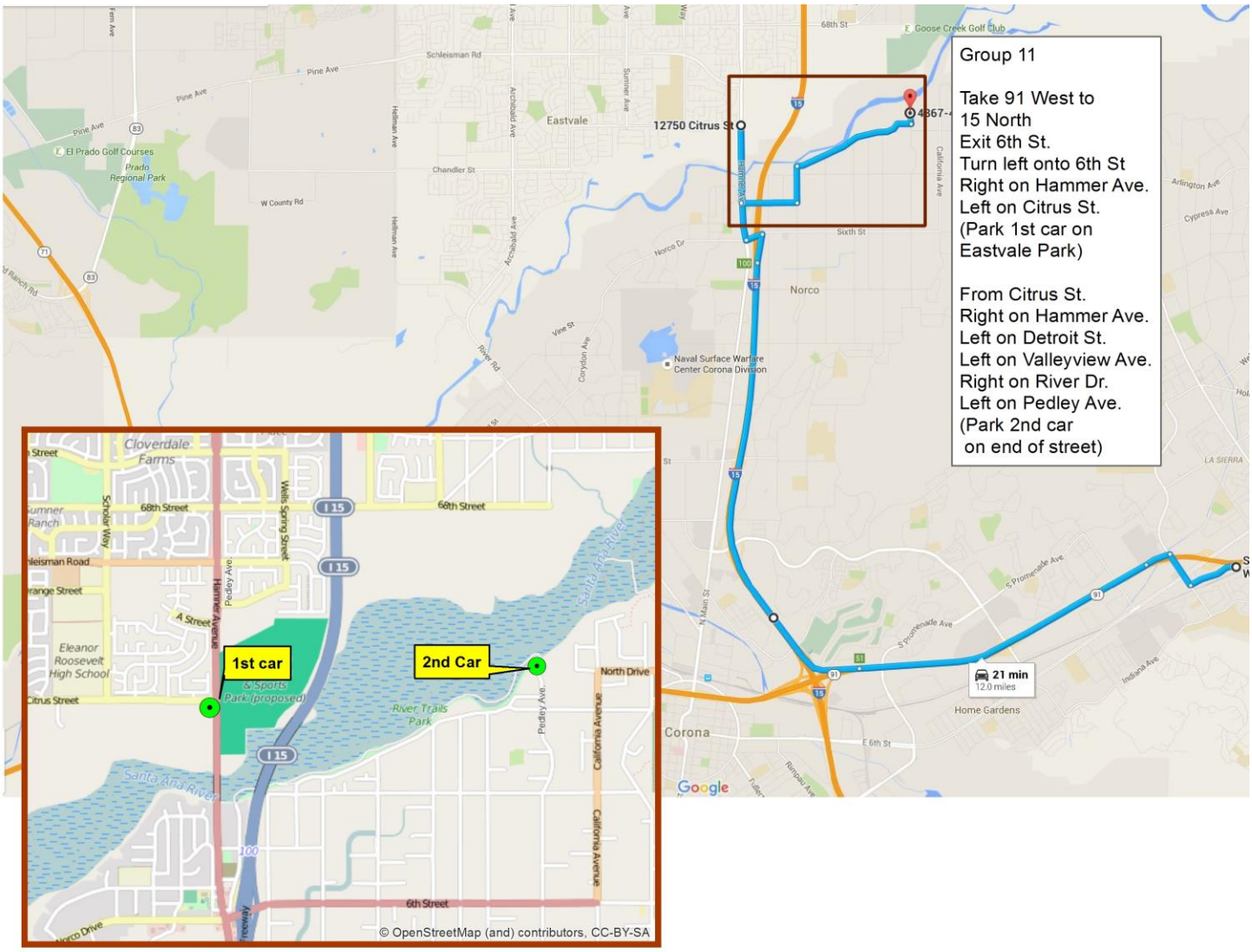
_____ _____

_____ _____

_____ _____

Group 11: Points 90-98

Driving Directions: Take 91 West to the 15 North. Exit 6th Street and turn right onto 6th 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.



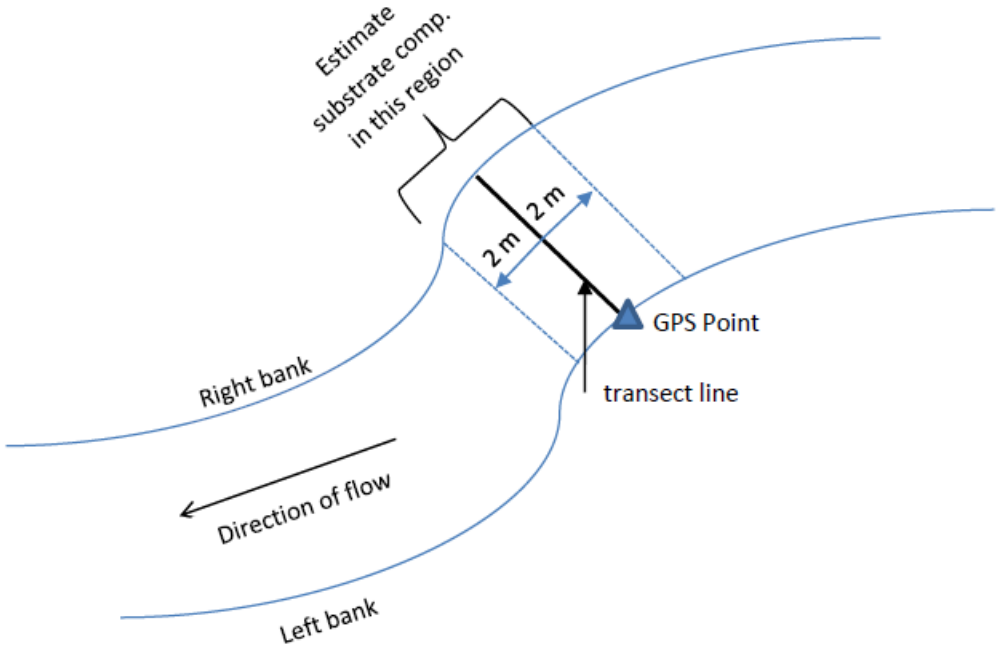
Data Collection Instructions: Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

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.

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 90 **Date** 10/25/17
Target UTM: **450524** **3757255**
Observers (writer/other) Lindsey McConnell

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0450503 3757284		
Channel position (L/C/R*)	Center		
Width of Channel (m)	30.5 m		
Max Depth (cm) & Location in Channel (L/C/R*)	21cm		
Depth @ Left Edge (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%		
Should total 100%: Substrate % mud/silt	0		
Substrate % sand	90%		
Substrate % gravel	10%		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	10:13 #1		
Photo Downstream (time & #)	10:13 #2		
Photo Left Bank* (time & #)	10.13 #3		
Photo Right Bank* (time & #)	10:13 #4		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	small patch of algae around both banks horse crossing upstream no red algae		

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

SAS 90

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 90 and SAS 91.

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

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 91 **Date** 10/25/17
Target UTM: **450228** **3757211**
Observers (writer/other) Lindsey McConnell

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0450200 3757222		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	40.3 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	20 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	17cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	14cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	8%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	92%		
	Substrate % gravel	8%		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	10:28 #5		
	Photo Downstream (time & #)	10:28 #6		
	Photo Left Bank* (time & #)	10:28 #7		
	Photo Right Bank* (time & #)	10.28 #8		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	Just downstream of island Tamarisk on left bank arrundo right bank 1 santa ana sucker fry ~1.5in just downstream (Ian took video about 10:32		

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

SAS 91

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 91 and SAS 92.

Tally	Gravel Patch Size	
卌 卌 卌 卌 |	Min 3m	– ~~[illegible]~~e small patches $1ft^2$ near-fen found
|||	3m-5m	
	5m-10m	
	10m-15m	
	15m+	

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

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 92 **Date** 10/25/17
Target UTM: **449957** **3757085**
Observers (writer/other) Lindsey McConnell

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0449938 3757106		
Channel position (L/C/R*)	C		
Width of Channel (m)	33.8 m		
Max Depth (cm) & Location in Channel (L/C/R*)	32 cm		
Depth @ Left Edge (cm) (~4" from bank edge)	26 cm		
Depth @ Right Edge (cm) (~4" from bank edge)	19 cm		
% Veg- Left Bank*	100%		
% Veg- Right Bank*	100%		
% Canopy Over Transect Band	4%		
Substrate % mud/silt	0		
Substrate % sand	100%		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	10:52 #9		
Photo Downstream (time & #)	10:52 #10		
Photo Left Bank* (time & #)	10:52 #11		
Photo Right Bank* (time & #)	10:52 #12		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	arrm do both banks island downstream horses upstream		

Should total 100%

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

SAS 92

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 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:

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 93 **Date** 10/25/17
Target UTM: **449781** **3756859**
Observers (writer/other) Lindsey/MS-Conne

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0449750 3756880		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	50.2 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	26cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	17cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	14cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	4%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	100		
	Substrate % gravel	0		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:09 #13		
	Photo Downstream (time & #)	11:09 #14		
	Photo Left Bank* (time & #)	11:09 #15		
	Photo Right Bank* (time & #)	11:09 #16		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	just downstream large sand bar		

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

SAS 93

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 93 and SAS 94.

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

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

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 94 **Date** 10/25/17
Target UTM: **449669** **3756630**
Observers (writer/other) Lindsey/Mccarnell

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0449725 3756660		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	18.8 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	53cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	24 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	13cm		
	% Veg- Left Bank*	2%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	5%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	100		
	Substrate % gravel	0		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:22 #17		
	Photo Downstream (time & #)	11:25 #18		
	Photo Left Bank* (time & #)	11:25 #19		
	Photo Right Bank* (time & #)	11:27 #20		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	snails on right bank downstream from station deep pools next to wall left bank mosquito fish cabbage butterfly		

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

SAS 94

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 94 and SAS 95.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 95 **Date** 10/25
Target UTM: 449377 3756566
Observers (writer/other) Lindsey / McConnell

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0449368 3756583		
Channel position (L/C/R*)	C		
Width of Channel (m)	25.4m		
Max Depth (cm) & Location in Channel (L/C/R*)	50cm		
Depth @ Left Edge (cm) (~4" from bank edge)	21 cm		
Depth @ Right Edge (cm) (~4" from bank edge)	17cm		
% Veg- Left Bank*	100		
% Veg- Right Bank*	100		
% Canopy Over Transect Band	5		
Should total 100% — Substrate % mud/silt	0		
Substrate % sand	100		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	11:40 #21		
Photo Downstream (time & #)	11:41 #22		
Photo Left Bank* (time & #)	11:41 #23		
Photo Right Bank* (time & #)	11:41 #24		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	tamarisk		

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

SAS 95

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 95 and SAS 96.

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

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

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 96 **Date** 10/25/17
Target UTM: **449118** **3756431**
Observers (writer/other) Lindsey/Mirranne

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0449115 3756430		
Channel position (L/C/R*)	L		
Width of Channel (m)	12.2		
Max Depth (cm) & Location in Channel (L/C/R*)	47cm		
Depth @ Left Edge (cm) (~4" from bank edge)	12cm		
Depth @ Right Edge (cm) (~4" from bank edge)	15cm		
% Veg- Left Bank*	0		
% Veg- Right Bank*	100		
% Canopy Over Transect Band	5%		
Should total 100% — Substrate % mud/silt	0		
Substrate % sand	100		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	11:56 #25		
Photo Downstream (time & #)	11:56 #26		
Photo Left Bank* (time & #)	11:56 #27		
Photo Right Bank* (time & #)	11:56 #28		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	right against wall on Left bank deep sand		

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

SAS 96

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 96 and SAS 97.

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

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

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 97 **Date** 10/25
Target UTM: **448822** **3756408**
Observers (writer/other) Lindsey McCarroll

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0448820 3756446		
	Channel position (L/C/R*)			
	Width of Channel (m)	25.1 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	38cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	29 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	13cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	15%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	100		
	Substrate % gravel	0		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	12:09 #29		
	Photo Downstream (time & #)	12:09 #30		
	Photo Left Bank* (time & #)	12:09 #31		
	Photo Right Bank* (time & #)	12:09 #32		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	Just downstream from 2 homeless encampments		

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

SAS 97

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 97 and SAS 98.

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

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

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 98 **Date** 10/25/17
Target UTM: 448534 3756384
Observers (writer/other) Lindsey/McConnell

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0448520 3756396		
Channel position (L/C/R*)	R		
Width of Channel (m)	22.5m		
Max Depth (cm) & Location in Channel (L/C/R*)	37cm		
Depth @ Left Edge (cm) (~4" from bank edge)	24cm		
Depth @ Right Edge (cm) (~4" from bank edge)	37cm		
% Veg- Left Bank*	100		
% Veg- Right Bank*	100		
% Canopy Over Transect Band	5%		
Should total 100% — Substrate % mud/silt	0		
Substrate % sand	100		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	12:23 #33		
Photo Downstream (time & #)	12:22 #34		
Photo Left Bank* (time & #)	12:22 #35		
Photo Right Bank* (time & #)	12:22 #36		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	small patch arundo R bank castor bean		

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

SAS 78

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 ____ and SAS _____.

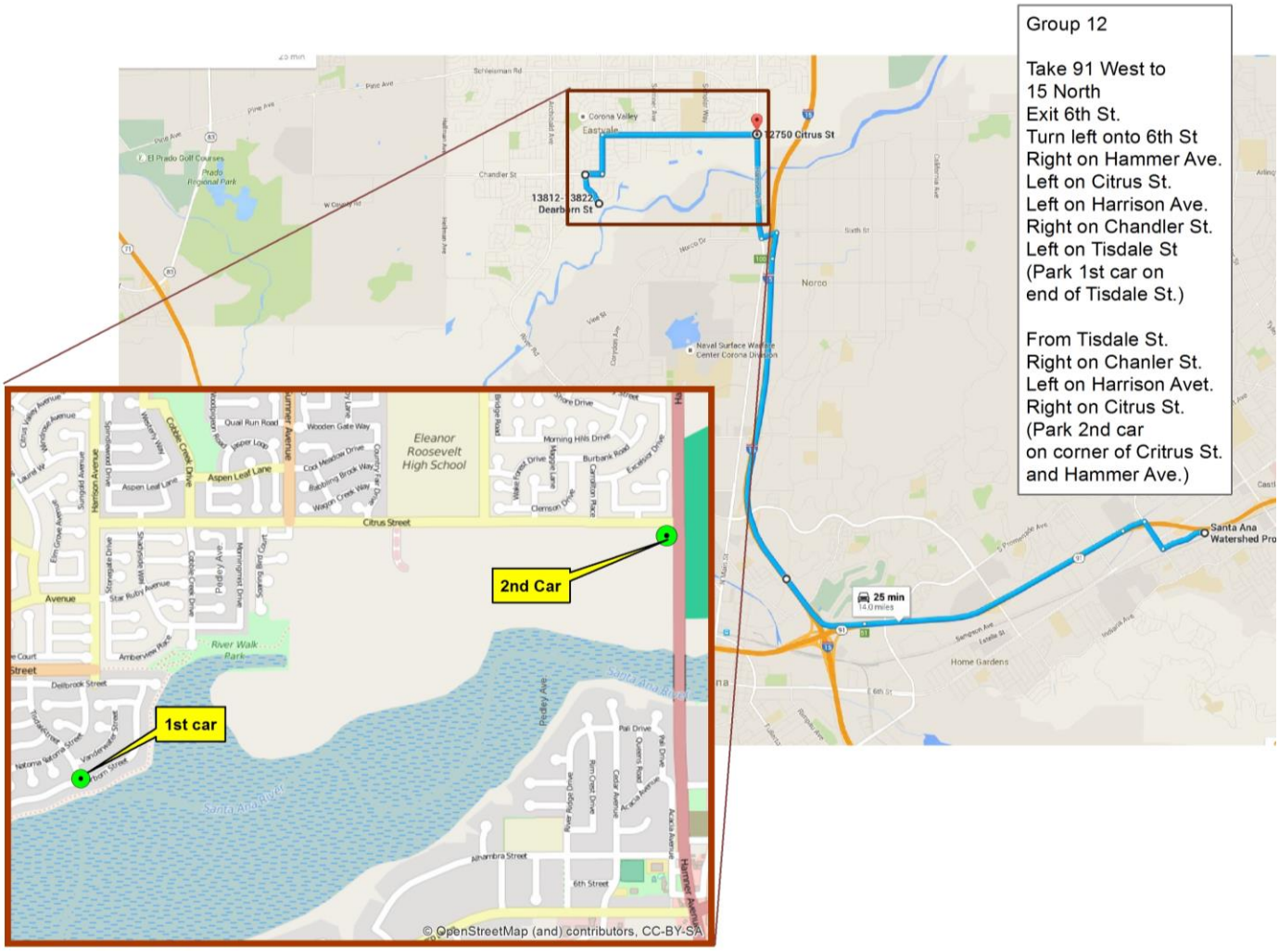
Tally	Gravel Patch Size
_____	Min 3m
_____	3m-5m
_____	5m-10m
_____	10m-15m
_____	15m+

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

Group 12: Points 99-108

Driving Directions: Take 91 West to the 15 North. Exit 6th Street and turn left onto 6th 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.



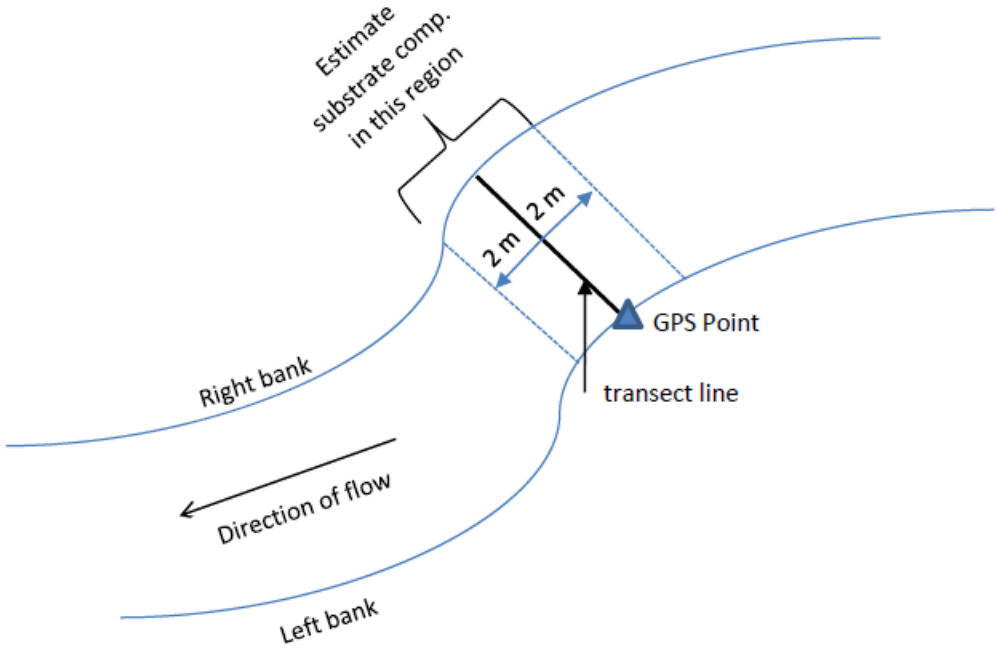
Data Collection Instructions: Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

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.

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 99 **Date** 10/25/17
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 UTM (@ Left Bank*)	448260 S 3756325		
	Channel position (L/C/R*)			
	Width of Channel (m)	85		
	Max Depth (cm) & Location in Channel (L/C/R*)	L 28		
	Depth @ Left Edge (cm) (~4" from bank edge)	25		
	Depth @ Right Edge (cm) (~4" from bank edge)	2.5		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	2		
	% Canopy Over Transect Band	5		
Should total 100%	Substrate % mud/silt	10		
	Substrate % sand	90		
	Substrate % gravel			
	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	10:17 am		
	Photo Downstream (time & #)	"		
	Photo Left Bank* (time & #)	"		
	Photo Right Bank* (time & #)	"		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 99

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 ____ and SAS _____.

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

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

Red algae - Right bank

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 100 **Date** 10/25/17
Target UTM: **447963** **3756361**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	11 South 0047965 | 3756381		
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*	100		
% Canopy Over Transect Band	10		
Should total 100% — Substrate % mud/silt			
Substrate % sand	90		
Substrate % gravel	5		
Substrate % cobble	5		
Substrate % boulder			
Photo Upstream (time & #)	10:31 am		
Photo Downstream (time & #)	"		
Photo Left Bank* (time & #)	"		
Photo Right Bank* (time & #)	"		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 100

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 101 **Date** 10/25/17
Target UTM: **447680** **3756377**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	11 S 0447653 3756392		
Channel position (L/C/R*)			
Width of Channel (m)	55		
Max Depth (cm) & Location in Channel (L/C/R*)	R 40 ~~55.5~~		
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		
Should total 100% — Substrate % mud/silt			
Substrate % sand	100		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo Upstream (time & #)	10:59 am		
Photo Downstream (time & #)	11		
Photo Left Bank* (time & #)	11		
Photo Right Bank* (time & #)	11		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 101

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 102 **Date** 10/25/17
Target UTM: **447620** **3756088**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	11 S 0447570 3756065		
Channel position (L/C/R*)			
Width of Channel (m)	92		
Max Depth (cm) & Location in Channel (L/C/R*)	L 41		
Depth @ Left Edge (cm) (~4" from bank edge)	22.5		
Depth @ Right Edge (cm) (~4" from bank edge)	10.5		
% Veg- Left Bank*	5		
% Veg- Right Bank*	10		
% Canopy Over Transect Band	5		
Should total 100% — Substrate % mud/silt			
Substrate % sand	100		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo Upstream (time & #)	11:17 am		
Photo Downstream (time & #)	11		
Photo Left Bank* (time & #)	11		
Photo Right Bank* (time & #)	11		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 102

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 103 **Date** 10/25/17
Target UTM: **447481** **3755829**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	11 S 0447464 3755843		
Channel position (L/C/R*)			
Width of Channel (m)	110		
Max Depth (cm) & Location in Channel (L/C/R*)	R 44		
Depth @ Left Edge (cm) (~4" from bank edge)	2.5		
Depth @ Right Edge (cm) (~4" from bank edge)	36		
% Veg- Left Bank*	5		
% Veg- Right Bank*	5		
% Canopy Over Transect Band	2		
Should total 100% — Substrate % mud/silt			
Substrate % sand	100		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo Upstream (time & #)	11:31 am		
Photo Downstream (time & #)	"		
Photo Left Bank* (time & #)	"		
Photo Right Bank* (time & #)	"		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 103

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 104 **Date** 10/25/17
Target UTM: **447240** **3755663**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	11S 0447206 3755684		
Channel position (L/C/R*)			
Width of Channel (m)	97		
Max Depth (cm) & Location in Channel (L/C/R*)	C 28		
Depth @ Left Edge (cm) (~4" from bank edge)	6		
Depth @ Right Edge (cm) (~4" from bank edge)	14		
% Veg- Left Bank*	5		
% Veg- Right Bank*	3		
% Canopy Over Transect Band	2		
Substrate % mud/silt			
Substrate % sand	100		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo Upstream (time & #)	11:50am		
Photo Downstream (time & #)	11		
Photo Left Bank* (time & #)	11		
Photo Right Bank* (time & #)	11		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

Should total 100%

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

SAS 104

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 105 **Date** 10/25/17
Target UTM: **446983** **3755713**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	11S 0446988 3755725		
Channel position (L/C/R*)			
Width of Channel (m)	60		
Max Depth (cm) & Location in Channel (L/C/R*)	C 29.5		
Depth @ Left Edge (cm) (~4" from bank edge)	13		
Depth @ Right Edge (cm) (~4" from bank edge)	14		
% Veg- Left Bank*	5		
% Veg- Right Bank*	0		
% Canopy Over Transect Band	2		
Should total 100% — Substrate % mud/silt			
Substrate % sand	100		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo Upstream (time & #)	12:00pm		
Photo Downstream (time & #)	"		
Photo Left Bank* (time & #)	"		
Photo Right Bank* (time & #)	"		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 105

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 ____ and SAS _____.

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

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

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 106 **Date** 10/25/17
Target UTM: **446735** **3755827**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	11S 0446749 3755841		
Channel position (L/C/R*)			
Width of Channel (m)	50		
Max Depth (cm) & Location in Channel (L/C/R*)	C 33.2		
Depth @ Left Edge (cm) (~4" from bank edge)	14		
Depth @ Right Edge (cm) (~4" from bank edge)	12		
% Veg- Left Bank*	2		
% Veg- Right Bank*	7		
% Canopy Over Transect Band	70		
Should total 100% — Substrate % mud/silt			
Substrate % sand	100		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo Upstream (time & #)	12:15 pm		
Photo Downstream (time & #)	"		
Photo Left Bank* (time & #)	"		
Photo Right Bank* (time & #)	"		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 106

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 107 **Date** 10/25/17
Target UTM: **446461** **3755771**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0446476 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		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	100		
	Substrate % gravel			
	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	12:30		
	Photo Downstream (time & #)			
	Photo Left Bank* (time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 107

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 108 **Date** 10/25/17
Target UTM: **446169** **3755831**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11 S 0446169 L 3755854		
	Channel position (L/C/R*)			
	Width of Channel (m)	32.5		
	Max Depth (cm) & Location in Channel (L/C/R*)	R 43		
	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		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	100		
	Substrate % gravel			
	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	12:45 PM		
	Photo Downstream (time & #)	(1		
	Photo Left Bank* (time & #)	11		
	Photo Right Bank* (time & #)	11		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 108

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 ____ and SAS _____.

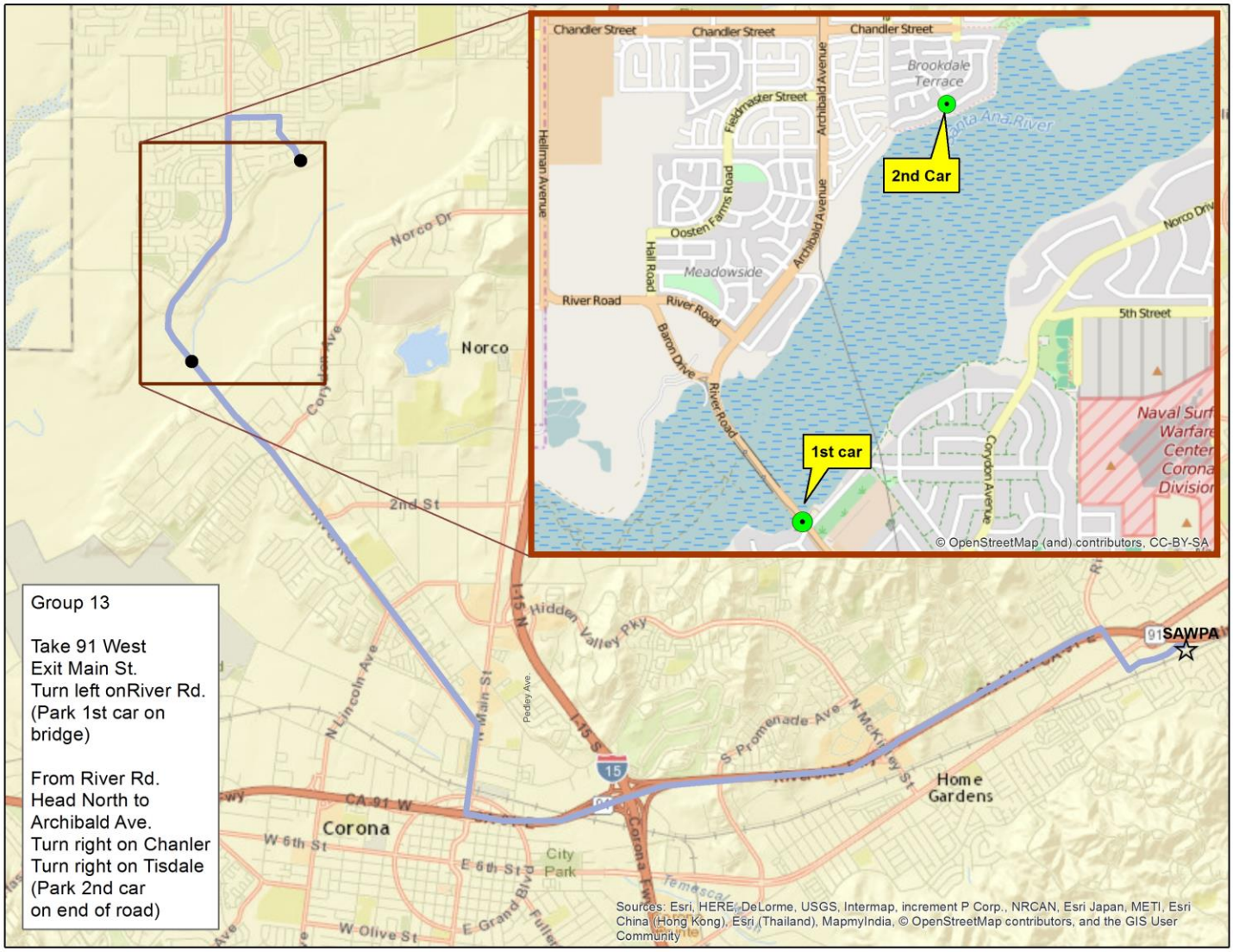
Tally	Gravel Patch Size
_____	Min 3m
_____	3m-5m
_____	5m-10m
_____	10m-15m
_____	15m+

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

Group 13: Points 109-118

Driving Directions: 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.



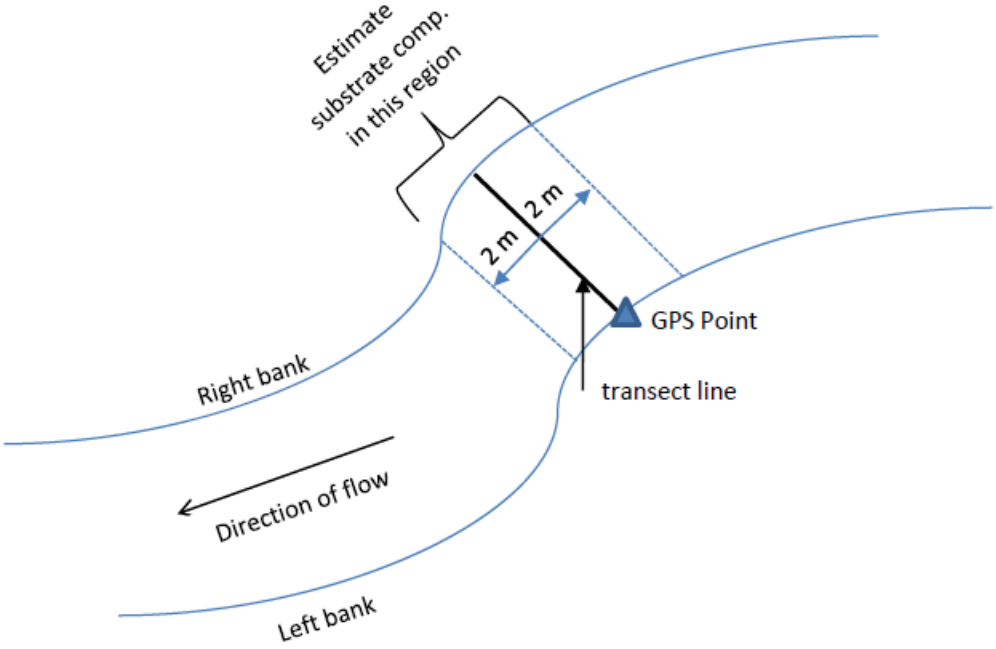
Data Collection Instructions: Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is

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.

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 109 **Date** 10/25/17
Target UTM: 445940 3755674
Observers (writer/other) JMB/LEM, MRW, CXG

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	445925 3755676		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	~~19.2~~ 20.0		
	Max Depth (cm) & Location in Channel (L/C/R*)	36		
	Depth @ Left Edge (cm) (~4" from bank edge)	10		
	Depth @ Right Edge (cm) (~4" from bank edge)	10.5		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	20		
Should total 100%	Substrate % mud/silt	—		
	Substrate % sand	100		
	Substrate % gravel	—		
	Substrate % cobble	—		
	Substrate % boulder	—		
	Photo Upstream (time & #)	0959 001		
	Photo Downstream (time & #)	002		
	Photo Left Bank* (time & #)	003		
	Photo Right Bank* (time & #)	004		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 109

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 110 **Date** 10/25/17
Target UTM: **446000** **3755385**
Observers (writer/other) JMB, LEM, CXG, MRW

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	446005 3755388		
Channel position (L/C/R*)	—		
Width of Channel (m)	18.0		
Max Depth (cm) & Location in Channel (L/C/R*)	44.0		
Depth @ Left Edge (cm) (~4" from bank edge)	11.3 cm		
Depth @ Right Edge (cm) (~4" from bank edge)	29.0		
% Veg- Left Bank*	100		
% Veg- Right Bank*	100		
% Canopy Over Transect Band	40		
Should total 100% — Substrate % mud/silt	0		
Substrate % sand	100		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	1026 005		
Photo Downstream (time & #)	004		
Photo Left Bank* (time & #)	007		
Photo Right Bank* (time & #)	008		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	small island a few [illegible] downstream		

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

SAS 110

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 ____ and SAS _____.

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

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

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 111 **Date** 10/25/17
Target UTM: 445935 3755100
Observers (writer/other) JMB, LEM, EXG, MRW

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	445933 3755103		
Channel position (L/C/R*)			
Width of Channel (m)	20.4		
Max Depth (cm) & Location in Channel (L/C/R*)	31		
Depth @ Left Edge (cm) (~4" from bank edge)	9.9		
Depth @ Right Edge (cm) (~4" from bank edge)	14.2		
% Veg- Left Bank*	40		
% Veg- Right Bank*	100		
% Canopy Over Transect Band	3.5+3 15		
Should total 100% — Substrate % mud/silt	0		
Substrate % sand	100		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	1054 009		
Photo Downstream (time & #)	010		
Photo Left Bank* (time & #)	011		
Photo Right Bank* (time & #)	012		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 111

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 112 **Date** 10/25/17
Target UTM: 445723 3754896
Observers (writer/other) JMB/ LEM, CXG, MRW

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	445726 3754896		
Channel position (L/C/R*)			
Width of Channel (m)	32.73		
Max Depth (cm) & Location in Channel (L/C/R*)	30		
Depth @ Left Edge (cm) (~4" from bank edge)	3.4		
Depth @ Right Edge (cm) (~4" from bank edge)	6.5		
% Veg- Left Bank*	100		
% Veg- Right Bank*	20		
% Canopy Over Transect Band	20		
Should total 100%: Substrate % mud/silt	0		
Substrate % sand	100		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	11:11 013		
Photo Downstream (time & #)	014		
Photo Left Bank* (time & #)	015		
Photo Right Bank* (time & #)	016		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 112

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 113 **Date** 10/25/17
Target UTM: 445456 3754961
Observers (writer/other) JMB / LEM, CXG, MRW

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	445452 3754968		
Channel position (L/C/R*)			
Width of Channel (m)	32.8		
Max Depth (cm) & Location in Channel (L/C/R*)	28		
Depth @ Left Edge (cm) (~4" from bank edge)	8.2		
Depth @ Right Edge (cm) (~4" from bank edge)	8.0		
% Veg- Left Bank*	90		
% Veg- Right Bank*			
% Canopy Over Transect Band	~~6.7 [illegible]~~ 20		
Should total 100%: Substrate % mud/silt	0		
Substrate % sand	100		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	1135 017		
Photo Downstream (time & #)	018		
Photo Left Bank* (time & #)	019		
Photo Right Bank* (time & #)	020		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 113

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 _____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 114 **Date** 10/25/17
Target UTM: 445308 3754771
Observers (writer/other) DMB / LEM, CXG, MRN

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	445283 3754772		
	Channel position (L/C/R*)	32.75 —		
	Width of Channel (m)	↓		
	Max Depth (cm) & Location in Channel (L/C/R*)	30		
	Depth @ Left Edge (cm) (~4" from bank edge)	8		
	Depth @ Right Edge (cm) (~4" from bank edge)	19		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	90		
	% Canopy Over Transect Band	~~30 40~~ 15%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	100		
	Substrate % gravel	0		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1157 021		
	Photo Downstream (time & #)	022		
	Photo Left Bank* (time & #)	023		
	Photo Right Bank* (time & #)	024		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 114

Additional Information

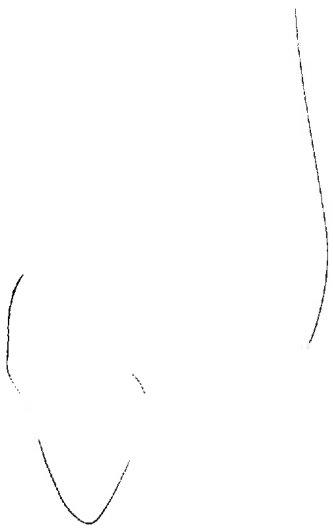
Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____



2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 115 **Date** 10/25/17
Target UTM: 445271 3754475
Observers (writer/other) OMB/LEM, CX6, MRW

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	445261 3754472		
Channel position (L/C/R*)			
Width of Channel (m)	32.2		
Max Depth (cm) & Location in Channel (L/C/R*)	27		
Depth @ Left Edge (cm) (~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 Transect Band	~~3.2m 3.5m~~ 18%		
Should total 100% — Substrate % mud/silt	0		
Substrate % sand	100		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	1255 025		
Photo Downstream (time & #)	026		
Photo Left Bank* (time & #)	027		
Photo Right Bank* (time & #)	028		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 115

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 116 **Date** 10/25/17
Target UTM: 445069 3754300
Observers (writer/other) JMB/ LEM, CXG, MRW

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	445064 3754298		
Channel position (L/C/R*)	—		
Width of Channel (m)	29.89		
Max Depth (cm) & Location in Channel (L/C/R*)	33		
Depth @ Left Edge (cm) (~4" from bank edge)	11		
Depth @ Right Edge (cm) (~4" from bank edge)	1.8		
% Veg- Left Bank*	25		
% Veg- Right Bank*	75		
% Canopy Over Transect Band	20%		
Should total 100% — Substrate % mud/silt	0		
Substrate % sand	100		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	1308 029		
Photo Downstream (time & #)	030		
Photo Left Bank* (time & #)	031		
Photo Right Bank* (time & #)	032		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 116

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 117 **Date** 10/25/17
Target UTM: 444878 3754208
Observers (writer/other) JMB, LEM, CX6, MRW

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	444878 3754207		
Channel position (L/C/R*)	—		
Width of Channel (m)	26.70		
Max Depth (cm) & Location in Channel (L/C/R*)	33		
Depth @ Left Edge (cm) (~4" from bank edge)	10.5		
Depth @ Right Edge (cm) (~4" from bank edge)	~~20.7~~ 9.5		
% Veg- Left Bank*	80		
% Veg- Right Bank*	100		
% Canopy Over Transect Band	~~100~~ 25.5		
Should total 100% — Substrate % mud/silt	—		
Substrate % sand	100		
Substrate % gravel	—		
Substrate % cobble	—		
Substrate % boulder	—		
Photo Upstream (time & #)	1322 033		
Photo Downstream (time & #)	034		
Photo Left Bank* (time & #)	035		
Photo Right Bank* (time & #)	036		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

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

SAS 117

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 ____ and SAS _____.

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

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

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

2017 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 118 **Date** 10/25/17
Target UTM: **444830** **3753915**
Observers (writer/other) JMB, LEM, CXG, MRW

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	444806 3753924		
	Channel position (L/C/R*)	—		
	Width of Channel (m)	27.0		
	Max Depth (cm) & Location in Channel (L/C/R*)	32		
	Depth @ Left Edge (cm) (~4" from bank edge)	5.0		
	Depth @ Right Edge (cm) (~4" from bank edge)	21		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*			
	% Canopy Over Transect Band	3M		
Should total 100%	Substrate % mud/silt	—		
	Substrate % sand	100		
	Substrate % gravel	—		
	Substrate % cobble	—		
	Substrate % boulder	—		
	Photo Upstream (time & #)	1338 037		
	Photo Downstream (time & #)	038		
	Photo Left Bank* (time & #)	039		
	Photo Right Bank* (time & #)	040		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

SAS 118

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 ____ and SAS _____.

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

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

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____