

## Group 1

Transects: **9 through 17.** The first car should park on Riverside Ave. where the street crosses the river. The second car should park upstream, off of Agua Mansa Road in the turn out next to the drainage right before Dunn Ranch Road.

Directions: Take 91 East to 60 West. Exit Main Street and turn right. *There are 2 Riverside Ave* Main Street turns into Riverside Ave (park a car here where it street and river cross). Turn right onto Agua Mansa (second car here).

Please use your GPS unit to guide you to each waypoint.

If the waypoint is not in the river, walk to the closest location that is in the river and record on your data sheet the actual GPS location on the east bank.

If there is more than one channel, record on your data sheet the GPS location on the east bank of each channel.

Based on the data collected in the previous River Walk, here are some tips:

- Please record all measurements using the metric system; there should be enough transect tapes/meter sticks with metric units for each group.
- Set up your transect lines perpendicular to the river
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%
- Record GPS locations using UTM coordinates

*Notes, 1/11/03*

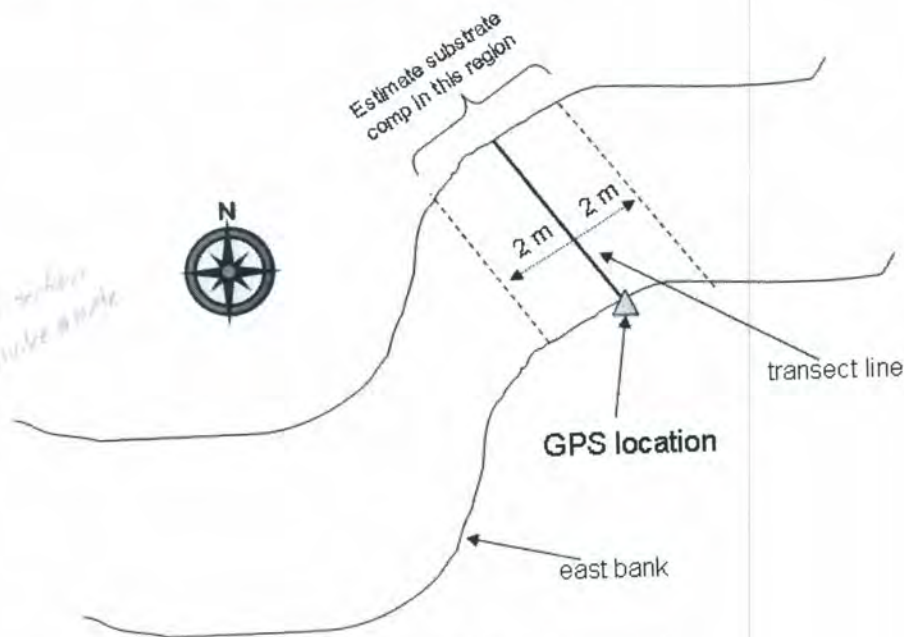
*bottom of debris check*

*take a pic,*

*estimate of percent*

*if its all the way down*

*if looking downstream*



If you have any problems, please call Bonnie Johnson at 951-757-0782.

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 9

Date 10/16/2014

Target UTM: 467461

3767169

Observers (writer/other) Brauden, Justin

**General Location**

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	3767119		
Channel position			
Width of Channel	7.6m		
Max Depth & location in channel	46cm (same as west edge)		
Depth Edge East (~4" from edge)	28cm		
Depth Edge West (~4" from edge)	46cm		
Bank East %Veg Overhand	100%	} mostly wood & debris	
Bank West %Veg Overhang	70%		
Substrate % mud/silt	70%		
Substrate % sand	0%		
Substrate % gravel	30%		
Substrate % cobble	0%		
Substrate % boulder	0%		
Photo East Bank (time & #)	3 12:57		
Photo West Bank (time & #)	1 ↓		
Photo upstream (time & #)	2		
Photo downstream (time & #)	4		
Photo other (describe)	5 (river)		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 10

**Date** 10/16/2014

**Target UTM:** 467340

3766938

**Observers (writer/other)** Brandon

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

*Photo on  
table  
river*

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	3767003		
Channel position			
Width of Channel	3.8m		
Max Depth & location in channel	37cm, 1.5mW		
Depth Edge East (~4" from edge)	10cm		
Depth Edge West (~4" from edge)	39cm		
Bank East %Veg Overhand	40%	} mostly woody debris	
Bank West %Veg Overhang	80%		
Substrate % mud/silt			
Substrate % sand	30%		
Substrate % gravel	30%		
Substrate % cobble	40%		
Substrate % boulder			
Photo East Bank (time & #)	3 12:29		
Photo West Bank (time & #)	1 ↓		
Photo upstream (time & #)	2		
Photo downstream (time & #)	4		
Photo other (describe)	5 (canoe)		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 11      **Date** 10/16/2011  
**Target UTM:**      467256      3766659  
**Observers (writer/other)** Brown etc  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	3706660 <del>3716660</del>		
Channel position			
Width of Channel	5.4m		
Max Depth & location in channel	71cm, 1m W		
Depth Edge East (~4" from edge)	6cm		
Depth Edge West (~4" from edge)	14cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	20%		
Substrate % sand	0%		
Substrate % gravel	40%		
Substrate % cobble	40%		
Substrate % boulder	0%		
Photo East Bank (time & #)	3 1203		
Photo West Bank (time & #)	1 ↓		
Photo upstream (time & #)	2		
Photo downstream (time & #)	4		
Photo other (describe)	5 (Stream (cur))		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 12      **Date** 10/16/2014  
**Target UTM:**      467150      3766398  
**Observers (writer/other)** Brandon etc  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	3766399		
Channel position			
Width of Channel	7.5m		
Max Depth & location in channel	81cm, 1m E		
Depth Edge East (~4" from edge)	53cm		
Depth Edge West (~4" from edge)	10cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	20%		
Substrate % sand	30%		
Substrate % gravel	50%		
Substrate % cobble	0%		
Substrate % boulder	0%		
Photo East Bank (time & #)	3 11:54		
Photo West Bank (time & #)	1 ↓		
Photo upstream (time & #)	2		
Photo downstream (time & #)	4		
Photo other (describe)	5 (review)		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

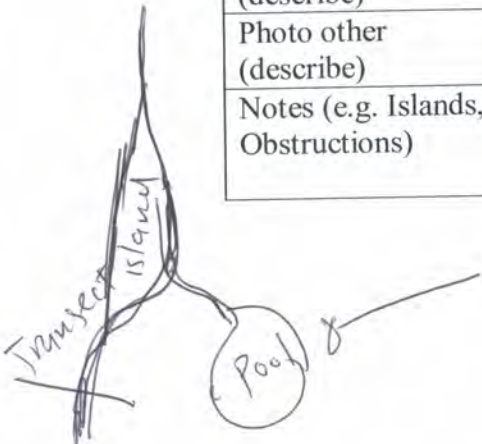
# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 13      **Date** 10/16/2014  
**Target UTM:**      467044      3766133  
**Observers (writer/other)** Braun, Tison  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	3766134		
Channel position			
Width of Channel	6.7m		
Max Depth & location in channel	43cm, 2.5m W		
Depth Edge East (~4" from edge)	5cm		
Depth Edge West (~4" from edge)	15cm,		
Bank East %Veg Overhand	90%		
Bank West %Veg Overhang	90%		
Substrate % mud/silt	0%		
Substrate % sand	20%		
Substrate % gravel	70%		
Substrate % cobble	10%		
Substrate % boulder	0%		
Photo East Bank (time & #)	3 11:42		
Photo West Bank (time & #)	1 ↓		
Photo upstream (time & #)	2		
Photo downstream (time & #)	4		
Photo other (describe)	5 (center)		
Photo other (describe)	Algae w/ moss		
Notes (e.g. Islands, Obstructions)	Pool ~ 3m E, separated by land, connects ~ 3m upstream		



# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 14      **Date** 10/16/2014  
**Target UTM:** 466961      **3765847**  
**Observers (writer/other)** Brauden

**General Location** \_\_\_\_\_  
Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	3765859		
Channel position			
Width of Channel	7.1 m		
Max Depth & location in channel	73cm, 2m E		
Depth Edge East (~4" from edge)	24cm		
Depth Edge West (~4" from edge)	7cm		
Bank East %Veg Overhand	0%		
Bank West %Veg Overhang	20%		
Substrate % mud/silt	20%		
Substrate % sand	20%		
Substrate % gravel	20%		
Substrate % cobble	30%		
Substrate % boulder	0%		
Photo East Bank (time & #)	3		
Photo West Bank (time & #)	1 11:14		
Photo upstream (time & #)	2 ↓		
Photo downstream (time & #)	4		
Photo other (describe)	5 (water)		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

*Brauden* Red algae - long strands on sand, 1m W, 10-50cm long

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

Transect Name: SAS 15

Date 10/16/14

Target UTM: 466938

3765563

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

General Location \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	3765575		
Channel position			
Width of Channel	13.6m		
Max Depth & location in channel	27cm, 3m W		
Depth Edge East (~4" from edge)	4cm		
Depth Edge West (~4" from edge)	7cm		
Bank East %Veg Overhand	0%		
Bank West %Veg Overhang	80%, herbs/lowbs		
Substrate % mud/silt	0%		
Substrate % sand	30%		
Substrate % gravel	50%		
Substrate % cobble	20%		
Substrate % boulder	0%		
Photo East Bank (time & #)	3 11:10		
Photo West Bank (time & #)	1 6		
Photo upstream (time & #)	2		
Photo downstream (time & #)	4		
Photo other (describe)	5 (stream)		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	2m island 1m upstream, sand		

Pool w/ fish, unknown species: 3765577  
(hundreds?, 2-4cm long)



# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 16      **Date** 10/16/2014  
**Target UTM:** 466759      **3765354**  
**Observers (writer/other)** Brandon  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	3765355		
Channel position			
Width of Channel	7.2m		
Max Depth & location in channel	1.8m, 1m W		
Depth Edge East (~4" from edge)	13cm		
Depth Edge West (~4" from edge)	9cm		
Bank East %Veg Overhand	20%		
Bank West %Veg Overhang	70%		
Substrate % mud/silt	10%		
Substrate % sand	0%		
Substrate % gravel	70%		
Substrate % cobble	20%		
Substrate % boulder	0%		
Photo East Bank (time & #)	3 40:57		
Photo West Bank (time & #)	1 ↓		
Photo upstream (time & #)	2		
Photo downstream (time & #)	4		
Photo other (describe)	5 (center of stream)		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

NOT COUNTING  
 (m2) 496  
 764 (2m)

← 1 m from  
 West bank

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 17      **Date** 10/  
**Target UTM:**      **466587**      **3765111**  
**Observers (writer/other)** Brandon M.  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	3765120		
Channel position	East		
Width of Channel	Mean 3.7m		
Max Depth & location in channel	17cm, 4m E		
Depth Edge East (~4" from edge)	2.2 inch		
Depth Edge West (~4" from edge)	5cm		
Bank East %Veg Overhand	5%		
Bank West %Veg Overhang	65%		
Substrate % mud/silt	30%		
Substrate % sand	0%		
Substrate % gravel	50%		
Substrate % cobble	20%		
Substrate % boulder	0%		
Photo East Bank (time & #)	10:40 5		
Photo West Bank (time & #)	↓ 1		
Photo upstream (time & #)		3	
Photo downstream (time & #)		4	
Photo other (describe)	West, center, upstream, downstream, east		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

o E = East  
 third of floodplain  
 o 4m E =  
 4 meters from East bank

## Group2

**Transects: 18 through 26.** The first car should park off of Market Street where the street crosses the river. The second car should park upstream on Riverside Ave. where the street crosses the river

**Directions:** Take 91 East to 60 West. Exit Market Street and turn right. From Market Street (leave first car here), turn around and get back on 60 East. Take next exit which is Main Street and turn left. Main Street will turn into Riverside Ave.

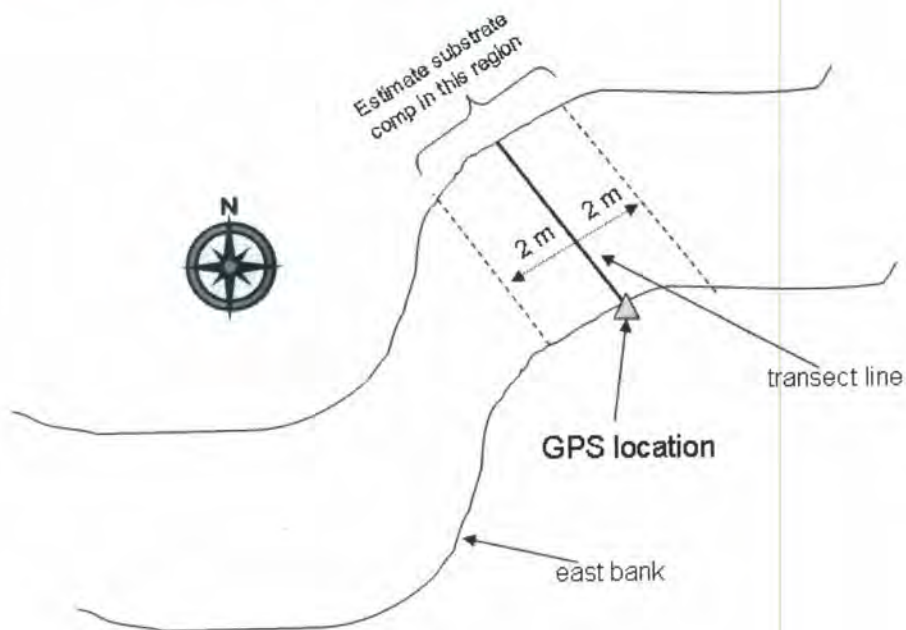
Please use your GPS unit to guide you to each waypoint.

If the waypoint is not in the river, walk to the closest location that is in the river and record on your data sheet the actual GPS location on the east bank.

If there is more than one channel, record on your data sheet the GPS location on the east bank of each channel.

Based on the data collected in the previous River Walk, here are some tips:

- Please record all measurements using the metric system; there should be enough transect tapes/meter sticks with metric units for each group.
- Set up your transect lines perpendicular to the river
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%
- Record GPS locations using UTM coordinates



**If you have any problems, please call Bonnie Johnson at 951-757-0782.**

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 18

Date 10/16/14

Target UTM: 466399

3764883

Observers (writer/other) Aaron Jones

General Location SAS 18

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0466409 3764883		
Channel position			
Width of Channel	11.65 m		
Max Depth & location in channel	39 cm		
Depth Edge East (~4" from edge)	2 cm		
Depth Edge West (~4" from edge)	11.5 cm		
Bank East %Veg Overhang	2%		
Bank West %Veg Overhang	2%		
Substrate % mud/silt	1%		
Substrate % sand	15%		
Substrate % gravel	64%		
Substrate % cobble	20%		
Substrate % boulder			
Photo East Bank (time & #)	1		
Photo West Bank (time & #)	2		
Photo upstream (time & #)	3		
Photo downstream (time & #)	4		
Photo other (describe)	5 - island down stream of transect		
Photo other (describe)	6 - invasive algae @ transect		
Notes (e.g. Islands, Obstructions)	Islands		

⇒ Invasive algae on cobble

# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 19      Date 10/16/14  
 Target UTM:      466227      3764671  
 Observers (writer/other) Austin Jones  
 General Location \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0466217 3764674		
Channel position			
Width of Channel	9.4m		
Max Depth & location in channel	36.0cm		
Depth Edge East (~4" from edge)	5.0cm		
Depth Edge West (~4" from edge)	6.0cm		
Bank East %Veg Overhand	0%		
Bank West %Veg Overhang	2%		
Substrate % mud/silt	0%		
Substrate % sand	3%		
Substrate % gravel	27%		
Substrate % cobble	70%		
Substrate % boulder	0%		
Photo East Bank (time & #)	9		
Photo West Bank (time & #)	10		
Photo upstream (time & #)	11		
Photo downstream (time & #)	12		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

7 (Photo): tire track  
 8 (Photo): recreational dam  
 13 (Photo): invasive tamarisks

14 (Photo): dam of sediment  
 15 (Photo): invasive algae  
 Note: Invasive algae present  
 16 (Photo): effluvia activity  
 17 (Photo): offroad vehicle tracks

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 20

Date 10/16/14

Target UTM: 466104

3764403

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

General Location \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0466094 3764410		
Channel position			
Width of Channel	9.4 m		
Max Depth & location in channel	25.0 cm		
Depth Edge East (~4" from edge)	8.0 cm		
Depth Edge West (~4" from edge)	5.0 cm		
Bank East %Veg Overhand	30%		
Bank West %Veg Overhang	0%		
Substrate % mud/silt	0%		
Substrate % sand	30%		
Substrate % gravel	40%		
Substrate % cobble	30%		
Substrate % boulder	0%		
Photo East Bank (time & #)	18		
Photo West Bank (time & #)	19		
Photo upstream (time & #)	20		
Photo downstream (time & #)	21		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

Invasive algae present (190 L)

22 (Photo): offroad vehicle use

23 (Photo): ripple w/ scower pool

# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 21

Date 10/16/14

Target UTM: 465953

3764146

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

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0465953 3764148		
Channel position			
Width of Channel	11.7 m		
Max Depth & location in channel	44 cm - west side of channel		
Depth Edge East (~4" from edge)	7 cm		
Depth Edge West (~4" from edge)	32 cm		
Bank East %Veg Overhand	2%		
Bank West %Veg Overhang	3%		
Substrate % mud/silt	0%		
Substrate % sand	50%		
Substrate % gravel	35%		
Substrate % cobble	15%		
Substrate % boulder	0%		
Photo East Bank (time & #)	24		
Photo West Bank (time & #)	25		
Photo upstream (time & #)	26		
Photo downstream (time & #)	27		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	3m sandbar in middle of transect		

28(photo): offroad vehicle use      30(photo): substrate  
 29(photo): sandbar in transect  
 Note: Invasive algae on plants (willow branches??)

# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 22

Date 10/16/14

Target UTM: 465757

3763921

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

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0465756 3763927		
Channel position			
Width of Channel	16.5 m		
Max Depth & location in channel	21.0 cm		
Depth Edge East (~4" from edge)	13 cm		
Depth Edge West (~4" from edge)	3.0 cm		
Bank East %Veg Overhand	5%		
Bank West %Veg Overhang	3%		
Substrate % mud/silt	0%		
Substrate % sand	90%		
Substrate % gravel	10%		
Substrate % cobble	0%		
Substrate % boulder	0%		
Photo East Bank (time & #)	32		
Photo West Bank (time & #)	33		
Photo upstream (time & #)	34		
Photo downstream (time & #)	35		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

31(Photo): deep hole near rip-rap  
458cm

36(Photo): people doing field work

37(Photo): recreational dam

38(Photo): 64cm Pool w/ heater measuring



## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 23  
**Target UTM:** 465548

**Date** 10/16/14  
3763710

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

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0465549 3763712		
Channel position			
Width of Channel	5.8		
Max Depth & location in channel	22cm		
Depth Edge East (~4" from edge)	9cm		
Depth Edge West (~4" from edge)	5cm		
Bank East %Veg Overhang	20%		
Bank West %Veg Overhang	1%		
Substrate % mud/silt	0%		
Substrate % sand	98%		
Substrate % gravel	0%		
Substrate % cobble	2%		
Substrate % boulder	0%		
Photo East Bank (time & #)	39		
Photo West Bank (time & #)	40		
Photo upstream (time & #)	41		
Photo downstream (time & #)	42		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

43(Photo): cobble bar

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 24

Date

10/14/14

Target UTM: 465400

3763456

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

General Location \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0465402 3763461		
Channel position			
Width of Channel	21.6 m		
Max Depth & location in channel	24 cm		
Depth Edge East (~4" from edge)	17 cm		
Depth Edge West (~4" from edge)	15 cm		
Bank East %Veg Overhand	2090		
Bank West %Veg Overhang	10%		
Substrate % mud/silt	0%		
Substrate % sand	100%		
Substrate % gravel	0%		
Substrate % cobble	0%		
Substrate % boulder	0%		
Photo East Bank (time & #)	44		
Photo West Bank (time & #)	45		
Photo upstream (time & #)	46		
Photo downstream (time & #)	47		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 25                      **Date** \_\_\_\_\_  
**Target UTM:**                      465129                      3763345

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

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0465125 3763348		
Channel position			
Width of Channel	11.8m		
Max Depth & location in channel	25 cm		
Depth Edge East (~4" from edge)	14 cm		
Depth Edge West (~4" from edge)	20 cm		
Bank East %Veg Overhand	2%		
Bank West %Veg Overhang	2%		
Substrate % mud/silt	0%		
Substrate % sand	90%		
Substrate % gravel	10%		
Substrate % cobble	0%		
Substrate % boulder	0%		
Photo East Bank (time & #)	48		
Photo West Bank (time & #)	49		
Photo upstream (time & #)	50		
Photo downstream (time & #)	51		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	1m sand bar in middle of channel		

52 (Photo): sand/gravel bar in transect  
 53-55 (photos): @ bridge - site SAS 26

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 26                      **Date** \_\_\_\_\_  
**Target UTM:**                      464939                      3763126

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

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)			
Channel position			
Width of Channel			
Max Depth & location in channel			
Depth Edge East (~4" from edge)			
Depth Edge West (~4" from edge)			
Bank East %Veg Overhand			
Bank West %Veg Overhang			
Substrate % mud/silt			
Substrate % sand			
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

### Group3

**Transects: 27 through 34.** The first car should park off of Mission Inn Ave. at the Carlson Bark Park on the left side of the road. The second car should park upstream off of Market Street where the street crosses the river. Directions: Take 91 East. Exit University Ave. Go through light for University and continue on to Mission Inn Ave. Turn left onto Mission Inn Ave. Dog Park will be on the left hand side. From Dog Park (leave first car here), turn right. Turn left when you reach Market Street.

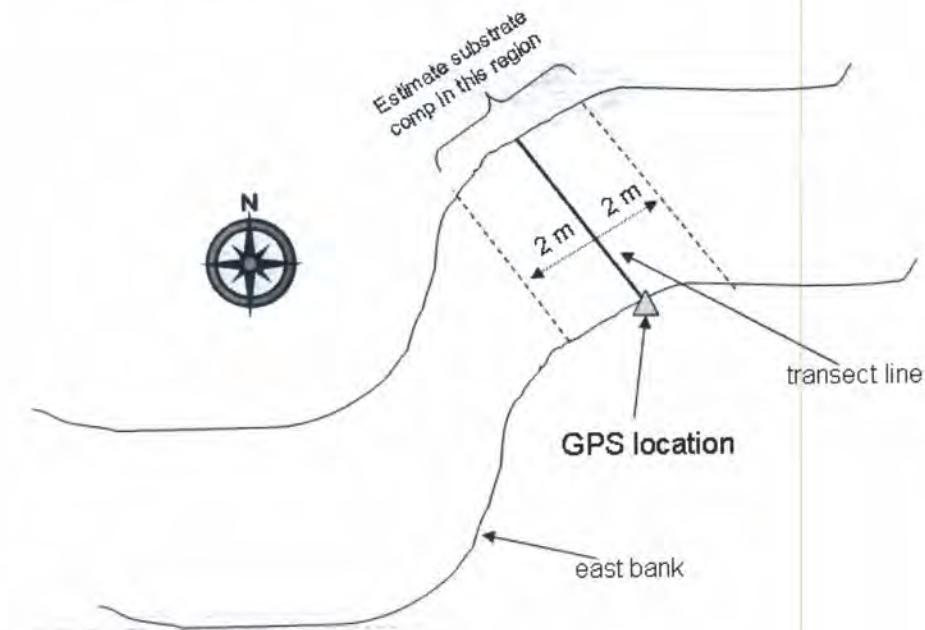
Please use your GPS unit to guide you to each waypoint.

If the waypoint is not in the river, walk to the closest location that is in the river and record on your data sheet the actual GPS location on the east bank.

If there is more than one channel, record on your data sheet the GPS location on the east bank of each channel.

Based on the data collected in the previous River Walk, here are some tips:

- Please record all measurements using the metric system; there should be enough transect tapes/meter sticks with metric units for each group.
- Set up your transect lines perpendicular to the river
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%
- Record GPS locations using UTM coordinates



If you have any problems, please call Bonnie Johnson at 951-757-0782.

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 27      **Date** 10/16/2014  
**Target UTM:**      464730      3762923  
**Observers (writer/other)** Jennifer, Nolan, Garrett, Liz  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	464719 3762942		
Channel position	west		
Width of Channel	24.8m		
Max Depth & location in channel	24cm center		
Depth Edge East (~4" from edge)	20cm.		
Depth Edge West (~4" from edge)	16cm		
Bank East %Veg Overhand	75% <del>70%</del>		
Bank West %Veg Overhang	30%		
Substrate % mud/silt			
Substrate % sand	100%		
Substrate % gravel	(trace)		
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	4		
Photo West Bank (time & #)	2		
Photo upstream (time & #)	3		
Photo downstream (time & #)	1		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 28                      **Date** \_\_\_\_\_

**Target UTM:**            464595            3762657

**Observers (writer/other)** Jennifer, Ndan, Garrett, Liz

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	04645690 3762644		
Channel position	Center		
Width of Channel	20.8m		
Max Depth & location in channel	30cm		
Depth Edge East (~4" from edge)	5cm		
Depth Edge West (~4" from edge)	10cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	0%		
Substrate % mud/silt			
Substrate % sand	85%		
Substrate % gravel	10%		
Substrate % cobble	5%		
Substrate % boulder			
Photo East Bank (time & #)	4		
Photo West Bank (time & #)	2		
Photo upstream (time & #)	3		
Photo downstream (time & #)	1		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 29                      Date \_\_\_\_\_

Target UTM:                      464539                      3762368

Observers (writer/other) Jennifer, Nolan, Garrett, Liz

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	464539 3762368.		
Channel position			
Width of Channel	21.9 m		
Max Depth & location in channel	23 cm.		
Depth Edge East (~4" from edge)	23 cm.		
Depth Edge West (~4" from edge)	13 cm		
Bank East %Veg Overhand	20%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt			
Substrate % sand	<del>83%</del>		
Substrate % gravel	10%		
Substrate % cobble	5 <del>10%</del>		
Substrate % boulder			
Photo East Bank (time & #)	4.		
Photo West Bank (time & #)	2		
Photo upstream (time & #)	1		
Photo downstream (time & #)	3		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			



## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 30                      **Date** \_\_\_\_\_

**Target UTM:**              464467              3762083

**Observers (writer/other)** Jennifer, Nolan, Garrett, Liz

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	46446 3762081		
Channel position			
Width of Channel	22.1 m		
Max Depth & location in channel	20cm		
Depth Edge East (~4" from edge)	17cm		
Depth Edge West (~4" from edge)	14cm		
Bank East %Veg Overhand	30%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt			
Substrate % sand	100%		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	4		
Photo West Bank (time & #)	2		
Photo upstream (time & #)	3		
Photo downstream (time & #)	1		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 31                      **Date** \_\_\_\_\_

**Target UTM:**                      464296                      3761837

**Observers (writer/other)** Jennifer, Nolan, Garrett, Liz

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	464277 3761828		
Channel position	26.5 m.		
Width of Channel			
Max Depth & location in channel	220 m.		
Depth Edge East (~4" from edge)	8 cm.		
Depth Edge West (~4" from edge)	8 cm.		
Bank East %Veg Overhand	91%		
Bank West %Veg Overhang	95%		
Substrate % mud/silt			
Substrate % sand	90%		
Substrate % gravel	5%		
Substrate % cobble	5%		
Substrate % boulder			
Photo East Bank (time & #)	4		
Photo West Bank (time & #)	2		
Photo upstream (time & #)	3		
Photo downstream (time & #)	1		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk

# Santa Ana River Habitat Evaluation

**Transect Name:** SAS 32                      **Date** \_\_\_\_\_

**Target UTM:**                      464096                      3761623

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

**General Location** Jennifer Nolan, Garrett, LZ

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	464135 3761622		
Channel position			
Width of Channel	24.4 m		
Max Depth & location in channel	20cm		
Depth Edge East (~4" from edge)	20cm.		
Depth Edge West (~4" from edge)	3 cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	0%		
Substrate % mud/silt			
Substrate % sand	87%		
Substrate % gravel	5%		
Substrate % cobble	8%		
Substrate % boulder			
Photo East Bank (time & #)	4		
Photo West Bank (time & #)	2		
Photo upstream (time & #)	3		
Photo downstream (time & #)	1		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## Group4

**Transects: 35 through 43.** The first car should park at the end of Rubidoux Ave. by the yellow gate and airplane house. The second car should park upstream off of Mission Inn Ave. at the Carlson Bark Park on the left side of the road. Directions: Take 91 East. Exit 14<sup>th</sup> Street. Turn left onto 14<sup>th</sup> Street. Turn left onto Brockton Ave. Turn right onto Bandini Ave. Bandini Ave. will turn into Grand Ave. Turn right onto Rubidoux Ave. (first car here). Turn around turn left on Grand. Turn left onto Palm. Turn Mission Inn Ave.

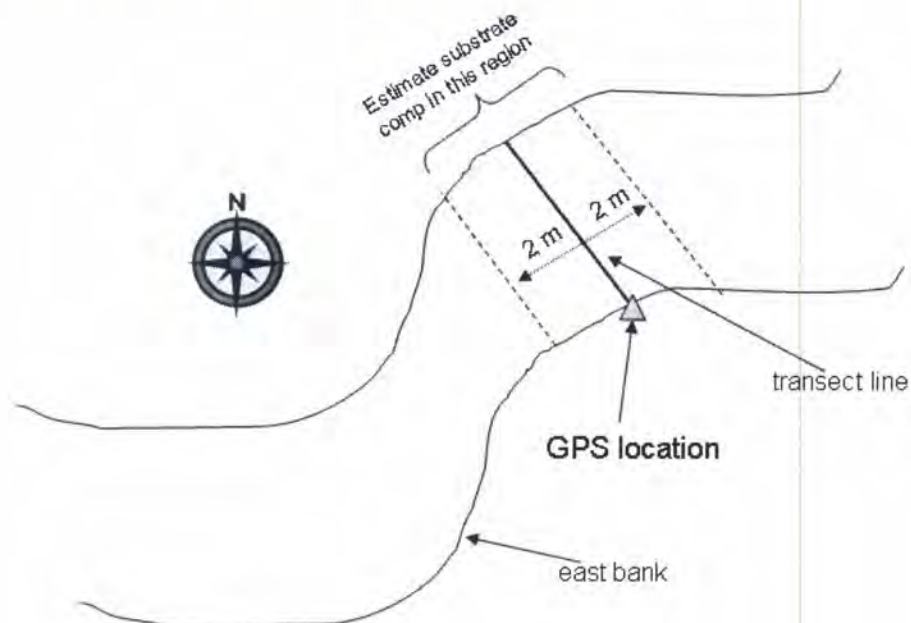
Please use your GPS unit to guide you to each waypoint.

If the waypoint is not in the river, walk to the closest location that is in the river and record on your data sheet the actual GPS location on the east bank.

If there is more than one channel, record on your data sheet the GPS location on the east bank of each channel.

Based on the data collected in the previous River Walk, here are some tips:

- Please record all measurements using the metric system; there should be enough transect tapes/meter sticks with metric units for each group.
- Set up your transect lines perpendicular to the river
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%
- Record GPS locations using UTM coordinates



**If you have any problems, please call Bonnie Johnson at 951-757-0782.**

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 35      **Date** 10/16/14  
**Target UTM:**      463439      3761054  
**Observers (writer/other)** Greg/Farid/Gaurav (RPU)

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

10:35

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0463421 3761058		
Channel position	East		
Width of Channel	16 m		
Max Depth & location in channel	20 cm		
Depth Edge East (~4" from edge)	3 cm		
Depth Edge West (~4" from edge)	5 cm		
Bank East %Veg Overhand	95%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	0		
Substrate % sand	90		
Substrate % gravel	10		
Substrate % cobble	-		
Substrate % boulder	-		
Photo East Bank (time & #)	3		
Photo West Bank (time & #)	4		
Photo upstream (time & #)	5		
Photo downstream (time & #)	6		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	Algae present on gravel		

†Gravel & very little  
 cobble present S.  
 of SAS 35

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 36      **Date** 10/16/14  
**Target UTM:**      463262      3760812  
**Observers (writer/other)** Greg / Farid / Gaurav (RPU)  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

10:45

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0463249 3760828		
Channel position	East		
Width of Channel	7.5		
Max Depth & location in channel	middle 25cm		
Depth Edge East (~4" from edge)	7 cm		
Depth Edge West (~4" from edge)	3 cm		
Bank East %Veg Overhand	40		
Bank West %Veg Overhang	60		
Substrate % mud/silt			
Substrate % sand	95		
Substrate % gravel	5		
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	7		
Photo West Bank (time & #)	8		
Photo upstream (time & #)	9		
Photo downstream (time & #)	10		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	gravel w/algae on east bank. Good flow		

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 37      **Date** 10/16/14  
**Target UTM:**      **463084**      **3760573**  
**Observers (writer/other)** Greg / Farid / Gaurav (RPU)  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0463086 3760585		
Channel position	East		
Width of Channel	9.90 m		
Max Depth & location in channel	23 cm East		
Depth Edge East (~4" from edge)	10 cm		
Depth Edge West (~4" from edge)	1 cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	0%		
Substrate % mud/silt			
Substrate % sand	98%		
Substrate % gravel	2%		
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	11		
Photo West Bank (time & #)	12		
Photo upstream (time & #)	13		
Photo downstream (time & #)	14		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	-small pool w bank w/ tons of Fish.		

- observed gravel w/ algae along east bank while walking from SAS 36 to 37
- observed sand moving along bottom

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 38

**Date** 10/16/14

**Target UTM:** 462880

3760354

**Observers (writer/other)** Greg / Farid / Gauvain (RPU)

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

11:06

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0462883 3760364		
Channel position	East		
Width of Channel	14.5		
Max Depth & location in channel	18cm east		
Depth Edge East (~4" from edge)	6cm		
Depth Edge West (~4" from edge)	12cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt			
Substrate % sand	100%		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	15		
Photo West Bank (time & #)	16		
Photo upstream (time & #)	17		
Photo downstream (time & #)	18		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			



## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 39

**Date** 10/16/14

**Target UTM:** 462706

3760111

**Observers (writer/other)** Greg / Farid / Gaurav (RPU)

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

11:17

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0462705 3760129		
Channel position	East		
Width of Channel	8m		
Max Depth & location in channel	17cm center/west		
Depth Edge East (~4" from edge)	2cm		
Depth Edge West (~4" from edge)	17cm		
Bank East %Veg Overhand	0%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt			
Substrate % sand	97%		
Substrate % gravel	3%		
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	19 20		
Photo West Bank (time & #)	21		
Photo upstream (time & #)	22		
Photo downstream (time & #)	23		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

\*Cobble & gravel present upstream

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 40

**Date** 10/16/14

**Target UTM:** 462526

3759882

**Observers (writer/other)** Greg / Farid / Gaurav (RPU)

**General Location**

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

11:27

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0462518 3759908		
Channel position			
Width of Channel	11.2		
Max Depth & location in channel	20cm center		
Depth Edge East (~4" from edge)	3cm		
Depth Edge West (~4" from edge)	3cm		
Bank East %Veg Overhand	0		
Bank West %Veg Overhang	100%		
Substrate % mud/silt			
Substrate % sand	100		
Substrate % gravel	5m. Island upstream		
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	24		
Photo West Bank (time & #)	25		
Photo upstream (time & #)	26		
Photo downstream (time & #)	27		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

• assessed Gravel along east bank when walking from previous point

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 41      **Date** 10/16/14  
**Target UTM:**      462388      3759638  
**Observers (writer/other)** Greg / Farid / Gaurav (RPJ)  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

11:36

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	6462377 3759642		
Channel position	East		
Width of Channel	9.5 meters		
Max Depth & location in channel	29 center		
Depth Edge East (~4" from edge)	2 cm		
Depth Edge West (~4" from edge)	2 cm		
Bank East %Veg Overhand	50		
Bank West %Veg Overhang	0		
Substrate % mud/silt			
Substrate % sand	95		
Substrate % gravel	5		
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	28		
Photo West Bank (time & #)	29		
Photo upstream (time & #)	30		
Photo downstream (time & #)	31		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	(40 to 41)		

- between points ← observed gravel along banks and sm. patches of cobbles
- just ~~at~~ upstream ↑ observed homeless camp w/ hot tub
- water flowing into Taguezquite

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

Transect Name: SAS 42

Date 10/16/14

Target UTM: 462124

3759501

Observers (writer/other) Goey / Farid / Gavon (RPV)

**General Location**

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

11.45

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0462137 3759496		
Channel position	east-center		
Width of Channel	11.6		
Max Depth & location in channel	17 east-center		
Depth Edge East (~4" from edge)	3 cm		
Depth Edge West (~4" from edge)	2		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	1		
Substrate % mud/silt			
Substrate % sand	97		
Substrate % gravel	3		
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	33		
Photo West Bank (time & #)	34		
Photo upstream (time & #)	35		
Photo downstream (time & #)	36		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

• Observed Gravel along the banks while walking from SAS 41  
 • water feels cooler than upstream, rising groundwater?

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 43      **Date** 10/16/14  
**Target UTM:**      461833      3759443  
**Observers (writer/other)** Greg / Farid / Gaurav CRPU  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

11.56

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0461833 3759450		
Channel position	east		
Width of Channel	10 m		
Max Depth & location in channel	15 center		
Depth Edge East (~4" from edge)	5 cm		
Depth Edge West (~4" from edge)	4		
Bank East %Veg Overhand	<del>100</del> 98		
Bank West %Veg Overhang	100		
Substrate % mud/silt			
Substrate % sand	<del>98</del> 97		
Substrate % gravel	2 0 3		
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	38		
Photo West Bank (time & #)	39		
Photo upstream (time & #)	40		
Photo downstream (time & #)	41		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

• 0462002  
 3759499 - homeless Fish dam. big Gravel patch  
 downstream

# Riverwalk 2014

## Additional Information Datasheet

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

Group: 4 Date: 10/16/14

Observers: Greg / Farid / Gauvain (RPU)

Give or send all data sheets and photos to Zyanya Blancas (951) 354-4220. Address: ATTN: Zyanya Blancas, Santa Ana Watershed Project Authority, 11615 Sterling Avenue, Riverside, CA 92503. Email: zblancas@sawpa.org

### LOCATION 1

GPS coordinates in UTM (at East bank)	0463448 3761104
Gravel length (m)	12m
Gravel width (m)	4m
Channel position	center
Max water depth (m)	4.5 <del>cm</del> in
Algae present?	very small amount
Photo upstream #	1
Notes	Small patch of gravel

### LOCATION 4

GPS coordinates in UTM (at East bank)	0462251 3759584
Gravel length (m)	12
Gravel width (m)	3
Channel position	<del>center</del> west
Max water depth (m)	4cm
Algae present?	
Photo upstream #	32
Notes	

### LOCATION 2

GPS coordinates in UTM (at East bank)	25m S of loc 1
Gravel length (m)	
Gravel width (m)	
Channel position	
Max water depth (m)	
Algae present?	yes
Photo upstream #	2
Notes	

### LOCATION 5

GPS coordinates in UTM (at East bank)	0461873 3759475
Gravel length (m)	25
Gravel width (m)	2
Channel position	west
Max water depth (m)	5
Algae present?	yes
Photo upstream #	37
Notes	

### LOCATION 3

GPS coordinates in UTM (at East bank)	0462787 3760241
Gravel length (m)	7m
Gravel width (m)	2m
Channel position	
Max water depth (m)	1cm to 4cm
Algae present?	yes
Photo upstream #	19
Notes	

### LOCATION 6

GPS coordinates in UTM (at East bank)	
Gravel length (m)	
Gravel width (m)	
Channel position	
Max water depth (m)	
Algae present?	
Photo upstream #	
Notes	

## Group5

Transects: **44 through 51**. The first car should park at the Martha McLean/Anza Narrows Park off of Jurupa Ave. The second car should park upstream at the end of Rubidoux Ave. by the yellow gate and airplane house. Directions: Take 91 East. Exit Central Ave. Turn left onto Central Ave. Turn right onto Palm Ave. Turn left onto Jurupa Ave. Anza Narrows Park will be on the right side right before the Railroad overpass (first car here). From park turn left onto Jurupa Ave. Turn left onto Grand Ave. Turn left onto Rubidoux Ave.

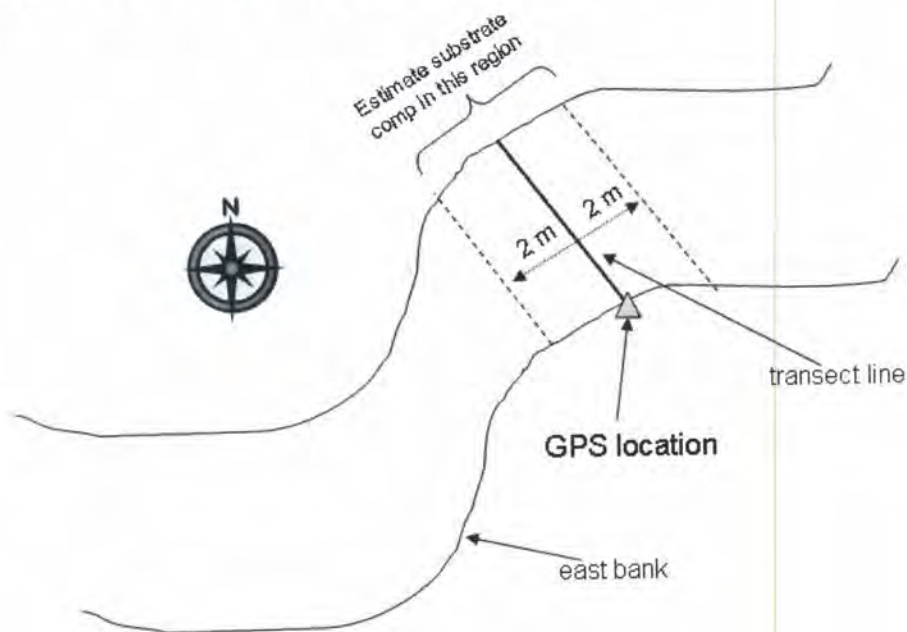
Please use your GPS unit to guide you to each waypoint.

If the waypoint is not in the river, walk to the closest location that is in the river and record on your data sheet the actual GPS location on the east bank.

If there is more than one channel, record on your data sheet the GPS location on the east bank of each channel.

Based on the data collected in the previous River Walk, here are some tips:

- Please record all measurements using the metric system; there should be enough transect tapes/meter sticks with metric units for each group.
- Set up your transect lines perpendicular to the river
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%
- Record GPS locations using UTM coordinates



If you have any problems, please call Bonnie Johnson at 951-757-0782.

# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

GPS ocvd

Transect Name: SAS 44                      Date 10.16.14  
 Target UTM:                      461555                      3759337  
 Observers (writer/other) Sean Carlson  
 General Location \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	N 33° 58' 43" E W 117° 24' 96" W		
Channel position	left east		
Width of Channel	11.6 m		
Max Depth & location in channel	30 cm		
Depth Edge East (~4" from edge)	30 cm		
Depth Edge West (~4" from edge)	11 cm		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	100		
Substrate % mud/silt	-		
Substrate % sand	100		
Substrate % gravel	-		
Substrate % cobble	-		
Substrate % boulder	-		
Photo East Bank (time & #)	10:40		
Photo West Bank (time & #)	10:40		
Photo upstream (time & #)	10:40		
Photo downstream (time & #)	10:40		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			



## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 45                      **Date** 10.16.14  
**Target UTM:**                      461287                      3759267  
**Observers (writer/other)** Sean Carlson  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	N 33° 58.402' W 117 24.151'		
Channel position	East		
Width of Channel	9.8 m		
Max Depth & location in channel	18 cm		
Depth Edge East (~4" from edge)	10 cm		
Depth Edge West (~4" from edge)	18 cm		
Bank East %Veg Overhand	50		
Bank West %Veg Overhang	100		
Substrate % mud/silt	-		
Substrate % sand	100		
Substrate % gravel	-		
Substrate % cobble	-		
Substrate % boulder	-		
Photo East Bank (time & #)	10:48		
Photo West Bank (time & #)	10:48		
Photo upstream (time & #)	10:48		
Photo downstream (time & #)	10:48		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 46      **Date** 10.16.14  
**Target UTM:**      461003      3759182  
**Observers (writer/other)** Sean Carlson  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	N33 58.352' W 117 25.321'		
Channel position	East		
Width of Channel	15.45 m		
Max Depth & location in channel	15 cm <sup>edge</sup> left		
Depth Edge East (~4" from edge)	10 cm		
Depth Edge West (~4" from edge)	12 cm		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	95		
Substrate % mud/silt	-		
Substrate % sand	70		
Substrate % gravel	30		
Substrate % cobble	-		
Substrate % boulder	-		
Photo East Bank (time & #)	10:58		
Photo West Bank (time & #)	10:58		
Photo upstream (time & #)	10:58		
Photo downstream (time & #)	10:58		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 47                      **Date** 10/16/14  
**Target UTM:**                      460830                      3758944  
**Observers (writer/other)** Sean Carlson

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	33° 58.221' 117° 25.449'		
Channel position	left		
Width of Channel	6.1 m		
Max Depth & location in channel	23 cm <sup>left</sup> east		
Depth Edge East (~4" from edge)	23 cm		
Depth Edge West (~4" from edge)	10 cm		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	100		
Substrate % mud/silt	-		
Substrate % sand	90		
Substrate % gravel	10		
Substrate % cobble	-		
Substrate % boulder	-		
Photo East Bank (time & #)	11:09		
Photo West Bank (time & #)	11:09		
Photo upstream (time & #)	11:09		
Photo downstream (time & #)	11:09		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 48                      **Date** 10/16/14  
**Target UTM:**                      460606                      3758749  
**Observers (writer/other)** Sean Corison  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	N 33° 59.121' W 117° 25.584'		
Channel position			
Width of Channel	6.8 m		
Max Depth & location in channel	22 cm West right		
Depth Edge East (~4" from edge)	16 cm		
Depth Edge West (~4" from edge)	22 cm		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	100		
Substrate % mud/silt	-		
Substrate % sand	100		
Substrate % gravel	-		
Substrate % cobble	-		
Substrate % boulder	-		
Photo East Bank (time & #)	11:19		
Photo West Bank (time & #)	11:19		
Photo upstream (time & #)	11:19		
Photo downstream (time & #)	11:19		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 49      **Date:** 10/16/14  
**Target UTM:** 460324      **3758705**  
**Observers (writer/other):** Sean Carlson  
**General Location:** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	N 33° 58.090' W 117° 25.760'		
Channel position			
Width of Channel	10.05 m		
Max Depth & location in channel	21 cm <sup>middle</sup>		
Depth Edge East (~4" from edge)	13 cm		
Depth Edge West (~4" from edge)	20 cm		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	60		
Substrate % mud/silt	-		
Substrate % sand	100		
Substrate % gravel	-		
Substrate % cobble	-		
Substrate % boulder	-		
Photo East Bank (time & #)	11:29		
Photo West Bank (time & #)	11:29		
Photo upstream (time & #)	11:29		
Photo downstream (time & #)	11:29		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 50                      **Date** 10/16/14  
**Target UTM:**                      460046                      3758748  
**Observers (writer/other)** Sean Carlson  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	N 33° 58.120' W 117° 25.955'		
Channel position			
Width of Channel	12.2 m		
Max Depth & location in channel	13cm center		
Depth Edge East (~4" from edge)	8 cm		
Depth Edge West (~4" from edge)	13 cm		
Bank East %Veg Overhand	80		
Bank West %Veg Overhang	100		
Substrate % mud/silt	-		
Substrate % sand	85		
Substrate % gravel	10		
Substrate % cobble	5		
Substrate % boulder	-		
Photo East Bank (time & #)	11:42		
Photo West Bank (time & #)	11:42		
Photo upstream (time & #)	11:42		
Photo downstream (time & #)	11:42		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 51      **Date** 10/16/14  
**Target UTM:**      459807      3758720  
**Observers (writer/other)** Sean Carlson

**General Location**

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

0.6  
 11.3  
 18.8  
 11.2

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	33° 58.093' 117° 26.091'		
Channel position	west	East	
Width of Channel	7.3	6	
Max Depth & location in channel	16cm west	13cm mid	
Depth Edge East (~4" from edge)	12cm	8cm	
Depth Edge West (~4" from edge)	16cm	8cm	
Bank East %Veg Overhand	0	90	
Bank West %Veg Overhang	100	0	
Substrate % mud/silt	-	-	
Substrate % sand	70	70	
Substrate % gravel	30	30	
Substrate % cobble	-	-	
Substrate % boulder	-	-	
Photo East Bank (time & #)	11:52	same photo	
Photo West Bank (time & #)	11:52	same photo	
Photo upstream (time & #)	11:52	same photo	
Photo downstream (time & #)	11:52	same photo	
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## Group6

Transects: **52 through 60.** The first car should park at the end of Doolittle Ave. The second car should park upstream at the Martha McLean/Anza Narrows Park. Directions: Take 91 East. Exit Van Buren Blvd. Turn left onto Indiana then another quick left onto Van Buren Blvd. Take Van Buren pass Arlington Blvd and turn left onto Morris Ave. Turn right onto Doolittle Ave (first car here). Take Doolittle Ave. to Morris Ave. and turn left. Turn left onto Van Buren Blvd. Turn right onto Jurupa Ave. Martha McLean/Anza Narrows Park will be on the left side after the Railroad overpass (second car here).

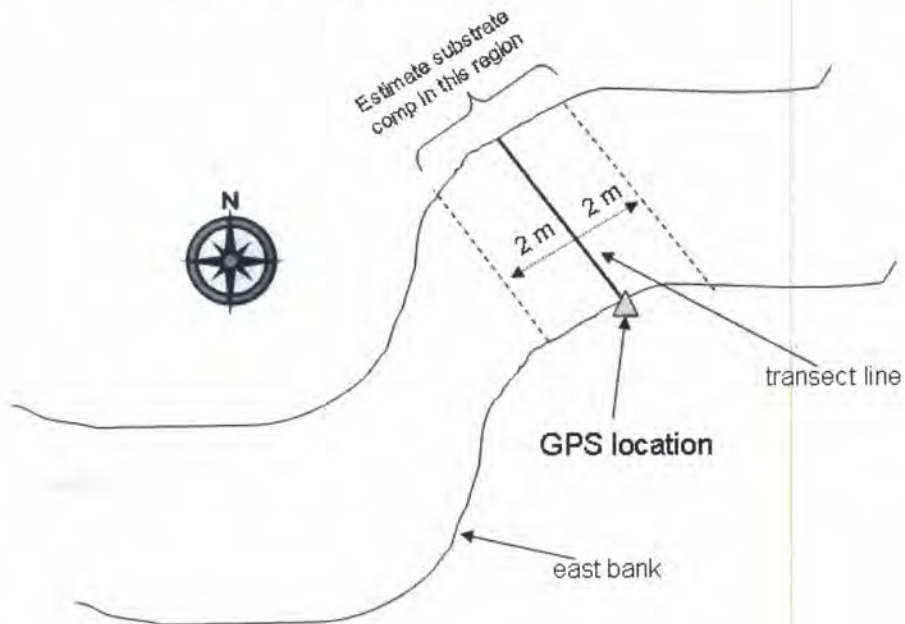
Please use your GPS unit to guide you to each waypoint.

If the waypoint is not in the river, walk to the closest location that is in the river and record on your data sheet the actual GPS location on the east bank.

If there is more than one channel, record on your data sheet the GPS location on the east bank of each channel.

Based on the data collected in the previous River Walk, here are some tips:

- Please record all measurements using the metric system; there should be enough transect tapes/meter sticks with metric units for each group.
- Set up your transect lines perpendicular to the river
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%
- Record GPS locations using UTM coordinates



If you have any problems, please call Bonnie Johnson at 951-757-0782.



# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: ~~SAS 52~~      Date 10/16/2014  
 Target UTM:      459545      3758820

Observers (writer/other) Elmer Paredes, Shane Brown, Mark Addison  
 General Location \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

	SAS 52	SAS 53	SAS 54
OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0459534 UTM 3758832	0459250 UTM 3758768	0458995 UTM 3758636
Channel position	West bank	East	East
Width of Channel	5.3 m	16.2 m	19.9 m
Max Depth & location in channel	25cm	33cm	23cm
Depth Edge East (~4" from edge)	2cm	5cm	13cm
Depth Edge West (~4" from edge)	5cm	5cm	8cm
Bank East %Veg Overhand	100%	3%	100%
Bank West %Veg Overhang	66%	98%	0
Substrate % mud/silt	0%	2%	0
Substrate % sand	90%	98%	90%
Substrate % gravel	9%	1%	10%
Substrate % cobble	1%	2%	0
Substrate % boulder	0	0	0
Photo East Bank (time & #)	*Photos on Heather Pert's camera 401	405	409
Photo West Bank (time & #)	402	406	410
Photo upstream (time & #)	403	407	411
Photo downstream (time & #)	404	408	412
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

Arundo on west bank

Contact Joe Paredes [eparedes1911@gmail.com](mailto:eparedes1911@gmail.com) -  
 opportunities to volunteer - maybe crunch data?

# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: ~~SAS 53~~

Date 10/16

Target UTM: 459260

3758737

Observers (writer/other) Erner Parades, Shane Brown, Mark Adelson

**General Location**

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

	SAS 55	SAS 56	SAS 57
OBSERVATIONS	<del>CHANNEL #1</del>	<del>CHANNEL #2</del>	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0458720 UTM 3758732	0458408 UTM 3758747	0458128 UTM 3758645
Channel position	east	east	east
Width of Channel	22m	27	26 m
Max Depth & location in channel	21cm	16	22cm
Depth Edge East (~4" from edge)	5cm	16cm	14cm
Depth Edge West (~4" from edge)	8cm	11cm	11cm
Bank East %Veg Overhand	5%	100%	100%
Bank West %Veg Overhang	100%	100%	100%
Substrate % mud/silt	1%		
Substrate % sand	95%	100%	100%
Substrate % gravel	2%		
Substrate % cobble	2%		
Substrate % boulder			
Photo East Bank (time & #)	413	420	424
Photo West Bank (time & #)	414	421	425
Photo upstream (time & #)	415	422	426
Photo downstream (time & #)	416	423	427
Photo other (describe)	3 photos of green heron		2 pictures of wild pig tracks
Photo other (describe)	lesser yellow legs		
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: ~~SAS 54~~

Date 10/16

Target UTM: 458984

3758633

Observers (writer/other) Elmer Paredes, Shane Brown Mark Arleson

General Location \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

	SAS 58	SAS 59	SAS 60
OBSERVATIONS	<del>CHANNEL #1</del>	<del>CHANNEL #2</del>	<del>CHANNEL #3</del>
Actual GPS coordinates in UTM (@ East bank)	0457905 UTM 3758454	0457628 UTM 3758358	0457330 UTM 3758278
Channel position	east	east	east
Width of Channel	24.3 m	14.6 m	22 m
Max Depth & location in channel	21 cm	18 cm	22 cm
Depth Edge East (~4" from edge)	4 cm	10 cm	11 cm
Depth Edge West (~4" from edge)	14 cm	18 cm	22 cm
Bank East %Veg Overhand	100%	100%	50%
Bank West %Veg Overhang	50%	50%	50%
Substrate % mud/silt			2%
Substrate % sand	100%	100%	98%
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	430	434	438
Photo West Bank (time & #)	431	435	439
Photo upstream (time & #)	432	436	440
Photo downstream (time & #)	433	437	441
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## Group7

Transects: **61 through 70**. The first car should park at the corner of Downey Street and 64<sup>th</sup> Street. The second car should park upstream at the end of Doolittle Ave. Directions: Take 91 East. Exit Van Buren Blvd. Turn left onto Indiana then another quick left onto Van Buren Blvd. Take Van Buren over the river to Limonite Ave. Turn left onto Limonite Ave. Turn left onto Downey Street (first car here). Turn around on Downey Street. Turn right onto Limonite Ave. Turn right onto Van Buren Blvd. Turn right onto Morris Ave. Turn right onto Doolittle Ave.

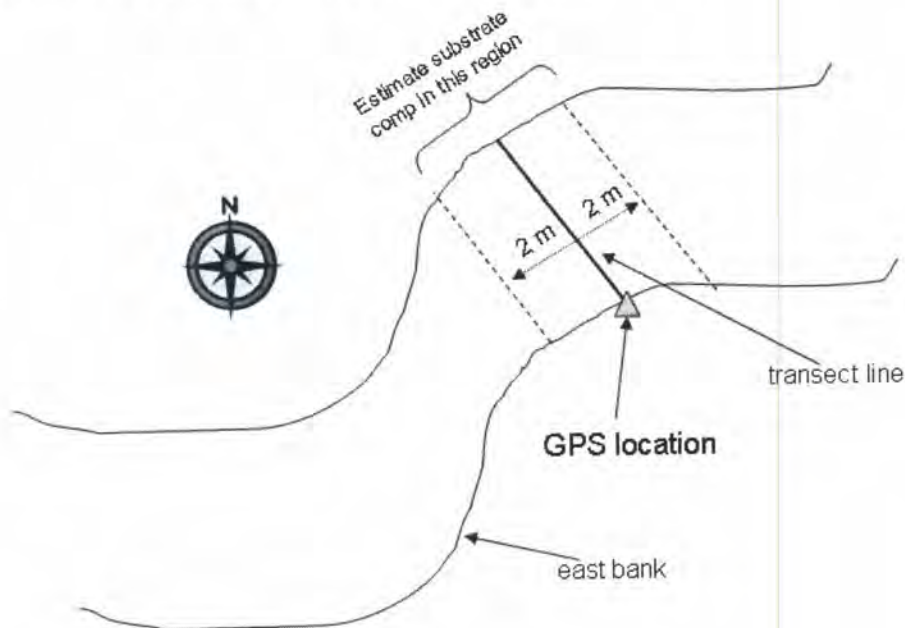
Please use your GPS unit to guide you to each waypoint.

If the waypoint is not in the river, walk to the closest location that is in the river and record on your data sheet the actual GPS location on the east bank.

If there is more than one channel, record on your data sheet the GPS location on the east bank of each channel.

Based on the data collected in the previous River Walk, here are some tips:

- Please record all measurements using the metric system; there should be enough transect tapes/meter sticks with metric units for each group.
- Set up your transect lines perpendicular to the river
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%
- Record GPS locations using UTM coordinates



**If you have any problems, please call Bonnie Johnson at 951-757-0782.**

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 61

Date 10-16-2014

Target UTM: 457069

3758165

Observers (writer/other) Anna Sawyer, Karyn Drannen, Bill McLaughlin

General Location Just East of Van Buren Bridge

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)		← 457066, 3758181	
Channel position		center	
Width of Channel		17.2	
Max Depth & location in channel		33	
Depth Edge East (~4" from edge)		26	
Depth Edge West (~4" from edge)		9.4	
Bank East %Veg Overhand		100	
Bank West %Veg Overhang		100	
Substrate % mud/silt		—	
Substrate % sand		98	
Substrate % gravel		2	
Substrate % cobble		—	
Substrate % boulder		—	
Photo East Bank (time & #)		2668	
Photo West Bank (time & #)		2669	
Photo upstream (time & #)		2670	
Photo downstream (time & #)		2671	
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 62      Date 10-16-14  
 Target UTM:      456796      3758041

Observers (writer/other) Ana Sawyer, Karyn Drennon, Bill McLaughlin

General Location Just West of Van Buren

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	456795 3758036		
Channel position			
Width of Channel	12.9		
Max Depth & location in channel	42		
Depth Edge East (~4" from edge)	<del>11</del> 6.5		
Depth Edge West (~4" from edge)	14		
Bank East %Veg Overhand	2		
Bank West %Veg Overhang	100		
Substrate % mud/silt	—		
Substrate % sand	100		
Substrate % gravel	—		
Substrate % cobble	—		
Substrate % boulder	—		
Photo East Bank (time & #)	2673		
Photo West Bank (time & #)	2674		
Photo upstream (time & #)	2675		
Photo downstream (time & #)	2676		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 63

Date 10-16-14

Target UTM: 456516

3758092

Observers (writer/other) Ana Sawyer, Karyn Dremen, Bill McLaughlin

General Location West of Van Buven

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	456515, 3758096		
Channel position	center		
Width of Channel	23		
Max Depth & location in channel	43		
Depth Edge East (~4" from edge)	1		
Depth Edge West (~4" from edge)	27		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	100		
Substrate % mud/silt	—		
Substrate % sand	100		
Substrate % gravel	—		
Substrate % cobble	—		
Substrate % boulder	—		
Photo East Bank (time & #)	26 <del>78</del> 81		
Photo West Bank (time & #)	26 <del>78</del> 82		
Photo upstream (time & #)	26 <del>80</del> 83		
Photo downstream (time & #)	26 <del>78</del> 84		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 64      **Date** 10-16-14  
**Target UTM:**      456219      3758120  
**Observers (writer/other)** Ana Sawyer, Karyn Drennen,  
**General Location** West of Van Buren

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	456232 3758158		
Channel position	center		
Width of Channel	23.1		
Max Depth & location in channel	43		
Depth Edge East (~4" from edge)	34		
Depth Edge West (~4" from edge)	12		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	100		
Substrate % mud/silt	—		
Substrate % sand	100		
Substrate % gravel	—		
Substrate % cobble	—		
Substrate % boulder	—		
Photo East Bank (time & #)	2686		
Photo West Bank (time & #)	2687		
Photo upstream (time & #)	2688		
Photo downstream (time & #)	2689		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			



## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 65

Date 10-16-14

Target UTM: 455953

3758238

Observers (writer/other) Amy Sawyer, Karyn Drennen, Bill Melaughlin

General Location West of Van Buren

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	456007 3758292		
Channel position	right/west		
Width of Channel	17.8		
Max Depth & location in channel	42		
Depth Edge East (~4" from edge)	02		
Depth Edge West (~4" from edge)	<del>4</del> 10		
Bank East %Veg Overhand	2		
Bank West %Veg Overhang	100		
Substrate % mud/silt	—		
Substrate % sand	96		
Substrate % gravel	2		
Substrate % cobble	2		
Substrate % boulder	—		
Photo East Bank (time & #)	2691		
Photo West Bank (time & #)	2692		
Photo upstream (time & #)	2693		
Photo downstream (time & #)	2694		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	Small vegetated island (<10m <sup>2</sup> )		

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 66      Date 10-16-14

Target UTM:      455786      3758478

Observers (writer/other) Anna Sawyer, Karyn Drennen, Bill McLaughlin

General Location West of Van Buren

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	455810 3758504		
Channel position	center		
Width of Channel	32		
Max Depth & location in channel	34		
Depth Edge East (~4" from edge)	10		
Depth Edge West (~4" from edge)	5		
Bank East %Veg Overhand	80		
Bank West %Veg Overhang	100		
Substrate % mud/silt	<del>0</del> 1		
Substrate % sand	<del>60</del> 95		
Substrate % gravel	1		
Substrate % cobble	3		
Substrate % boulder	-		
Photo East Bank (time & #)	2696		
Photo West Bank (time & #)	2697		
Photo upstream (time & #)	2698		
Photo downstream (time & #)	2699		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 67

Date 10-16-14

Target UTM: 455537

3758623

Observers (writer/other) Aunt Ana Sawyer, Karyn Drennen, Bill McLaughlin

General Location West of Van Buren

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	455571 3758650		
Channel position	center		
Width of Channel	25.2		
Max Depth & location in channel	36		
Depth Edge East (~4" from edge)	6		
Depth Edge West (~4" from edge)	3		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	100		
Substrate % mud/silt	—		
Substrate % sand	100		
Substrate % gravel	—		
Substrate % cobble	—		
Substrate % boulder	—		
Photo East Bank (time & #)	2700		
Photo West Bank (time & #)	2701		
Photo upstream (time & #)	2702		
Photo downstream (time & #)	2703		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 68

Date 10-16

Target UTM: 455246

3758601

Observers (writer/other) Ana Sawyer, Karyn Drennen, Bill McLaughlin

General Location West of Van Buren

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	455249 3758623	455235 3758650	
Channel position	<del>center left</del>	right	
Width of Channel	19.7	4.4	
Max Depth & location in channel	41	9	
Depth Edge East (~4" from edge)	16	6	
Depth Edge West (~4" from edge)	2	2	
Bank East %Veg Overhand	100	30	
Bank West %Veg Overhang	<del>100</del> 0	100	
Substrate % mud/silt	—	—	
Substrate % sand	97	95	
Substrate % gravel	2	5	
Substrate % cobble	1	—	
Substrate % boulder	—	—	
Photo East Bank (time & #)	2705	2709	
Photo West Bank (time & #)	2706	2710	
Photo upstream (time & #)	2707	2711	
Photo downstream (time & #)	2708	2712	
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	sandbar 9.7m width		

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 69

**Date** 10-16-14

**Target UTM:** 455019

3758411

**Observers (writer/other)** Ana Sawyer, Karyn Drennen, Bill McLaughlin

**General Location** West of Van Buren

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	455021 3758418		
Channel position	center		
Width of Channel	32.6		
Max Depth & location in channel	28		
Depth Edge East (~4" from edge)	9		
Depth Edge West (~4" from edge)	4		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	55		
Substrate % mud/silt	3		
Substrate % sand	97		
Substrate % gravel	10		
Substrate % cobble	—		
Substrate % boulder	—		
Photo East Bank (time & #)	2713		
Photo West Bank (time & #)	2714		
Photo upstream (time & #)	2715		
Photo downstream (time & #)	2716		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 70

**Date** 10-16-14

**Target UTM:** 454789

3758479

**Observers (writer/other)** Ana Sawyer, Karyn Drennen, Bill McLaughlin

**General Location** West of Van Buren

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	454789 3758479		
Channel position	center		
Width of Channel	26.4		
Max Depth & location in channel	39		
Depth Edge East (~4" from edge)	12		
Depth Edge West (~4" from edge)	2		
Bank East %Veg Overhand	40		
Bank West %Veg Overhang	0		
Substrate % mud/silt	—		
Substrate % sand	100		
Substrate % gravel	—		
Substrate % cobble	—		
Substrate % boulder	—		
Photo East Bank (time & #)	2717		
Photo West Bank (time & #)	2718		
Photo upstream (time & #)	2719		
Photo downstream (time & #)	2720		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# Riverwalk 2014

## Additional Information Datasheet

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

Group: 7

Date: 10-16-14

Observers: Ana Sawyer, Karyn Dorenan, Bill McLaughlin

Give or send all data sheets and photos to Zyanya Blancas (951) 354-4220. Address: ATTN: Zyanya Blancas, Santa Ana Watershed Project Authority, 11615 Sterling Avenue, Riverside, CA 92503. Email: zblancas@sawpa.org

### LOCATION 1

GPS coordinates in UTM (at East bank)	456911 3758092
Gravel length (m)	9.8
Gravel width (m)	2.7
Channel position	center
Max water depth (m)	.12
Algae present?	yes
Photo upstream #	2672
Notes	at merge of effluent runoff, gravel closer to east bank

### LOCATION 4

GPS coordinates in UTM (at East bank)	456549 3758098
Gravel length (m)	30.6
Gravel width (m)	7.3
Channel position	center
Max water depth (m)	.95
Algae present?	No
Photo upstream #	2677
Notes	lots of broken glass Vegetation along bank near patch gravel closer to east bank

### LOCATION 2

GPS coordinates in UTM (at East bank)	456371 3758118
Gravel length (m)	14.5
Gravel width (m)	3
Channel position	center
Max water depth (m)	.10
Algae present?	yes
Photo upstream #	2685
Notes	

### LOCATION 5

GPS coordinates in UTM (at East bank)	456149 3758149
Gravel length (m)	13.8
Gravel width (m)	4.5
Channel position	center
Max water depth (m)	.11
Algae present?	yes
Photo upstream #	2690
Notes	patch closer to East bank

### LOCATION 3

GPS coordinates in UTM (at East bank)	455938, 3758336
Gravel length (m)	12.3
Gravel width (m)	4
Channel position	center
Max water depth (m)	.12
Algae present?	no
Photo upstream #	2695
Notes	patch on eastern gravel closer to east bank

### LOCATION 6

GPS coordinates in UTM (at East bank)	455459 3758669
Gravel length (m)	16.4
Gravel width (m)	3.5
Channel position	center
Max water depth (m)	10
Algae present?	yes
Photo upstream #	2704
Notes	patch along east bank

## Group8

**Transects: 71 through 77.** The first car should park off on Bain Street. The second car should park upstream at the corner of Downey Street and 64<sup>th</sup> Street. Directions: Take 91 East. Exit Van Buren Blvd. Turn left onto Indiana then another quick left onto Van Buren Blvd. Take Van Buren over the river to Limonite Ave. Turn left onto Limonite Ave. Turn right onto Bain Street on park on right side of road (first car here). Turn left onto Limonite Ave. Turn right onto Downey Street. Park at end where Downey meets 64<sup>th</sup> Street (second car here).

Please use your GPS unit to guide you to each waypoint.

If the waypoint is not in the river, walk to the closest location that is in the river and record on your data sheet the actual GPS location on the east bank.

If there is more than one channel, record on your data sheet the GPS location on the east bank of each channel.

Based on the data collected in the previous River Walk, here are some tips:

- Please record all measurements using the metric system; there should be enough transect tapes/meter sticks with metric units for each group.
- Set up your transect lines perpendicular to the river
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%
- Record GPS locations using UTM coordinates

*Off-transect  
note pres. alg.  
On-transect  
estimate 1/3 of transect  
Left bank center  
or middle*



0453883 Great Blue  
3759123 Heron (GBHE)  
11:20 Santa Ana R.  
Acc: ①  
Flushed Adult  
Sex?

If you have any problems, please call Bonnie Johnson at 951-757-0782.



Group 8

GPS unit: 686

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 71

**Date:** Oct. 16, 2014

**Target UTM:** 454863

3758759

**Observers (writer/other):** A. Collada, D. Tafuya, J. Daniel

**General Location:** North of golf course + bend in river

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

This point was not on the map - somehow we did not do one of the points that are mapped. Did group 7 maybe do one of the first points?

Left

Middle

Right

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0454894 3758753	—	—
Channel position	West of floodplain		
Width of Channel	24.85 m.		
Max Depth & location in channel	28 cm., west edge		
Depth Edge East (~4" from edge)	3 cm		
Depth Edge West (~4" from edge)	28 cm.		
Bank East %Veg Overhand	40%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt			
Substrate % sand	100%	<del>100%</del>	
Substrate % gravel			
Substrate % cobble	1%		
Substrate % boulder			
Photo East Bank (time & #)	2018 10:16		
Photo West Bank (time & #)	2019 10:17		
Photo upstream (time & #)	2020 10:17		
Photo downstream (time & #)	2021 10:17		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

Rel. to floodplain

Left side

(R)

beach  
≤ pea  
1 hand  
2 hands

Subtract from width of channel island insets → 2 channels  
Note dimensions exclude from substrate estimates

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 72

Date Oct. 16, 2014

Target UTM: 454748

3758936

Observers (writer/other) A. Collada, D. Tafuya, J. Daniel

General Location North of Bain St.

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

96  
15

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0454755 3758957	—	—
Channel position	West		
Width of Channel	23.81 m		
Max Depth & location in channel	50.5m, west bank		
Depth Edge East (~4" from edge)	4 cm		
Depth Edge West (~4" from edge)	17 cm.		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	80%		
Substrate % mud/silt	—		
Substrate % sand	98%		
Substrate % gravel	—		
Substrate % cobble	—		
Substrate % boulder	2%		
Photo East Bank (time & #)	2022 10:36		
Photo West Bank (time & #)	2023 10:36		
Photo upstream (time & #)	2024 10:36		
Photo downstream (time & #)	2025 10:37		
Photo other (describe)	2026 Algae		
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	filamentous algae 1% total other algae		

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 73                      Date Oct. 16, 2014

Target UTM:                      454455                      3758993

Observers (writer/other) Collada, Tafaya, Daniel

General Location North of Bain, near golf course

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0454 458 3759007	—	—
Channel position	West of floodplain		
Width of Channel	28.55 m.		
Max Depth & location in channel	35 cm		
Depth Edge East (~4" from edge)	7 cm		
Depth Edge West (~4" from edge)	6 cm.		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	—		
Substrate % sand	98%		
Substrate % gravel	1%		
Substrate % cobble	1%		
Substrate % boulder	—		
Photo East Bank (time & #)	2029 10:54		
Photo West Bank (time & #)	2030 10:55		
Photo upstream (time & #)	2031 10:55		
Photo downstream (time & #)	2032 10:55		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	Good algae <1%		

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 74

Date Oct 16, 2014

Target UTM: 454159

3759037

Observers (writer/other) Collada, Tafaya, Daniel

General Location North of Barn St

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0454156 3759048	—	—
Channel position	West of fip.		
Width of Channel	25.59		
Max Depth & location in channel	28' cm West side near bank		
Depth Edge East (~4" from edge)	12 cm.		
Depth Edge West (~4" from edge)	7 cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	—		
Substrate % sand	98%		
Substrate % gravel	1%		
Substrate % cobble	1%		
Substrate % boulder	—		
Photo East Bank (time & #)	<del>2033</del> 2033 11:10		
Photo West Bank (time & #)	2034 14:11		
Photo upstream (time & #)	2035 14:11		
Photo downstream (time & #)	2036 11:11		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	good algae (1%)		

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 75                      Date Oct. 16, 2014  
 Target UTM:                      453874                      3759120

Observers (writer/other) Collada, Tafaya, Daniel

General Location North of Bain St.

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0453873 3759121	-	-
Channel position	West of f.p.		
Width of Channel	21.06		
Max Depth & location in channel	43 cm		
Depth Edge East (~4" from edge)	6 cm.		
Depth Edge West (~4" from edge)	10 cm.		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100 %		
Substrate % mud/silt			
Substrate % sand	100%		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	2037 11:26		
Photo West Bank (time & #)	2038 11:26		
Photo upstream (time & #)	2039 11:26		
Photo downstream (time & #)	2040 11:26		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 76

**Date:** Oct. 16, 2014

**Target UTM:** 453587

3759156

**Observers (writer/other):** Collada, Tafaya, Daniel

**General Location:** North of Bawn

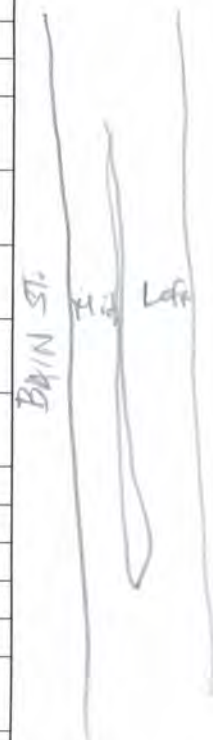
Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

Middle

Left

OBSERVATIONS	Middle CHANNEL #1 2	Left CHANNEL #2 1	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0453588 3759187	0453587 3759164	—
Channel position	West of f.p. - left	West of f.p.	
Width of Channel	20.25 m. channel	6.68 cm	
Max Depth & location in channel	54 cm East bank	13 West bank	
Depth Edge East (~4" from edge)	8 cm	4 cm	
Depth Edge West (~4" from edge)	9 cm.	4 cm.	
Bank East %Veg Overhand	100%	0	
Bank West %Veg Overhang	80%	100%	
Substrate % mud/silt		—	
Substrate % sand	100%	70%	
Substrate % gravel		30%	
Substrate % cobble		—	
Substrate % boulder		—	
Photo East Bank (time & #)	001 11:46	005 12:00	
Photo West Bank (time & #)	002 11:46	006 12:00	
Photo upstream (time & #)	003 11:46	007 12:00	
Photo downstream (time & #)	004 11:46	008 12:00	
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	good algae patch < 1%	good algae	

6.53  
-1.5  
6.8



## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 77      **Date** Oct. 16, 2014  
**Target UTM:**      453294      3759167  
**Observers (writer/other)** Collado, Tafuya, Daniel  
**General Location** North of Bain St.

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0453292 3759207	0453292 3759222	
Channel position	West of f.p	West of channel #1	
Width of Channel	13.23 m	14.46 m.	
Max Depth & location in channel	27 cm East bank	37 cm	
Depth Edge East (~4" from edge)	8 cm.	9 cm.	
Depth Edge West (~4" from edge)	2 cm	37 cm	
Bank East %Veg Overhand	10%	100%	
Bank West %Veg Overhang	100%	100%	
Substrate % mud/silt			
Substrate % sand	100%	100%	
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)		channel = 14.46 - 1.56	

Island cha  

$$\begin{array}{r} 1.71 \text{ m} \\ - 0.15 \\ \hline 1.56 \text{ m.} \end{array}$$

## Group9

Transects: **78 through 82.** The first car should park at the Park off of Ridgeview Ave. The second car should park upstream off on Bain Street. Directions: Take 91 East. Exit Van Buren Blvd. Turn left onto Indiana then another quick left onto Van Buren Blvd. Take Van Buren over the river to Limonite Ave. Turn left onto Limonite Ave. Turn left onto Ridgeview Ave. and park in the Park on the left side (first car here). Turn around and turn right onto Limonite Ave. Turn left onto Bain Street on park on right side of road (second car here).

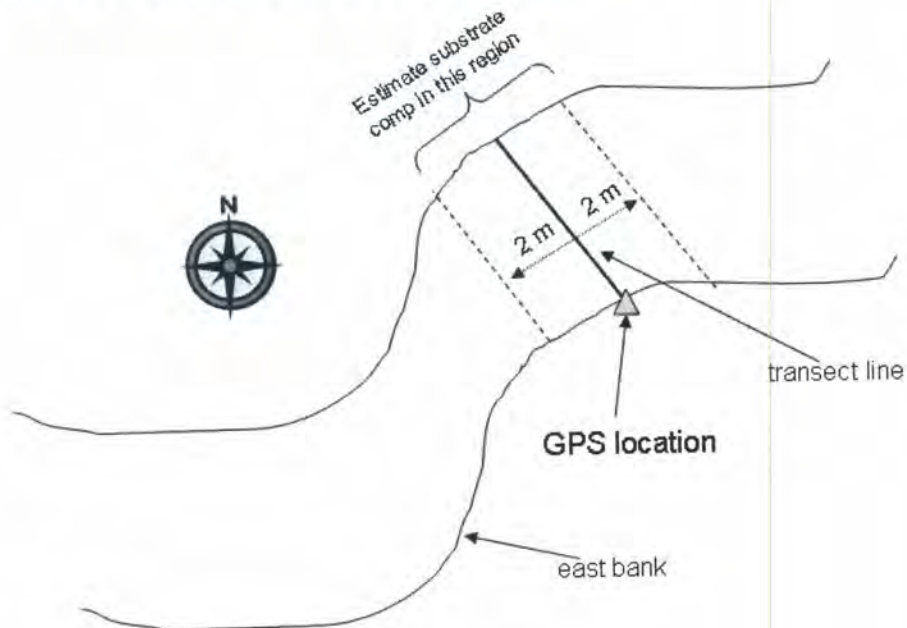
Please use your GPS unit to guide you to each waypoint.

If the waypoint is not in the river, walk to the closest location that is in the river and record on your data sheet the actual GPS location on the east bank.

If there is more than one channel, record on your data sheet the GPS location on the east bank of each channel.

Based on the data collected in the previous River Walk, here are some tips:

- Please record all measurements using the metric system; there should be enough transect tapes/meter sticks with metric units for each group.
- Set up your transect lines perpendicular to the river
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%
- Record GPS locations using UTM coordinates



If you have any problems, please call Bonnie Johnson at 951-757-0782.



# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 78      **Date** 10/16/2014      **GPS#:** 689  
**Target UTM:**      453010      3759212  
**Observers (writer/other)** KARLY Gaynor, Rob Whipple, Mallory Gandara  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	3759213		
Channel position	<del>31m</del> Middle channel		
Width of Channel	31m 10cm		
Max Depth & location in channel	East and West 26cm bank		
Depth Edge East (~4" from edge)	26cm		
Depth Edge West (~4" from edge)	20cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	0		
Substrate % sand	90%		
Substrate % gravel	10%		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)	10:40 0403		
Photo West Bank (time & #)	10:40 0404		
Photo upstream (time & #)	10:40 0405		
Photo downstream (time & #)	10:40 0406		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	Island soon downstream		

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 79

**Date** 10/14/2014

GPS # 689

**Target UTM:** 452731

3759199

**Observers (writer/other)** Karly Gaynor, Rob Whipple, Mallory Gandara

**General Location**

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	3759229		
Channel position	Middle		
Width of Channel	37m 55cm		
Max Depth & location in channel	middle 25cm		
Depth Edge East (~4" from edge)	2cm		
Depth Edge West (~4" from edge)	20cm		
Bank East %Veg Overhand	0%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	0		
Substrate % sand	90%		
Substrate % gravel	5%		
Substrate % cobble	5%		
Substrate % boulder	0		
Photo East Bank (time & #)	11:20 0414		
Photo West Bank (time & #)	11:20 0415		
Photo upstream (time & #)	11:20 0416		
Photo downstream (time & #)	11:20 0417		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

GPS# 689

**Transect Name:** SAS 80      **Date** 10/16/2014  
**Target UTM:**      452566      3758961

**Observers (writer/other)** Karly Gaynor, Rob Whipple, Mallory Gandara  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	3758964	3758975	
Channel position	Middle	West	
Width of Channel	8M 40CM	19M 70CM	
Max Depth & location in channel	7CM East	<del>13CM</del> 13CM West	
Depth Edge East (~4" from edge)	6CM	11CM	
Depth Edge West (~4" from edge)	7CM	11CM	
Bank East %Veg Overhand	100%	100%	
Bank West %Veg Overhang	100%	100%	
Substrate % mud/silt	0	0	
Substrate % sand	100%	100%	
Substrate % gravel	0	0	
Substrate % cobble	0	0	
Substrate % boulder	0	0	
Photo East Bank (time & #)	11:46 0419	11:53 0423	
Photo West Bank (time & #)	11:46 0420	11:53 0424	
Photo upstream (time & #)	11:46 0421	11:53 0425	
Photo downstream (time & #)	11:46 0422	11:53 0426	
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 81

**Date:** 10/11/2014

GPS # 689

**Target UTM:** 452441

3758698

**Observers (writer/other):** Karly Gaynor, Rob Whipple, Mallory Gandara

**General Location**

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	3758704		
Channel position	East		
Width of Channel	29m 80cm		
Max Depth & location in channel	Middle 12 cm		
Depth Edge East (~4" from edge)	11cm		
Depth Edge West (~4" from edge)	4cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	0%		
Substrate % mud/silt	0		
Substrate % sand	100%		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)	12:15 0427		
Photo West Bank (time & #)	12:15 0428		
Photo upstream (time & #)	12:15 0429		
Photo downstream (time & #)	12:15 0430		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

GPS# 689

**Transect Name:** SAS 82      **Date** 10/16/2014  
**Target UTM:**      452149      3758681

**Observers (writer/other)** Karly Gaynor, Rob Whipple, Mallory Gandara

**General Location**

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	3758691		
Channel position	Middle		
Width of Channel	39m 10cm		
Max Depth & location in channel	40cm East bank		
Depth Edge East (~4" from edge)	32cm		
Depth Edge West (~4" from edge)	6cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	20%		
Substrate % mud/silt	0		
Substrate % sand	90%		
Substrate % gravel	10%		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)	1:00PM 0433		
Photo West Bank (time & #)	1:00PM 0434		
Photo upstream (time & #)	1:00PM 0435		
Photo downstream (time & #)	1:00PM 0436		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# Riverwalk 2014

## Additional Information Datasheet

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

Group: 9

Date: 10/16/2014

Observers: Karly Gaynor, Rob Whipple, Mallory Grandara

Give or send all data sheets and photos to Zyanya Blancas (951) 354-4220. Address: ATTN: Zyanya Blancas, Santa Ana Watershed Project Authority, 11615 Sterling Avenue, Riverside, CA 92503. Email: zblancas@sawpa.org

### LOCATION 1

GPS coordinates in UTM (at East bank)	3759213
Gravel length (m)	10m 25cm
Gravel width (m)	3m
Channel position	West side
Max water depth (m)	12cm
Algae present?	No
Photo upstream #	0407
Notes	

### LOCATION 4

GPS coordinates in UTM (at East bank)	3759017
Gravel length (m)	12m 65cm
Gravel width (m)	9m 95cm
Channel position	East
Max water depth (m)	7cm
Algae present?	No
Photo upstream #	0418
Notes	

### LOCATION 2

GPS coordinates in UTM (at East bank)	3759231
Gravel length (m)	7m 20cm
Gravel width (m)	3m 75cm
Channel position	East
Max water depth (m)	13cm
Algae present?	No
Photo upstream #	0408
Notes	

### LOCATION 5

GPS coordinates in UTM (at East bank)	
Gravel length (m)	
Gravel width (m)	
Channel position	
Max water depth (m)	
Algae present?	
Photo upstream #	
Notes	

### LOCATION 3

GPS coordinates in UTM (at East bank)	3759226
Gravel length (m)	34m
Gravel width (m)	3m 75cm
Channel position	East
Max water depth (m)	13cm
Algae present?	A little amount
Photo upstream #	0413
Notes	

### LOCATION 6

GPS coordinates in UTM (at East bank)	
Gravel length (m)	
Gravel width (m)	
Channel position	
Max water depth (m)	
Algae present?	
Photo upstream #	
Notes	

## Group10

**Transects: 83 through 92.** The first car should park at the end of Pedley Ave. The second car should park upstream at the Park off of Ridgeview Ave. Directions: Take 91 West to the 15 North. Exit 6<sup>th</sup> Street and turn right onto 6<sup>th</sup> Street. Turn left onto Pedley Ave. Park at the end of Pedley Ave. (first car here). Turn around and take Pedley Ave. back to 6<sup>th</sup> Street and turn right. Enter the 15 FWY North. Exit Limonite Ave. Turn right onto Limonite Ave. Turn right onto Ridgeview Ave. (second car here).

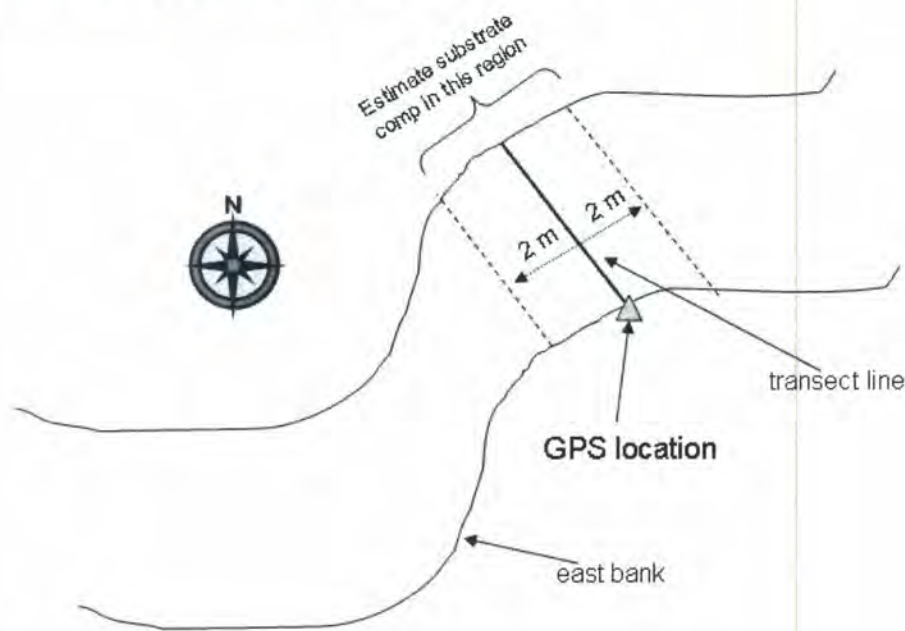
Please use your GPS unit to guide you to each waypoint.

If the waypoint is not in the river, walk to the closest location that is in the river and record on your data sheet the actual GPS location on the east bank.

If there is more than one channel, record on your data sheet the GPS location on the east bank of each channel.

Based on the data collected in the previous River Walk, here are some tips:

- Please record all measurements using the metric system; there should be enough transect tapes/meter sticks with metric units for each group.
- Set up your transect lines perpendicular to the river
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%
- Record GPS locations using UTM coordinates



**If you have any problems, please call Bonnie Johnson at 951-757-0782.**

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 83      **Date:** 10/16/14  
**Target UTM:** 451873      3758631  
**Observers (writer/other):** Danielle Pitt

GPS OCWD  
BS

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	1150451813 UTM: 3758639		
Channel position	center		
Width of Channel	29.8 m		
Max Depth & location in channel	51.0 cm 5cm from west bank		
Depth Edge East (~4" from edge)	21.0 cm		
Depth Edge West (~4" from edge)	42.8 cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt			
Substrate % sand	99%		
Substrate % gravel	1%		
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	10:34		
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

Non-native algae present <1%, epiphyte



## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 84      Date 10/16/14

Target UTM:      451638      3758497

Observers (writer/other) Danielle Pitt

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0451602 3758518		
Channel position	west bank		
Width of Channel	53.5 m		
Max Depth & location in channel	22 cm 40 m from E		
Depth Edge East (~4" from edge)	8 cm		
Depth Edge West (~4" from edge)	15.3 cm		
Bank East %Veg Overhand	75%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	75%		
Substrate % sand	106%		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	11:03		
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	island just out of transect		

Non-native algae present, epiphyte

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 85      **Date** 10/16/14  
**Target UTM:**      451443      3758279  
**Observers (writer/other)** Danielle Pitt

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	1150451446 3758279		
Channel position	west		
Width of Channel	43.0 m		
Max Depth & location in channel	43 cm 3m from E bank		
Depth Edge East (~4" from edge)	5.8 cm		
Depth Edge West (~4" from edge)	21 cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt			
Substrate % sand	100%		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	11.23 am		
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	island just downstream		

Non-native algae present, epiphyte

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

Transect Name: SAS 86                      Date 10/16  
 Target UTM:            451303            3758016  
 Observers (writer/other) Danielle Pitt

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	1150151293 3758017		
Channel position	West		
Width of Channel	48.5		
Max Depth & location in channel	25.2 19 m from E		
Depth Edge East (~4" from edge)	9 cm		
Depth Edge West (~4" from edge)	16 cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt			
Substrate % sand	99%		
Substrate % gravel	1%		
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	11:40		
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	island upstream		

non-native algae present, epiphyte

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 87      **Date** 10/16/14  
**Target UTM:**      451176      3757746  
**Observers (writer/other)** Danielle Pitt

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	115 0451149 3757735		
Channel position	west		
Width of Channel	56.5 m		
Max Depth & location in channel	28 cm 46 from E		
Depth Edge East (~4" from edge)	9.8 cm		
Depth Edge West (~4" from edge)	22 cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt			
Substrate % sand	100%		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	120+		
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	mostly only on rch deep		

non-native algae present, epiphyte

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 88      **Date:** 10/16/14

**Target UTM:** 451034      3757486

**Observers (writer/other):** Danielle Pitt

**General Location:** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	1150451023375 7471		
Channel position	East		
Width of Channel	10.0 m		
Max Depth & location in channel	26 cm 30 from east		
Depth Edge East (~4" from edge)	15 cm		
Depth Edge West (~4" from edge)	21 cm		
Bank East %Veg Overhand	10%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt			
Substrate % sand	100%		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)	12:16		
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	coll seep upstream, east bank (~65°)		

Non-native algae present, epiphytes

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 89

Date 10/16/14

Target UTM: 450811

3757315

Observers (writer/other) Danielle Pitt

General Location \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	1150450825 3757329		
Channel position	East		
Width of Channel	29 m		
Max Depth & location in channel	27 cm 14 m from E		
Depth Edge East (~4" from edge)	13 cm		
Depth Edge West (~4" from edge)	6 cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt			
Substrate % sand	<del>100%</del> 100%		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

non-native algae present, epiphytes

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 90                      **Date** 10/16/14  
**Target UTM:**        450524                      3757255  
**Observers (writer/other)** Danille A.H.  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	115 0450542 3757277		
Channel position	east		
Width of Channel	40 m		
Max Depth & location in channel	29 20 m from E		
Depth Edge East (~4" from edge)	10.4 cm		
Depth Edge West (~4" from edge)	17 cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt			
Substrate % sand	100%		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

non-native algae present, epiphytes

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 91      **Date** 10/16/17  
**Target UTM:**      450228      3757211  
**Observers (writer/other)** Danielle Pitt  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	1150450210 3757223		
Channel position	west		
Width of Channel	48m		
Max Depth & location in channel	23cm 3.5m from E		
Depth Edge East (~4" from edge)	13cm		
Depth Edge West (~4" from edge)	12cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt			
Substrate % sand	100%		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	sand bar to north		

101' native algae present, epiphytes



## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 92

Date 10/16/14

Target UTM: 449957

3757085

Observers (writer/other) Danielle P.H.

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	1150449940 8757108		
Channel position	west		
Width of Channel	39 m		
Max Depth & location in channel	26 27 m from E		
Depth Edge East (~4" from edge)	13.3		
Depth Edge West (~4" from edge)	13 cm		
Bank East %Veg Overhand	50%		
Bank West %Veg Overhang	106%		
Substrate % mud/silt			
Substrate % sand	100%		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

non-native algae present, epiphytes

# Riverwalk 2014

## Additional Information Datasheet

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

Group: \_\_\_\_\_

Date: 10/16/14

Observers: Danielle, Paola, Kai

Give or send all data sheets and photos to Zyanya Blancas (951) 354-4220. Address: ATTN: Zyanya Blancas, Santa Ana Watershed Project Authority, 11615 Sterling Avenue, Riverside, CA 92503. Email: zblancas@sawpa.org

### LOCATION 1

GPS coordinates in UTM (at East bank)	1150451502 B758062
Gravel length (m)	17 m
Gravel width (m)	5.5 m
Channel position	mid-stream
Max water depth (m)	2ft. 4 cm
Algae present?	Yes, native
Photo upstream #	
Notes	closest transect 86, ~50 m upstream

### LOCATION 4

GPS coordinates in UTM (at East bank)	
Gravel length (m)	
Gravel width (m)	
Channel position	
Max water depth (m)	
Algae present?	
Photo upstream #	
Notes	

### LOCATION 2

GPS coordinates in UTM (at East bank)	
Gravel length (m)	
Gravel width (m)	
Channel position	
Max water depth (m)	
Algae present?	
Photo upstream #	
Notes	

### LOCATION 5

GPS coordinates in UTM (at East bank)	
Gravel length (m)	
Gravel width (m)	
Channel position	
Max water depth (m)	
Algae present?	
Photo upstream #	
Notes	

### LOCATION 3

GPS coordinates in UTM (at East bank)	
Gravel length (m)	
Gravel width (m)	
Channel position	
Max water depth (m)	
Algae present?	
Photo upstream #	
Notes	

### LOCATION 6

GPS coordinates in UTM (at East bank)	
Gravel length (m)	
Gravel width (m)	
Channel position	
Max water depth (m)	
Algae present?	
Photo upstream #	
Notes	

## Group11

**Transects: 93 through 100.** The first car should park at Eastvale Community Park off of Citrus Ave. The second car should park upstream at the end of Pedley Ave.  
**Directions:** Take 91 West to the 15 North. . Exit 6<sup>th</sup> Street and turn left onto 6<sup>th</sup> Street. Turn right (north) onto Hamner Ave. Cross over the river and make the first left onto Citrus Ave. The park is on the corner of Hamner and Citrus (first car here). From Citrus, turn right onto Citrus. Turn right onto Hamner. Turn left onto Detroit Street. Turn left onto Valley View Ave. Turn right onto River Drive. Turn left onto Pedley Ave. and park at the end of Ave. (second car here).

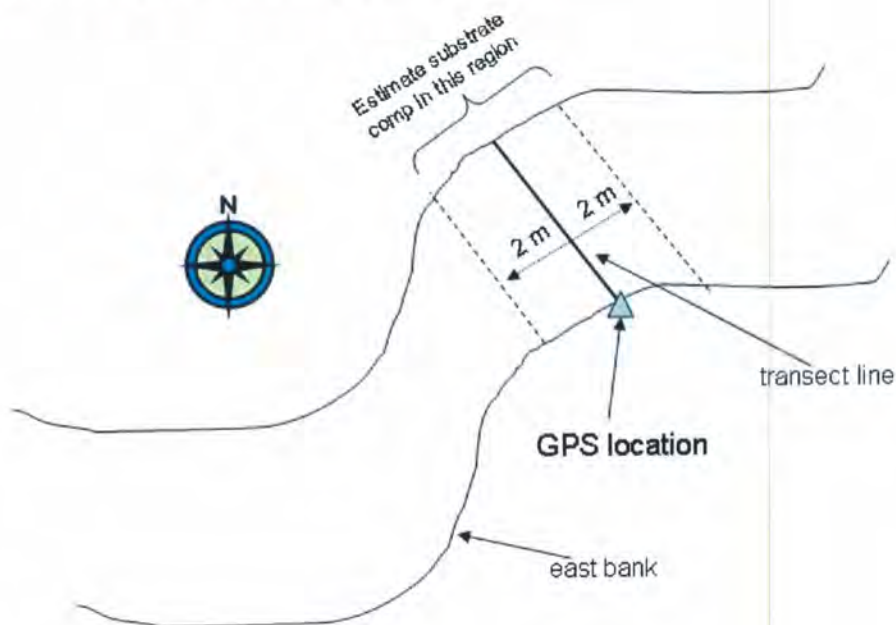
Please use your GPS unit to guide you to each waypoint.

If the waypoint is not in the river, walk to the closest location that is in the river and record on your data sheet the actual GPS location on the east bank.

If there is more than one channel, record on your data sheet the GPS location on the east bank of each channel.

Based on the data collected in the previous River Walk, here are some tips:

- Please record all measurements using the metric system; there should be enough transect tapes/meter sticks with metric units for each group.
- Set up your transect lines perpendicular to the river
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%
- Record GPS locations using UTM coordinates



**If you have any problems, please call Bonnie Johnson at 951-757-0782.**

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

GPS SAS 90  
~~Re~~ SAS 93 map

Transect Name: SAS 93<sup>(90)</sup>      Date 10-16-24

Target UTM:      449781      3756859

Observers (writer/other) Andy Campbell / IAN Achimore

General Location \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

	OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
0	Actual GPS coordinates in UTM (@ East bank)	450465 3757258		
	Channel position	east side		
3	Width of Channel	140 ft (39.9m)		
6	Max Depth & location in channel	24 cm		
1	Depth Edge East (~4" from edge)	8 cm		
4	Depth Edge West (~4" from edge)	10 in		
2	Bank East %Veg Overhand	100%		
5	Bank West %Veg Overhang	100%		
11	Substrate % mud/silt			
	Substrate % sand	100%		
	Substrate % gravel			
	Substrate % cobble			
	Substrate % boulder			
7	Photo East Bank S (time & #)			
8	Photo West Bank N (time & #)			
9	Photo upstream E (time & #)			
10	Photo downstream W (time & #)			
	Photo other (describe)			
	Photo other (describe)			
	Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

GPS 91  
SAS 94 map

**Transect Name:** SAS 94      **Date** 10-16-14

**Target UTM:**      449669      3756630

**Observers (writer/other)** Andy Campbell - Ian Achimore

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	450226 3757217	450213 375744	3757249
Channel position	East	East	
Width of Channel	26m	12m	
Max Depth & location in channel	18cm center	29cm	
Depth Edge East (~4" from edge)	13cm	7cm	
Depth Edge West (~4" from edge)	11cm	29cm	
Bank East %Veg Overhand	100%	90%	
Bank West %Veg Overhang	100%	90%	
Substrate % mud/silt			
Substrate % sand	100%	100%	
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

GPS 92  
Map 95

Transect Name: SAS 95      Date 10-14-2014  
 Target UTM:      449377      3756566  
 Observers (writer/other) Andy Campbell - Ian Achimore  
 General Location \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	449950 3757106		
Channel position	East		
Width of Channel	40m		
Max Depth & location in channel	34cm		
Depth Edge East (~4" from edge)	11cm		
Depth Edge West (~4" from edge)	26cm		
Bank East %Veg Overhand	15%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	0		
Substrate % sand	100%		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

GPS 93  
map 96

Transect Name: SAS 96

Date 10-18-14

Target UTM: 449118

3756431

Observers (writer/other) Anny Campbell - Ian Achimore

**General Location**

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	449765 37656871		
Channel position	East		
Width of Channel	50 m		
Max Depth & location in channel	32 cm		
Depth Edge East (~4" from edge)	16 cm		
Depth Edge West (~4" from edge)	6 cm		
Bank East %Veg Overhand	200%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	0		
Substrate % sand	100%		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	Air Photo shows sand bar on East edge - overgrown could not access possible other braid		

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

GPS 94  
map 97

**Transect Name:** SAS 97

**Date** 10-16-14

**Target UTM:** 448822

3756408

**Observers (writer/other)** Andy Campbell - Ian Achimore

**General Location**

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	449674 3756628		
Channel position	Very east		
Width of Channel	23 m		
Max Depth & location in channel	23cm west		
Depth Edge East (~4" from edge)	20cm		
Depth Edge West (~4" from edge)	14cm		
Bank East %Veg Overhand	0%		
Bank West %Veg Overhang	90%		
Substrate % mud/silt	0		
Substrate % sand	100%		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			



# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 98

**Date** 10-16-14

GPS 95  
MAP 98

**Target UTM:** 448534

3756384

**Observers (writer/other)** Andy Campbell - Ian Achimore

**General Location**

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0449371 3756573		
Channel position	<del>east</del> W.		
Width of Channel	48 m		
Max Depth & location in channel	18cm west side		
Depth Edge East (~4" from edge)	15 cm		
Depth Edge West (~4" from edge)	<del>15</del> 4cm		
Bank East %Veg Overhand			
Bank West %Veg Overhang	70%		
Substrate % mud/silt	0		
Substrate % sand	100%		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	JUST 30 FT up stream of sand bar		

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

Transect Name: SAS 99

Date 10-16-14

Target UTM: 448253

3756327

Observers (writer/other) Amy Campbell - Ian Achimoree

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	449119 3756431		
Channel position	EAST		
Width of Channel	14 m		
Max Depth & location in channel	44cm <sup>west</sup>		
Depth Edge East (~4" from edge)	30 cm		
Depth Edge West (~4" from edge)	19 cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	0%		
Substrate % mud/silt	0		
Substrate % sand	100%		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 100

**Date** 10-16-14

**Target UTM:** 447963

3756361

**Observers (writer/other)** Andy Campbell - Ian Achimore

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	448769 3756412		
Channel position	West		
Width of Channel	29 m		
Max Depth & location in channel	31cm West		
Depth Edge East (~4" from edge)	16cm		
Depth Edge West (~4" from edge)	15cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	65%		
Substrate % mud/silt	0		
Substrate % sand	98%		
Substrate % gravel	2%		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## Group12

**Transects: 101 through 111.** The first car should park at the end of Tisdale St. The second car should park upstream at Eastvale Community Park off of Citrus Ave.  
Directions: Take 91 West to the 15 North. Exit 6<sup>th</sup> Street and left onto 6<sup>th</sup> Street. Turn right onto Hamner. Turn left onto Citrus. Turn left on Harrison. Turn right on Chandler. Turn left onto Tisdale (first car here). From Tisdale return to Chandler and turn right. Turn left onto Harrison. Turn right onto Citrus. Eastvale Community Park is located on the corner of Citrus and Hamner (second car here).

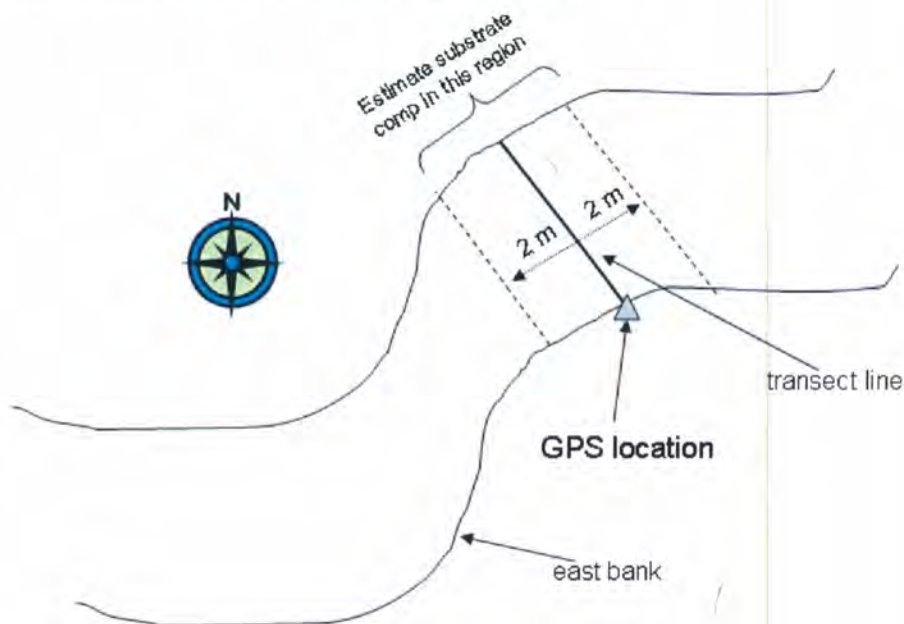
Please use your GPS unit to guide you to each waypoint.

If the waypoint is not in the river, walk to the closest location that is in the river and record on your data sheet the actual GPS location on the east bank.

If there is more than one channel, record on your data sheet the GPS location on the east bank of each channel.

Based on the data collected in the previous River Walk, here are some tips:

- Please record all measurements using the metric system; there should be enough transect tapes/meter sticks with metric units for each group.
- Set up your transect lines perpendicular to the river
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%
- Record GPS locations using UTM coordinates



**If you have any problems, please call Bonnie Johnson at 951-757-0782.**

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 101

**Date:** 10/16/2014

**Target UTM:** 447680

3756377

**Observers (writer/other):** Casa Escabia, Pablo Jimenez, Doug Edwards

**General Location:** group 12

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	101 CHANNEL #1	102 CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	44 76 69 37 56 394	<del>44 76 03 37 56 082</del>	<del>44 74 77 37 55 832</del>
Channel position	West	West	West
Width of Channel	36 meters	37	
Max Depth & location in channel	36 cm east	23 1/2	
Depth Edge East (~4" from edge)	25 1/2	21 1/2	19
Depth Edge West (~4" from edge)	10	17	
Bank East %Veg Overhand	100%	100%	
Bank West %Veg Overhang	75%	100%	
Substrate % mud/silt	0%	0%	
Substrate % sand	100%	95%	
Substrate % gravel	0%	5%	
Substrate % cobble	0%	0%	
Substrate % boulder	0%	0%	
Photo East Bank (time & #)	11:03	11:21	
Photo West Bank (time & #)	11:03	11:21	
Photo upstream (time & #)	11:03	11:21	
Photo downstream (time & #)	11:03	11:21	
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)		Crayfish (mud)	

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 102      **Date** 10-16  
**Target UTM:**      447620      3756088

**Observers (writer/other)** Cassidy Escutia

**General Location** Warpal

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	447603 3756082		
Channel position	west		
Width of Channel	34		
Max Depth & location in channel	23 1/2 east		
Depth Edge East (~4" from edge)	27 1/2		
Depth Edge West (~4" from edge)	17		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	0%		
Substrate % sand	95%		
Substrate % gravel	5%		
Substrate % cobble	0%		
Substrate % boulder	0%		
Photo East Bank (time & #)	11:21		
Photo West Bank (time & #)	11:21		
Photo upstream (time & #)	11:21		
Photo downstream (time & #)	11:21		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)	Cray fish (male)		

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 103

**Date** 10-16

**Target UTM:** 447481

3755829

**Observers (writer/other)** Casey Escutia

**General Location** Group 12

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	44 74 71 37 55 831	44 74 39 37 55 847	
Channel position	middle	west	
Width of Channel	25 1/2	4 1/2	
Max Depth & location in channel	33 1/2	35 1/2	
Depth Edge East (~4" from edge)	17 1/2	35 1/2	
Depth Edge West (~4" from edge)	8	17 1/2	
Bank East %Veg Overhand	100%	100%	
Bank West %Veg Overhang	100%	100%	
Substrate % mud/silt			
Substrate % sand	100%	100%	
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)		11:30	
Photo West Bank (time & #)		11:30	
Photo upstream (time & #)		11:30	
Photo downstream (time & #)		11:30	
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 104      **Date** 10-16  
**Target UTM:**      447240      3755663  
**Observers (writer/other)** Casey E  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	4472 43 37 55 669		
Channel position	East		
Width of Channel	33		
Max Depth & location in channel	43 middle		
Depth Edge East (~4" from edge)	14		
Depth Edge West (~4" from edge)	43		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	0		
Substrate % sand	95%		
Substrate % gravel	5%		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)	11:55		
Photo West Bank (time & #)	11:55		
Photo upstream (time & #)	11:55		
Photo downstream (time & #)	11:55		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			



# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 105                      **Date** \_\_\_\_\_  
**Target UTM:**            446983                      3755713  
**Observers (writer/other)** \_\_\_\_\_

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	446983 3755713		
Channel position	East		
Width of Channel	35m		
Max Depth & location in channel	39 east		
Depth Edge East (~4" from edge)	22/23 39		
Depth Edge West (~4" from edge)	10 1/2		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	30%		
Substrate % mud/silt	0%		
Substrate % sand	100%		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)	12:08		
Photo West Bank (time & #)	12:08		
Photo upstream (time & #)	12:08		
Photo downstream (time & #)	12:08		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 106

Date 10-16

Target UTM: 446735

3755827

Observers (writer/other) Casey E

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	44 67 38 3755 832		
Channel position	Middle		
Width of Channel	18m		
Max Depth & location in channel	23 1/2 east		
Depth Edge East (~4" from edge)	23 1/2		
Depth Edge West (~4" from edge)	17 1/2		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	0%		
Substrate % sand	100%		
Substrate % gravel	0%		
Substrate % cobble	0%		
Substrate % boulder	0%		
Photo East Bank (time & #)	12:31		
Photo West Bank (time & #)	12:31		
Photo upstream (time & #)	12:31		
Photo downstream (time & #)	12:31		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 107                      **Date** \_\_\_\_\_

**Target UTM:**                      446461                      3755771

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

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	44 64 68 37 55 774		
Channel position	West		
Width of Channel	2 1/2		
Max Depth & location in channel	35 1/2 center		
Depth Edge East (~4" from edge)	26		
Depth Edge West (~4" from edge)	16		
Bank East %Veg Overhand	40%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	0		
Substrate % sand	100%		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)	12:43		
Photo West Bank (time & #)	12:43		
Photo upstream (time & #)	12:43		
Photo downstream (time & #)	12:43		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 108      **Date** 10-16  
**Target UTM:**      446169      3755831  
**Observers (writer/other)** Cusey E

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	446172 3755843		
Channel position	West		
Width of Channel	15 1/2		
Max Depth & location in channel	54 1/2		
Depth Edge East (~4" from edge)	54 1/2 east		
Depth Edge West (~4" from edge)	22		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	0%		
Substrate % mud/silt	0		
Substrate % sand	100%		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)	12:56		
Photo West Bank (time & #)	↓		
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 109      Date 10-16  
 Target UTM:      445940      3755674

Observers (writer/other) Cathy E

**General Location**

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	44 59 31 37 55 680		
Channel position	East		
Width of Channel	16 1/2		
Max Depth & location in channel	21 1/2 center		
Depth Edge East (~4" from edge)	20 1/2		
Depth Edge West (~4" from edge)	29 cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	0		
Substrate % sand	100%		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)	1:10		
Photo West Bank (time & #)	1:16		
Photo upstream (time & #)	1:10		
Photo downstream (time & #)	1:10		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 110      **Date** 10-16  
**Target UTM:**      446000      3755385  
**Observers (writer/other)** Casey E  
**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	44 6001 37 55 389		
Channel position	Center		
Width of Channel	16		
Max Depth & location in channel	42 west		
Depth Edge East (~4" from edge)	29		
Depth Edge West (~4" from edge)	42		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	0		
Substrate % sand	100%		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)	1:24		
Photo West Bank (time & #)	↓		
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 111      Date 10/14

Target UTM:      445935      3755100

Observers (writer/other) Casey E

**General Location** \_\_\_\_\_

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	44 59 33 37 55 110		
Channel position	West		
Width of Channel	20		
Max Depth & location in channel	54cm east		
Depth Edge East (~4" from edge)	28cm		
Depth Edge West (~4" from edge)	22cm		
Bank East %Veg Overhand	100%		
Bank West %Veg Overhang	100%		
Substrate % mud/silt	0		
Substrate % sand	100%		
Substrate % gravel	0		
Substrate % cobble	0		
Substrate % boulder	0		
Photo East Bank (time & #)	1:36		
Photo West Bank (time & #)	↓		
Photo upstream (time & #)			
Photo downstream (time & #)	↓		
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

### Group13

**Transects: 112 through 118.** The first car should park at the end of Near River Rd Bridge. The second car should park upstream at the end of Tisdale. Directions: Take 91 West. Exit Main Street and turn left onto River Rd. Park at River Rd Bridge Construction (first car here). From Construction head north on River Rd to Archabald. Turn right Chandler. Turn right Tisdale (second car here at end of street).

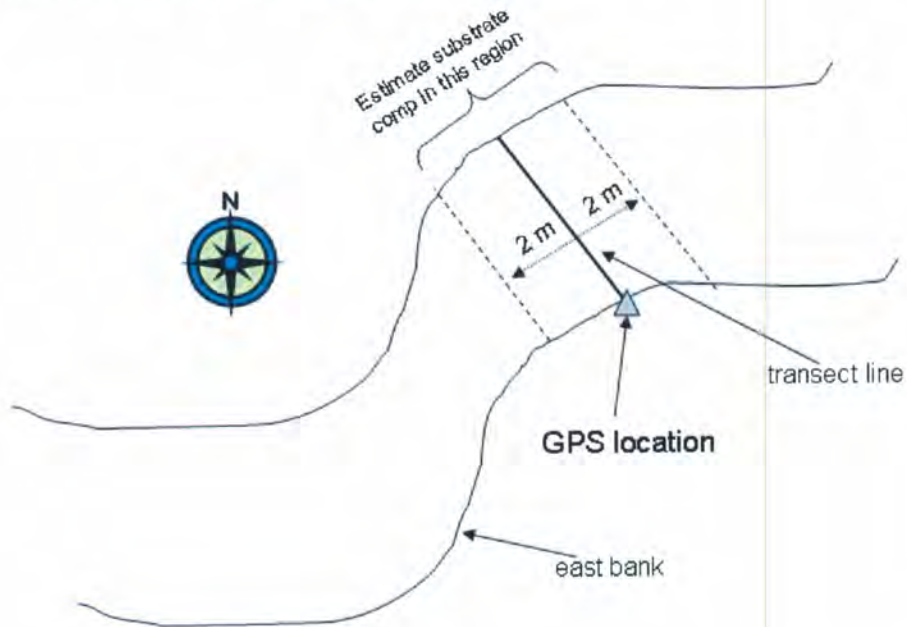
Please use your GPS unit to guide you to each waypoint.

If the waypoint is not in the river, walk to the closest location that is in the river and record on your data sheet the actual GPS location on the east bank.

If there is more than one channel, record on your data sheet the GPS location on the east bank of each channel.

Based on the data collected in the previous River Walk, here are some tips:

- Please record all measurements using the metric system; there should be enough transect tapes/meter sticks with metric units for each group.
- Set up your transect lines perpendicular to the river
- Estimate substrate components within a 2-m band on either side of the transect; make sure all substrate components add up to 100%
- Record GPS locations using UTM coordinates



**If you have any problems, please call Bonnie Johnson at 951-757-0782.**



## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 112

**Date** 10-16-14

**Target UTM:** 445723

3754896

**Observers (writer/other)** Cynthia Chavez, Bonnie Johnson, Cameron Macbeth, Jon Ristic

**General Location** Upstream of River Rd Mari Paramo

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0445723 3754906		
Channel position	center		
Width of Channel	21.3 m		
Max Depth & location in channel	36cm - East		
Depth Edge East (~4" from edge)	20 cm		
Depth Edge West (~4" from edge)	18 cm		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	100		
Substrate % mud/silt	9		
Substrate % sand	91		
Substrate % gravel	-		
Substrate % cobble	-		
Substrate % boulder	-		
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 113      **Date** 10-16-14

**Target UTM:**      445456      3754961

**Observers (writer/other)** (C, B), CM, JR, MP

**General Location** Upstream of River Rd.

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0445456 3754960		
Channel position	WEST		
Width of Channel	33.8m		
Max Depth & location in channel	47cm - East		
Depth Edge East (~4" from edge)	25.5cm		
Depth Edge West (~4" from edge)	5cm		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	100		
Substrate % mud/silt	12		
Substrate % sand	88		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 114      **Date** 10-16-14

**Target UTM:**      445308      3754771

**Observers (writer/other)** CC, BJ, CM, JR, MP

**General Location** Upstream of River Rd.

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	0445303 3754772		
Channel position	West		
Width of Channel	47.7m		
Max Depth & location in channel	31cm - center		
Depth Edge East (~4" from edge)	2cm		
Depth Edge West (~4" from edge)	16cm		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	100		
Substrate % mud/silt	27		
Substrate % sand	73		
Substrate % gravel			
Substrate % cobble			
Substrate % boulder			
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

Transect Name: SAS 115      Date 10-16-14

Target UTM:      445271      3754475

Observers (writer/other) CC, BJ, CM, JR, MP

General Location Upstream of River Rd.

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	445269 3754477		
Channel position	center		
Width of Channel	37.7m		
Max Depth & location in channel	44cm - center		
Depth Edge East (~4" from edge)	3cm		
Depth Edge West (~4" from edge)	16cm		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	100		
Substrate % mud/silt	11		
Substrate % sand	89		
Substrate % gravel	-		
Substrate % cobble	-		
Substrate % boulder	-		
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 116      **Date** 10-16-14  
**Target UTM:**      **445069**      **3754300**  
**Observers (writer/other)** CC, BJ, CM, JR, MP  
**General Location** Upstream of River Rd.

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	445071 3754297		
Channel position	west		
Width of Channel	30.6m		
Max Depth & location in channel	30cm-east		
Depth Edge East (~4" from edge)	16cm		
Depth Edge West (~4" from edge)	8cm		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	90		
Substrate % mud/silt	7		
Substrate % sand	93		
Substrate % gravel	-		
Substrate % cobble	-		
Substrate % boulder	-		
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# SAWA 2014 River Walk

## Santa Ana River Habitat Evaluation

**Transect Name:** SAS 117      **Date** 10-16-14  
**Target UTM:**      444878      3754208  
**Observers (writer/other)** CC, BJ, CM, JR, MP  
**General Location** Upstream of River Rd.

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	444876 3754210		
Channel position			
Width of Channel	27.7m		
Max Depth & location in channel	35cm-east		
Depth Edge East (~4" from edge)	35cm		
Depth Edge West (~4" from edge)	3cm		
Bank East %Veg Overhand	100		
Bank West %Veg Overhang	100		
Substrate % mud/silt	—		
Substrate % sand	100		
Substrate % gravel	—		
Substrate % cobble	—		
Substrate % boulder	—		
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

## SAWA 2014 River Walk Santa Ana River Habitat Evaluation

**Transect Name:** SAS 118      **Date** 10-16-14

**Target UTM:**      444830      3753915

**Observers (writer/other)** CC, BJ, CM, JR, MP

**General Location** Upstream of River Rd

Give or send all data sheets and photos to Bonnie Johnson (Phone: 951-757-0782; address: ATTN: Bonnie Johnson, Orange County Water District, 14980 River Rd., Corona, CA 92880; email: [bjohnson@ocwd.com](mailto:bjohnson@ocwd.com))

OBSERVATIONS	CHANNEL #1	CHANNEL #2	CHANNEL #3
Actual GPS coordinates in UTM (@ East bank)	444792 3753911		
Channel position	center		
Width of Channel	28.7m		
Max Depth & location in channel	31cm - east		
Depth Edge East (~4" from edge)	7cm		
Depth Edge West (~4" from edge)	17cm		
Bank East %Veg Overhand	90		
Bank West %Veg Overhang	60		
Substrate % mud/silt	—		
Substrate % sand	100		
Substrate % gravel	—		
Substrate % cobble	—		
Substrate % boulder	—		
Photo East Bank (time & #)			
Photo West Bank (time & #)			
Photo upstream (time & #)			
Photo downstream (time & #)			
Photo other (describe)			
Photo other (describe)			
Notes (e.g. Islands, Obstructions)			

# Riverwalk 2014

## Additional Information Datasheet

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

**Group:** Upstream of River Rd

**Date:** 10-16-14

**Observers:** Cynthia Chavez, Bonnie Johnson, Cameron MacBeth, Jon Rishi, Mari Paramo

Give or send all data sheets and photos to Zyanya Blancas (951) 354-4220. Address: ATTN: Zyanya Blancas, Santa Ana Watershed Project Authority, 11615 Sterling Avenue, Riverside, CA 92503. Email: zblancas@sawpa.org

### LOCATION 1

GPS coordinates in UTM (at East bank)	0445400 3754981
Gravel length (m)	9.7
Gravel width (m)	1.5
Channel position	East
Max water depth (m)	39.0m
Algae present?	NO
Photo upstream #	
Notes	

### LOCATION 4

GPS coordinates in UTM (at East bank)	
Gravel length (m)	
Gravel width (m)	
Channel position	
Max water depth (m)	
Algae present?	
Photo upstream #	
Notes	

### LOCATION 2

GPS coordinates in UTM (at East bank)	
Gravel length (m)	
Gravel width (m)	
Channel position	
Max water depth (m)	
Algae present?	
Photo upstream #	
Notes	

### LOCATION 5

GPS coordinates in UTM (at East bank)	
Gravel length (m)	
Gravel width (m)	
Channel position	
Max water depth (m)	
Algae present?	
Photo upstream #	
Notes	

### LOCATION 3

GPS coordinates in UTM (at East bank)	
Gravel length (m)	
Gravel width (m)	
Channel position	
Max water depth (m)	
Algae present?	
Photo upstream #	
Notes	

### LOCATION 6

GPS coordinates in UTM (at East bank)	
Gravel length (m)	
Gravel width (m)	
Channel position	
Max water depth (m)	
Algae present?	
Photo upstream #	
Notes	