

2022 Riverwalk Datasheets

Each year 13 groups collect habitat data at over 100 field points in the Santa Ana River.

This year, volunteers were given the option to collect habitat data using the ArcGIS Field Maps Application.

This PDF is a collection of the physical datasheets and does not include the habitat data collected through the ArcGIS Field Maps application.



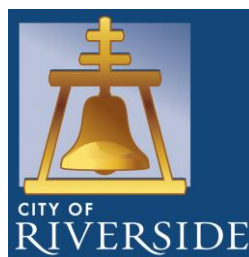
Conservation Team

<https://sawpa.gov/task-force/santa-ana-sucker-conservation-team/>

Santa Ana Watershed Project Authority

11615 Sterling Avenue

Riverside, CA 92503

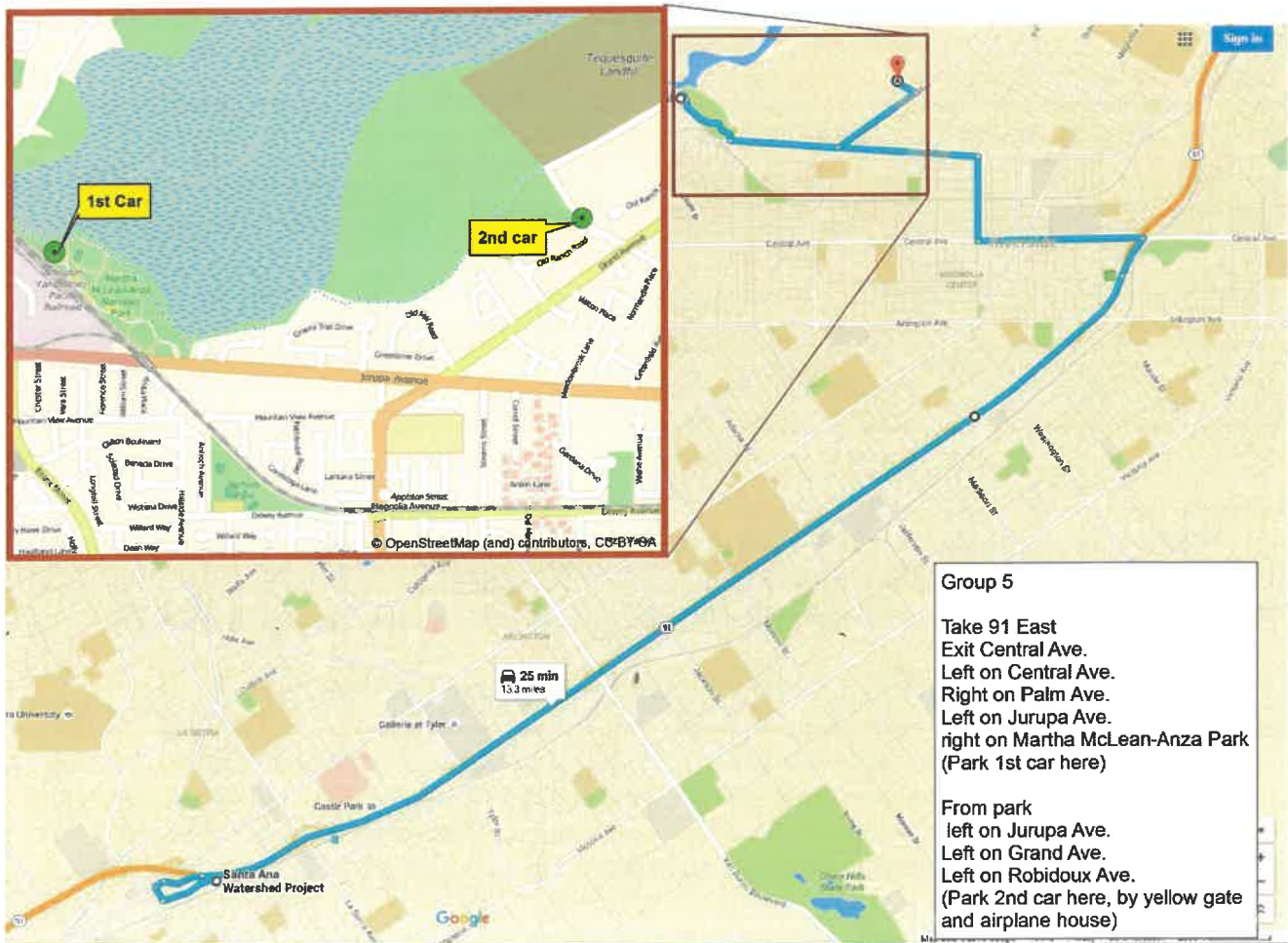


Group 5: Points 44-51

First Car Google Map Point:

<https://goo.gl/maps/WVdQYnjwFZUzxPEg6>

Driving Directions (From SAWPA): 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.

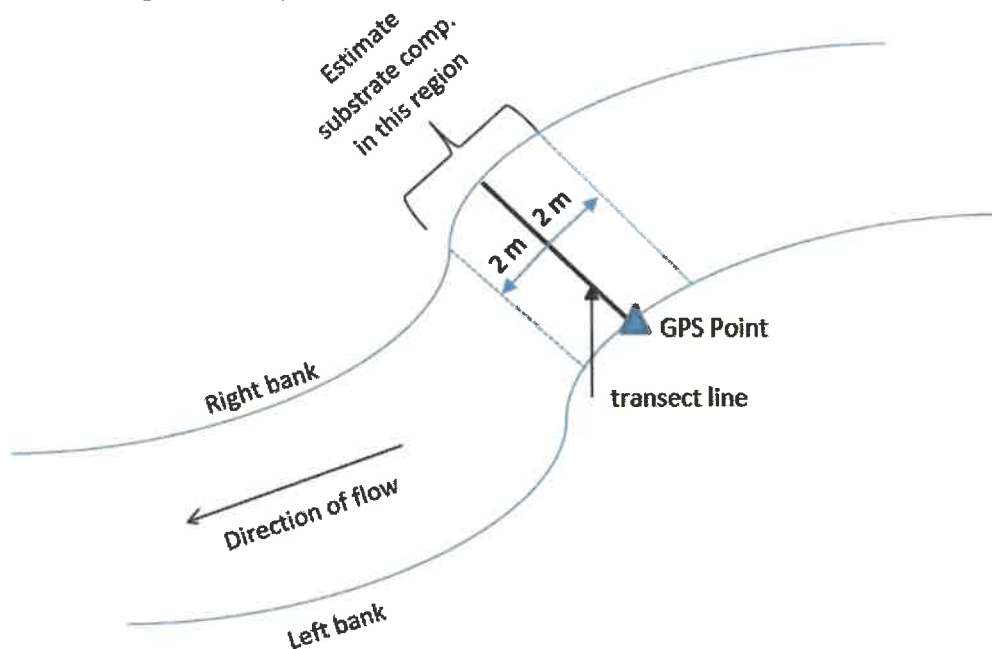


Technical Questions: Call Cameron Macbeth at (949) 533-5749
Coordination/Logistical Issues: Call Zyanya Ramirez at (951) 354-4244

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.

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: Within a week of the survey, please return equipment and any paper datasheets to SAWPA at 11615 Sterling Ave Riverside, CA 92503. Photos will be submitted via a dropbox link that you will receive from Zyanya Ramirez (SAWPA staff).

If You Want to Drive Back to SAWPA Immediately After Your Surveying (Optional): 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.

Technical Questions: Call Cameron Macbeth at (949) 533-5749
Coordination/Logistical Issues: Call Zyanya Ramirez at (951) 354-4244

Riverwalk

Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 44

Date 11/3

Target UTM: 461555

3759337

Observers (writer/other) Kai, Chris, Brett, Joanna

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		<i>+ used app</i>		
Channel position (L/C/R*)		<i>C</i>		
Width of Channel (m)		<i>7.1</i>		
Max Depth (cm) & Location in Channel (L/C/R*)		<i>24cm (L)</i>		
Depth @ Left Edge (cm) (~4" from bank edge)		<i>8cm</i>		
Depth @ Right Edge (cm) (~4" from bank edge)		<i>2cm</i>		
% Veg- Left Bank*		<i>70%</i>		
% Veg- Right Bank*		<i>40%</i>		
% Canopy Over Transect Band		<i>20%</i>		
Should total 100%	Substrate % mud/silt	<i>2</i>		
	Substrate % sand	<i>62</i>		
	Substrate % gravel	<i>35</i>		
	Substrate % cobble	<i>1</i>		
	Substrate % boulder	<i>0</i>		
Photo Upstream (time & #)		<i>1</i>		
Photo Downstream (time & #)		<i>2</i>		
Photo Left Bank* (time & #)		<i>4</i>		
Photo Right Bank* (time & #)		<i>3</i>		
Photo other (describe)				
Notes (e.g. Islands, Obstructions)		<i>No red algae fish in channel observed - bambusia observed.</i>		

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

Arundo present both banks *Water turbid*
Pig tracks
Heavy human encampments

Riverwalk

Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 45

Date 11/3

Target UTM: 461287

3759267

Observers (writer/other)

Brett, Kai, Mavis, Joanna

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)				
Channel position (L/C/R*)		R		
Width of Channel (m)		9.0 m		
Max Depth (cm) & Location in Channel (L/C/R*)		25 cm (C)		
Depth @ Left Edge (cm) (~4" from bank edge)		2.0 cm		
Depth @ Right Edge (cm) (~4" from bank edge)		20 cm		
% Veg- Left Bank*		0%		
% Veg- Right Bank*		90%		
% Canopy Over Transect Band		25%		
Should total 100%	Substrate % mud/silt	1		
	Substrate % sand	68		
	Substrate % gravel	20		
	Substrate % cobble	1		
	Substrate % boulder	0		
Photo Upstream (time & #)		5	} toward 9cm	
Photo Downstream (time & #)		6		
Photo Left Bank* (time & #)		8		
Photo Right Bank* (time & #)		7		
Photo other (describe)				
Notes (e.g. Islands, Obstructions)		laundryline Heavy human disturbance		

Arundo present

Water is turbid

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

Ⓢ This location was one of survey pts for native fish survey

Riverwalk

Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 46

Date 11/3

Target UTM: 461003

3759182

Observers (writer/other) Chris, Kai, Brett, Joanna

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)				
Channel position (L/C/R*)		<u>C</u>		
Width of Channel (m)		<u>6.2m</u>		
Max Depth (cm) & Location in Channel (L/C/R*)		<u>29.0cm</u>		
Depth @ Left Edge (cm) (~4" from bank edge)		<u>4.0cm</u>		
Depth @ Right Edge (cm) (~4" from bank edge)		<u>13.0cm</u>		
% Veg- Left Bank*		<u>40%</u>		
% Veg- Right Bank*		<u>100%</u>		
% Canopy Over Transect Band		<u>50%</u>		
Should total 100%	Substrate % mud/silt	<u>1</u>		
	Substrate % sand	<u>94</u>		
	Substrate % gravel	<u>5</u>		
	Substrate % cobble	<u>0</u>		
	Substrate % boulder	<u>0</u>		
Photo Upstream (time & #)		<u>1</u>	} strand 9:18	
Photo Downstream (time & #)		<u>2</u>		
Photo Left Bank* (time & #)		<u>4</u>		
Photo Right Bank* (time & #)		<u>3</u>		
Photo other (describe)				
Notes (e.g. Islands, Obstructions)				

Arundo Encampment upstream
Turbid pigs

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

no algae

Pilot project downstream

Riverwalk

Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 47 Date 11/3
 Target UTM: 460830 3758944
 Observers (writer/other) KAI, CHRIS, BKEIT, JOANNA

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)				
Channel position (L/C/R*)		L	R	
Width of Channel (m)		8.4 5.2m	1.4m	
Max Depth (cm) & Location in Channel (L/C/R*)		50cm (L)	17cm (C)	
Depth @ Left Edge (cm) (~4" from bank edge)		8.0cm	4.0cm	
Depth @ Right Edge (cm) (~4" from bank edge)		5.0cm	3.0cm	
% Veg- Left Bank*		75	60	
% Veg- Right Bank*		75	95	
% Canopy Over Transect Band		45	50	
Should total 100%	Substrate % mud/silt	1	20	
	Substrate % sand	94	45	
	Substrate % gravel	5	35	
	Substrate % cobble	0	0	
	Substrate % boulder	0	0	
Photo Upstream (time & #)		1	1	
Photo Downstream (time & #)		2	2	
Photo Left Bank* (time & #)		4	4	
Photo Right Bank* (time & #)		3	3	
Photo other (describe)				
Notes (e.g. Islands, Obstructions)		Island bar		

Undercut L bank
No longer turbid

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

Riverwalk Santa Ana River Sucker Habitat Evaluation

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

Date 11/3
3758749
Chris, Kai, Kelt, Jouna

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)				
Channel position (L/C/R*)		C		
Width of Channel (m)		7.4m		
Max Depth (cm) & Location in Channel (L/C/R*)		33cm (R)		
Depth @ Left Edge (cm) (~4" from bank edge)		12cm		
Depth @ Right Edge (cm) (~4" from bank edge)		1cm		
% Veg- Left Bank*		100		
% Veg- Right Bank*		90		
% Canopy Over Transect Band		60		
Should total 100%	Substrate % mud/silt	5		
	Substrate % sand	45		
	Substrate % gravel	50		
	Substrate % cobble	∅		
	Substrate % boulder	∅		
Photo Upstream (time & #)		} 120		
Photo Downstream (time & #)				
Photo Left Bank* (time & #)				
Photo Right Bank* (time & #)				
Photo other (describe)				
Notes (e.g. Islands, Obstructions)				

Arundo
Slightly turbid

bambusia

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

Riverwalk

Santa Ana River Sucker Habitat Evaluation

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

Date 11/3
 3758705

Chris, Kim, Brett, Joanna

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)			
Channel position (L/C/R*)	C		
Width of Channel (m)	9.4		
Max Depth (cm) & Location in Channel (L/C/R*)	26cm (C)		
Depth @ Left Edge (cm) (~4" from bank edge)	2cm		
Depth @ Right Edge (cm) (~4" from bank edge)	5cm		
% Veg- Left Bank*	50		
% Veg- Right Bank*	50		
% Canopy Over Transect Band	33		
Should total 100%	Substrate % mud/silt	3	
	Substrate % sand	66	
	Substrate % gravel	15 20	
	Substrate % cobble	0 1	
	Substrate % boulder	0	
Photo Upstream (time & #)	1	137	
Photo Downstream (time & #)	2		
Photo Left Bank* (time & #)	4		
Photo Right Bank* (time & #)	3		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

*Pig tracks
 Evidence of
 encampment.*

Arundo, Palms, + animalisk

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

*Final
 evidence
 left bank*

Riverwalk Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 50

Date 11/3

Target UTM: 460046

3758748

Observers (writer/other) Chris, Kai, Brett, Joanna

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)				
Channel position (L/C/R*)		R		
Width of Channel (m)		8.1		
Max Depth (cm) & Location in Channel (L/C/R*)		36 (L)		
Depth @ Left Edge (cm) (~4" from bank edge)		2cm		
Depth @ Right Edge (cm) (~4" from bank edge)		9cm		
% Veg- Left Bank*		2		
% Veg- Right Bank*		5		
% Canopy Over Transect Band		15		
Should total 100%	Substrate % mud/silt	3		
	Substrate % sand	67		
	Substrate % gravel	20		
	Substrate % cobble	0		
	Substrate % boulder	0		
Photo Upstream (time & #)		1	} 11:54	
Photo Downstream (time & #)		2		
Photo Left Bank* (time & #)		4		
Photo Right Bank* (time & #)		3		
Photo other (describe)				
Notes (e.g. Islands, Obstructions)				

Arundo. Water fairly clear Pig tracks

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

Riverwalk

Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 51 Date 11/3
 Target UTM: 459807 3758720
 Observers (writer/other) Chris, Kai, Brett, Joanna

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)				
Channel position (L/C/R*)		L		
Width of Channel (m)		9.3		
Max Depth (cm) & Location in Channel (L/C/R*)		43 cm - in pool upstream from debris dam		
Depth @ Left Edge (cm) (~4" from bank edge)		4 cm		
Depth @ Right Edge (cm) (~4" from bank edge)		3 cm		
% Veg- Left Bank*		5%		
% Veg- Right Bank*		0		
% Canopy Over Transect Band		1%		
Should total 100%	Substrate % mud/silt	2		
	Substrate % sand	82		
	Substrate % gravel	15		
	Substrate % cobble	1		
	Substrate % boulder	0		
Photo Upstream (time & #)		1		
Photo Downstream (time & #)		2		
Photo Left Bank* (time & #)		4		
Photo Right Bank* (time & #)		3		
Photo other (describe)				
Notes (e.g. Islands, Obstructions)				

SAS in transect. Arundo, palm. Pumpkins 😊

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

Group 8: Points 72-77

First Car Google Map Point:

<https://goo.gl/maps/fygeMNqAKKwMGbmr6>

Driving Directions (From SAWPA): 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.

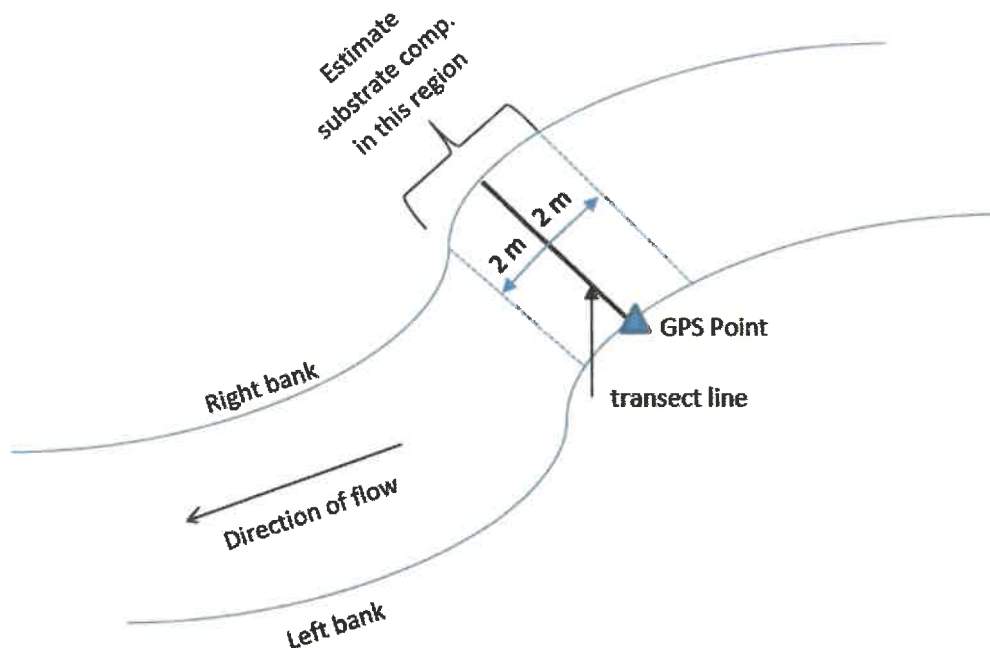


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Coordination/Logistical Issues: Call Zyanya Ramirez at (951) 354-4244

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.

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: Within a week of the survey, please return equipment and any paper datasheets to SAWPA at 11615 Sterling Ave Riverside, CA 92503. Photos will be submitted via a dropbox link that you will receive from Zyanya Ramirez (SAWPA staff).

If You Want to Drive Back to SAWPA Immediately After Your Surveying

(Optional): 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.

Technical Questions: Call Cameron Macbeth at (949) 533-5749

Coordination/Logistical Issues: Call Zyanya Ramirez at (951) 354-4244

Riverwalk Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 72

Date 11/3/22

Target UTM: 454748

3758936

Observers (writer/other)

Neftali

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		33.96994 N 117.4 W		
Channel position (L/C/R*)		1 C		
Width of Channel (m)		22.8		
Max Depth (cm) & Location in Channel (L/C/R*)		73		
Depth @ Left Edge (cm) (~4" from bank edge)		56cm		
Depth @ Right Edge (cm) (~4" from bank edge)		73cm		
% Veg- Left Bank*		100		
% Veg- Right Bank*		100		
% Canopy Over Transect Band		5		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	60		
	Substrate % gravel	30		
	Substrate % cobble	10		
	Substrate % boulder	0		
Photo Upstream (time & #)		8:50 am		
Photo Downstream (time & #)		8:50 am		
Photo Left Bank* (time & #)		8:50 am		
Photo Right Bank* (time & #)		8:50 am		
Photo other (describe)				
Notes (e.g. Islands, Obstructions)				

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

Riverwalk Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 73

Date 11/3/22

Target UTM: 454455

3758993

Observers (writer/other) Neftali

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		In App		
Channel position (L/C/R*)		C		
Width of Channel (m)		23.9		
Max Depth (cm) & Location in Channel (L/C/R*)		87		
Depth @ Left Edge (cm) (~4" from bank edge)		74		
Depth @ Right Edge (cm) (~4" from bank edge)		87 84		
% Veg- Left Bank*		100		
% Veg- Right Bank*		100		
% Canopy Over Transect Band		25		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	90 100		
	Substrate % gravel	0		
	Substrate % cobble	0		
	Substrate % boulder	0		
Photo Upstream (time & #)		9:04 am		
Photo Downstream (time & #)		9:04 am		
Photo Left Bank* (time & #)		9:04 am		
Photo Right Bank* (time & #)		9:04 am		
Photo other (describe)				
Notes (e.g. Islands, Obstructions)				

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

Riverwalk Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 74
Target UTM: 454159
Observers (writer/other) _____

Date 11/3/22
3759037

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)				
Channel position (L/C/R*)		(21 NA/ 23)		
Width of Channel (m)				
Max Depth (cm) & Location in Channel (L/C/R*)		48 cm		
Depth @ Left Edge (cm) (~4" from bank edge)		24 cm		
Depth @ Right Edge (cm) (~4" from bank edge)		18 cm		
% Veg- Left Bank*		100%		
% Veg- Right Bank*		90%		
% Canopy Over Transect Band		40%		
Should total 100%	Substrate % mud/silt	10%		
	Substrate % sand	60%		
	Substrate % gravel			
	Substrate % cobble	30%		
	Substrate % boulder			
Photo Upstream (time & #)				
Photo Downstream (time & #)				
Photo Left Bank* (time & #)				
Photo Right Bank* (time & #)				
Photo other (describe)				
Notes (e.g. Islands, Obstructions)		Man-made diversion		

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

Riverwalk Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 75 Date _____
 Target UTM: 453874 3759120
 Observers (writer/other) _____

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)				
Channel position (L/C/R*)				
Width of Channel (m)		14.8		
Max Depth (cm) & Location in Channel (L/C/R*)		55 40 cm		
Depth @ Left Edge (cm) (~4" from bank edge)		42 cm		
Depth @ Right Edge (cm) (~4" from bank edge)		24 cm		
% Veg- Left Bank*		100%		
% Veg- Right Bank*		100%		
% Canopy Over Transect Band		60%		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	100%		
	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.

Riverwalk Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 76 Date _____
 Target UTM: 453587 3759156
 Observers (writer/other) _____

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)				
Channel position (L/C/R*)				
Width of Channel (m)		16m		
Max Depth (cm) & Location in Channel (L/C/R*)		21 cm		
Depth @ Left Edge (cm) (~4" from bank edge)		21 cm		
Depth @ Right Edge (cm) (~4" from bank edge)		12 cm		
% Veg- Left Bank*		100%		
% Veg- Right Bank*		80%		
% Canopy Over Transect Band		70%		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	100%		
	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.

Riverwalk

Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 77 **Date** _____
Target UTM: 453294 3759167
Observers (writer/other) _____

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

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

Riverwalk

Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 78 Date 15 November 2022
 Target UTM: 453010 3759212
 Observers (writer/other) Dustin McLain, Ari Romo, Kadee

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		45 ³⁰⁰⁹ , 3759222		
Channel position (L/C/R*)		—		
Width of Channel (m)		45 15		
Max Depth (cm) & Location in Channel (L/C/R*)		39 L		
Depth @ Left Edge (cm) (~4" from bank edge)		9		
Depth @ Right Edge (cm) (~4" from bank edge)		15		
% Veg- Left Bank*		50	L 50% Amber	
% Veg- Right Bank*		100	50% Amber	
% Canopy Over Transect Band		15		
Should total 100%	Substrate % mud/silt	—		
	Substrate % sand	100		
	Substrate % gravel	—		
	Substrate % cobble	—		
	Substrate % boulder	—		
Photo Upstream (time & #)		✓ 8:25 AM	20221115-ACR-78-U	
Photo Downstream (time & #)		✓ 8:25 AM	20221115-ACR-78-D	
Photo Left Bank* (time & #)		✓ 8:25 AM	20221115-ACR-78-L	
Photo Right Bank* (time & #)		✓ 8:25 AM	20221115-ACR-78-R	
Photo other (describe)		—		
Notes (e.g. Islands, Obstructions)		—		

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

Riverwalk

Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 79 Date 15 Nov. 2022
 Target UTM: 452731 3759199
 Observers (writer/other) D. McLain, A. Rana, & Kerley-Schellert

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		0452718, 3759247		
Channel position (L/C/R*)				
Width of Channel (m)		19.40		
Max Depth (cm) & Location in Channel (L/C/R*)		36, L		
Depth @ Left Edge (cm) (~4" from bank edge)		6		
Depth @ Right Edge (cm) (~4" from bank edge)		7		
% Veg- Left Bank*		0 (human structure)		
% Veg- Right Bank*		0 (human structure)		
% Canopy Over Transect Band		5		
Should total 100%	Substrate % mud/silt	—		
	Substrate % sand	70		
	Substrate % gravel	20		
	Substrate % cobble	10		
	Substrate % boulder	—		
Photo Upstream (time & #)		✓ 8:56 AM	20221115-ACR-79-U	
Photo Downstream (time & #)		✓ 8:56 AM	20221115-ACR-79-D	
Photo Left Bank* (time & #)		✓ 8:56 AM	20221115-ACR-79-L	
Photo Right Bank* (time & #)		✓ 8:57 AM	20221115-ACR-79-R	
Photo other (describe)				
Notes (e.g. Islands, Obstructions)				

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

Riverwalk

Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 80 Date 15 Nov 2022
 Target UTM: 452566 3758961
 Observers (writer/other) McLain, Romo, Koelsch, Schellert

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		452525, 3758900		
Channel position (L/C/R*)				
Width of Channel (m)		22.2		
Max Depth (cm) & Location in Channel (L/C/R*)		36.7 L		
Depth @ Left Edge (cm) (~4" from bank edge)		17		
Depth @ Right Edge (cm) (~4" from bank edge)		11		
% Veg- Left Bank*		100		
% Veg- Right Bank*		70		
% Canopy Over Transect Band		5		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	60		
	Substrate % gravel	40		
	Substrate % cobble			
	Substrate % boulder			
Photo Upstream (time & #)	✓ 9:20 AM	20221115-ACR-80-U		
Photo Downstream (time & #)	✓ 9:20 AM	20221115-ACR-80-D		
Photo Left Bank* (time & #)	✓ 9:20 AM	20221115-ACR-80-L		
Photo Right Bank* (time & #)	✓ 9:20 AM	20221115-ACR-80-R		
Photo other (describe)				
Notes (e.g. Islands, Obstructions)				

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

Riverwalk

Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 81 Date 15 Nov 2022
 Target UTM: 452441 3758698
 Observers (writer/other) McLain, Kono, Koestgen-Schellmy

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		452441, 3758721		
Channel position (L/C/R*)		—		
Width of Channel (m)		16.4		
Max Depth (cm) & Location in Channel (L/C/R*)		36 L		
Depth @ Left Edge (cm) (~4" from bank edge)		31		
Depth @ Right Edge (cm) (~4" from bank edge)		9		
% Veg- Left Bank*		80		
% Veg- Right Bank*		2		
% Canopy Over Transect Band		30		
Should total 100%	Substrate % mud/silt	—		
	Substrate % sand	100		
	Substrate % gravel	—		
	Substrate % cobble	—		
	Substrate % boulder	—		
Photo Upstream (time & #)	✓ 9:38 AM	20221115-ACR-81-U		
Photo Downstream (time & #)	✓ 9:38 AM	20221115-ACR-81-D		
Photo Left Bank* (time & #)	✓ 9:38 AM	20221115-ACR-81-L		
Photo Right Bank* (time & #)	✓ 9:39 AM	20221115-ACR-81-R		
Photo other (describe)	—			
Notes (e.g. Islands, Obstructions)	—			

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

Riverwalk

Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 82 Date 15 NW 2022
 Target UTM: 452149 3758681
 Observers (writer/other) McLain, Komo, Koelke-Schellenberg

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		452151, 3758681		
Channel position (L/C/R*)		—		
Width of Channel (m)		22.8		
Max Depth (cm) & Location in Channel (L/C/R*)		42 2		
Depth @ Left Edge (cm) (~4" from bank edge)		9		
Depth @ Right Edge (cm) (~4" from bank edge)		6		
% Veg- Left Bank*		100		
% Veg- Right Bank*		5		
% Canopy Over Transect Band		20		
Should total 100%	Substrate % mud/silt	—		
	Substrate % sand	100		
	Substrate % gravel	—		
	Substrate % cobble	—		
	Substrate % boulder	—		
Photo Upstream (time & #)		✓ 9:59 AM	20221115-ACR-82-U	
Photo Downstream (time & #)		✓ 9:59 AM	20221115-ACR-82-D	
Photo Left Bank* (time & #)		✓ 10:00 AM	20221115-ACR-82-L	
Photo Right Bank* (time & #)		✓ 10:00 AM	20221115-ACR-82-R	
Photo other (describe)				
Notes (e.g. Islands, Obstructions)				

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

Riverwalk Points: Group 9

Points 78-82

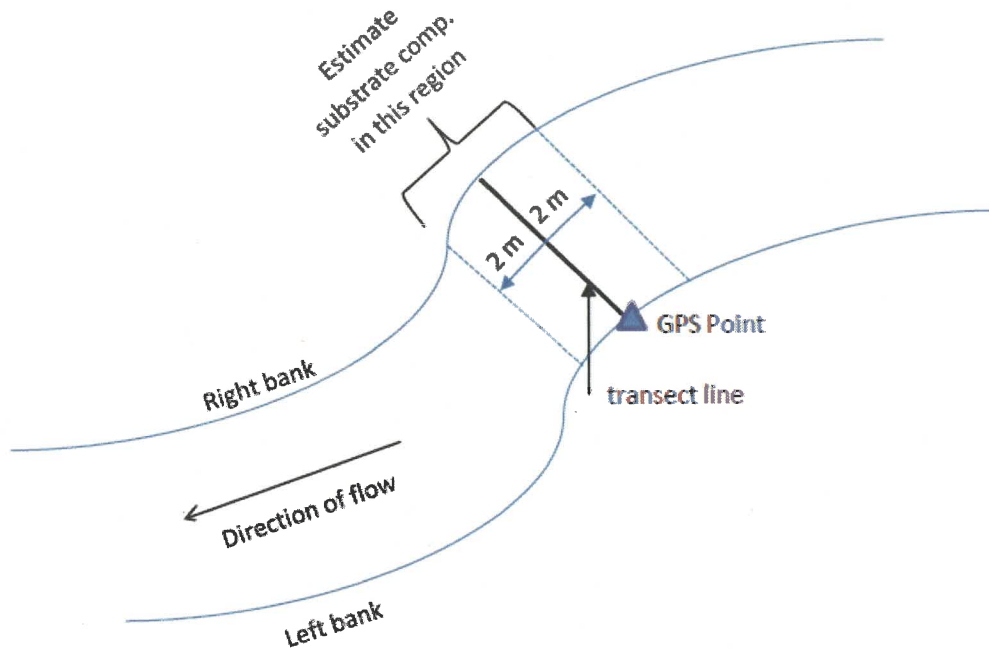


Data Collection Instructions: Locate GPS points shown on the attached Riverwalk Points Map. If the GPS Point is not in the wetted river, walk to the closest location that is in the wetted river and record on your data sheet the actual GPS location on the left bank (note: the left bank is on your left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

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

2022 115_ACR_78_U
-D
-C
-R



When You Are Done: Within a week of the survey, please return equipment and any paper datasheets to SAWPA at 11615 Sterling Ave Riverside, CA 92503. Photos will be submitted via a dropbox link that you will receive from Zyanya Ramirez (SAWPA staff).

If You Want to Drive Back to SAWPA Immediately After Your Surveying (Optional): 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.

Technical Questions: Call Cameron Macbeth at (949) 533-5749
Coordination/Logistical Issues: Call Zyanya Ramirez at (951) 354-4244

Group 9: Points 78-82

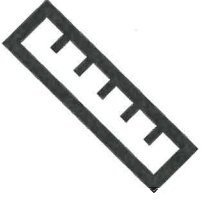
First Car Google Map Point:

<https://goo.gl/maps/JcMxjQDeFozCUmdu5>

Driving Directions (from SAWPA): 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.



Technical Questions: Call Cameron Macbeth at (949) 533-5749
Coordination/Logistical Issues: Call Zyanya Ramirez at (951) 354-4244



Gravel Bar



Gravel Bar Form

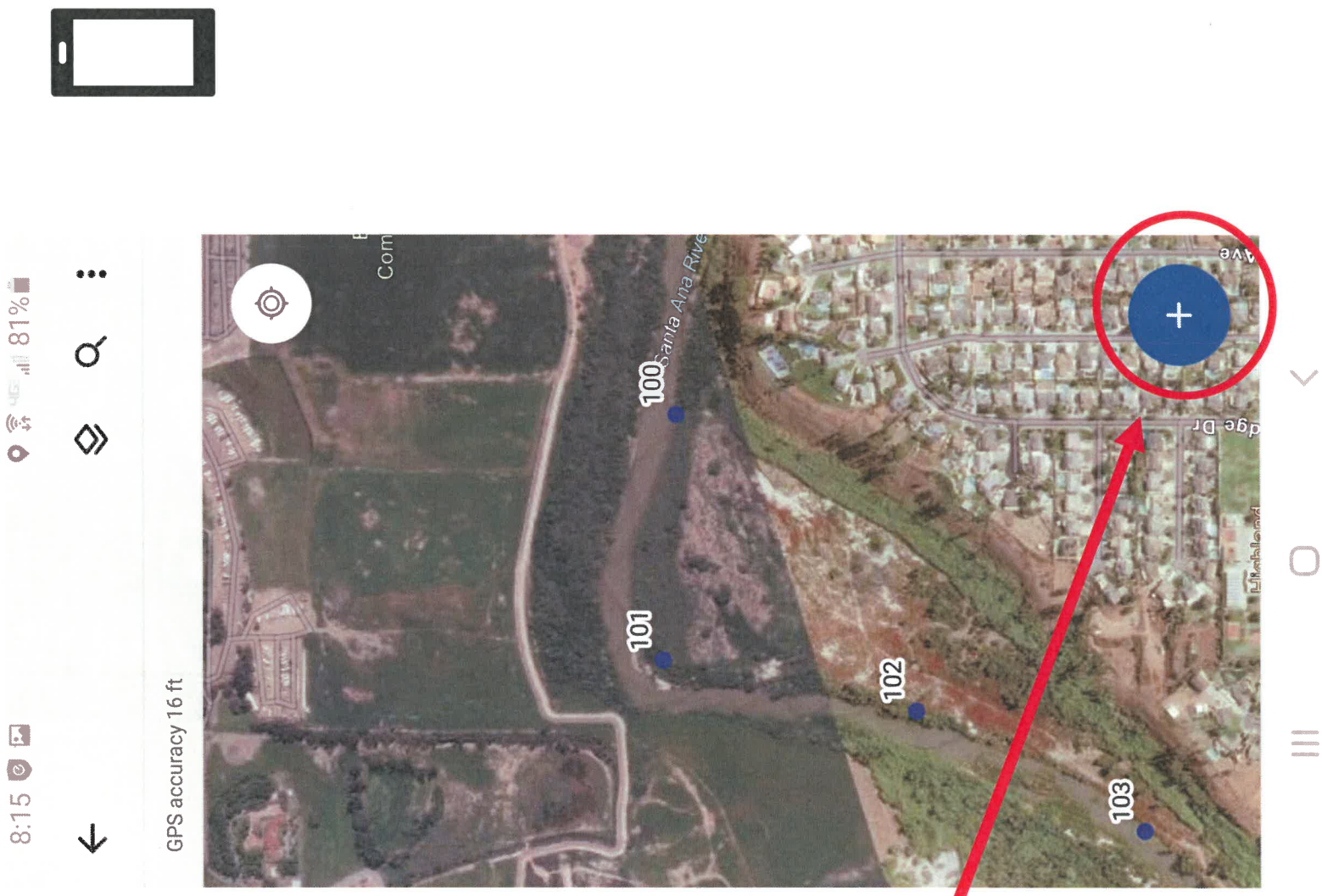
Once you hit the “+” sign, a new form will appear in the app.

Choose a size range option, depending on the square footage of the gravel bar. Just estimate square footage visually.

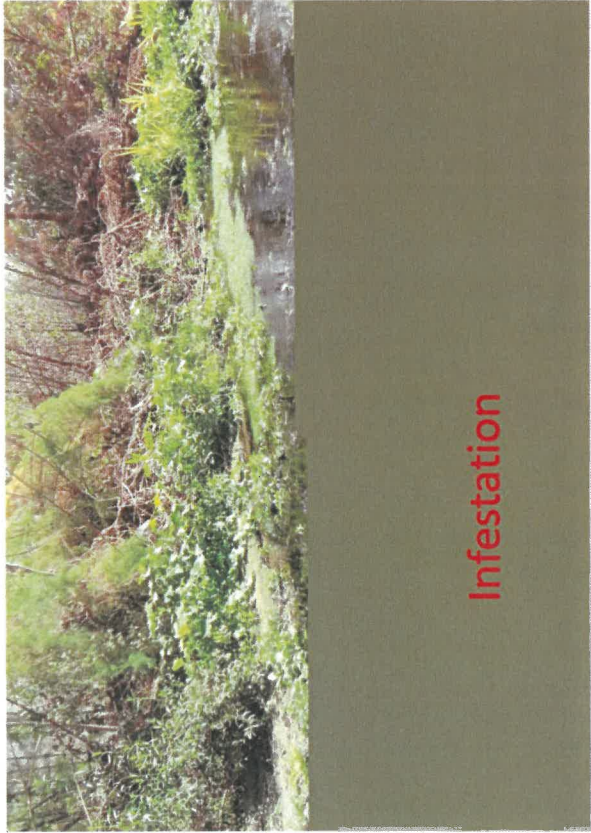
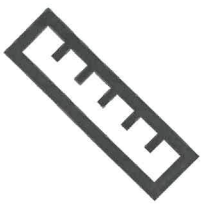
8:14 81%
Collect ✓
Gravel Bars
33.806429°N 117.827968°W
Collected By *
Person or group collecting data
Date Collected *
No value
Gravel Bar Size (meters) *
 3
 3-5
 5-10
 10-15
 > 15

Gravel Bar Option in App

As you are walking
downstream of the
point you just
surveyed, add gravel
bars by pressing “+”
sign.



Red Algae (*Compsopogon caeruleus*)



Red Algae Option in Form

If you notice red algae in your survey transect, select "Yes"

Text box is here to describe extent and/or severity.

8:13 82%
Collect
Riverwalk Transects
33.967748°N 117.514809°W

Vegetation *

Substrate Percentages *

Red Algae Present *

Yes

No

Red Algae Description Extent/Severity

Transect has second channel *

Yes

No

Second Channel Information *

Second Channel Option in Form

Toward the bottom of the form, you will see a question regarding a second channel.

If you select “Yes”, you have the ability to enter the same information you did for the first channel you collected data for.

8:13 Collect ✓

Riverwalk Transects
33.967748°N 117.514809°W

Transect has second channel *

Yes No

Second Channel Information *

Second Channel Vegetation *

Second Channel Substrate Percentages *

Second Channel Red Algae Present *

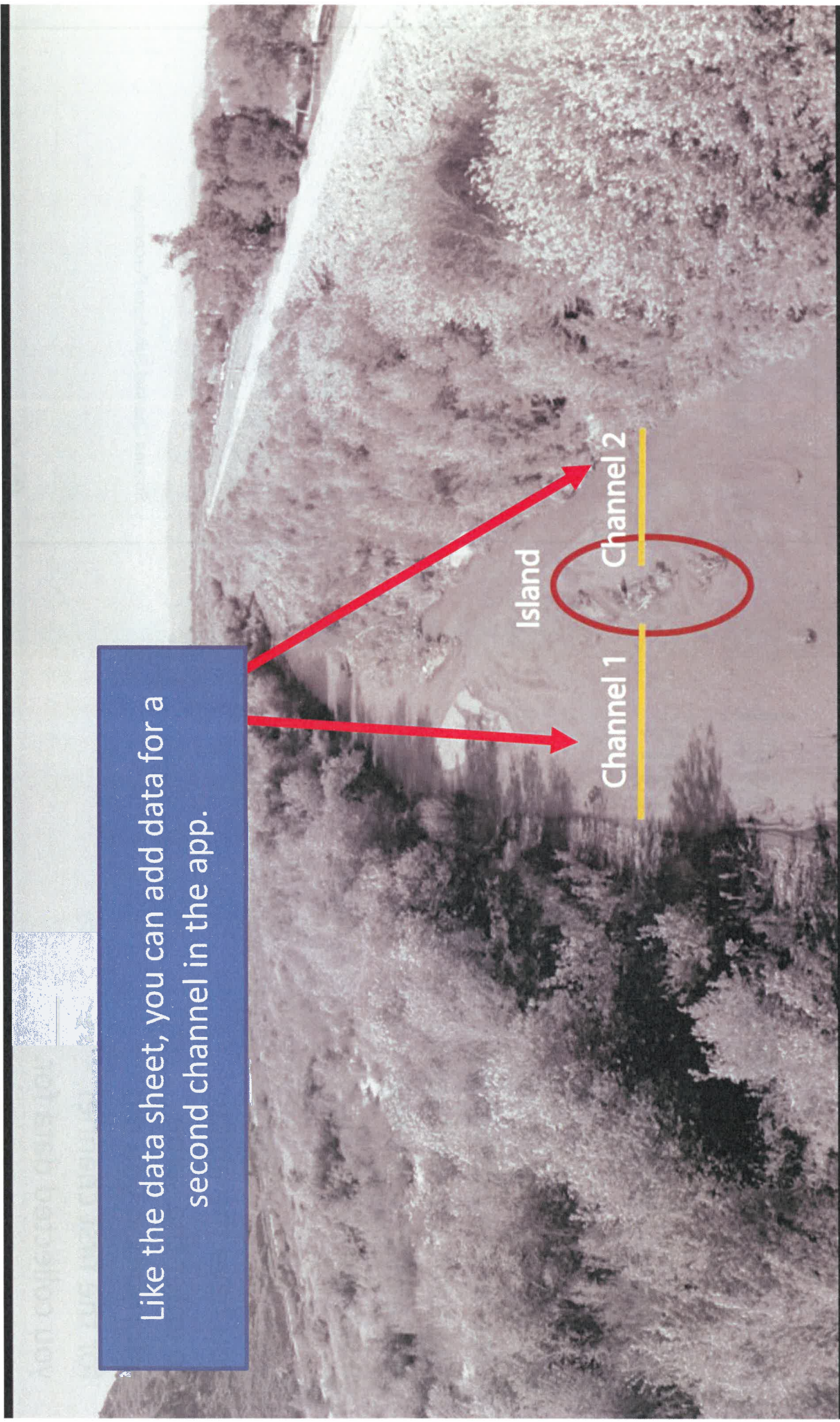
Yes No

Comments

Second Channel Option



Like the data sheet, you can add data for a second channel in the app.



How To Enter Data Into App



- When in a specific transect view, click “Edit” ,
- Then this form-like screen will appear →
- Note: You can still use the hard copy datasheet if you prefer.
- If you loose internet connection, datasheets are your backup.

10:49 79%

Collect

Riverwalk Transects
33.920037°N 117.59732°W

TAKE PHOTO ATTACH

Transect
118.0

Date Collected *

Collected By *

Channel Information *

Percent Veg Right Bank *

Percent Veg Left Bank *

III 0 <

1. Enter Data

2. Click the check mark to save



What Compass View Looks Like



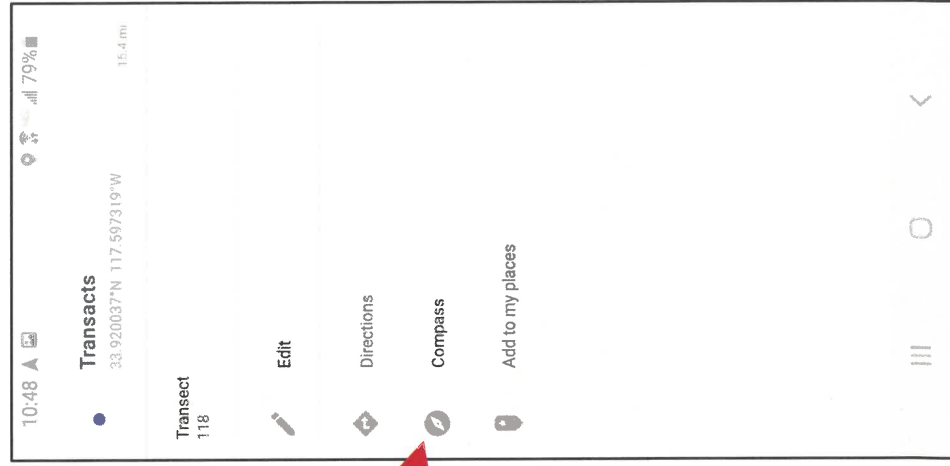
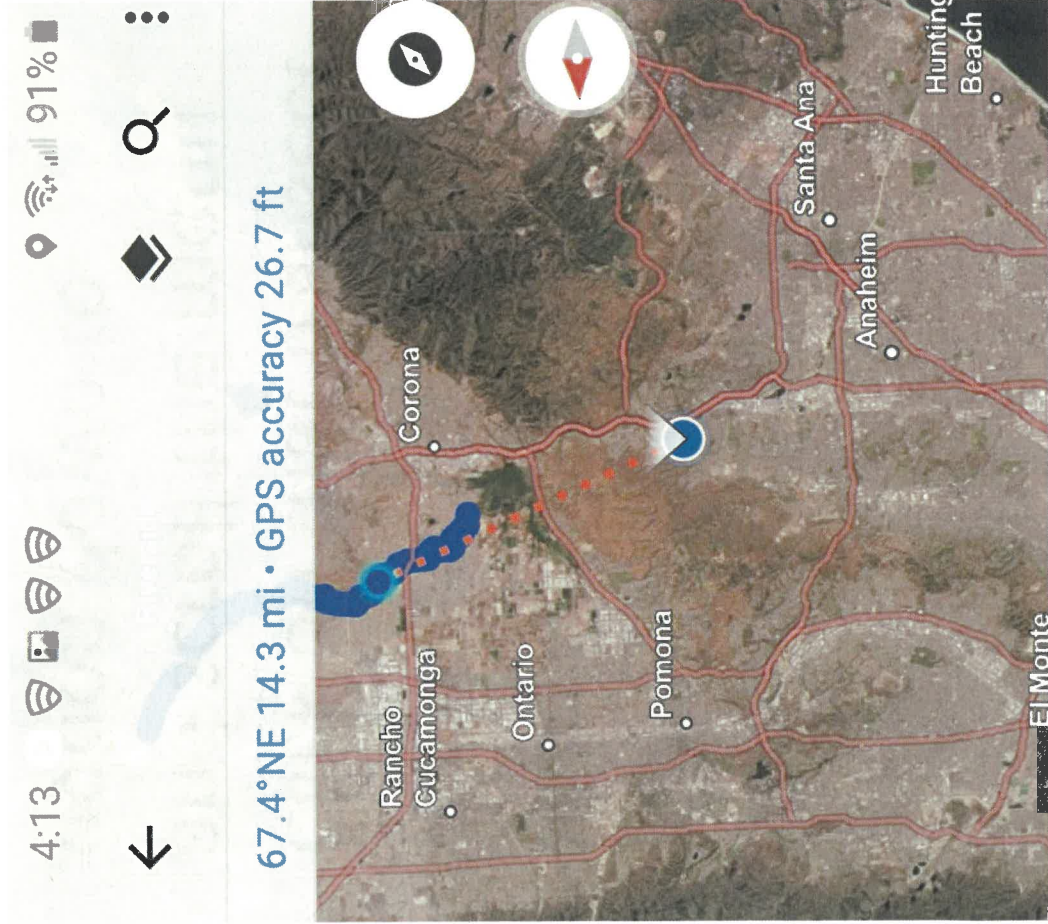
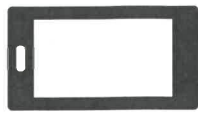
Your Transect

Path to Transect

You Are Here

Note that Compass (and the app won't work without Cellular Data)

Use Compass As You Walk to Transect



3. Click

Find Your Transect Points



- Move the map toward your section of the River and find your first transect.
- Click on that transect and scroll the menu option down to “Compass”

1. Click



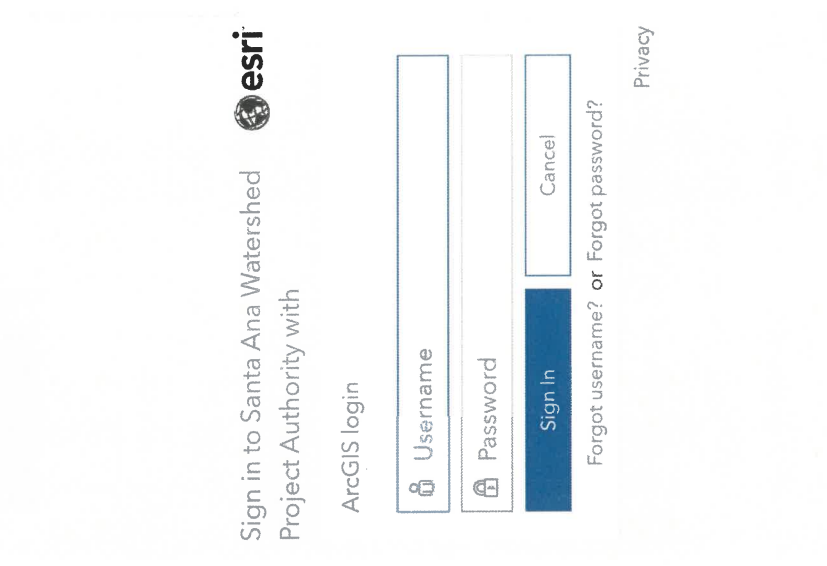
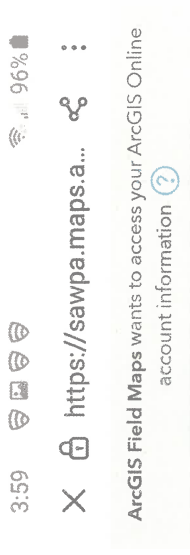
2. Scroll Down



Log In (Continued)



- ArcGIS Online Account
 - But must be an “organizational” account (i.e. from your employer)
 - Check to see if your employer has one, if they do...they need to share with you the login details.
 - If your employer doesn’t have one, **contact SAWPA.**



Log In

- When prompted open map with 'Field Maps' previously downloaded and installed
- Log In with ArcGIS Online Account



3:59 96%
X <https://sawpa.maps.a...>

ArcGIS Field Maps wants to access your ArcGIS Online account information

Sign in to Santa Ana Watershed Project Authority with

ArcGIS login

[Forgot username? or Forgot password?](#)

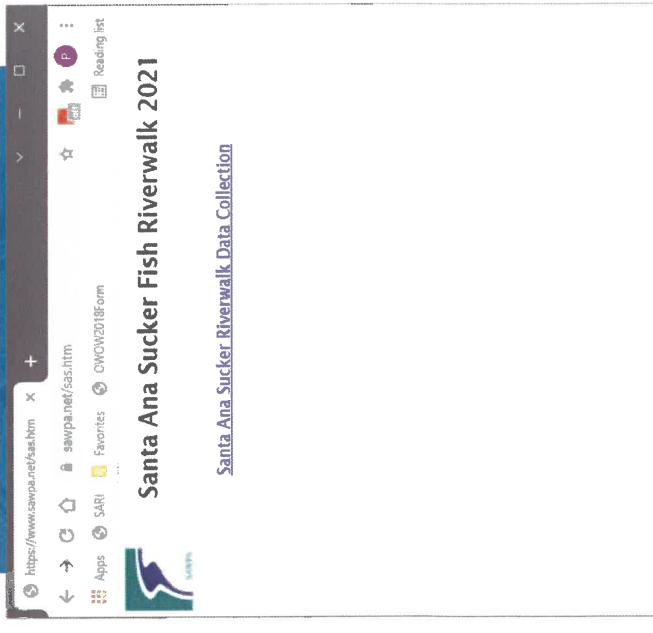
[Privacy](#)



App Information



- ArcGIS Field Maps App
 - Download from Apple or Play Store (its free)
- On your mobile device go to <https://www.sawpa.net/sas.htm>
- Click link ‘Santa Ana Sucker Riverwalk Data Collection’



Riverwalk
Santa Ana River Sucker Habitat Evaluation

Transsect Name: SAS 9 Date _____
 Target UTM: 467461
 Observers (writer/other) _____

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

Should total 100%

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

Additional Information

Please use this form to tally any gravel patches measuring a minimum of roughly 3m x 3m 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:

You May Use **Either** Datasheets or the Phone-Based Application

- Hard copies of the datasheets will be available at SAWPA when you pick up the equipment

Data Sheets and Phone-Based Application For Riverwalk 2022



Conservation Team

November 2, 2022

Riverwalk

Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 78 **Date** _____
Target UTM: 453010 **3759212**
Observers (writer/other) _____

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

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

Take with you

63521



Application for No-Fee Access Permit

Applicant Name: Ian Achimore Date: 9/14/2022

Company/Agency Name: Santa Ana Watershed Project Authority

Address: 11615 Sterling Avenue City: Riverside Zip Code: 92503

Telephone No. 951 354-4233 Mobile No. 951 202-5277

- Access to District right of way is to perform an environmental survey with results sent to the District.
- Access to District right of way is to collect water or soil samples with results sent to the District.
- Access will not involve an environmental survey or sampling.

Activity for which access is being requested (attach additional sheets as needed):
2022 Santa Ana River Habitat Survey (Riverwalk)

District facility(ies) if known, and proposed activity limits (please include an exhibit(s) showing the approximate location/boundary of the above described activity):
San Bernardino County (in Colton) downstream to River Road in Crossing in Santa Ana River; Habitat survey sampling.

Duration and timing for each individual facility for which activity under this No-Fee Access Permit is being requested (attach additional sheets as needed):

District facility(ies) being requested access to from 10/11/2022 to 11/18/2022
Start Date Completion Date

If checking out a lock key, please complete the following:

Vehicle Make & Model: NA License Plate No. NA

Please submit to the District the Access Start Notice Form (Page 6) prior to beginning activity for which access onto District right of way is being requested, if access is not going to be taken immediately.

Please do not write below this line.

Access Permit Authorization

Access Permit No. 1670 Key No. _____ Authorization Date: 10/11/2022

Facility Name: SANTA ANA RIVER Project No. 1-0-00010

Recommended for Approval: JESUS MIRANDA Expiration Date: 11/18/2022

Approval from ERS or WPD (If Required): [Signature]

Approval: [Signature]
RUDDY ARGUETA Senior Civil Engineer

Please keep a copy of this signed document while on District right of way.

Car #2



Application for No-Fee Access Permit

Applicant Name: Ian Achimore Date: 9/14/2022

Company/Agency Name: Santa Ana Watershed Project Authority

Address: 11615 Sterling Avenue City: Riverside Zip Code: 92503

Telephone No. 951 354-4233 Mobile No. 951 202-5277

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2022 Santa Ana River Habitat Survey (Riverwalk)

District facility(ies) if known, and proposed activity limits (please include an exhibit(s) showing the approximate location/boundary of the above described activity):
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District facility(ies) being requested access to from 10/11/2022 to 11/18/2022
Start Date Completion Date

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Recommended for Approval: JESUS MIRANDA Expiration Date: 11/18/2022

Approval from ERS or WPD (If Required): [Signature]

Approval: [Signature]
RUDDY ARGUETA Senior Civil Engineer

Please keep a copy of this signed document while on District right of way.



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2022 Santa Ana River Habitat Survey (Riverwalk)

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District facility(ies) being requested access to from 10/11/2022 to 11/18/2022
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Please do not write below this line.

Access Permit Authorization

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Facility Name: SANTA ANA RIVER Project No. 1-0-00010

Recommended for Approval: JESUS MIRANDA Expiration Date: 11/18/2022

Approval from ERS or WPD (If Required): [Signature]

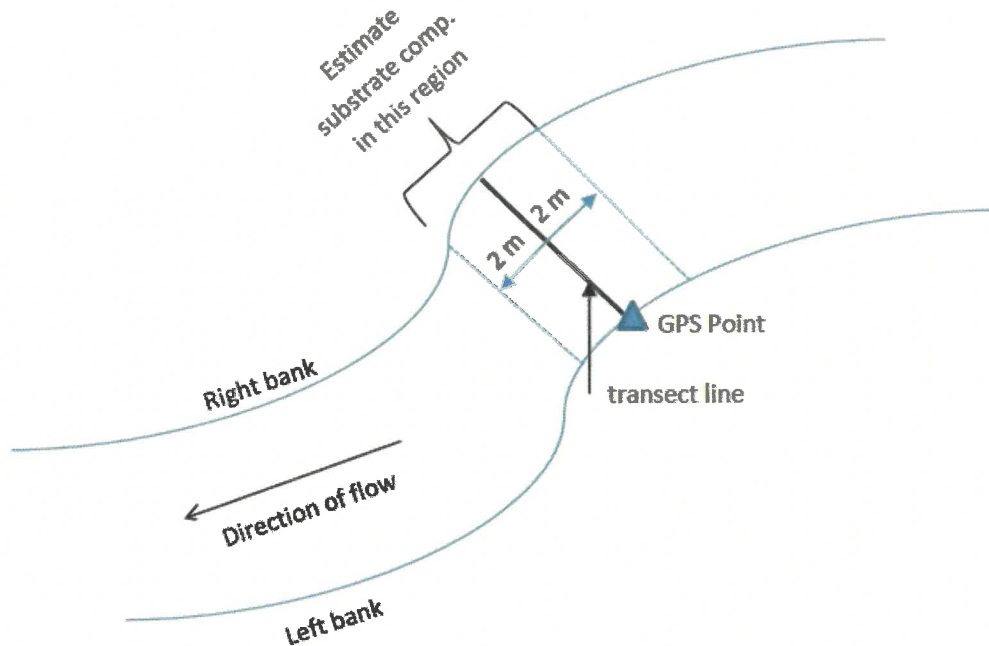
Approval: [Signature]
RUDDY ARGUETA Senior Civil Engineer

Please keep a copy of this signed document while on District right of way.

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.

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: Within a week of the survey, please return equipment and any paper datasheets to SAWPA at 11615 Sterling Ave Riverside, CA 92503. Photos will be submitted via a dropbox link that you will receive from Zyanya Ramirez (SAWPA staff).

If You Want to Drive Back to SAWPA Immediately After Your Surveying

(Optional): 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.

Technical Questions: Call Cameron Macbeth at (949) 533-5749

Coordination/Logistical Issues: Call Zyanya Ramirez at (951) 354-4244

Group 9: Points 78-82

First Car Google Map Point:

<https://goo.gl/maps/JcMxjQDeFozCUmdu5>

Driving Directions (from SAWPA): 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.



Technical Questions: Call Cameron Macbeth at (949) 533-5749

Coordination/Logistical Issues: Call Zyanya Ramirez at (951) 354-4244

Important Information



Conservation Team

- **Soft Segments:**
 - Watch out for soft spots in the river. It is not uncommon for there to be areas of “quicksand” type material that can suck you in up to your waist. It is recommended that you not walk immediately next to your group partners. That way if one of your group members starts to sink, you don’t sink too, and there is still someone there to help them if necessary.
- **Sun Safety:**
 - Be sure to wear a hat, sunglasses (polarized if possible) and sunscreen. Water intensifies the sun’s glare and can cause you to burn much quicker than on land.
- **Wearing Waders:**
 - It is **not** recommended that you wear waders for the Riverwalk. They hold the heat in and if you fall you risk the chance of them filling up with water and pulling you under. If you do chose to wear them, be sure to also wear a wader belt. This will help keep the water out or at least slow it down if you do fall. The footwear of choice seems to be water shoes or an old pair of tennis shoes.
- **Safe Surroundings:**
 - Be aware that there are swift and sometimes deep moving portions of the river. If a section is moving too fast, it is best to exit the wetted portion of the river and re-enter it downstream.
 - Be aware of your surroundings. There are many homeless people that reside in the riverbed. They usually keep to themselves, but may have a dog or two guarding their camp. Also, you may encounter feral pigs in or near the river. They are usually very skittish and will run off but be aware of your surroundings.
 - Be careful of debris in the river. There may be dangerous objects buried in the sand such as needles, cans, broken glass or other sharp objects.
 - When getting into and out of the river, be aware of stinging or biting insects such as bees and wasps that may be living or feeding in the surrounding vegetation. They may become agitated if disturbed. Also, make sure you can identify and avoid stinging nettle.



STINGING NETTLE



POISON OAK

Riverwalk Safety Sheet



Santa Ana River – Know your limits

If you've done the Riverwalk before you know how much fun it is going to be this year. However, it is important to understand and respect its hazardous nature. Remember that safety should be your first concern. Here are a few simple rules to follow while volunteering for the Riverwalk:

- Never stray from your group alone
- Be cautious and avoid approaching people living on or near the River
- Walk through water cautiously as there may be sudden drop-offs or slippery segments
- Obey all warning signs
- Avoid any large debris in the river
- Stay away from stray animals
- Watch out for tree branches
- Do not underestimate the River

Be Prepared!

Make sure you carry these items.

- A bright vest or shirt (SAWPA has extra vests if you need one)
- Laced tennis shoes that can get wet
- Backpack
- Cell phone and a sealable bag to keep it dry just in case
- Water bottle
- Sunscreen
- Hat
- Bug spray
- First aid kit
- Snacks if needed
- Waterproof camera if needed

For your safety

- Make sure you get cell phone numbers from each of your group members
- Make sure your group knows who to call in case of an emergency

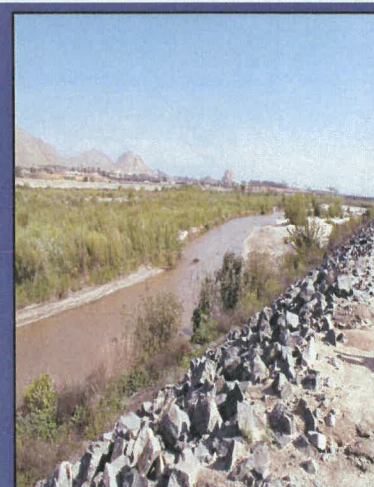


Exposure to excessive heat can lead to many illnesses. All heat illnesses should be taken seriously.

The most common illnesses include heat cramps, heat exhaustion, and heat stroke.

The Riverwalk is outside and during mosquito season (May to October).

For more information on the West Nile Virus that can be carried by mosquitoes see the following [link](#).



Keep in mind that the river has different types of terrains. You will have to walk in the wetted channel, down steep levees and through vegetation.

Riverwalk Santa Ana River Sucker Habitat Evaluation

Transsect Name: SAS 82
Target UTM: 452149

Date 3758681

Observers (writer/other)

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

Should total
100%

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

Riverwalk Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 81
 Target UTM: 452441
 Observers (writer/other) _____

Date 3758698

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

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

**Riverwalk
Santa Ana River Sucker Habitat Evaluation**

Transect Name: SAS 80
 Target UTM: 452566
 Observers (writer/other)

Date 3758961

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

Should total
100%

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

Riverwalk Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 79
 Target UTM: 452731
 Observers (writer/other) _____

Date _____
 3759199

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

Should total
100%

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



Take with you

Application for No-Fee Access Permit

Applicant Name: Ian Achimore Date: 9/14/2022

Company/Agency Name: Santa Ana Watershed Project Authority

Address: 11615 Sterling Avenue City: Riverside Zip Code: 92503

Telephone No. 951 354-4233 Mobile No. 951 202-5277

- Access to District right of way is to perform an environmental survey with results sent to the District.
- Access to District right of way is to collect water or soil samples with results sent to the District.
- Access will not involve an environmental survey or sampling.

Activity for which access is being requested (attach additional sheets as needed):

2022 Santa Ana River Habitat Survey (Riverwalk)

District facility(ies) if known, and proposed activity limits (please include an exhibit(s) showing the approximate location/boundary of the above described activity):

San Bernardino County (in Colton) downstream to River Road in Crossing in Santa Ana River; Habitat survey sampling.

Duration and timing for each individual facility for which activity under this No-Fee Access Permit is being requested (attach additional sheets as needed):

District facility(ies) being requested access to from 10/11/2022 to 11/18/2022
Start Date Completion Date

If checking out a lock key, please complete the following:

Vehicle Make & Model: NA License Plate No. NA

Please submit to the District the Access Start Notice Form (Page 6) prior to beginning activity for which access onto District right of way is being requested, if access is not going to be taken immediately.

Please do not write below this line.

Access Permit Authorization

Access Permit No. 1670 Key No. NA Authorization Date: 10/11/2022

Facility Name: SANTA ANA RIVER Project No. 1-0-00010

Recommended for Approval: JESUS MIRANDA Expiration Date: 11/18/2022

Approval from ERS or WPD (If Required): [Signature]

Approval: [Signature]
RUDDY ARGUETA Senior Civil Engineer

Please keep a copy of this signed document while on District right of way.

Car #2



Application for No-Fee Access Permit

Applicant Name: Ian Achimore Date: 9/14/2022

Company/Agency Name: Santa Ana Watershed Project Authority

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Activity for which access is being requested (attach additional sheets as needed):
2022 Santa Ana River Habitat Survey (Rivenwalk)

District facility(ies) if known, and proposed activity limits (please include an exhibit(s) showing the approximate location/boundary of the above described activity):
San Bernardino County (in Colton) downstream to River Road in Crossing in Santa Ana River; Habitat survey sampling.

Duration and timing for each individual facility for which activity under this No-Fee Access Permit is being requested (attach additional sheets as needed):

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Recommended for Approval: JESUS MIRANDA Expiration Date: 11/18/2022

Approval from ERS or WPD (If Required): [Signature]

Approval: [Signature]
RUDDY ARGUETA Senior Civil Engineer

Please keep a copy of this signed document while on District right of way.

Riverwalk Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 83

Date 11/3/22

Target UTM: 451873

3758631

Observers (writer/other)

Ryan Siless, Brooke Su, Chris Medak, Rebecca Christensen

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		S 451873 3758631		
Channel position (L/C/R*)		R		
Width of Channel (m)		24.7		
Max Depth (cm) & Location in Channel (L/C/R*)		R 43 cm		
Depth @ Left Edge (cm) (~4" from bank edge)		12.0 cm		
Depth @ Right Edge (cm) (~4" from bank edge)		9 cm		
% Veg- Left Bank*		100%		
% Veg- Right Bank*		100%		
% Canopy Over Transect Band		20%		
Should total 100%	Substrate % mud/silt	<1%		
	Substrate % sand	99+%		
	Substrate % gravel			
	Substrate % cobble			
	Substrate % boulder			
Photo Upstream (time & #)		10:23 am		
Photo Downstream (time & #)				
Photo Left Bank* (time & #)				
Photo Right Bank* (time & #)				
Photo other (describe)				
Notes (e.g. Islands, Obstructions)		arundo tule		

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

Riverwalk Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 84
Target UTM: 451638
Observers (writer/other)

Date 11/2/2022
3758497

Chris Medak, Rebecca Christensen, Ryan Siless
Brooks

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		451604 3758553		
Channel position (L/C/R*)		R		
Width of Channel (m)		32.7 M		
Max Depth (cm) & Location in Channel (L/C/R*)		21.6		
Depth @ Left Edge (cm) (~4" from bank edge)		9.4		
Depth @ Right Edge (cm) (~4" from bank edge)		17.9		
% Veg- Left Bank*		100%		
% Veg- Right Bank*		100%		
% Canopy Over Transect Band		25%		
Should total 100%	Substrate % mud/silt	6%		
	Substrate % sand	84%		
	Substrate % gravel	10%		
	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)		Island upstream of transect		

Army gravel bar

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

Riverwalk Points: Group 10

Points 83-89

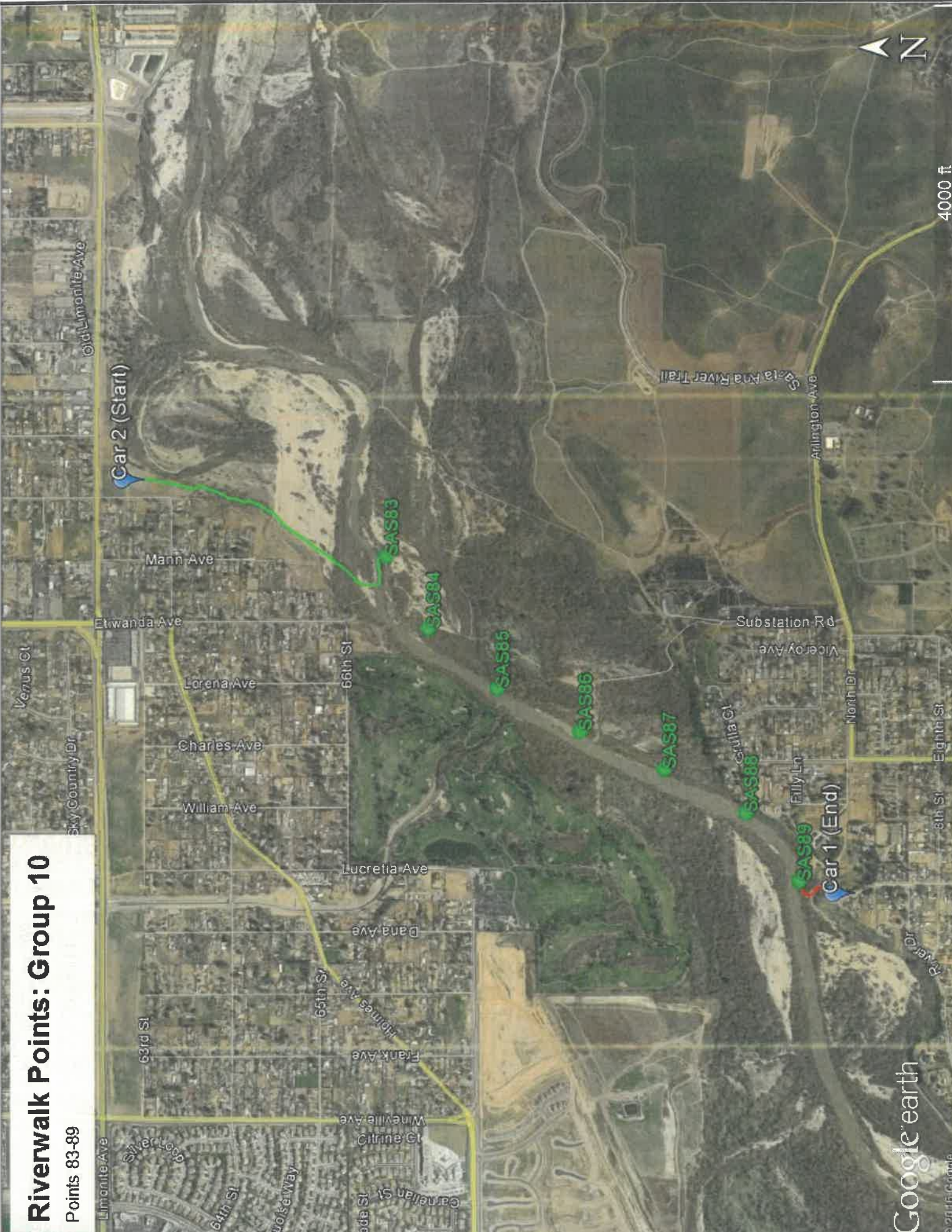
Car 2 (Start)

Car 1 (End)

- SAS83
- SAS84
- SAS85
- SAS86
- SAS87
- SAS88
- SAS89



4000 ft



Riverwalk Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 85

Date 11/2/22

Target UTM: 451443

3758279

Observers (writer/other) Chris Mezak, Rebecca Christensen, Brooke SW, Kyan Siless

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		451443 3758279		
Channel position (L/C/R*)		R		
Width of Channel (m)		27.1		
Max Depth (cm) & Location in Channel (L/C/R*)		34.5 C		
Depth @ Left Edge (cm) (~4" from bank edge)		5.5 cm		
Depth @ Right Edge (cm) (~4" from bank edge)		11.6 cm		
% Veg- Left Bank*		100%		
% Veg- Right Bank*		100%		
% Canopy Over Transect Band		22%		
Should total 100%	Substrate % mud/silt	3%		
	Substrate % sand	97%		
	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)		Solid arundo		

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

Riverwalk

Santa Ana River Sucker Habitat Evaluation

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

Date 11/2/22
 3758016

Chris Medale, Rebecca Christner, Brooke So, Ryan Sikes

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		451284 3758018		
Channel position (L/C/R*)		R		
Width of Channel (m)		33.4 m		
Max Depth (cm) & Location in Channel (L/C/R*)		L 37.5 cm		
Depth @ Left Edge (cm) (~4" from bank edge)		5.6 cm		
Depth @ Right Edge (cm) (~4" from bank edge)		21.5 cm		
% Veg- Left Bank*		100		
% Veg- Right Bank*		100		
% Canopy Over Transect Band		19 %		
Should total 100%	Substrate % mud/silt	12 %		
	Substrate % sand	88 %		
	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)		Solid Arundo on banks		

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

Riverwalk Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 87

Date 11/2/22

Target UTM: 451176

3757746

Observers (writer/other) Chris Medak, Rebecca Christensen, Brooke So, Ryan Syless

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		451147 3757753		
Channel position (L/C/R*)		C		
Width of Channel (m)		28.6		
Max Depth (cm) & Location in Channel (L/C/R*)		31.9 R		
Depth @ Left Edge (cm) (~4" from bank edge)		6.7 cm		
Depth @ Right Edge (cm) (~4" from bank edge)		34 cm		
% Veg- Left Bank*		100		
% Veg- Right Bank*		100	-100% Arundo entire section between 86-87	
% Canopy Over Transect Band		19%		
Should total 100%	Substrate % mud/silt	18%		
	Substrate % sand	82%		
	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.

Riverwalk Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 88

Date 11/2/22

Target UTM: 451034

3757486

Observers (writer/other) Chris Medak, Rebecca Christensen, Ryan Silless, Brooke S.

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		451030 3757487		
Channel position (L/C/R*)		L		
Width of Channel (m)		26.6 m		
Max Depth (cm) & Location in Channel (L/C/R*)		35 cm		
Depth @ Left Edge (cm) (~4" from bank edge)		30.8 cm		2 3 W 2 silt
Depth @ Right Edge (cm) (~4" from bank edge)		9.8 cm		
% Veg- Left Bank*		100% - grape vine	- steep bank	
% Veg- Right Bank*		100% - cattails/willows		
% Canopy Over Transect Band		19%		
Should total 100%	Substrate % mud/silt	18%		
	Substrate % sand	82%		
	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.

Riverwalk Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 89 Date 11/2/22
 Target UTM: 450811 3757313
 Observers (writer/other) Chris Medak, Rebecca Christensen, Brankesjo, Ryan Silless.

OBSERVATIONS		CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)		450811 3757313		
Channel position (L/C/R*)				
Width of Channel (m)		12.95 m		
Max Depth (cm) & Location in Channel (L/C/R*)		40.5 R		
Depth @ Left Edge (cm) (~4" from bank edge)		20.5 cm		
Depth @ Right Edge (cm) (~4" from bank edge)		30.0 cm		
% Veg- Left Bank*		100 %	-Sunflower/cattails/arundo	
% Veg- Right Bank*		~95 %	-Willows	
% Canopy Over Transect Band		24 %		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	98 %		
	Substrate % gravel			
	Substrate % cobble	2 %		
	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.

