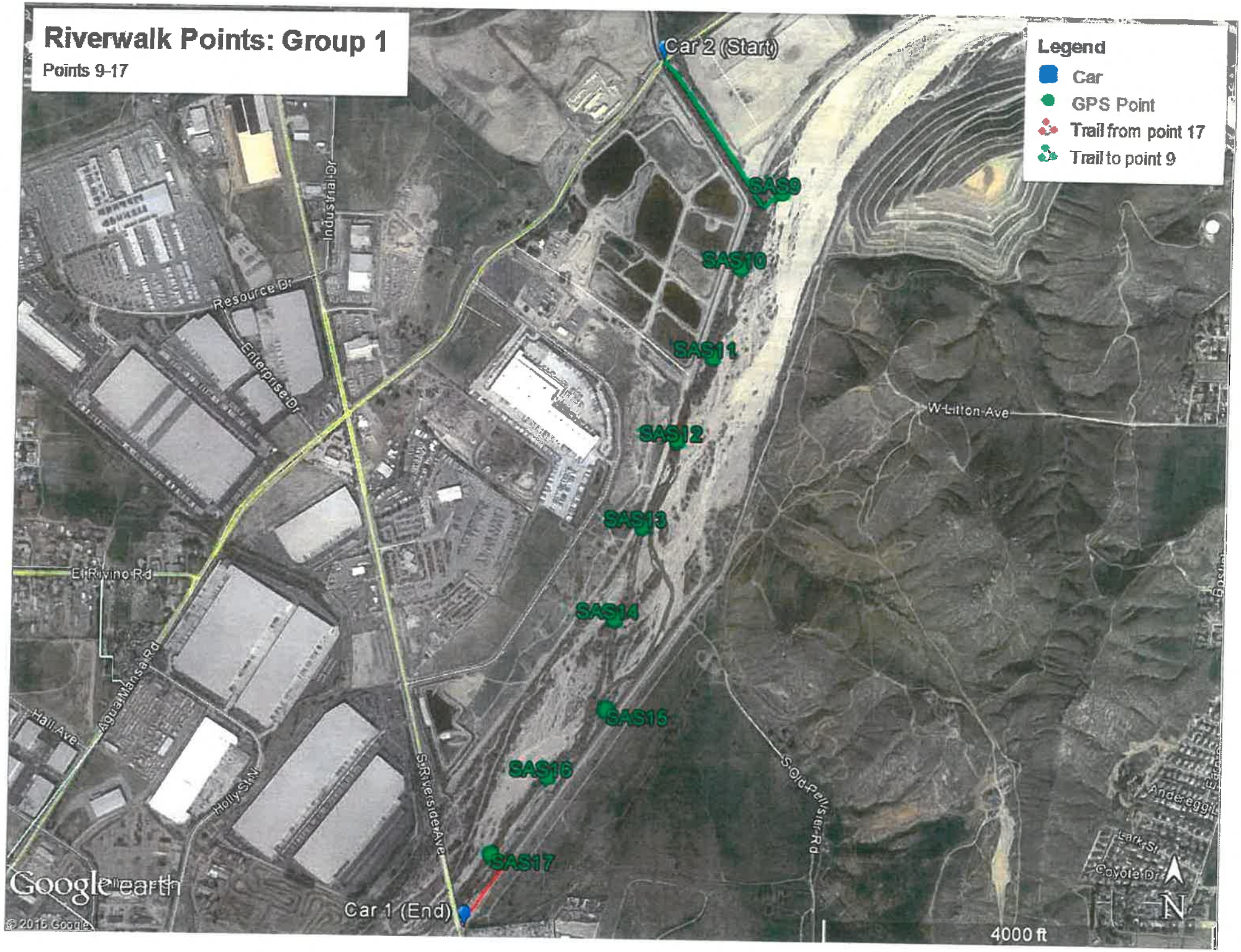
Riverwalk Points: Group 1
Points 9-17
Legend
Car
GPS Point
Trail from point 17
Trail to point 9
Car 2 (Start)
SAS9
SAS10
SAS11
SAS12
SAS13
SAS14
SAS15
SAS16
SAS17
Car 1 (End)
Industrial Dr
Resource Dr
Enterprise Dr
W Lilton Ave
El Rivino Rd
Agua Mansa Rd
Hall Ave
Holly St N
S Riverside Ave
S Old Pellissier Rd
Clark St
Coyote Dr
Google earth
© 2015 Google
4000 ft
N

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 9 **Date** 10/18/18
Target UTM: **467461** **3767169**
Observers (writer/other) NANCY HOTALING

SAS 9

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)			
Channel position (L/C/R*)	R		
Width of Channel (m)	20M		
Max Depth (cm) & Location in Channel (L/C/R*)	NO WATER N/A		
Depth @ Left Edge (cm) (~4" from bank edge)	N/A		
Depth @ Right Edge (cm) (~4" from bank edge)	N/A		
% Veg- Left Bank*	0		
% Veg- Right Bank*	0		
% Canopy Over Transect Band	0		
Should total 100% — Substrate % mud/silt			
Substrate % sand	99%		
Substrate % gravel	1%		
Substrate % cobble			
Substrate % boulder			
Photo Upstream (time & #)	9:37		
Photo Downstream (time & #)	"		
Photo Left Bank* (time & #)	"		
Photo Right Bank* (time & #)	"		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	NO WATER		

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 9 and SAS 18.
Entire reach.

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

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 10 **Date** 10/18/18
Target UTM: **467340** **3766938**
Observers (writer/other) NANCY HOTALING

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)			
	Channel position (L/C/R*)	R		
	Width of Channel (m)	11.8 M		
	Max Depth (cm) & Location in Channel (L/C/R*)	43M		
	Depth @ Left Edge (cm) (~4" from bank edge)	15 M		
	Depth @ Right Edge (cm) (~4" from bank edge)	8m C		
	% Veg- Left Bank*	30%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	65%		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	90%		
	Substrate % gravel	10%		
	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	10 AM		
	Photo Downstream (time & #)	"		
	Photo Left Bank* (time & #)	"		
	Photo Right Bank* (time & #)	"		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	Significant Trash deposits		

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 11 **Date** 10/18/18
Target UTM: **467256** **3766659**
Observers (writer/other) NANCY HOTALING

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)			
	Channel position (L/C/R*)	R		
	Width of Channel (m)	5.5 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	69M C		
	Depth @ Left Edge (cm) (~4" from bank edge)	10		
	Depth @ Right Edge (cm) (~4" from bank edge)	48M		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	95%		
	% Canopy Over Transect Band	40%		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	100%		
	Substrate % gravel			
	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	10:35Am		
	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.

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.
several patches gravel & cobble

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

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 12 **Date** 10/18/18
Target UTM: 467150 3766398
Observers (writer/other) NANCY HOTALING

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)			
	Channel position (L/C/R*)	R		
	Width of Channel (m)	7.3M		
	Max Depth (cm) & Location in Channel (L/C/R*)	~~7.3M~~ 37 CM		
	Depth @ Left Edge (cm) (~4" from bank edge)	16 CM		
	Depth @ Right Edge (cm) (~4" from bank edge)	~~16MM~~ CM		
	% Veg- Left Bank*			
	% Veg- Right Bank*			
	% Canopy Over Transect Band	85%		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	5%		
	Substrate % gravel	90%		
	Substrate % cobble	5%		
	Substrate % boulder			
	Photo Upstream (time & #)	11:09		
	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.

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.

Lg patch of gravel & cobble

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 13 **Date** 10/18/18
Target UTM: **467044** **3766133**
Observers (writer/other) NANCY HOTALING

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)			
	Channel position (L/C/R*)	R	R	
	Width of Channel (m)	6.3	4	
	Max Depth (cm) & Location in Channel (L/C/R*)	20	41 R	
	Depth @ Left Edge (cm) (~4" from bank edge)	19	6	
	Depth @ Right Edge (cm) (~4" from bank edge)	15	16	
	% Veg- Left Bank*	100	30	
	% Veg- Right Bank*	100	80	
	% Canopy Over Transect Band	10	90	
Should total 100%	Substrate % mud/silt			
	Substrate % sand	10	40	
	Substrate % gravel	90	60	
	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	11:40	11:41	
	Photo Downstream (time & #)	"	"	
	Photo Left Bank* (time & #)	"	"	
	Photo Right Bank* (time & #)	"	"	
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	Island		

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 14 **Date** 10/18/18
Target UTM: 466961 3765847
Observers (writer/other) NANCY HOTALING

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)			
	Channel position (L/C/R*)	C		
	Width of Channel (m)	8.6		
	Max Depth (cm) & Location in Channel (L/C/R*)	38		
	Depth @ Left Edge (cm) (~4" from bank edge)	19		
	Depth @ Right Edge (cm) (~4" from bank edge)	4		
	% Veg- Left Bank*	80%		
	% Veg- Right Bank*	95%		
	% Canopy Over Transect Band	95		
Should total 100%	Substrate % mud/silt	5%		
	Substrate % sand	14%		
	Substrate % gravel	80%		
	Substrate % cobble	1%		
	Substrate % boulder	~~80~~		
	Photo Upstream (time & #)	12:19		
	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.

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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 15 **Date** 10/18/18
Target UTM: **466938** **3765563**
Observers (writer/other) NANCY HOTALING

WAYPOINT 013

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	34.0303°N 117.6396°W		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	4.6		
	Max Depth (cm) & Location in Channel (L/C/R*)	1M		
	Depth @ Left Edge (cm) (~4" from bank edge)	10		
	Depth @ Right Edge (cm) (~4" from bank edge)	11		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	30		
Should total 100%	Substrate % mud/silt	≤ 10%		
	Substrate % sand	≤ 10%		
	Substrate % gravel	80%		
	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	12:40 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.

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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 16 **Date** 10/18/18
Target UTM: **466759** **3765354**
Observers (writer/other) NANCY HOTALING

34.0284° N
117.3608 W
W.P. 014

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)			
	Channel position (L/C/R*)	C		
	Width of Channel (m)	3.5		
	Max Depth (cm) & Location in Channel (L/C/R*)	17		
	Depth @ Left Edge (cm) (~4" from bank edge)	7		
	Depth @ Right Edge (cm) (~4" from bank edge)	9		
	% Veg- Left Bank*	50%		
	% Veg- Right Bank*	60%		
	% Canopy Over Transect Band	40%		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	30%		
	Substrate % gravel	70%		
	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	1:00 PM		
	Photo Downstream (time & #)	"		
	Photo Left Bank* (time & #)	"		
	Photo Right Bank* (time & #)	"		
	Photo other (describe)	"		
	Notes (e.g. Islands, Obstructions)	low flow split between 13+14 we took left		

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 17 **Date** 10/18/18
Target UTM: 466587 3765111
Observers (writer/other)_____

34.0264° N
117.3626 W.
WP. 015

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)			
Channel position (L/C/R*)	C		
Width of Channel (m)	11		
Max Depth (cm) & Location in Channel (L/C/R*)	28		
Depth @ Left Edge (cm) (~4" from bank edge)	9		
Depth @ Right Edge (cm) (~4" from bank edge)	20		
% Veg- Left Bank*	100%		
% Veg- Right Bank*	100%		
% Canopy Over Transect Band	25%		
Should total 100% — Substrate % mud/silt	5%		
Substrate % sand	25%		
Substrate % gravel	70		
Substrate % cobble			
Substrate % boulder			
Photo Upstream (time & #)	1:11 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.

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:

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


Riverwalk Points: Group 2
Points 18-26
Car 2 (Start)
SAS18
SAS19
SAS20
SAS21
SAS22
SAS23
SAS24
SAS25
SAS26
Car 1 (End)
S Brown Ave
Holly St N
S Riverside Ave
Security Ave
Pellisier Rd
W Center St
Placentia Ln
Via Ricardo
Fleetwood Dr
Via Cerro
Garner Rd
Garner Cove
Jenkins Ln
Fallon Rd
Snake River Dr
Carter Ave
Stanley Ct
Will Ave
Paloma Rd
Bell Ave
24th St
Market St
S Salmon River Rd
Rivera St
Suwannee St
Greenwich Dr
Marymount St
Boise St
Strawberry St
Weyer St
Hale St
Castledale St
Columbia Ave
Main St
Sophia Ct
Market Street
3000 ft
N
Google earth
© 2016 Google

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 18 **Date** 10-18-18
Target UTM: **466399** **3764883**
Observers (writer/other) Emily Hockman

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	466362 3764888		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	5.8		
	Max Depth (cm) & Location in Channel (L/C/R*)	C 39 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	4cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	6cm		
	% Veg- Left Bank*	60%		
	% Veg- Right Bank*	90%		
	% Canopy Over Transect Band	30%		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	35		
	Substrate % gravel	30		
	Substrate % cobble	35		
	Substrate % boulder			
	Photo Upstream (time & #)	9:46a		
	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.

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:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 19 **Date** 10-18-18
Target UTM: **466227** **3764671**
Observers (writer/other) Emily Hackman

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	466221 3764672	/	/
	Channel position (L/C/R*)	R		
	Width of Channel (m)	13.1 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	L 22 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	18cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	5 cm		
	% Veg- Left Bank*	50		
	% Veg- Right Bank*	95		
	% Canopy Over Transect Band	8		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	40		
	Substrate % gravel	59		
	Substrate % cobble	1		
	Substrate % boulder	0		
	Photo Upstream (time & #)	10 —		
	Photo Downstream (time & #)	↓		
	Photo Left Bank* (time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	40 x 60 m shallow gravel bar		

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 20 **Date** 10-18-18
Target UTM: **466104** **3764403**
Observers (writer/other) Emily Hockman

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	466092 3764405		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	7.5		
	Max Depth (cm) & Location in Channel (L/C/R*)	R 41 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	8.5 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	31 cm		
	% Veg- Left Bank*			
	% Veg- Right Bank*			
	% Canopy Over Transect Band	70% (25% just downed bat living willow)	0	
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	15		
	Substrate % gravel	80		
	Substrate % cobble	5		
	Substrate % boulder	0		
	Photo Upstream (time & #)	10:17		
	Photo Downstream (time & #)	↓		
	Photo Left Bank* (time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	see above		

*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 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:

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 21 **Date** 10-18-18
Target UTM: 465953 3764146
Observers (writer/other) Emily Hackman

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	465949 3764148		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	6.7m		
	Max Depth (cm) & Location in Channel (L/C/R*)	30cm R		
	Depth @ Left Edge (cm) (~4" from bank edge)	3 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	/		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	35%		
Should total 100%	Substrate % mud/silt	<1		
	Substrate % sand	95		
	Substrate % gravel	5		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	10:37		
	Photo Downstream (time & #)	↓		
	Photo Left Bank* (time & #)	↓		
	Photo Right Bank* (time & #)	↓		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	Right bank obscured		

*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 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:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 22 **Date** 10-18-18
Target UTM: **465757** **3763921**
Observers (writer/other) Emily

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	465761 3763926	465753 3763935	
	Channel position (L/C/R*)	C	R	
	Width of Channel (m)	6.8	3.2	
	Max Depth (cm) & Location in Channel (L/C/R*)	21 cm	31 cm	
	Depth @ Left Edge (cm) (~4" from bank edge)	3cm	2 cm	
	Depth @ Right Edge (cm) (~4" from bank edge)	3cm	12 cm	
	% Veg- Left Bank*	100%	20%	
	% Veg- Right Bank*	45%	40%	
	% Canopy Over Transect Band	15%	25%	
Should total 100%	Substrate % mud/silt	0	0	
	Substrate % sand	25%	65	
	Substrate % gravel	25%	5	
	Substrate % cobble	50%	30	
	Substrate % boulder	0	0	
	Photo Upstream (time & #)	10:50	10:52	
	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.

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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 23 **Date** 10-18-18
Target UTM: 465548 . 3763710
Observers (writer/other) Emily Hackman

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	465538 3763712		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	7.1		
	Max Depth (cm) & Location in Channel (L/C/R*)	C 34 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	5cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	27cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	7%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	85 (coarse)		
	Substrate % gravel	10		
	Substrate % cobble	5		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:03		
	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.

465711 3763905 gravel bars

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:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 24 **Date** 10-18-18
Target UTM: **465400** **3763456**
Observers (writer/other) Emily Hackman

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	465392 3763458		
	Channel position (L/C/R*)	center		
	Width of Channel (m)	8-m		
	Max Depth (cm) & Location in Channel (L/C/R*)	L 34cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	9cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	15cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	15%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	95%		
	Substrate % gravel	5%		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:24		
	Photo Downstream (time & #)	↓		
	Photo Left Bank* (time & #)	↓		
	Photo Right Bank* (time & #)	↓		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	scooter ~10m upstream		

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

gravel bar @ 0465464 3763539 also lots of cobble

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
11	15m+

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 25 **Date** 10-18-18
Target UTM: **465129** **3763345**
Observers (writer/other) Emily Hockman

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	465114 3763346		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	11.1 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	C 23cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	3cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	4cm		
	% Veg- Left Bank*	60%		
	% Veg- Right Bank*	95%		
	% Canopy Over Transect Band	65%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	70		
	Substrate % gravel	30		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:40		
	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.

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:

_____
_____
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_____
_____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 26 **Date** 6-18-17
Target UTM: 464939 3763126
Observers (writer/other) Emily Hackman

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	464934 3763128		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	8.3		
	Max Depth (cm) & Location in Channel (L/C/R*)	C 27cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	7cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	9cm		
	% Veg- Left Bank*	35%		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	15%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	97		
	Substrate % gravel	3		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:52		
	Photo Downstream (time & #)	↓		
	Photo Left Bank* (time & #)			
	Photo Right Bank* (time & #)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

Bridge to encampment just 5m upstream

*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 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:

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


Riverwalk Points: Group 3
Points 27-34
SAS27
Car 2 (Start)
Julia-Way
Sophia-Ct
River-a-St
Strong-St
Sunup-Cir
Devon-Port-Way
Allstate-Dr
Wallace-St
Frontage-Rd
30th-St
Hall-Ave
SAS28
SAS29
Latham-St
Fairgrounds
60
Field-Ln
Circle-Lazy-J-Rd
SAS30
Bowling-Green-Dr
Dexter-Dr
34th-St
35th-St
36th-St
Odell-St
37th-St
SAS31
SAS32
Banks-Dr
Fairmount-Ct
Ridge-Rd
Brockton-Ave
Randall-Rd
Pine-St
Honghs-Ave
Lakehill-Pl
Mission-Blvd
SAS33
SAS34
Car 1 (End)
Indian-Hill-Rd
Beacon-Way
Terrace-Ln
3rd-St
Cedar-St
Locust-St
2nd-St
1st-St
Chestnut-St
Fairmount-Blvd
4th-St
Market-Street
Westmoor-Rd
Google earth
© 2016 Google
N
3000 ft

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 27 **Date** 10/18/18
Target UTM: **464730** 3762923
Observers (writer/other) Amanda Swaller, Melissa Matlock
Michael Viramontes, Ryan Lawler

6.1 m

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11504647	3762931	
	Channel position (L/C/R*)	~~C~~		
	Width of Channel (m)	6.1		
	Max Depth (cm) & Location in Channel (L/C/R*)	47		
	Depth @ Left Edge (cm) (~4" from bank edge)	1.0 ~~cm~~		
	Depth @ Right Edge (cm) (~4" from bank edge)	28.5		
	% Veg- Left Bank*	0		
	% Veg- Right Bank*	60		
	% Canopy Over Transect Band	20		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	~~60~~ 80		
	Substrate % gravel	~~5~~ 15		
	Substrate % cobble	~~15~~ 5		
	Substrate % boulder	0		
	Photo Upstream (time & #)	9:56		
	Photo Downstream (time & #)	9:56		
	Photo Left Bank* (time & #)	9:56		
	Photo Right Bank* (time & #)	9:56		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	NA		

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 28 **Date**_____
Target UTM: **464595** **3762657**
Observers (writer/other)_____

1.8 cm depth of submersed sandbar

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	#15 0446584 3762665		
	Channel position (L/C/R*)			
	Width of Channel (m)	13.55		
	Max Depth (cm) & Location in Channel (L/C/R*)	2 maximums in same channel 18.5 / 19		
	Depth @ Left Edge (cm) (~4" from bank edge)	1.6		
	Depth @ Right Edge (cm) (~4" from bank edge)	6.5		
	% Veg- Left Bank*	0		
	% Veg- Right Bank*	0		
	% Canopy Over Transect Band	0 (Bridge)		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	70		
	Substrate % gravel	20		
	Substrate % cobble	10		
	Substrate % boulder	0		
	Photo Upstream (time & #)	10:17		
	Photo Downstream (time & #)	10:17		
	Photo Left Bank* (time & #)	10:17		
	Photo Right Bank* (time & #)	10:17		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	Sandbar but submerged depth of water 1.8cm		

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 29 **Date**_____
Target UTM: **464539** **3762368**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0464529 3762367		
	Channel position (L/C/R*)	/		
	Width of Channel (m)	12.5		
	Max Depth (cm) & Location in Channel (L/C/R*)	15.		
	Depth @ Left Edge (cm) (~4" from bank edge)	~~Dry~~ 2.0		
	Depth @ Right Edge (cm) (~4" from bank edge)	10 → 25.0		
	% Veg- Left Bank*	80		
	% Veg- Right Bank*	85		
	% Canopy Over Transect Band	10		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	60		
	Substrate % gravel	35		
	Substrate % cobble	5		
	Substrate % boulder			
	Photo Upstream (time & #)	10:35		
	Photo Downstream (time & #)	10:35		
	Photo Left Bank* (time & #)	10:35		
	Photo Right Bank* (time & #)	10:35		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

_____ _____
_____ _____
_____ _____
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_____ _____
_____ _____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 30 **Date**_____
Target UTM: **464467** **3762083**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0464456 3762088		
	Channel position (L/C/R*)	/		
	Width of Channel (m)	7.7		
	Max Depth (cm) & Location in Channel (L/C/R*)	22 (C)		
	Depth @ Left Edge (cm) (~4" from bank edge)	4.8		
	Depth @ Right Edge (cm) (~4" from bank edge)	~~7.75~~ 20.0		
	% Veg- Left Bank*	75		
	% Veg- Right Bank*	80		
	% Canopy Over Transect Band	10		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	40		
	Substrate % gravel	30		
	Substrate % cobble	30		
	Substrate % boulder			
	Photo Upstream (time & #)	10:52		
	Photo Downstream (time & #)	10:52		
	Photo Left Bank* (time & #)	10:52		
	Photo Right Bank* (time & #)	10:52		
	Photo other (describe)	1		
	Notes (e.g. Islands, Obstructions)			

*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 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:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 31 **Date**_____
Target UTM: **464296** **3761837**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0464291 3761845		
	Channel position (L/C/R*)			
	Width of Channel (m)	8.8		
	Max Depth (cm) & Location in Channel (L/C/R*)	~~8~~ 23 Center		
	Depth @ Left Edge (cm) (~4" from bank edge)	25.5		
	Depth @ Right Edge (cm) (~4" from bank edge)	5.0		
	% Veg- Left Bank*	55		
	% Veg- Right Bank*	~~25~~ 20		
	% Canopy Over Transect Band	5		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	85		
	Substrate % gravel	15		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:03		
	Photo Downstream (time & #)	11:03		
	Photo Left Bank* (time & #)	11:03		
	Photo Right Bank* (time & #)	11:03		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 32 **Date**_____
Target UTM: **464096** **3761623**
Observers (writer/other)_____

all 3

	OBSERVATIONS	CHANNEL #1 (L)	CHANNEL #2 (C)	CHANNEL #3 (R)
	Actual GPS coordinates in UTM (@ Left Bank*)	~~11S~~ 11S 0464117 3761596	11S 0464115 3761600	11S 0464107 ~~3761610~~
	Channel position (L/C/R*)	L	C	R
	Width of Channel (m)	~~19.45~~ 5.7	8.1	2.0
	Max Depth (cm) & Location in Channel (L/C/R*)	~~22~~ 5 (L)	22 (C)	20 (C)
	Depth @ Left Edge (cm) (~4" from bank edge)	2	11.0	9
	Depth @ Right Edge (cm) (~4" from bank edge)	1.4	5	13
	% Veg- Left Bank*	30	20	0
	% Veg- Right Bank*	0	0	80
	% Canopy Over Transect Band	60	0	50
Should total 100%	Substrate % mud/silt	45	0	0
Should total 100%	Substrate % sand	55	50	100
Should total 100%	Substrate % gravel	5	20	0
Should total 100%	Substrate % cobble	0	30	0
Should total 100%	Substrate % boulder	0	0	0
	Photo Upstream (time & #)	11:30	11:30	11:30
	Photo Downstream (time & #)	11:30	11:30	11:30
	Photo Left Bank* (time & #)	11:30	11:30	11:30
	Photo Right Bank* (time & #)	11:30	11:30	11:30
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 33 **Date**_____
Target UTM: **463908** **3761402**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	115 0463897 3761381		
	Channel position (L/C/R*)	/		
	Width of Channel (m)	5.4		
	Max Depth (cm) & Location in Channel (L/C/R*)	~~28 (C)~~ 47.5 (L)		
	Depth @ Left Edge (cm) (~4" from bank edge)	~~8~~ 5.0		
	Depth @ Right Edge (cm) (~4" from bank edge)	31.0		
	% Veg- Left Bank*	0		
	% Veg- Right Bank*	30		
	% Canopy Over Transect Band	X ~~5~~ 0		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	X ~~80~~ 75		
	Substrate % gravel	10		
	Substrate % cobble	10		
	Substrate % boulder	5		
	Photo Upstream (time & #)	12:01		
	Photo Downstream (time & #)	12:01		
	Photo Left Bank* (time & #)	12:01		
	Photo Right Bank* (time & #)	12:01		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 34 **Date**_____
Target UTM: **463646** **3761265**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0463644 3761286		
	Channel position (L/C/R*)			
	Width of Channel (m)	12.6		
	Max Depth (cm) & Location in Channel (L/C/R*)	23.0 (C)		
	Depth @ Left Edge (cm) (~4" from bank edge)	0.1		
	Depth @ Right Edge (cm) (~4" from bank edge)	21.0		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	40		
Should total 100%	Substrate % mud/silt	10		
	Substrate % sand	85		
	Substrate % gravel	5		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	12:14		
	Photo Downstream (time & #)	12:14		
	Photo Left Bank* (time & #)	12:14		
	Photo Right Bank* (time & #)	12:14		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

Additional Information

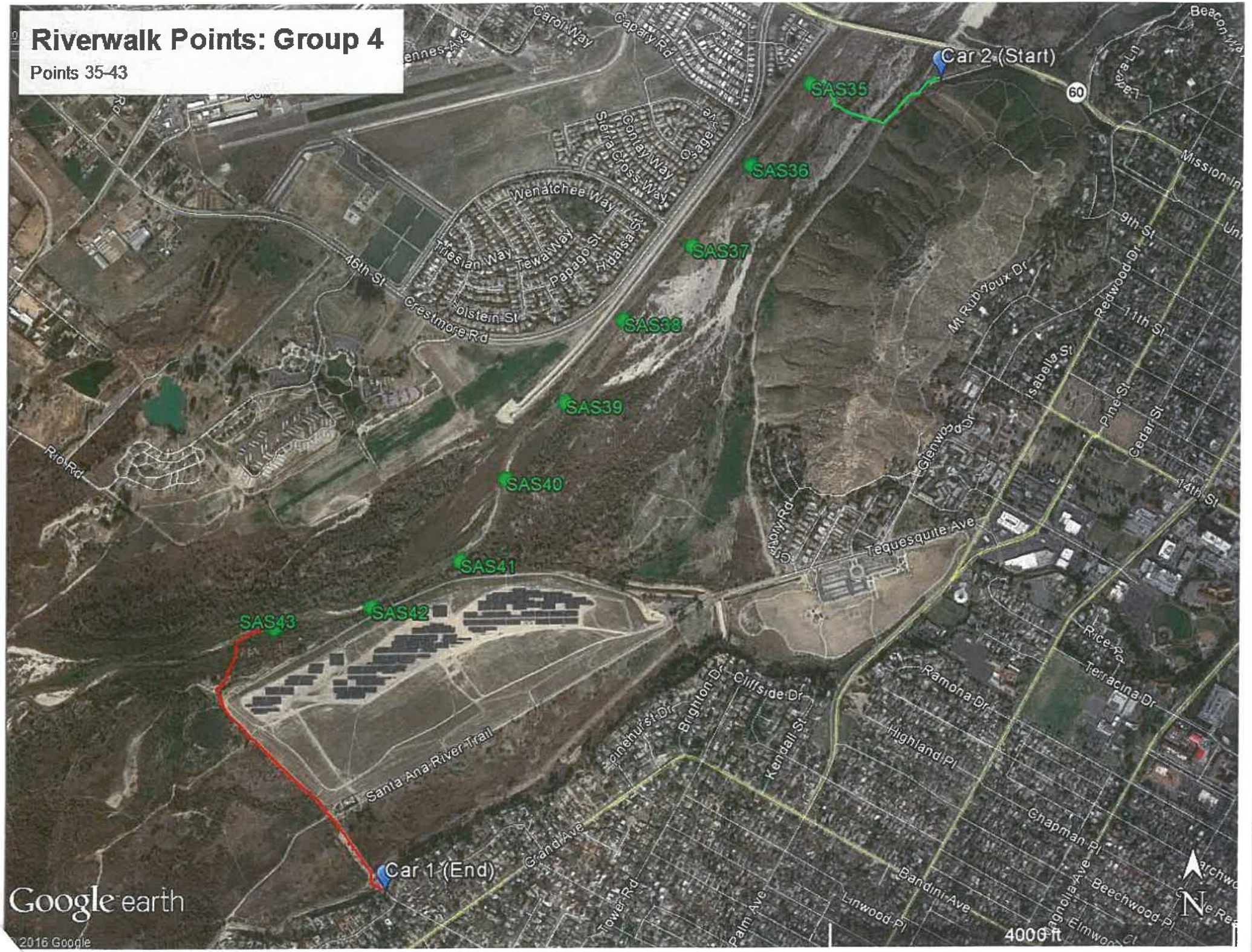
Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

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:

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


Riverwalk Points: Group 4
Points 35-43
Car 2 (Start)
SAS35
SAS36
SAS37
SAS38
SAS39
SAS40
SAS41
SAS42
SAS43
Car 1 (End)
Carol Way
Gapary Rd
Sierra Cross Way
Contay Way
Osage Ave
Wenatchee Way
Tiffslan Way
Tewa Way
Papago St
Hidalsa St
46th St
Holstein St
Crestmore Rd
Rio Rd
Mt Rubidoux Dr
Redwood Dr
9th St
11th St
Isabella St
Pine St
Cedar St
14th St
Glenwood Dr
Tequesquite Ave
Rice Rd
Terracina Dr
Ramona Dr
Cliffside Dr
Brighton Dr
Pinehurst Dr
Kendall St
Highland Pl
Chapman Pl
Bandini Ave
Linwood Pl
Palm Ave
Tower Rd
Grand Ave
Santa Ana River Trail
Beechwood Pl
Elmwood Ct
60
Google earth
© 2016 Google
4000 ft
N

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 35 **Date** 10/18/18
Target UTM: 463439 3761054
Observers (writer/other) ROBERT ELAND (CITY OF RIVERSIDE)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0463417 UTM 3761063		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	14.3 M		
	Max Depth (cm) & Location in Channel (L/C/R*)	25 CM LEFT CENTER		
	Depth @ Left Edge (cm) (~4" from bank edge)	3 CM		
	Depth @ Right Edge (cm) (~4" from bank edge)	8 CM		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	10		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	90		
	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)			

*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 3mx3m you find OUTSIDE of your point locations.

100 ft Downstream of 35

Location between GPS Points SAS ____ and SAS _____.

Tally	Gravel Patch Size
	Min 3m
	3m-5m
1 7m x 3m	5m-10m
	10m-15m
	15m+

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

N/A

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 36 **Date** 10/18/18
Target UTM: **463262** **3760812**
Observers (writer/other) ECAND

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0463247 UTM 3760815		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	8.4M		
	Max Depth (cm) & Location in Channel (L/C/R*)	29cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	20cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	9cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	15		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	95		
	Substrate % gravel	5		
	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.

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
Between 35 + 36	3M x 8M	Min 3m
		3m-5m
		5m-10m
		10m-15m
		15m+

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 37 **Date** 10/18/18
Target UTM: **463084** **3760573**
Observers (writer/other) ELAND

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0463066 UTM 3760574		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	12M		
	Max Depth (cm) & Location in Channel (L/C/R*)	27cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	6cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	4cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	15		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	90		
	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)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS ____ and SAS _____.

JUST DOWN FROM 36

Tally	Gravel Patch Size
	Min 3m
3M x 20M	3m-5m
	5m-10m
	10m-15m
	15m+

MID BETWEN 36 - 37

4M x 5M

&

3M x 6M

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 38 **Date** 10/18/18
Target UTM: **462880** **3760354**
Observers (writer/other) ELAND

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0462877 UTM 3760361		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	12.9 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	28cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	5cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	10cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	5%		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	75%		
	Substrate % gravel	25%		
	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.

Additional Information

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

JUST DOWN FROM 37

4M x 10M

Location between GPS Points SAS ____ and SAS _____.

MID WAY

3M x 4M

+

2M x 4M

+

5M x 20M

+

6M x 3M

+

3M x 10M

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

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

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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 39 **Date** 10/18/18
Target UTM: **462706** **3760111**
Observers (writer/other) ELAND

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S0462 689 UTM 3760112		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	11M		
	Max Depth (cm) & Location in Channel (L/C/R*)	23cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	22cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	4cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	0		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	70		
	Substrate % gravel	30		
	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.

Additional Information

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

Between 38 & 39

Location between GPS Points SAS ____ and SAS _____.

4m x 25m & 4m x 15m & 3m x 12m 3m x 10m

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

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

_____ _____
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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 40 **Date** 10/18/18
Target UTM: **462526** **3759882**
Observers (writer/other) EL AND D

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0462517 UTM 3759883		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	12m		
	Max Depth (cm) & Location in Channel (L/C/R*)	24cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	5cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	19cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	10		
Should total 100%	Substrate % mud/silt			
	Substrate % sand	95		
	Substrate % gravel	5		
	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.

Additional Information

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

Between 39 & 40

3M x 11.5M

&

3M x 15M

3M & 18M

&

3M x 19.5M

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:

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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 41 **Date** 10/18/18
Target UTM: **462388** **3759638**
Observers (writer/other) ELAND

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0462378 UTM3759646		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	13M		
	Max Depth (cm) & Location in Channel (L/C/R*)	29cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	11cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	10cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	15%		
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.

Additional Information

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

Between 40 & 41

Location between GPS Points SAS ____ and SAS _____.

3m x 6m + 3m x 8.6m + 4m x 17.5m

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

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

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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 42 **Date** 10/18/18
Target UTM: 462124 3759501
Observers (writer/other) ELAM

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	11S 0462134 UTM 3759512		
Channel position (L/C/R*)	L		
Width of Channel (m)	17.4		
Max Depth (cm) & Location in Channel (L/C/R*)	25cm		
Depth @ Left Edge (cm) (~4" from bank edge)	8cm		
Depth @ Right Edge (cm) (~4" from bank edge)	9cm		
% Veg- Left Bank*	100		
% Veg- Right Bank*	100		
% Canopy Over Transect Band	5		
Should total 100% — Substrate % mud/silt			
Substrate % sand	95		
Substrate % gravel	5		
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.

Additional Information

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

Between
41 & 42

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:

_____ _____
_____ _____
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_____ _____
_____ _____
_____ _____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 43 **Date** 10/18/18
Target UTM: **461833** **3759443**
Observers (writer/other) GAND

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0461824 UTM 3759451		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	6.4M		
	Max Depth (cm) & Location in Channel (L/C/R*)	31cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	13cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	11cm		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	0		
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.

Additional Information

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

Between 42 & 43

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:

_____ _____

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Riverwalk Points: Group 5
Points 44-51
SAS44
SAS45
SAS46
SAS47
SAS48
SAS49
SAS50
SAS51
Car 1 (End)
Car 2 (Start)
Kern Dr
Sandoval Ave
Anab St
Riverview Dr
Ave Juan Diaz
Industrial St
Griffith St
Santa Ana River Trail
Rio Rancho Way
Grassy Trail Dr
Old Mill Rd
Old Ranch Rd
Park Cliff Ct
Grand Ave
Serrano Pl
Garlingford Ave
Meadowbrook Ln
Jurupa Ave
Mountain View Ave
Vera St
Florence St
Chester St
Anita Pl
Steeler Ave
Corfell St
Google earth
© 2015 Google
3000 ft
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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 44 **Date** 18 Oct 18
Target UTM: 461555 3759337
Observers (writer/other) Anthony Locatelli, Maci Archer, Florence Chan, Helga Forster, Michael Nieto

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0461549 / 3759338		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	9.9 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	27. cm / L		
	Depth @ Left Edge (cm) (~4" from bank edge)	9 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	2 cm		
	% Veg- Left Bank*	0 %		
	% Veg- Right Bank*	76%		
	% Canopy Over Transect Band	25%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	10%		
	Substrate % gravel	90%		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	9:47		
	Photo Downstream (time & #)	9:47		
	Photo Left Bank* (time & #)	9:47		
	Photo Right Bank* (time & #)	9:47		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 44 and SAS 45.

Tally	Gravel Patch Size
I	0 ~~Min~~ 3m
III	3m-5m
I	5m-10m
	10m-15m
~~IIII~~ I	15m+

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 45 **Date** 10/18/18
Target UTM: **461287** **3759267**
Observers (writer/other) AL, MA, EC, HF, MN (see pt. 44 datasheet)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	461272 / 3759274		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	9.5 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	31cm / C		
	Depth @ Left Edge (cm) (~4" from bank edge)	3 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	9 cm		
	% Veg- Left Bank*	5%		
	% Veg- Right Bank*	85%		
	% Canopy Over Transect Band	25%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	90		
	Substrate % gravel	10		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1014		
	Photo Downstream (time & #)	1014		
	Photo Left Bank* (time & #)	1014		
	Photo Right Bank* (time & #)	1014		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 45 and SAS 46.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 46 **Date** 18 Oct 18
Target UTM: 461003 3759182
Observers (writer/other) JC, MA, FC, HI, MN (see pt 44 datasheet for full names)

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	460985 / 3759203		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	12.8 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	29 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	15 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	5 cm		
	% Veg- Left Bank*	95%		
	% Veg- Right Bank*	70%		
	% Canopy Over Transect Band	2%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	84%		
	Substrate % gravel	15%		
	Substrate % cobble	1%		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1039		
	Photo Downstream (time & #)	1039		
	Photo Left Bank* (time & #)	1039		
	Photo Right Bank* (time & #)	1039		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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
𝍸	5m-10m
||	10m-15m
𝍸	15m+

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 47 **Date** 18Oct18
Target UTM: **460830** **3758944**
Observers (writer/other) AL, MA, FC, HE, MN

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	460826 3758947		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	8.1 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	36 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	7 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	5 cm		
	% Veg- Left Bank*	5%		
	% Veg- Right Bank*	95%		
	% Canopy Over Transect Band	1%		
Should total 100%	Substrate % mud/silt	1%		
	Substrate % sand	96%		
	Substrate % gravel	3%		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1052		
	Photo Downstream (time & #)	1052		
	Photo Left Bank* (time & #)	1052		
	Photo Right Bank* (time & #)	1052		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 47 and SAS 48.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 48 **Date** 18 Oct 18
Target UTM: 460606, 3758749
Observers (writer/other) AZ, MA, FC, HF, MN

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	460602 / 3758752		
Channel position (L/C/R*)	C		
Width of Channel (m)	7.9 m		
Max Depth (cm) & Location in Channel (L/C/R*)	55		
Depth @ Left Edge (cm) (~4" from bank edge)	3 cm		
Depth @ Right Edge (cm) (~4" from bank edge)	9 cm		
% Veg- Left Bank*	30%		
% Veg- Right Bank*	95%		
% Canopy Over Transect Band	2%		
Should total 100%: Substrate % mud/silt	1%		
Substrate % sand	98%		
Substrate % gravel	1%		
Substrate % cobble	0%		
Substrate % boulder	0%		
Photo Upstream (time & #)	1111		
Photo Downstream (time & #)	1111		
Photo Left Bank* (time & #)	1111		
Photo Right Bank* (time & #)	1111		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 48 and SAS 49.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 49 **Date** 18 Oct 18
Target UTM: **460324** **3758705**
Observers (writer/other) AL, MA, EC, HF, MN

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	460322 / 3758710		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	11.3 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)	4 cm		
	% Veg- Left Bank*	15 %		
	% Veg- Right Bank*	65 %		
	% Canopy Over Transect Band	70 %		
Should total 100%	Substrate % mud/silt	25 %		
	Substrate % sand	74 %		
	Substrate % gravel	1 %		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1125		
	Photo Downstream (time & #)	1125		
	Photo Left Bank* (time & #)	1125		
	Photo Right Bank* (time & #)	1125		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 49 and SAS 50.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 50 **Date** 18 Oct 18
Target UTM: **460046** **3758748**
Observers (writer/other) AL, MA, EC, HF, MN

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	460039 3758761		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	16.1 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	43 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	3 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	4 cm		
	% Veg- Left Bank*	40%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	50%		
Should total 100%	Substrate % mud/silt	20%		
	Substrate % sand	78%		
	Substrate % gravel	2%		
	Substrate % cobble	0%		
	Substrate % boulder	0%		
	Photo Upstream (time & #)	1142		
	Photo Downstream (time & #)	1142		
	Photo Left Bank* (time & #)	1142		
	Photo Right Bank* (time & #)	1142		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 50 and SAS 51.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 51 **Date** 18 Oct 18
Target UTM: **459807** **3758720**
Observers (writer/other) AE, MA, TC, HF, MN

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	459805 3758727	459807 3758737	
	Channel position (L/C/R*)	L	L	
	Width of Channel (m)	9.6 m	8.6 m	
	Max Depth (cm) & Location in Channel (L/C/R*)	38 cm	27 cm	
	Depth @ Left Edge (cm) (~4" from bank edge)	4 cm	3 cm	
	Depth @ Right Edge (cm) (~4" from bank edge)	5 cm	6 cm	
	% Veg- Left Bank*	40 %	8 %	
	% Veg- Right Bank*	8 %	25 %	
	% Canopy Over Transect Band	1 %	25 %	
Should total 100%	Substrate % mud/silt	1 %	25 %	
	Substrate % sand	68 %	75 %	
	Substrate % gravel	20 %	2 %	
	Substrate % cobble	1 %	2 %	
	Substrate % boulder	10 %	1 %	
	Photo Upstream (time & #)	1201	1203	
	Photo Downstream (time & #)	1201	1203	
	Photo Left Bank* (time & #)	1201	1203	
	Photo Right Bank* (time & #)	1201	1203	
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

Additional Information

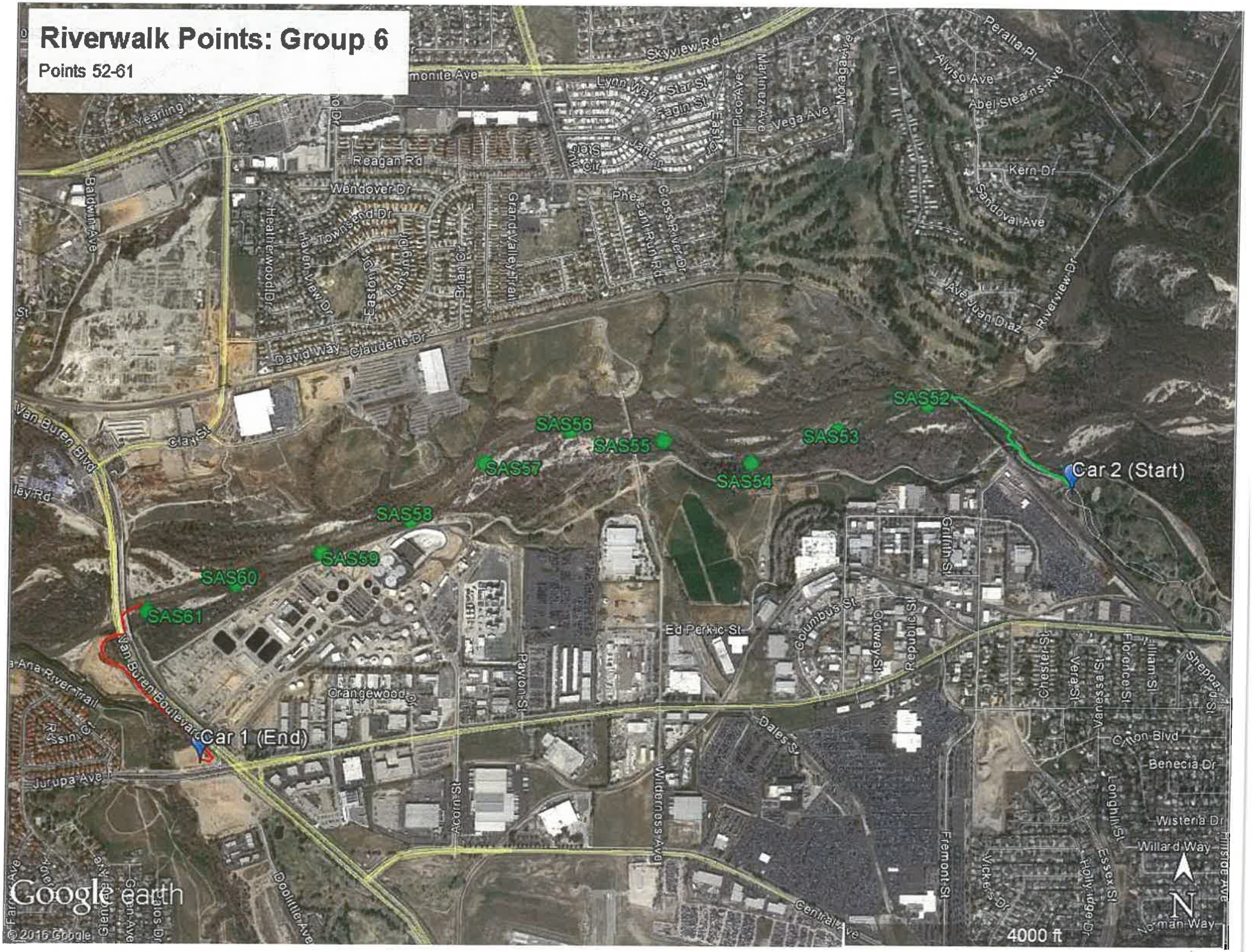
Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

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:

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


Riverwalk Points: Group 6
Points 52-61
SAS52
SAS53
SAS54
SAS55
SAS56
SAS57
SAS58
SAS59
SAS60
SAS61
Car 2 (Start)
Car 1 (End)
Skyview Rd
Yearling
Reagan Rd
Wendover Dr
Baldwin Ave
Heatherwood Dr
Haven View Dr
Townsend Dr
Easton Dr
Lancaster Dr
Brian Cir
Grand Valley Trail
Lois Cir
Jane Ln
Lynn Way
Star St
Fagin St
Jessie St
Pico Ave
Martinez Ave
Vega Ave
Moraga Ave
Peralta Pl
Alviso Ave
Abel Stearns Ave
Kern Dr
Sandoval Ave
Pheasant Run Rd
Cross River Dr
Ave Juan Diaz
Riverview Dr
David Way
Claudette Dr
Van Buren Blvd
Clay St
Ed Perkic St
Griffith St
Columbus St
Ordway St
Republic St
Payton St
Orangewood Dr
Santa Ana River Trail
Jurupa Ave
Acorn St
Wilderness Ave
Dales St
Fremont St
Vicker Dr
Essex St
Hollyridge Dr
Longhill St
Vera St
Chestnut St
Florence St
Vanessa St
William St
Sheppard St
Clinton Blvd
Benecia Dr
Wisteria Dr
Willard Way
Norman Way
Ellistoe Ave
Central Ave
Doolittle Ave
Google earth
© 2016 Google
4000 ft
N

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 52 **Date** 10/18/18
Target UTM: **459545** **3758820**
Observers (writer/other) Allison/PJ

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	459547 E 3758827 N		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	19.2		
	Max Depth (cm) & Location in Channel (L/C/R*)	46 L		
	Depth @ Left Edge (cm) (~4" from bank edge)	7		
	Depth @ Right Edge (cm) (~4" from bank edge)	82		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	65		
Should total 100%	Substrate % mud/silt	15		
	Substrate % sand	84		
	Substrate % gravel	1		
	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.

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 52 and SAS 53.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 53 **Date** 10/18/18
Target UTM: **459260** **3758737**
Observers (writer/other) Allison / PJ

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	459260 E 3758738 N		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	13.5		
	Max Depth (cm) & Location in Channel (L/C/R*)	33 R		
	Depth @ Left Edge (cm) (~4" from bank edge)			
	Depth @ Right Edge (cm) (~4" from bank edge)	10		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	45		
Should total 100%	Substrate % mud/silt	8		
	Substrate % sand	91		
	Substrate % gravel	<1		
	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.

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 53 and SAS 54.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 54 **Date** 10/18/18
Target UTM: 458984 3758633
Observers (writer/other) Allison / PJ

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	458978 E 3758639 N		
	Channel position (L/C/R*)	C & L		
	Width of Channel (m)	18.9		
	Max Depth (cm) & Location in Channel (L/C/R*)	33 R		
	Depth @ Left Edge (cm) (~4" from bank edge)	12		
	Depth @ Right Edge (cm) (~4" from bank edge)	6		
	% Veg- Left Bank*	75		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	35		
Should total 100%	Substrate % mud/silt	12		
	Substrate % sand	47		
	Substrate % gravel	40		
	Substrate % cobble	<1		
	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)	Transect Measure 2 to 4.5 = island		

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 54 and SAS 55.

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

Many lg. boulders Both sides of stream 458939 E 3758636 W

More lg. Boulders 458791 E 3758693 W

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 55 **Date** 10/18/18
Target UTM: **458706** **3758704**
Observers (writer/other) Kai, Chris M, Allison, PJ, Madeline

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	458723 E 3758750 N		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	17.5		
	Max Depth (cm) & Location in Channel (L/C/R*)	25 C		
	Depth @ Left Edge (cm) (~4" from bank edge)	11		
	Depth @ Right Edge (cm) (~4" from bank edge)	17		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	33		
Should total 100%	Substrate % mud/silt	15		
	Substrate % sand	84		
	Substrate % gravel	1		
	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.

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 55 and SAS 56.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 56 **Date** 10/18/18
Target UTM: **458409** **3758736**
Observers (writer/other) Kai, Chris M., Allison, Madeline

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0458398 E 3758761 N		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	19.9		
	Max Depth (cm) & Location in Channel (L/C/R*)	28 L		
	Depth @ Left Edge (cm) (~4" from bank edge)	6		
	Depth @ Right Edge (cm) (~4" from bank edge)	9		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	40		
Should total 100%	Substrate % mud/silt	15		
	Substrate % sand	84		
	Substrate % gravel	<1		
	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.

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 56 and SAS 57.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 57 **Date** 10/18/18
Target UTM: 458138 3758633
Observers (writer/other) Kai, Chris M.

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	458138 E 3758634 W		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	19.0		
	Max Depth (cm) & Location in Channel (L/C/R*)	33 L/R same		
	Depth @ Left Edge (cm) (~4" from bank edge)	8		
	Depth @ Right Edge (cm) (~4" from bank edge)	11		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	25		
Should total 100%	Substrate % mud/silt	5		
	Substrate % sand	92		
	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)	small is on transect from 8.7 to 10.6 m on tape		

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 57 and SAS 58.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 58 **Date** 10/18/18
Target UTM: 457904 3758451
Observers (writer/other) Kaj, Chris M., Allison, Madeline, PJ

River Trail- What is going on w/ the construction?

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	457904 3758452		
Channel position (L/C/R*)	L		
Width of Channel (m)	23.7		
Max Depth (cm) & Location in Channel (L/C/R*)	33 R		
Depth @ Left Edge (cm) (~4" from bank edge)	9		
Depth @ Right Edge (cm) (~4" from bank edge)	3		
% Veg- Left Bank*	100		
% Veg- Right Bank*	100		
% Canopy Over Transect Band	30		
Should total 100% — Substrate % mud/silt	5		
Substrate % sand	75		
Substrate % gravel	20		
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)			

Lights on trail need to be discussed.

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 58 and SAS 59.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 59 **Date** 10/18/18
Target UTM: **457622** **3758348**
Observers (writer/other) Kai, Chris M, Allison, PS, Madeline

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	457622 E 3758349 N		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	11.8		
	Max Depth (cm) & Location in Channel (L/C/R*)	44		
	Depth @ Left Edge (cm) (~4" from bank edge)	C		
	Depth @ Right Edge (cm) (~4" from bank edge)	5		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	25		
Should total 100%	Substrate % mud/silt	~~20~~ 15		
Should total 100%	Substrate % sand	80		
Should total 100%	Substrate % gravel	5		
Should total 100%	Substrate % cobble	0		
Should total 100%	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.

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 59 and SAS 60.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 60 **Date** 10/18/18
Target UTM: **457350** **3758251**
Observers (writer/other) Kai, ChrisM., Allison, PJ, Madeline

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	457329 E 3758294 N		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	14.5		
	Max Depth (cm) & Location in Channel (L/C/R*)	44 R		
	Depth @ Left Edge (cm) (~4" from bank edge)	2.5		
	Depth @ Right Edge (cm) (~4" from bank edge)	19		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	0		
	% Canopy Over Transect Band	12		
Should total 100%	Substrate % mud/silt	2		
	Substrate % sand	97		
	Substrate % gravel	1		
	Substrate % cobble	0		
	Substrate % boulder	<1		
	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.

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
1	3m-5m
1	5m-10m
	10m-15m
	15m+

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 61 **Date** 10/18/18
Target UTM: **457069** **3758165**
Observers (writer/other) Kai, Chris M, Allison, PJ, Madeline

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	457068 E 3758166 N		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	15.8		
	Max Depth (cm) & Location in Channel (L/C/R*)	42 L		
	Depth @ Left Edge (cm) (~4" from bank edge)	6		
	Depth @ Right Edge (cm) (~4" from bank edge)	12		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	30		
Should total 100%	Substrate % mud/silt	10		
	Substrate % sand	88		
	Substrate % gravel	2		
	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.

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 60 and SAS 61.

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

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

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____


Riverwalk Points: Group 7
Points 62-71
Car 1 (End)
Car 2 (Start)
SAS71
SAS68
SAS67
SAS70
SAS66
SAS69
SAS65
SAS64
SAS63
SAS62
Downey St
63rd St
Gorey St
Baker St
Archer St
64th St
65th St
Kelsey Pl
Kennedy St
Lakeview Ave
Merton Ave
Eucalyptus St
Baldwin Ave
Haven View Dr
Heatherwood Dr
Linares Ave
David
Van Buren Blvd
General P
Padley Rd
Auld St
Macy Ct
Julian Dr
Lunn Ct
Tyler St
Crest Ave
Ontario St
Pinwild Ln
Mandalay Ct
Rutland Ave
Ossini Ct
Alabama St
Jurupa Ave
Van Buren Boulevard
Google earth
© 2016 Google
3000 ft
N

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 62 **Date** 10/18/18
Target UTM: **456796** **3758041**
Observers (writer/other) Ana Sawyer, Jessica Burton, Joe Sherrock, Cynthia Gibbs

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0456795 3758038		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	14.15m		
	Max Depth (cm) & Location in Channel (L/C/R*)	(L) 67cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	4cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	0.5m		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	25%		
Should total 100%	Substrate % mud/silt	5%		
	Substrate % sand	80%		
	Substrate % gravel	15%		
	Substrate % cobble	2%		
	Substrate % boulder	0		
	Photo Upstream (time & #) 988	988		
	Photo Downstream (time & #) 989	989		
	Photo Left Bank* (time & #) 990	990		
	Photo Right Bank* (time & #) 991	991		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 62 and SAS 63.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 63 **Date** 10/18/18
Target UTM: **456516** **3758092**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0456517 3758099	0456515 3758114	
	Channel position (L/C/R*)	L	R	
	Width of Channel (m)	8.01m	8.25m	
	Max Depth (cm) & Location in Channel (L/C/R*)	33cm L	59cm R	
	Depth @ Left Edge (cm) (~4" from bank edge)	34cm	4cm	
	Depth @ Right Edge (cm) (~4" from bank edge)	8cm	45cm	
	% Veg- Left Bank*	40%	100%	
	% Veg- Right Bank*	30%	90%	
	% Canopy Over Transect Band	25%	15%	
Should total 100%	Substrate % mud/silt	Ø	5%	
	Substrate % sand	95%	75%	
	Substrate % gravel	5%	20%	
	Substrate % cobble	Ø	Ø	
	Substrate % boulder	Ø	Ø	
	Photo Upstream (time & #)	994	998	
	Photo Downstream (time & #)	995	999	
	Photo Left Bank* (time & #)	996	1000	
	Photo Right Bank* (time & #)	997	1001	
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 63 and SAS 64.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 64 **Date** 10/18/18
Target UTM: **456219** **3758120**
Observers (writer/other)_____

face downstream

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	456219 3759157	456220 3758174	
Channel position (L/C/R*)		R	
Width of Channel (m)	14.18m	4.1m	
Max Depth (cm) & Location in Channel (L/C/R*)	38cm	2.5cm	
Depth @ Left Edge (cm) (~4" from bank edge)	45cm	1.5cm	
Depth @ Right Edge (cm) (~4" from bank edge)	8cm	.1 cm	
% Veg- Left Bank*	100%	Ø	
% Veg- Right Bank*	90%	100%	
% Canopy Over Transect Band	15%	70%	
Should total 100% — Substrate % mud/silt	Ø	45%	
Substrate % sand	75%	50%	
Substrate % gravel	20%	5%	
Substrate % cobble	5%	Ø	
Substrate % boulder	Ø	Ø	
Photo Upstream (time & #)	1002	06	
Photo Downstream (time & #)	03	07	
Photo Left Bank* (time & #)	04	08	
Photo Right Bank* (time & #)	05	09	
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	E	Evidence of wild pigs	

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 64 and SAS 65.

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

Quicksand!

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 65 **Date** 10/18/18
Target UTM: **455953** **3758238**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	455991 3758288		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	11.3 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	61 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	1 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	3cm		
	% Veg- Left Bank*	90%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	10%		
Should total 100%	Substrate % mud/silt	10%		
	Substrate % sand	90%		
	Substrate % gravel	0		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1012		
	Photo Downstream (time & #)	1013		
	Photo Left Bank* (time & #)	1014		
	Photo Right Bank* (time & #)	1015		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 65 and SAS 66.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 66 **Date**_____
Target UTM: **455786** **3758478**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0455818 3758500	0455832 3758514	
	Channel position (L/C/R*)	R		
	Width of Channel (m)	13.1 m	12.3 m	
	Max Depth (cm) & Location in Channel (L/C/R*)	34 cm	41 cm	
	Depth @ Left Edge (cm) (~4" from bank edge)	2 cm	2 cm	
	Depth @ Right Edge (cm) (~4" from bank edge)	3.5 cm	11 cm	
	% Veg- Left Bank*	50%	25%	
	% Veg- Right Bank*	0%	100%	
	% Canopy Over Transect Band	15%	30%	
Should total 100%	Substrate % mud/silt	15%	30%	
	Substrate % sand	75%	65%	
	Substrate % gravel	10%	5%	
	Substrate % cobble	ø	ø	
	Substrate % boulder	ø	ø	
	Photo Upstream (time & #)	1016	1020	
	Photo Downstream (time & #)	1017	1021	
	Photo Left Bank* (time & #)	1018 *	1022	
	Photo Right Bank* (time & #)	1019	1023	
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 66 and SAS 67.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 67 **Date**_____
Target UTM: **455537** **3758623**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0455549 3758655	0455503 3758609	
	Channel position (L/C/R*)	R	R	
	Width of Channel (m)	19.8 m	6.7 m	
	Max Depth (cm) & Location in Channel (L/C/R*)	36 cm	16 cm	
	Depth @ Left Edge (cm) (~4" from bank edge)	3 cm	8 cm	
	Depth @ Right Edge (cm) (~4" from bank edge)	8 cm	5 cm	
	% Veg- Left Bank*	60%	0%	
	% Veg- Right Bank*	30%	30%	
	% Canopy Over Transect Band	5%	35%	
Should total 100%	Substrate % mud/silt	5%	35%	
	Substrate % sand	90%	60%	
	Substrate % gravel	5%	5	
	Substrate % cobble	0	0	
	Substrate % boulder	0	0	
	Photo Upstream (time & #)	1024	1024	
	Photo Downstream (time & #)	1025	1025	
	Photo Left Bank* (time & #)	1026	1026	
	Photo Right Bank* (time & #)	1027	1031	
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 67 and SAS 68.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 68 **Date**_____
Target UTM: **455246** **3758601**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0455236 3758625		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	28.25 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	44 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	4.5 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	27 cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	10%		
Should total 100%	Substrate % mud/silt	5%		
	Substrate % sand	65%		
	Substrate % gravel	30%		
	Substrate % cobble	0%		
	Substrate % boulder	0%		
	Photo Upstream (time & #)	1032		
	Photo Downstream (time & #)	1033		
	Photo Left Bank* (time & #)	1034		
	Photo Right Bank* (time & #)	1035		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 68 and SAS 69.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 69 **Date**_____
Target UTM: **455019** **3758411**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0459993 3758470		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	21.1 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	28cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	5cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	15cm		
	% 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 & #)	1036		
	Photo Downstream (time & #)	1037		
	Photo Left Bank* (time & #)	1038		
	Photo Right Bank* (time & #)	1039		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 70 **Date**_____
Target UTM: **454789** **3758479**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	454856 3758531		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	13.7 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	63 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	4 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	13 cm		
	% Veg- Left Bank*	90%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	48%		
Should total 100%	Substrate % mud/silt	30%		
	Substrate % sand	70%		
	Substrate % gravel	Ø		
	Substrate % cobble	Ø		
	Substrate % boulder	Ø		
	Photo Upstream (time & #)	1040		
	Photo Downstream (time & #)	1041		
	Photo Left Bank* (time & #)	1042		
	Photo Right Bank* (time & #)	1043		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 70 and SAS 71.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 71 **Date**_____
Target UTM: **454863** **3758759**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0454839 3756700	0454843 3758726	
	Channel position (L/C/R*)	L	L	
	Width of Channel (m)	13.8m	12.2m	
	Max Depth (cm) & Location in Channel (L/C/R*)	70cm	36.5cm	
	Depth @ Left Edge (cm) (~4" from bank edge)	3cm	4cm	
	Depth @ Right Edge (cm) (~4" from bank edge)	4.5cm	2cm	
	% Veg- Left Bank*	25%	25%	
	% Veg- Right Bank*	100%	100%	
	% Canopy Over Transect Band	5%	60%	
Should total 100%	Substrate % mud/silt	5%	60%	
	Substrate % sand	95%	40%	
	Substrate % gravel	Ø	Ø	
	Substrate % cobble	Ø	Ø	
	Substrate % boulder	Ø	Ø	
	Photo Upstream (time & #)	1044	1048	
	Photo Downstream (time & #)	1045	1049	
	Photo Left Bank* (time & #)	1046	1050	
	Photo Right Bank* (time & #)	1047	1051	
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

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

Additional Information

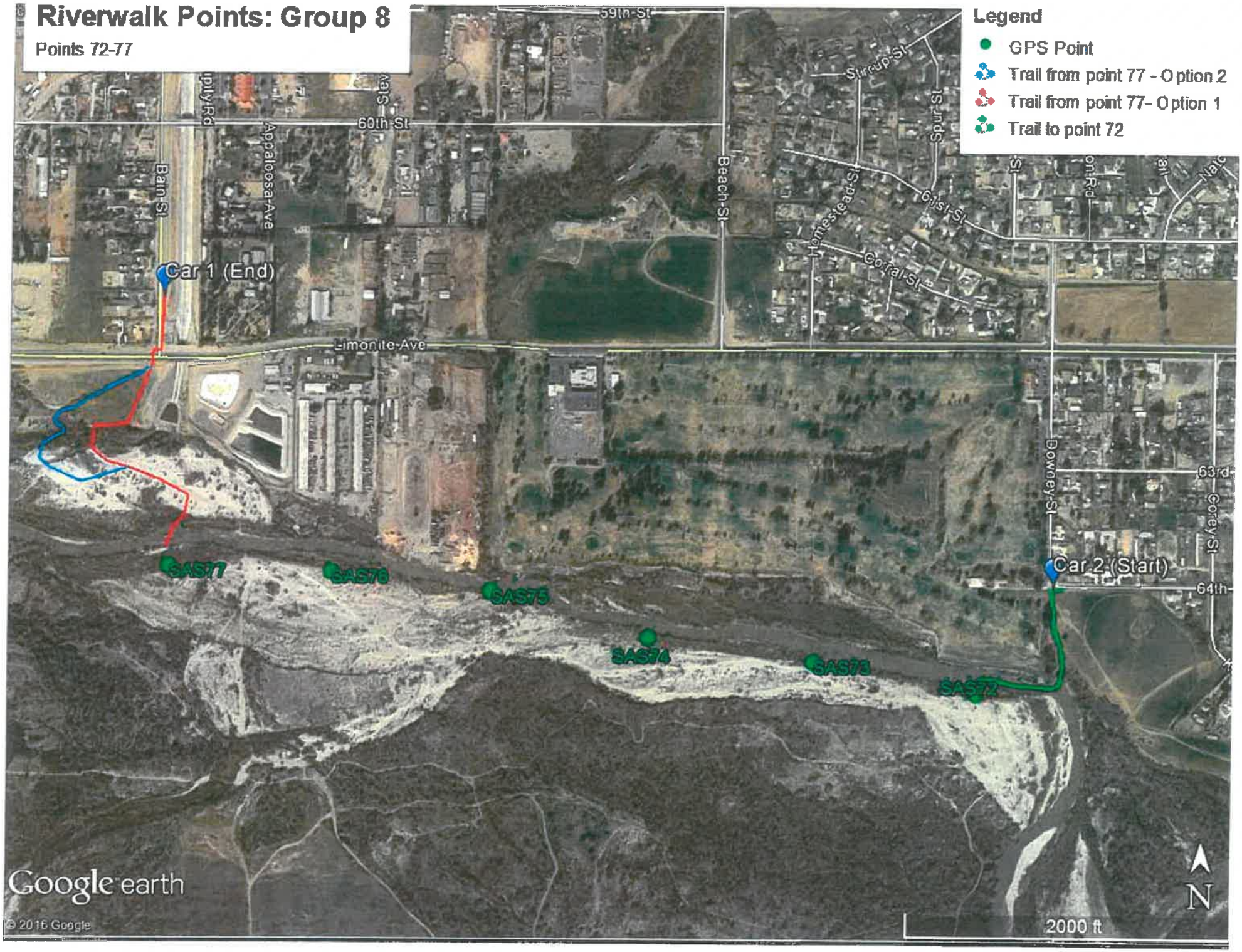
Please use this form to tally any gravel patches measuring a minimum of roughly 3mx3m you find OUTSIDE of your point locations.

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:

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


Riverwalk Points: Group 8
Points 72-77
Legend
GPS Point
Trail from point 77 - Option 2
Trail from point 77- Option 1
Trail to point 72
59th St
60th St
Bain St
Appaloosa Ave
Beach St
Limonite Ave
Car 1 (End)
SAS77
SAS76
SAS75
SAS74
SAS73
SAS72
Car 2 (Start)
Downey St
63rd
64th
Corey St
Google earth
© 2016 Google
2000 ft
N

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

32m

Transect Name: SAS 72 **Date** 10/18/18
Target UTM: **454748** **3758936**
Observers (writer/other) Rangel, Kearns, Poletto, Achimore, Siebuhr

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0454747 3758937		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	22.3		
	Max Depth (cm) & Location in Channel (L/C/R*)	C, 43		
	Depth @ Left Edge (cm) (~4" from bank edge)	10.5		
	Depth @ Right Edge (cm) (~4" from bank edge)	24		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	50		
	% Canopy Over Transect Band	12		
Should total 100%	Substrate % mud/silt	5		
	Substrate % sand	75		
	Substrate % gravel	20		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	2		
	Photo Downstream (time & #)	1		
	Photo Left Bank* (time & #)	4		
	Photo Right Bank* (time & #)	3		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 73 **Date** 10/18
Target UTM: **454455** **3758993**
Observers (writer/other) Rangel, Kearns, Poletto, Achimore, Siebahr

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	454454 3758994		
Channel position (L/C/R*)	C		
Width of Channel (m)	40.2 ft		
Max Depth (cm) & Location in Channel (L/C/R*)	36 C		
Depth @ Left Edge (cm) (~4" from bank edge)	7.8		
Depth @ Right Edge (cm) (~4" from bank edge)	35		
% Veg- Left Bank*	100		
% Veg- Right Bank*	100		
% Canopy Over Transect Band	12		
Substrate % mud/silt	5		
Substrate % sand	~~2~~ 85		
Substrate % gravel	10		
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)	Arundo, Tamarisk		

Should total 100%

26
32
35

*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 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
	15m+

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 74 **Date** 10/18/18
Target UTM: **454159** **3759037**
Observers (writer/other) Kcams, Pdelto, Achimore, Siobahr

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0454158 3759038		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	21.3		
	Max Depth (cm) & Location in Channel (L/C/R*)	32		
	Depth @ Left Edge (cm) (~4" from bank edge)	18		
	Depth @ Right Edge (cm) (~4" from bank edge)	19		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	12 %		
Should total 100%	Substrate % mud/silt	10		
	Substrate % sand	70		
	Substrate % gravel	20		
	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.

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
11	Min 3m
1	3m-5m
	5m-10m
	10m-15m
	15m+

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 75 **Date** 10/18/18
Target UTM: **453874** **3759120**
Observers (writer/other) kcairns, Polcito, Achimore, Siekaniec

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0453873 3759121		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	18.6		
	Max Depth (cm) & Location in Channel (L/C/R*)	48cm, & R		
	Depth @ Left Edge (cm) (~4" from bank edge)	36		
	Depth @ Right Edge (cm) (~4" from bank edge)	48		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	8		
Should total 100%	Substrate % mud/silt	10		
	Substrate % sand	70		
	Substrate % gravel	12		
	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)	Island downstream		

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 74 and SAS 75.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 76 **Date** 10/18/18
Target UTM: **453587** **3759156**
Observers (writer/other) Keons, Poletto, Advincula, Siebahn

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0453587 3759156		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	22.2		
	Max Depth (cm) & Location in Channel (L/C/R*)	46 C		
	Depth @ Left Edge (cm) (~4" from bank edge)	22		
	Depth @ Right Edge (cm) (~4" from bank edge)	23.5		
	% Veg- Left Bank*	90		
	% Veg- Right Bank*	98		
	% Canopy Over Transect Band			
Should total 100%	Substrate % mud/silt	10		
	Substrate % sand	85		
	Substrate % gravel	5		
	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.

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
1	5m-10m
	10m-15m
	15m+

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 77 **Date** 10/18/18
Target UTM: **453294** **3759167**
Observers (writer/other) ~~Evans~~, Poletto, Ackmann, Siebahn

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0453293 3759168		
	Channel position (L/C/R*)	R		
	Width of Channel (m)	21.3		
	Max Depth (cm) & Location in Channel (L/C/R*)	45, C		
	Depth @ Left Edge (cm) (~4" from bank edge)	21		
	Depth @ Right Edge (cm) (~4" from bank edge)	22		
	% Veg- Left Bank*	70		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	50		
Should total 100%	Substrate % mud/silt	10		
	Substrate % sand	~~80~~ 80		
	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)	Arundo upstream.		

*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 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:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____


Riverwalk Points: Group 9
Points 78-82
60th St
Marlatt St
Dodd St
Bain St
Appaloosa Ave
Old Limonite Ave
Limonite Ave
Ridgeview Ave
Mann Ave
Car 1 (End)
Car 2 (Start)
SAS78
SAS79
SAS80
SAS81
SAS82
Google earth
© 2016 Google
N
2000 ft

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 78 **Date** 10/18/18 SAS 78
Target UTM: **453010** **3759212**
Observers (writer/other) Sam Jones, Chris Jones, Brett Mills, Cameron Macbeth, Brian Keene

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	453014 3759221		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	23.3m		
	Max Depth (cm) & Location in Channel (L/C/R*)	44cm L		
	Depth @ Left Edge (cm) (~4" from bank edge)	17cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	12 cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	0%		
Should total 100%	Substrate % mud/silt	2%		
	Substrate % sand	92%		
	Substrate % gravel	3%		
	Substrate % cobble	3%		
	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.

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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 79 **Date** 10/18/18 SAS79
Target UTM: **452731** **3759199**
Observers (writer/other) erin jones chris jones
brett mills cameron macbeth
brian keener

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	452732 3759252		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	18.2m		
	Max Depth (cm) & Location in Channel (L/C/R*)	40cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	12cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	18cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	0%		
Should total 100%	Substrate % mud/silt	2%		
	Substrate % sand	95%		
	Substrate % gravel	2%		
	Substrate % cobble	1%		
	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.

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:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 80 **Date** 10/18/18 SAS 80
Target UTM: 452566 3758961
Observers (writer/other) lin jones chris jones
brett mills cameron macbeth
brian keene

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	452511 3758975	452505 3758980	
Channel position (L/C/R*)	L	—	
Width of Channel (m)	4.75m	10.5m	
Max Depth (cm) & Location in Channel (L/C/R*)	30cm	50cm	
Depth @ Left Edge (cm) (~4" from bank edge)	24cm	18cm	
Depth @ Right Edge (cm) (~4" from bank edge)	12.5cm	19.5cm	
% Veg- Left Bank*	100%	100%	
% Veg- Right Bank*	50%	100%	
% Canopy Over Transect Band	20%	3%	
Should total 100% — Substrate % mud/silt	—	—	
Substrate % sand	100%	100%	
Substrate % gravel	—	—	
Substrate % cobble	—	—	
Substrate % boulder	—	1 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.

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:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

SAS 81

Transect Name: SAS 81 **Date** 10/18/18
Target UTM: 452441 3758698
Observers (writer/other) Lun Jones chris jones
brett mills
brian keeney cameron macbeth

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	452431 3758699		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	17.6m		
	Max Depth (cm) & Location in Channel (L/C/R*)	49cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	22cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	21cm		
	% Veg- Left Bank*	0%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	15%		
Should total 100%	Substrate % mud/silt	8%		
	Substrate % sand	92%		
	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.

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
35.5m x 1.5m 3m wide at upstream end	15m+

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

SAS 82

Transect Name: SAS 82 **Date** 10/18/18
Target UTM: 452149 3758681
Observers (writer/other) Erin Jones Chris Jones
Matt Mills Cameron Macbeth
Brian Feeney

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	452152 3758693	452144 3758733	
	Channel position (L/C/R*)	L	L	
	Width of Channel (m)	14.3m	9.7m	
	Max Depth (cm) & Location in Channel (L/C/R*)	36cm	37cm	
	Depth @ Left Edge (cm) (~4" from bank edge)	4cm	5cm	
	Depth @ Right Edge (cm) (~4" from bank edge)	16cm	18cm	
	% Veg- Left Bank*	100%	100%	
	% Veg- Right Bank*	100%	100%	
	% Canopy Over Transect Band	10%	50%	
Should total 100%	Substrate % mud/silt	2%	2%	
	Substrate % sand	83%	98%	
	Substrate % gravel	15%	—	
	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.

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 x 3m	5m-10m
14.6 x 3m	10m-15m
20.4m x 5m @ upstream	15m+ 18.6m x

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


Riverwalk Points: Group 10
Points 83-89
Venus Ct
Sky Country Dr
Old Limonite Ave
Limonite Ave
Silverlo Rd
63rd St
Etwanda Ave
Mann Ave
William Ave
Charles Ave
Lorena Ave
Car 2 (Start)
64th St
quois e Way
65th St
66th St
Holmes Ave
Frank Ave
Vineville Ave
Dana Ave
Lucretia Ave
Carnelian St
Citrine Ct
SAS83
SAS84
SAS85
SAS86
SAS87
SAS88
SAS89
Grulla Ct
Filly Ln
Car 1 (End)
Viceroy Ave
Substation Rd
Santa Ana River Trail
Arlington Ave
North Dr
River Dr
8th St
Eighth St
Google earth
© 2016 Google
N
4000 ft

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 83 **Date** 10/18
Target UTM: **451873** **3758631**
Observers (writer/other) Marisa Peyer Reyes

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0451863 3758647		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	23.3		
	Max Depth (cm) & Location in Channel (L/C/R*)	19 L		
	Depth @ Left Edge (cm) (~4" from bank edge)	10		
	Depth @ Right Edge (cm) (~4" from bank edge)	17		
	% 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 & #)	0388 9:36		
	Photo Downstream (time & #)	0389 9:36		
	Photo Left Bank* (time & #)	0391 9:36		
	Photo Right Bank* (time & #)	0390 9:36		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	lots of arundo, some castor bean tamarisk		

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 84 **Date** 10/18
Target UTM: **451638** **3758497**
Observers (writer/other) Marica Perez-Reyes

	OBSERVATIONS	CHANNEL #1 (L)	CHANNEL #2 (R)	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0451609, 3759537	0451591, 3758550	
	Channel position (L/C/R*)	C	C	
	Width of Channel (m)	17.0	19.1	
	Max Depth (cm) & Location in Channel (L/C/R*)	76, L	26, R	
	Depth @ Left Edge (cm) (~4" from bank edge)	9	6	
	Depth @ Right Edge (cm) (~4" from bank edge)	13	13	
	% Veg- Left Bank*	100%	50%	
	% Veg- Right Bank*	50%	60%	
	% Canopy Over Transect Band	10%	60%	
Should total 100%	Substrate % mud/silt		30%	
	Substrate % sand	100%	70%	
	Substrate % gravel			
	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	0392 10:06	0396 10:08	
	Photo Downstream (time & #)	0393	0397	
	Photo Left Bank* (time & #)	0394	0398	
	Photo Right Bank* (time & #)	0395	0399	
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	arundo	castor, arundo	

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 85 **Date** 10/18
Target UTM: **451443** **3758279**
Observers (writer/other) Marisa Perez-Reyes,

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0451442 3758282		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	40.4		
	Max Depth (cm) & Location in Channel (L/C/R*)	36 R		
	Depth @ Left Edge (cm) (~4" from bank edge)	13 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	15 cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	7%		
Should total 100%	Substrate % mud/silt	5%		
	Substrate % sand	95%		
	Substrate % gravel			
	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	400 10:28		
	Photo Downstream (time & #)	401		
	Photo Left Bank* (time & #)	402		
	Photo Right Bank* (time & #)	403		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	solid arundo some castor		

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 85 and SAS 86.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

0451278
3758050

Transect Name: SAS 86 **Date** 10/18
Target UTM: **451303** **3758016**
Observers (writer/other) Marisa Perez-Reyes

35

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	451278 3758030		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	22.6		
	Max Depth (cm) & Location in Channel (L/C/R*)	47 R		
	Depth @ Left Edge (cm) (~4" from bank edge)	23		
	Depth @ Right Edge (cm) (~4" from bank edge)	28		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	5		
Should total 100%	Substrate % mud/silt	5		
	Substrate % sand	95		
	Substrate % gravel	-		
	Substrate % cobble	-		
	Substrate % boulder	-		
	Photo Upstream (time & #)	404		
	Photo Downstream (time & #)	405		
	Photo Left Bank* (time & #)	406		
	Photo Right Bank* (time & #)	407		
	Photo other (describe)	-		
	Notes (e.g. Islands, Obstructions)	Arundo right side		

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 86 and SAS 87.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 87 **Date** Oct. 18, 2018
Target UTM: **451176** **3757746**
Observers (writer/other) R. Packard

	OBSERVATIONS	CHANNEL #1 (Left)	CHANNEL #2 (Right)	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0451158 3757767	0451151 3757771	
	Channel position (L/C/R*)	~~E~~ L	R	
	Width of Channel (m)	5.4	35	
	Max Depth (cm) & Location in Channel (L/C/R*)	26 Left	34 Left	
	Depth @ Left Edge (cm) (~4" from bank edge)	2.6	15	
	Depth @ Right Edge (cm) (~4" from bank edge)	15	8	
	% Veg- Left Bank*	100	0	
	% Veg- Right Bank*	0	100	
	% Canopy Over Transect Band	0	15	
Should total 100%	Substrate % mud/silt	–	15	
	Substrate % sand	100	85	
	Substrate % gravel	–	–	
	Substrate % cobble	–	–	
	Substrate % boulder	–	–	
	Photo Upstream (time & #)	408	417	
	Photo Downstream (time & #)	409	418	
	Photo Left Bank* (time & #)	410	419	
	Photo Right Bank* (time & #)	411	420	
	Photo other (describe)	–	–	
	Notes (e.g. Islands, Obstructions)	Arundo on right bank - 95%	" "	

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 87 and SAS 88.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 88 **Date** Oct. 18, 2018
Target UTM: **451034** **3757486**
Observers (writer/other) T. Packard

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0451033 3757548		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	26 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	34 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	34cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	25 cm		
	% Veg- Left Bank*	100 %		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	10%		
Should total 100%	Substrate % mud/silt	3%		
	Substrate % sand	97%		
	Substrate % gravel	0%		
	Substrate % cobble	0%		
	Substrate % boulder	0%		
	Photo Upstream (time & #)	421 11:38		
	Photo Downstream (time & #)	422 11:38		
	Photo Left Bank* (time & #)	423 11:38		
	Photo Right Bank* (time & #)	424 11:38		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	grundo		

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 88 and SAS 89.

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

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 89 **Date**_____
Target UTM: **450811** **3757315**
Observers (writer/other) Khrystal

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0450801 3757316		
	Channel position (L/C/R*)	L		
	Width of Channel (m)	27 m		
	Max Depth (cm) & Location in Channel (L/C/R*)	45 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	13cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	8 cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	51		
Should total 100%	Substrate % mud/silt	6%		
	Substrate % sand	94%		
	Substrate % gravel	0%		
	Substrate % cobble	0%		
	Substrate % boulder	0%		
	Photo Upstream (time & #)	0425 11.59		
	Photo Downstream (time & #)	0426 11.59		
	Photo Left Bank* (time & #)	0427 11.59		
	Photo Right Bank* (time & #)	0428 11.59		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 3mx3m you find OUTSIDE of your point locations.

Location between GPS Points SAS 88 and SAS 89.

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

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


Riverwalk Points: Group 11
Points 90-98
SAS90
SAS91
SAS92
SAS93
SAS94
SAS95
SAS96
SAS97
SAS98
Car 2 (Start)
Car 1 (End)
Eighth St
River Dr
Carthay Dr
Scotts Ln
Seventh St
7th St
Rose Ct
Lyndee Dr
Carriage Dr
Detroit St
Old Hamner Ave
Sierra Ave
Woodward Ave
Valley View Ave
Corona Cir
Center Ave
Hillside Ave
Pedley Ave
15
Google earth
© 2016 Google
2000 ft
N

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 90 **Date** 10-18-18
Target UTM: 450524 3757255
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	3757287		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	30.9		
	Max Depth (cm) & Location in Channel (L/C/R*)	35cm Right Bank		
	Depth @ Left Edge (cm) (~4" from bank edge)	6cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	18cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	1%		
Should total 100%	Substrate % mud/silt	0%		
	Substrate % sand	95%		
	Substrate % gravel	0%		
	Substrate % cobble	5%		
	Substrate % boulder	0%		
	Photo Upstream (time & #)	9:43am #1		
	Photo Downstream (time & #)	#3		
	Photo Left Bank* (time & #)	#4		
	Photo Right Bank* (time & #)	9:43 am #2		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	Small Sand Bar		

50 meters
1 3
26.9 meter
30.9 meter
↓
18cm
6cm

*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 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:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 91 **Date**_____
Target UTM: **450228** **3757211**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	3757251		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	NP ~~30.~~ 33.2		
	Max Depth (cm) & Location in Channel (L/C/R*)	36cm Left		
	Depth @ Left Edge (cm) (~4" from bank edge)	15cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	5cm		
	% Veg- Left Bank*	NP ~~15cm~~ 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 & #)	10:03am B NP 7		
	Photo Downstream (time & #)	5		
	Photo Left Bank* (time & #)	8		
	Photo Right Bank* (time & #)	6		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	0		

30.2 ↑↓
+3
35.2

36 ↓

L 15cm
R 5cm

2m ←
10% over

100% sand

*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 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:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 92 **Date**_____
Target UTM: **449957** **3757085**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	3757128		
	Channel position (L/C/R*)	C		
—	Width of Channel (m)	36.2 m		
—	Max Depth (cm) & Location in Channel (L/C/R*)	32.5cm Center		
	Depth @ Left Edge (cm) (~4" from bank edge)	16.5cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	8 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 & #)	11		
	Photo Downstream (time & #)	9		
	Photo Left Bank* (time & #)	12		
	Photo Right Bank* (time & #)	10		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	none		

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

1
34.7
1.5
36.2
32.5 c

20% over 7 meters over hang
L 16.5cm

8cm R

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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 93 **Date**_____
Target UTM: **449781** **3756859**
Observers (writer/other)_____

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	3756893		
Channel position (L/C/R*)	C		
Width of Channel (m)	39.5 m		
Max Depth (cm) & Location in Channel (L/C/R*)	62 cm Right Bank		
Depth @ Left Edge (cm) (~4" from bank edge)	9cm		
Depth @ Right Edge (cm) (~4" from bank edge)	≈ 9cm		
% Veg- Left Bank*	100%		
% Veg- Right Bank*			
% 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 & #)	15		
Photo Downstream (time & #)	13		
Photo Left Bank* (time & #)	16		
Photo Right Bank* (time & #)	14		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

32.5
÷
39.5

L 9cm

Bour 6.5

62

20%

13

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 94 **Date**_____
Target UTM: **449669** **3756630**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	3756648		
	Channel position (L/C/R*)	L		
-	Width of Channel (m)	24.9 m		
-	Max Depth (cm) & Location in Channel (L/C/R*)	27cm Left Bank		
	Depth @ Left Edge (cm) (~4" from bank edge)	5cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	3cm		
	% Veg- Left Bank*	10%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	≤ 30% 7m		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	100%		
	Substrate % gravel	0		
	Substrate % cobble	0		
	Substrate % boulder	0		
3	Photo Upstream (time & #)	19		
1	Photo Downstream (time & #)	17		
4	Photo Left Bank* (time & #)	20		
2	Photo Right Bank* (time & #)	18		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

24.9

15cm

7m overhang vegitation

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 95 **Date**_____
Target UTM: **449377** **3756566**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	3756603		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	24m		
	Max Depth (cm) & Location in Channel (L/C/R*)	35 cm Center		
	Depth @ Left Edge (cm) (~4" from bank edge)	12 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	24 cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	30%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	100%		
	Substrate % gravel	0		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	22		
	Photo Downstream (time & #)	20		
	Photo Left Bank* (time & #)	23		
	Photo Right Bank* (time & #)	21		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

35

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 96 **Date** 10/18/18 114C
Target UTM: 449118 3756431
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	3756442		
	Channel position (L/C/R*)	Left		
–	Width of Channel (m)	23.5		
–	Max Depth (cm) & Location in Channel (L/C/R*)	47 Left		
	Depth @ Left Edge (cm) (~4" from bank edge)	~~91~~ 33 Left bank		
	Depth @ Right Edge (cm) (~4" from bank edge)	~~5.5cm~~ 21cm		
	% Veg- Left Bank*	90%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	5m/23.5 20%		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	100%		
	Substrate % gravel	0		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	256 11:51am		
	Photo Downstream (time & #)	254 11:51		
	Photo Left Bank* (time & #)	2547 11:51		
	Photo Right Bank* (time & #)	245		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 97 **Date**_____
Target UTM: **448822** **3756408**
Observers (writer/other)_____

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	3756422		
	Channel position (L/C/R*)	Left		
	Width of Channel (m)	24.5		
	Max Depth (cm) & Location in Channel (L/C/R*)	44		
	Depth @ Left Edge (cm) (~4" from bank edge)	14		
	Depth @ Right Edge (cm) (~4" from bank edge)	7cm		
	% Veg- Left Bank*	90%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	$\frac{2.4}{24.5} \approx 10\%$		
Should total 100%	Substrate % mud/silt	0		
	Substrate % sand	100%		
	Substrate % gravel	0		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	12:10pm 31 ~~2~~		
	Photo Downstream (time & #)	259		
	Photo Left Bank* (time & #)	2832		
	Photo Right Bank* (time & #)	2630		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 98 **Date** 10/18/18
Target UTM: 448534 3756384
Observers (writer/other)_____

12:24

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	3756417		
	Channel position (L/C/R*)	Right		
	Width of Channel (m)	25m		
	Max Depth (cm) & Location in Channel (L/C/R*)	25m C/L 39cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	9		
	Depth @ Right Edge (cm) (~4" from bank edge)	18cm		
	% Veg- Left Bank*	100%		
	% Veg- Right Bank*	100%		
	% Canopy Over Transect Band	20%		
Should total 100%	Substrate % mud/silt	5%		
	Substrate % sand	~~20%~~ 95%		
	Substrate % gravel			
	Substrate % cobble			
	Substrate % boulder			
	Photo Upstream (time & #)	12:28 35		
	Photo Downstream (time & #)	12:28 33		
	Photo Left Bank* (time & #)	12:28 36		
	Photo Right Bank* (time & #)	12:28 34		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

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


Riverwalk Points: Group12
Points 99-108
Wooden Gate Way
Cool Meadow Dr
Aspen Leaf Ln
Heatherwood Dr
Wagon Creek Way
Sumner Ave
Citrus St
Maryield St
Maggie Ln
Morning Hills Dr
Burbank Rd
Excelsior Dr
Greenbelt Rd
Corona Valley Ave
Harrison Ave
Stonegate Dr
Shadyside Way
Cobble Creek Dr
Morning Mist Dr
Soaring Bird Ct
Harder Ct
Chandler St
Dellbrook St
National St
Vandewalle St
Dearborn St
Car 1 (End)
SAS108
SAS107
SAS106
SAS105
SAS104
SAS103
SAS102
SAS101
SAS100
SAS99
Car 2 (Start)
Queens Rd
Pal Dr
Rim Crest Dr
Acacia Ave
Mauna Loa
Old Hammer Ave
Detroit St
Taft St
Sierra Ave
6th St
Chestnut Dr
Rocky View Rd
Alhambra St
Norco Dr
Shadow Canyon Ct
Norconian Dr
15
N
3000 ft
Google earth
© 2016 Google

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 99 **Date** 10/18/18
Target UTM: **448253** **3756327**
Observers (writer/other) Barbara Berry

CB, U, R, d F

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0448257 3756330		
	Channel position (L/C/R*)	L	C	
	Width of Channel (m)	27		
	Max Depth (cm) & Location in Channel (L/C/R*)	41cm L		
	Depth @ Left Edge (cm) (~4" from bank edge)	38 cm		
	Depth @ Right Edge (cm) (~4" from bank edge)	12 cm		
	% Veg- Left Bank*	~~%~~ 100		
	% Veg- Right Bank*	~~%~~ 100		
	% Canopy Over Transect Band	10		
Should total 100%	Substrate % mud/silt	5		
	Substrate % sand	90		
	Substrate % gravel	5		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	0950 1		
	Photo Downstream (time & #)	0951 2		
	Photo Left Bank* (time & #)	0952 3		
	Photo Right Bank* (time & #)	0953 4		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	Island DS Minor		

*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 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:

NO

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

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

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	447960 3756381		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	~~60~~ 27		
	Max Depth (cm) & Location in Channel (L/C/R*)	~~46~~ 46 L		
	Depth @ Left Edge (cm) (~4" from bank edge)	46		
	Depth @ Right Edge (cm) (~4" from bank edge)	15		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	~~20~~ 10		
Should total 100%	Substrate % mud/silt	5		
	Substrate % sand	50		
	Substrate % gravel	5		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1014 5		
	Photo Downstream (time & #)	1015 6		
	Photo Left Bank* (time & #)	1015 7		
	Photo Right Bank* (time & #)	1016 8		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)	Significant Arundo Cane		

*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 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:

_____
_____
_____
_____
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_____
_____

_____
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_____
_____
_____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 101 **Date** 10/18/18
Target UTM: **447680** **3756377**
Observers (writer/other) Barbara

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	447659 3756360		
Channel position (L/C/R*)	C		
Width of Channel (m)	23.5		
Max Depth (cm) & Location in Channel (L/C/R*)	56 R		
Depth @ Left Edge (cm) (~4" from bank edge)	32		
Depth @ Right Edge (cm) (~4" from bank edge)	54		
% Veg- Left Bank*	100		
% Veg- Right Bank*	75		
% Canopy Over Transect Band	5		
Should total 100% — Substrate % mud/silt	5		
Substrate % sand	50		
Substrate % gravel	5		
Substrate % cobble	0		
Substrate % boulder	0		
Photo Upstream (time & #)	10:25 7		
Photo Downstream (time & #)	10:25 8		
Photo Left Bank* (time & #)	10:30 9		
Photo Right Bank* (time & #)	1030 10		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

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

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	1150447593 3756095		
	Channel position (L/C/R*)	C	C	
	Width of Channel (m)	25m		
	Max Depth (cm) & Location in Channel (L/C/R*)	45 L		
	Depth @ Left Edge (cm) (~4" from bank edge)	45		
	Depth @ Right Edge (cm) (~4" from bank edge)	28		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	15		
Should total 100%	Substrate % mud/silt	5		
	Substrate % sand	85		
	Substrate % gravel	10		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	10:43 11		
	Photo Downstream (time & #)	10:43 12		
	Photo Left Bank* (time & #)	10:44 13		
	Photo Right Bank* (time & #)	10:44 14		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

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

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 103 **Date** 10/18/18
Target UTM: **447481** **3755829**
Observers (writer/other) Stacey

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S0447444 3755825		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	31		
	Max Depth (cm) & Location in Channel (L/C/R*)	~~28L~~ 35R		
	Depth @ Left Edge (cm) (~4" from bank edge)	18		
	Depth @ Right Edge (cm) (~4" from bank edge)	~~28~~ 18		
	% Veg- Left Bank*	90		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	10		
Should total 100%	Substrate % mud/silt	5		
	Substrate % sand	90		
	Substrate % gravel	5		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	10:57 15		
	Photo Downstream (time & #)	10:57 16		
	Photo Left Bank* (time & #)	10:58 17		
	Photo Right Bank* (time & #)	10:58 18		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 104 **Date** 10/18/18
Target UTM: **447240** **3755663**
Observers (writer/other) Stacey

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S0447246 3755607		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	31		
	Max Depth (cm) & Location in Channel (L/C/R*)	27R		
	Depth @ Left Edge (cm) (~4" from bank edge)	14		
	Depth @ Right Edge (cm) (~4" from bank edge)	22		
	% Veg- Left Bank*	90		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	10		
Should total 100%	Substrate % mud/silt	5		
	Substrate % sand	90		
	Substrate % gravel	5		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:12 19		
	Photo Downstream (time & #)	11:12 20		
	Photo Left Bank* (time & #)	11:13 21		
	Photo Right Bank* (time & #)	11:13 22		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

_____ _____
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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 105 **Date** 10/18/18
Target UTM: **446983** **3755713**
Observers (writer/other) Stacy

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S0446984 3755699	11S0446975 3755698	
	Channel position (L/C/R*)	R	L	
	Width of Channel (m)	16	6	
	Max Depth (cm) & Location in Channel (L/C/R*)	50L	42	
	Depth @ Left Edge (cm) (~4" from bank edge)	47	22	
	Depth @ Right Edge (cm) (~4" from bank edge)	20	11	
	% Veg- Left Bank*	100	100	
	% Veg- Right Bank*	100	100	
	% Canopy Over Transect Band	10	30	
Should total 100%	Substrate % mud/silt	5	20	
	Substrate % sand	85	80	
	Substrate % gravel	10	0	
	Substrate % cobble	0	0	
	Substrate % boulder	0	0	
	Photo Upstream (time & #)	1123	1126	
	Photo Downstream (time & #)	1123	1126	
	Photo Left Bank* (time & #)	1124	1129	
	Photo Right Bank* (time & #)	1124	1127	
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

_____ _____

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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 106 **Date** 10/18/18
Target UTM: **446735** **3755827**
Observers (writer/other) Stacey

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11504674O 3755035		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	18		
	Max Depth (cm) & Location in Channel (L/C/R*)	38L		
	Depth @ Left Edge (cm) (~4" from bank edge)	31		
	Depth @ Right Edge (cm) (~4" from bank edge)	24		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	85		
Should total 100%	Substrate % mud/silt	5		
	Substrate % sand	90		
	Substrate % gravel	5		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	11:46		
	Photo Downstream (time & #)	11:46		
	Photo Left Bank* (time & #)	11:47		
	Photo Right Bank* (time & #)	11:47		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

_____ _____

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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

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

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	11S 0446470 3755777		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	17		
	Max Depth (cm) & Location in Channel (L/C/R*)	47 R		
	Depth @ Left Edge (cm) (~4" from bank edge)	22		
	Depth @ Right Edge (cm) (~4" from bank edge)	47		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	25		
Should total 100%	Substrate % mud/silt	05		
	Substrate % sand	90		
	Substrate % gravel	5		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	1155		
	Photo Downstream (time & #)	1155		
	Photo Left Bank* (time & #)	1200		
	Photo Right Bank* (time & #)	1200		
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

*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 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:

_____ _____
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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

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

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0446164 3755844		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	18		
	Max Depth (cm) & Location in Channel (L/C/R*)	44 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	20		
Should total 100%	Substrate % mud/silt	10		
	Substrate % sand	85		
	Substrate % gravel	5		
	Substrate % cobble	0		
	Substrate % boulder	0		
	Photo Upstream (time & #)	12:13		
	Photo Downstream (time & #)	1213		
	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.

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:

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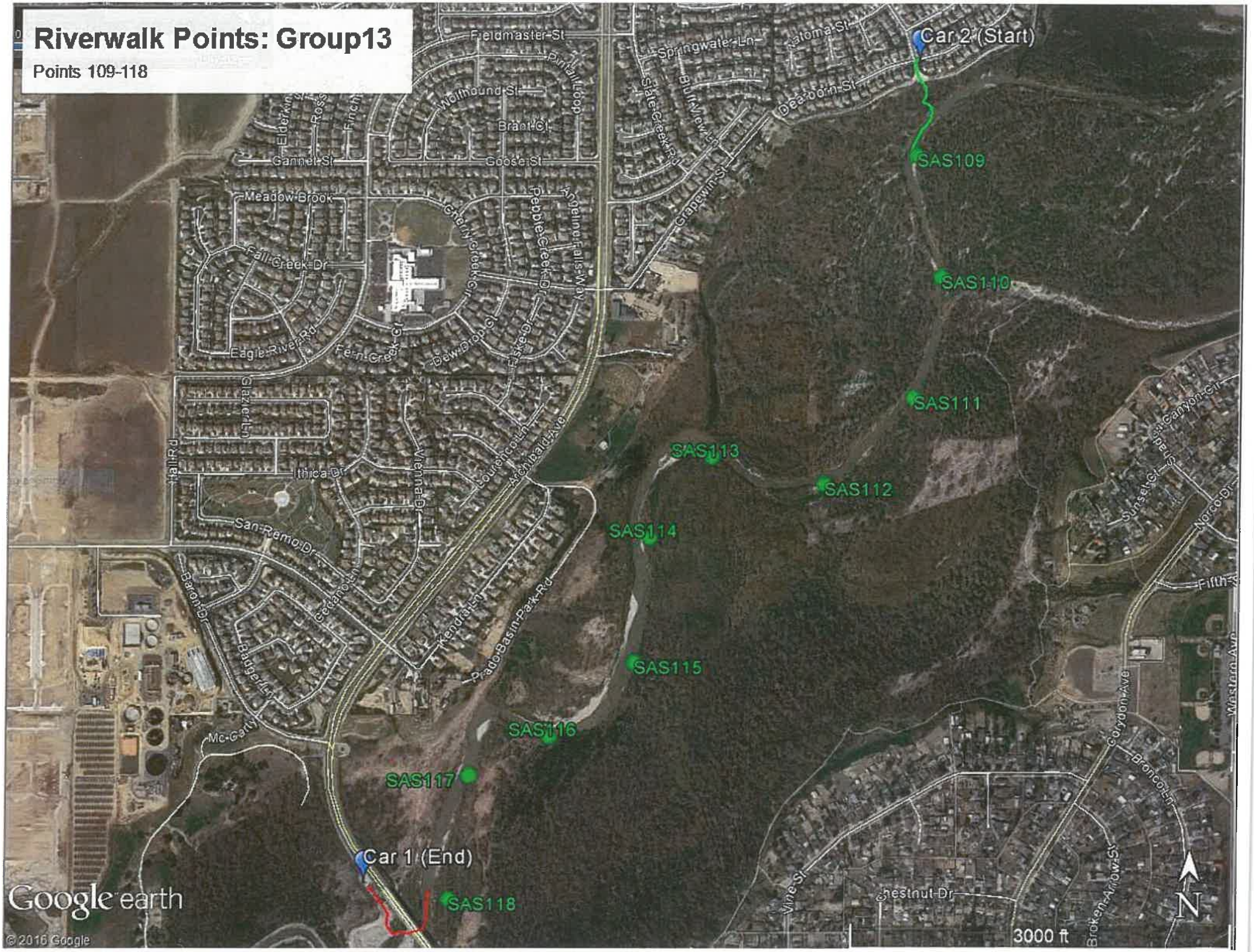
Riverwalk Points: Group13
Points 109-118
Car 2 (Start)
SAS109
SAS110
SAS111
SAS113
SAS112
SAS114
SAS115
SAS116
SAS117
Car 1 (End)
SAS118
Fieldmaster St
Springwater Ln
Kaloma St
Deadhorn St
Bluffview Ct
Slate Creek Rd
Grapewin St
Pintail Loop
Wolfhound St
Brant Ct
Gannet St
Goose St
Meadow Brook
Cherry Creek Cir
Pebble Creek Dr
Angeline Falls Way
Fall Creek Dr
Eagle River Rd
Fern Creek Cir
Dewdrop Ct
Lake Dr
Glazier Ln
Tall Rd
Ithica Dr
Vanness Dr
Lourence Ln
Archibald Ave
San Remo Dr
Cedano Ln
Baron Dr
Badger Ln
Kendra Ln
Prado Basin Park Rd
Mc Carty
Canyon Cir
Sunset Ct
Norco Dr
Fifth St
Western Ave
Corydon Ave
Broncon Ln
Broken Arrow St
Vine St
Chestnut Dr
Google earth
© 2016 Google
3000 ft
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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 109 **Date** 10-18-2018
Target UTM: **445940** **3755674**
Observers (writer/other) [illegible]

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	445922 3755681		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	19.5		
	Max Depth (cm) & Location in Channel (L/C/R*)	39 cm		
	Depth @ Left Edge (cm) (~4" from bank edge)	25		
	Depth @ Right Edge (cm) (~4" from bank edge)	7		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	75		
	% Canopy Over Transect Band	20%		
Should total 100%	Substrate % mud/silt	1		
	Substrate % sand	99		
	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.

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:

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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 110 **Date** 10-18
Target UTM: **446000** **3755385**
Observers (writer/other) BO

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0445946 3755395		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	15.8		
	Max Depth (cm) & Location in Channel (L/C/R*)	48 C		
	Depth @ Left Edge (cm) (~4" from bank edge)	18		
	Depth @ Right Edge (cm) (~4" from bank edge)	20		
	% Veg- Left Bank*	80		
	% Veg- Right Bank*	50		
	% Canopy Over Transect Band	45		
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.

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:

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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 111 **Date** 10-18-2018
Target UTM: **445935** **3755100**
Observers (writer/other) BOH

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0445931 3755112		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	20.4		
	Max Depth (cm) & Location in Channel (L/C/R*)	51 C		
	Depth @ Left Edge (cm) (~4" from bank edge)	3		
	Depth @ Right Edge (cm) (~4" from bank edge)	23		
	% Veg- Left Bank*	50		
	% Veg- Right Bank*	75		
	% Canopy Over Transect Band	33		
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.

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:

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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 112 **Date** 10-18-2018
Target UTM: **445723** **3754896**
Observers (writer/other) Bott

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0445722 3754899		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	31.5		
	Max Depth (cm) & Location in Channel (L/C/R*)	41 C		
	Depth @ Left Edge (cm) (~4" from bank edge)	4		
	Depth @ Right Edge (cm) (~4" from bank edge)	16		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	28		
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.

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:

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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 113 **Date** 10-18-17
Target UTM: 445456 3754961
Observers (writer/other) BH

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0445958 3754972		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	38.3		
	Max Depth (cm) & Location in Channel (L/C/R*)	37 C		
	Depth @ Left Edge (cm) (~4" from bank edge)	7		
	Depth @ Right Edge (cm) (~4" from bank edge)	7		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	40		
Should total 100%	Substrate % mud/silt	2		
	Substrate % sand	98		
	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.

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:

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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 114 **Date** 10-18-22
Target UTM: **445308** **3754771**
Observers (writer/other) BOH

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ Left Bank*)	0445279 3754181		
Channel position (L/C/R*)			
Width of Channel (m)	31.5		
Max Depth (cm) & Location in Channel (L/C/R*)	43		
Depth @ Left Edge (cm) (~4" from bank edge)	0		
Depth @ Right Edge (cm) (~4" from bank edge)	8		
% Veg- Left Bank*	100		
% Veg- Right Bank*	60		
% Canopy Over Transect Band	35		
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.

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:

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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 115 **Date** 10-15-20
Target UTM: **445271** **3754475**
Observers (writer/other) Bott

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0445262 3754480		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	35.6		
	Max Depth (cm) & Location in Channel (L/C/R*)	41 C		
	Depth @ Left Edge (cm) (~4" from bank edge)	4		
	Depth @ Right Edge (cm) (~4" from bank edge)	20		
	% Veg- Left Bank*	95		
	% Veg- Right Bank*	70		
	% Canopy Over Transect Band	35.6		
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)			

*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 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:

_____ _____
_____ _____
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2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 116 **Date** 10.18.2018
Target UTM: 445069 3754300
Observers (writer/other) Bell

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0445071 3754303		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	29.8		
	Max Depth (cm) & Location in Channel (L/C/R*)	49 C		
	Depth @ Left Edge (cm) (~4" from bank edge)	25		
	Depth @ Right Edge (cm) (~4" from bank edge)	9		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	29		
Should total 100%	Substrate % mud/silt	4		
	Substrate % sand	96		
	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.

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:

_____ _____
_____ _____
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_____ _____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 117 **Date** 10/18/2018
Target UTM: **444878** **3754208**
Observers (writer/other) Batt

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	444876 3754210		
	Channel position (L/C/R*)	C		
	Width of Channel (m)	26.7		
	Max Depth (cm) & Location in Channel (L/C/R*)	43		
	Depth @ Left Edge (cm) (~4" from bank edge)	24		
	Depth @ Right Edge (cm) (~4" from bank edge)	8		
	% Veg- Left Bank*	50		
	% Veg- Right Bank*	100		
	% Canopy Over Transect Band	23		
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.

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:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

2018 River Walk
Santa Ana River Sucker Habitat Evaluation

Transect Name: SAS 118 **Date** 10/17/2018
Target UTM: **444830** **3753915**
Observers (writer/other) Beth

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
	Actual GPS coordinates in UTM (@ Left Bank*)	0444788 3753950		
	Channel position (L/C/R*)	0		
	Width of Channel (m)	28.7		
	Max Depth (cm) & Location in Channel (L/C/R*)	45 0		
	Depth @ Left Edge (cm) (~4" from bank edge)	34		
	Depth @ Right Edge (cm) (~4" from bank edge)	10		
	% Veg- Left Bank*	100		
	% Veg- Right Bank*	75		
	% Canopy Over Transect Band	27		
Should total 100%	Substrate % mud/silt	1		
	Substrate % sand	99		
	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.

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_____ _____
_____ _____