



UNIVERSITAT
POLITÈCNICA
DE VALÈNCIA

ESCUELA TÉCNICA SUPERIOR
DE INGENIEROS DE CAMINOS,
CANALES Y PUERTOS



Análisis de la problemática de inundabilidad en el
municipio de Aldaia (Valencia) y propuesta de soluciones.

Anejo Nº4:

Análisis tormenta real

Trabajo final de grado

Titulación: Grado en Ingeniería de Obras Públicas

Curso: 2015/16

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Análisis de la problemática de inundabilidad en el municipio del Aldaia y propuesta de soluciones.

1. Introducción

En este documento se van a mostrar los aspectos que deben ser ampliados para una mejor comprensión del apartado número 8 de la memoria, Análisis tormenta real.

Ya se ha dicho que la precipitación a analizar en la de los días 1 y 2 de noviembre del 2015.

2. Lluvia 1-2 de noviembre del 2015

2.1.Hietograma

En las siguientes figuras vamos a ver los hietogramas de los pluviómetros cercanos a nuestra cuenca.

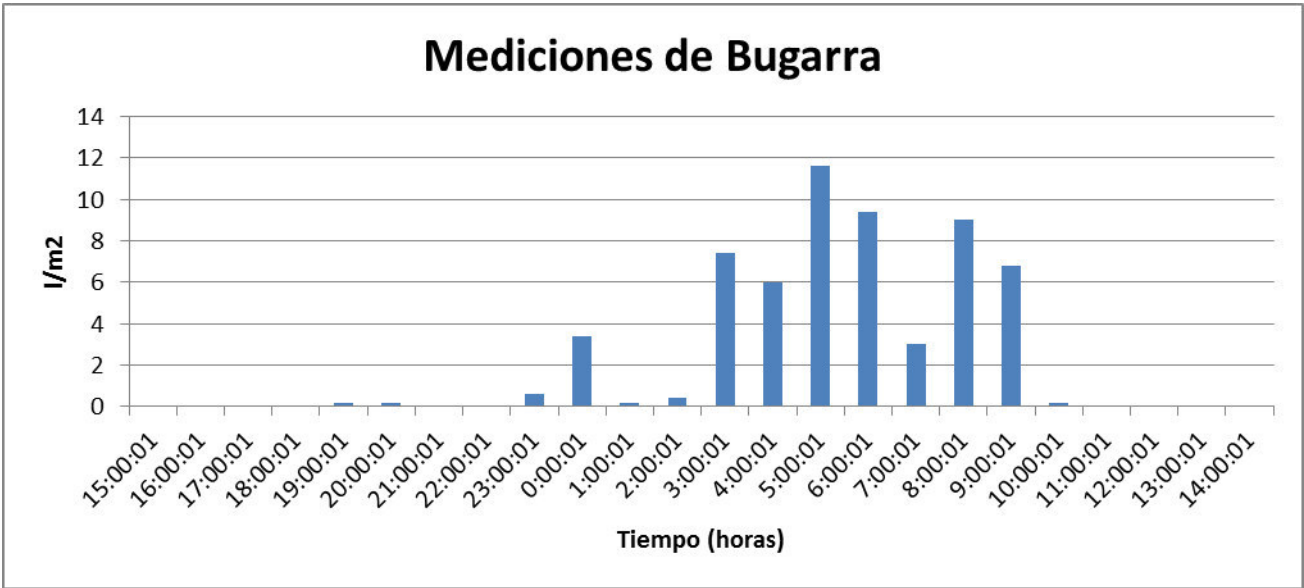


Figura 2.1. Hietograma del pluviómetro de Bugarra.

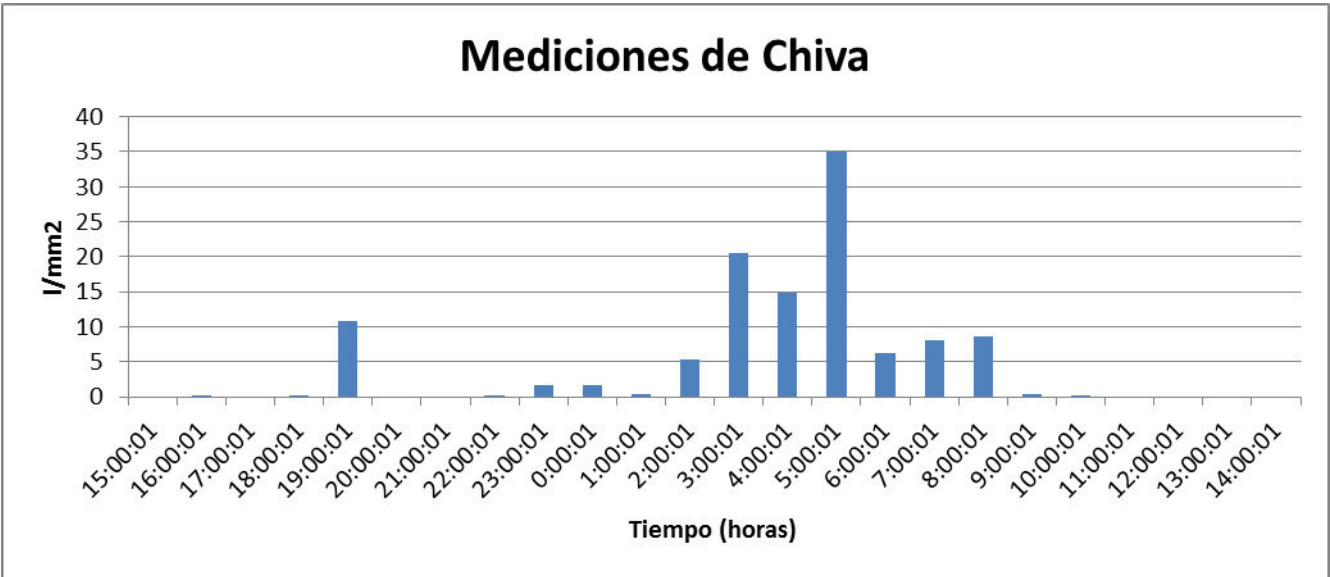


Figura 2.2. Hietograma del pluviómetro de Chiva.

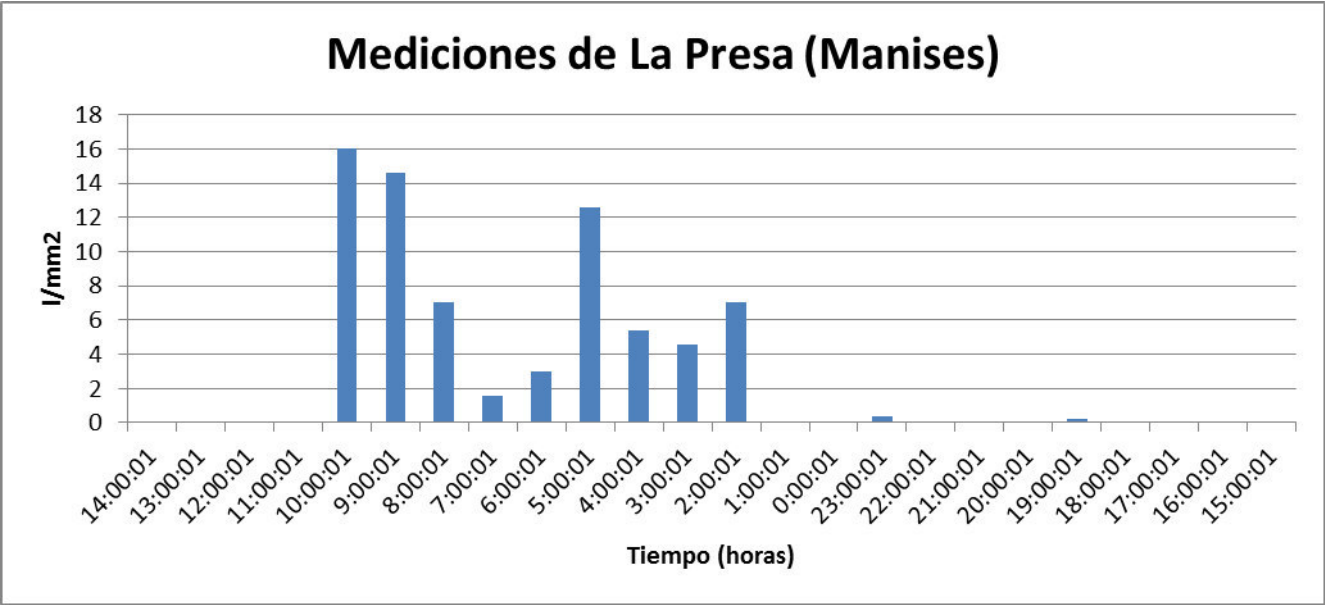


Figura 2.3. Hietograma del pluviómetro de La Presa (Manises)

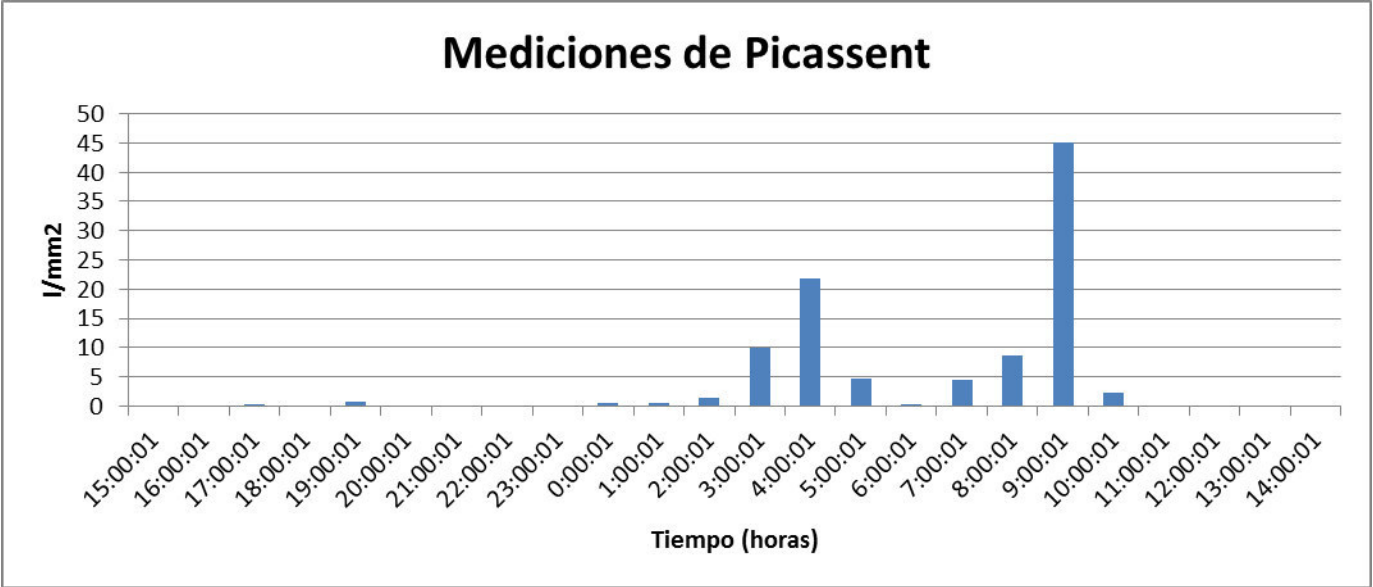


Figura 2.4. Hietograma del pluviómetro de Picassent.

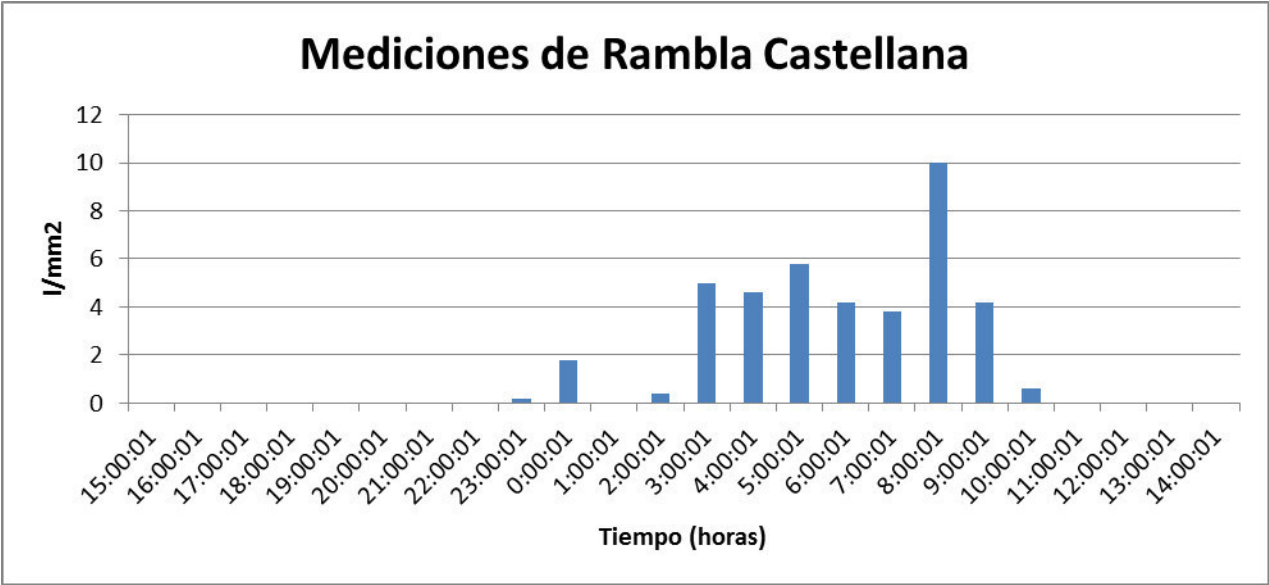


Figura 2.5. Hietograma del pluviómetro de Rambla Castellana.

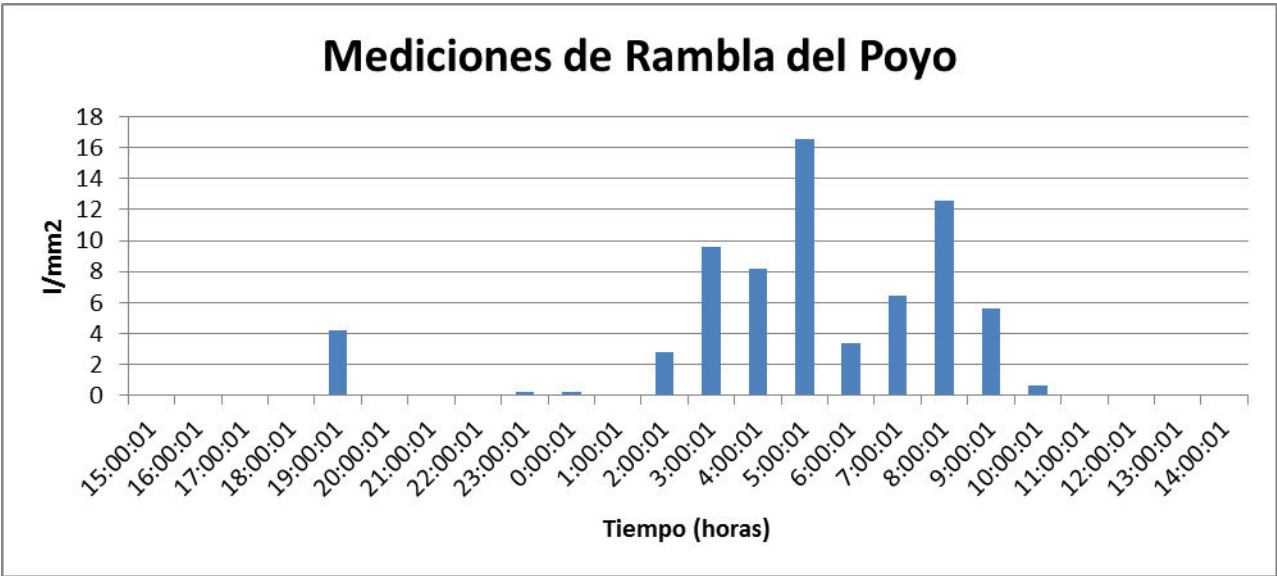


Figura 2.6.Hietograma del pluviómetro de la Rambla del Poyo.

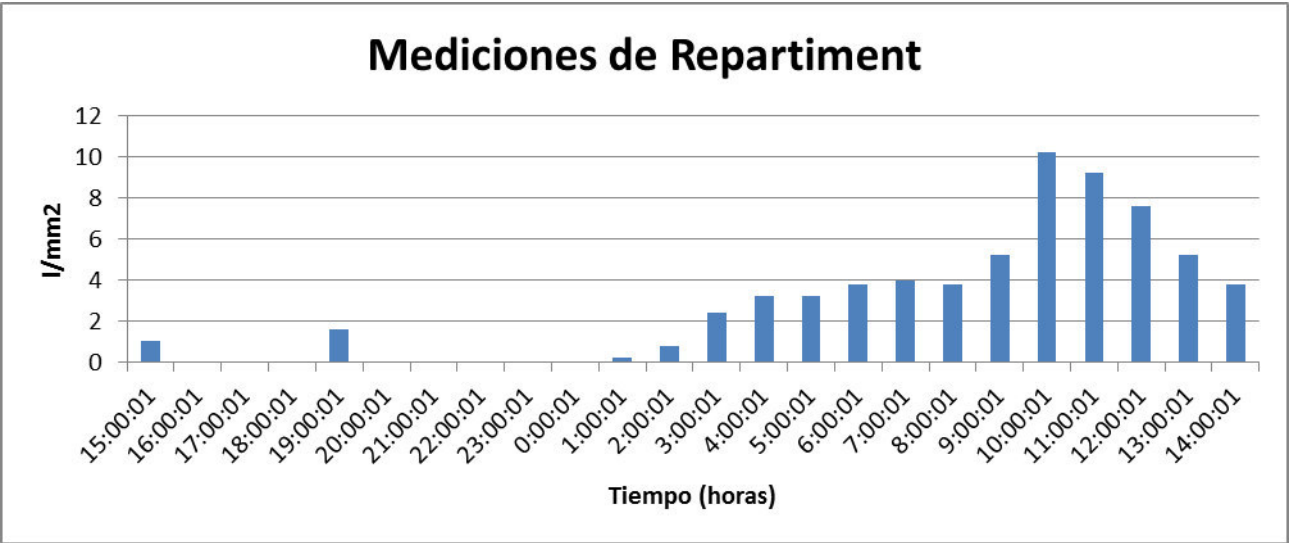


Figura 2.7. Hietograma del pluviómetro de Rpartiment.

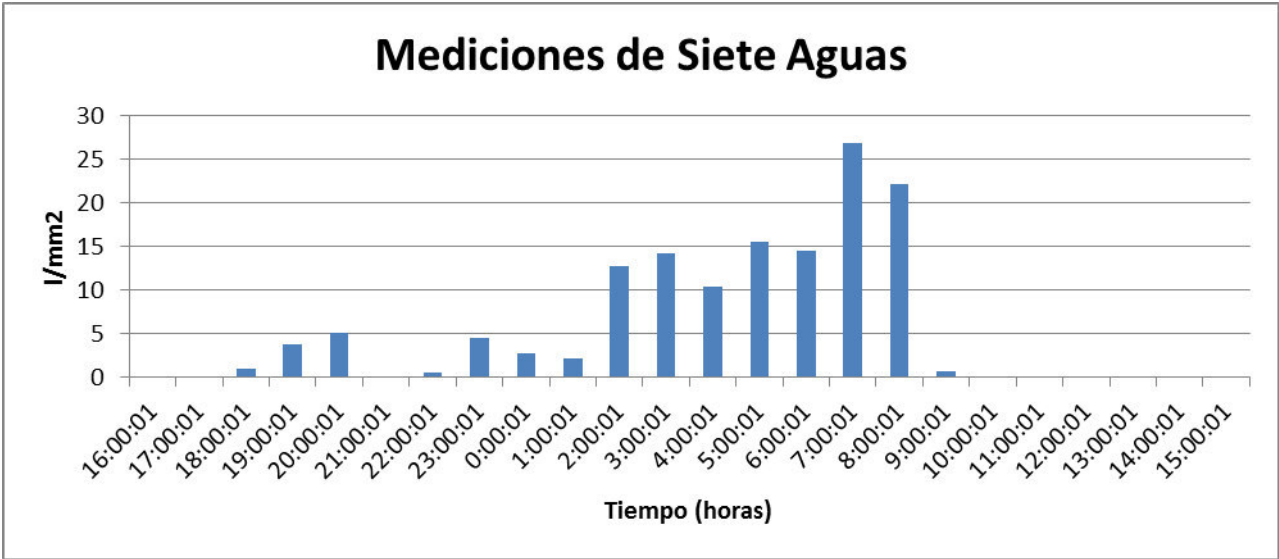


Figura 2.8. Hietograma del pluviómetro de Siete Aguas.

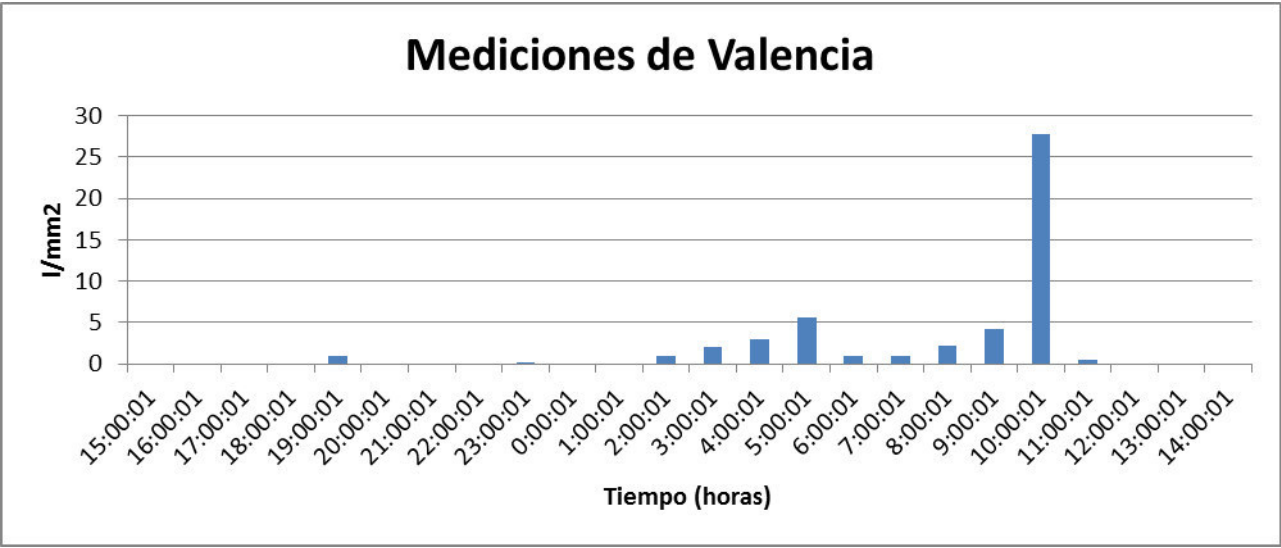


Figura 2.9. Hietograma del pluviómetro de Valencia.

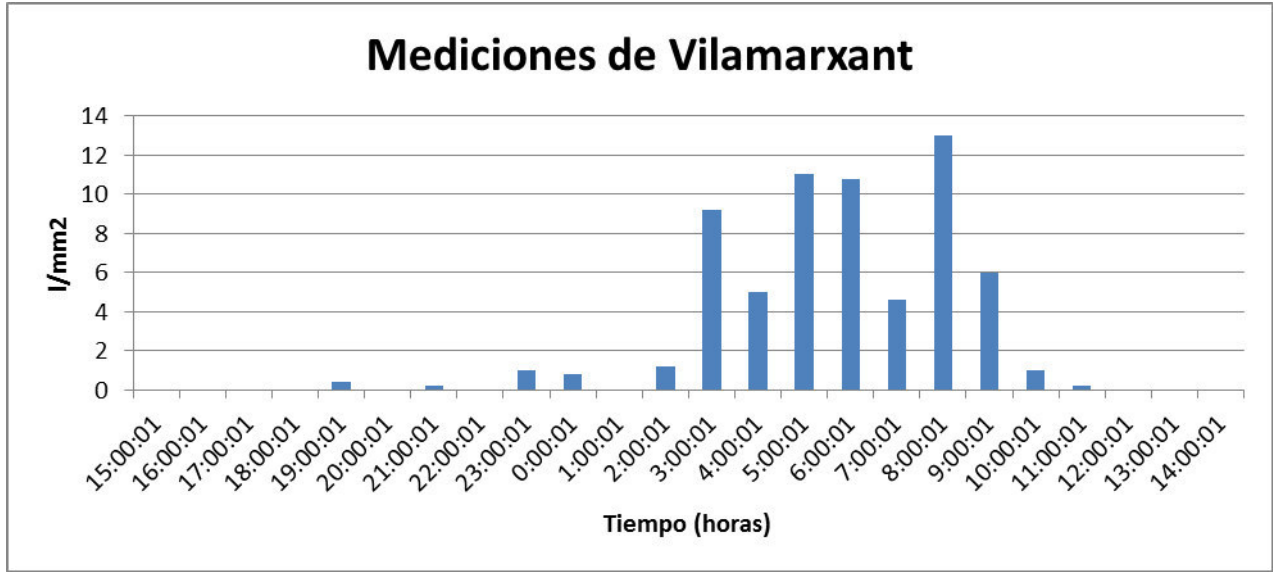


Figura 2.10. Hietograma del pluviómetro de Vilamarxant.

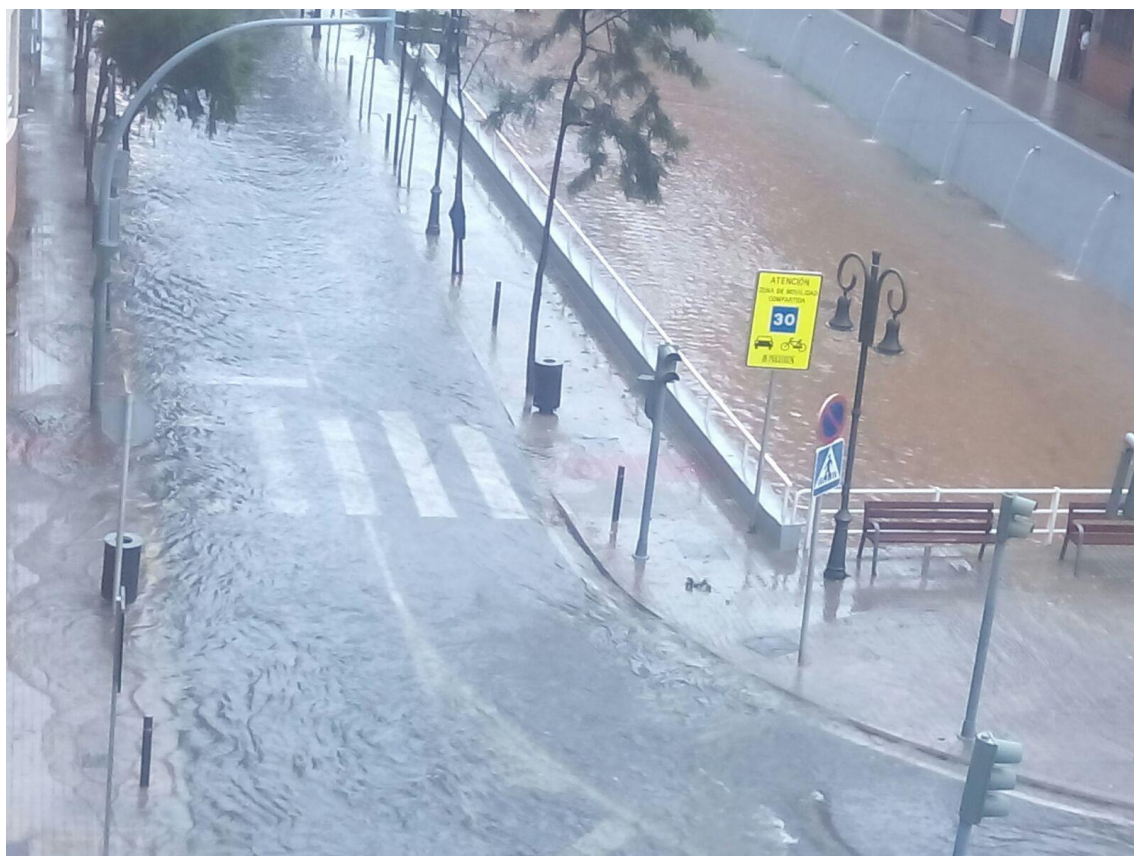
Análisis de la problemática de inundabilidad en el municipio del Aldaia y propuesta de soluciones.

2.2.Fotos de la tormenta.

En las siguientes figuras vamos a ver fotografías, realizadas el 2 de noviembre en el pico de las descarga del hidrograma, de lo ocurrido durante la tormenta.



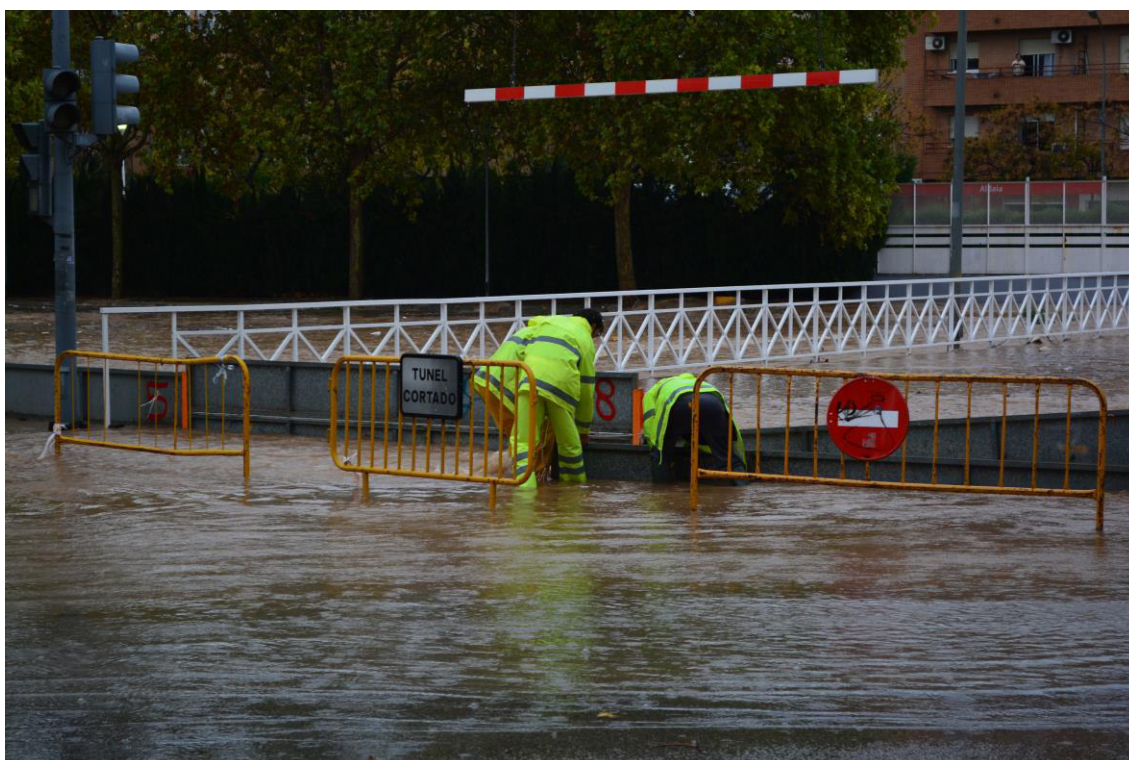
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Análisis de la problemática de inundabilidad en el municipio del Aldaia y propuesta de soluciones.



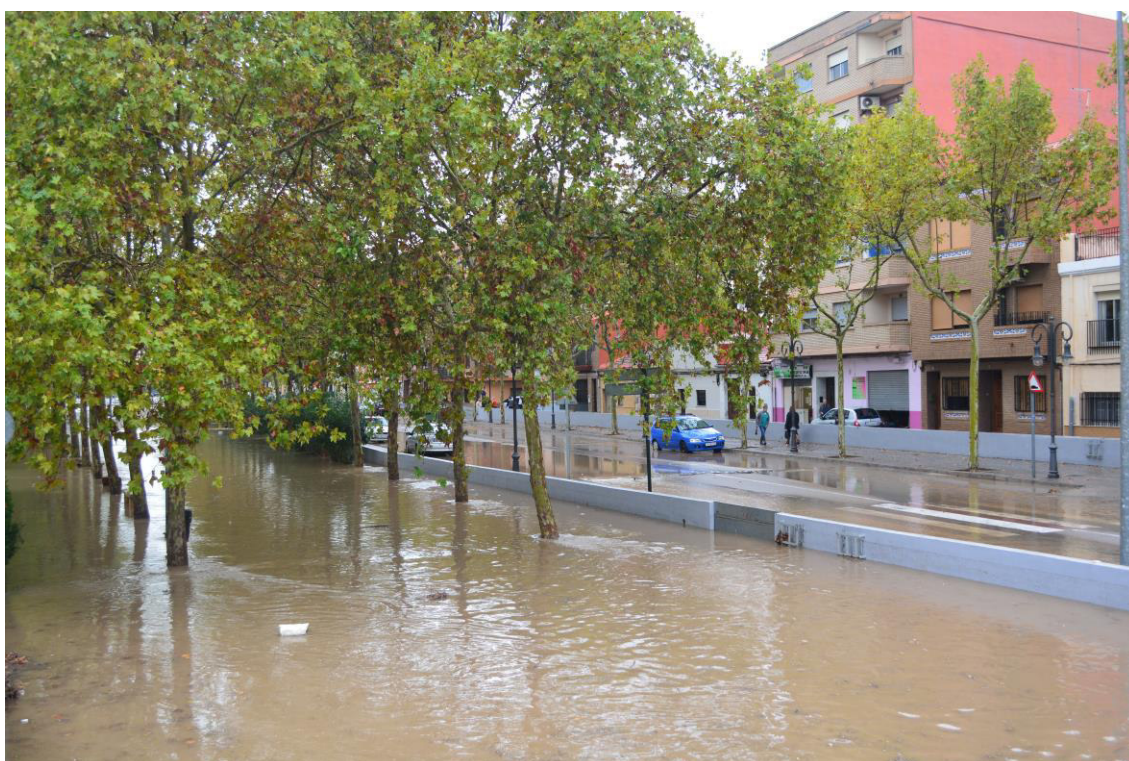
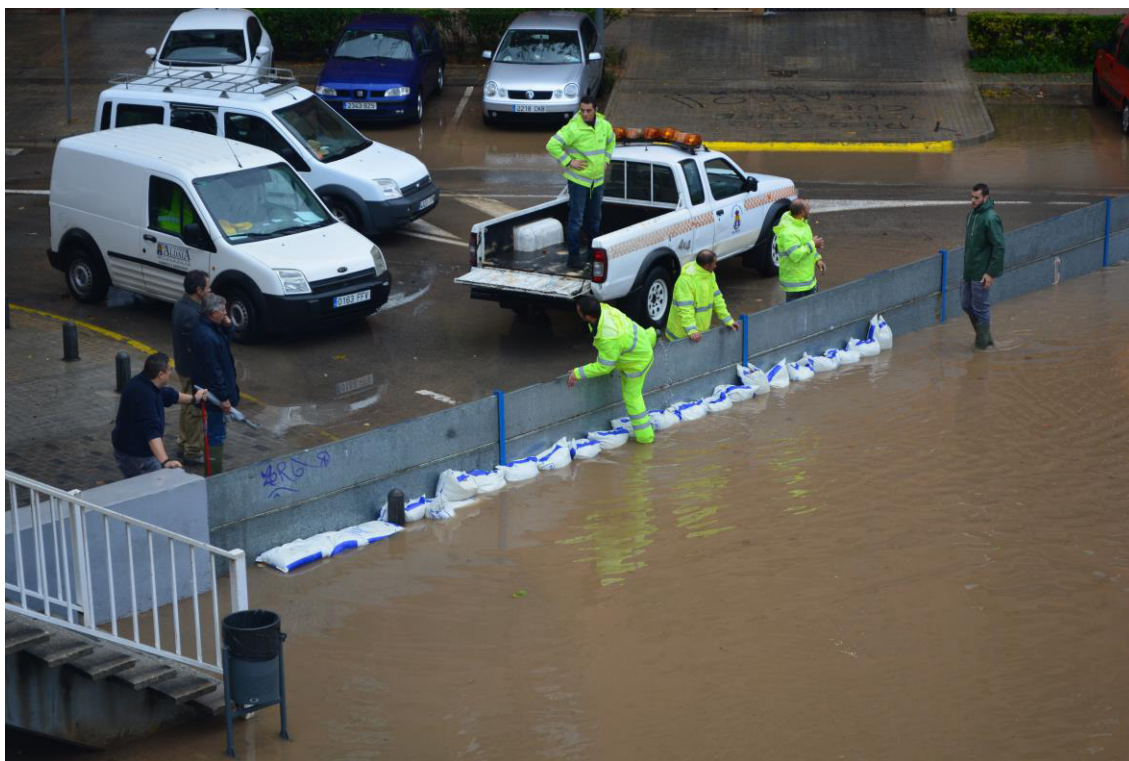
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Análisis de la problemática de inundabilidad en el municipio del Aldaia y propuesta de soluciones.



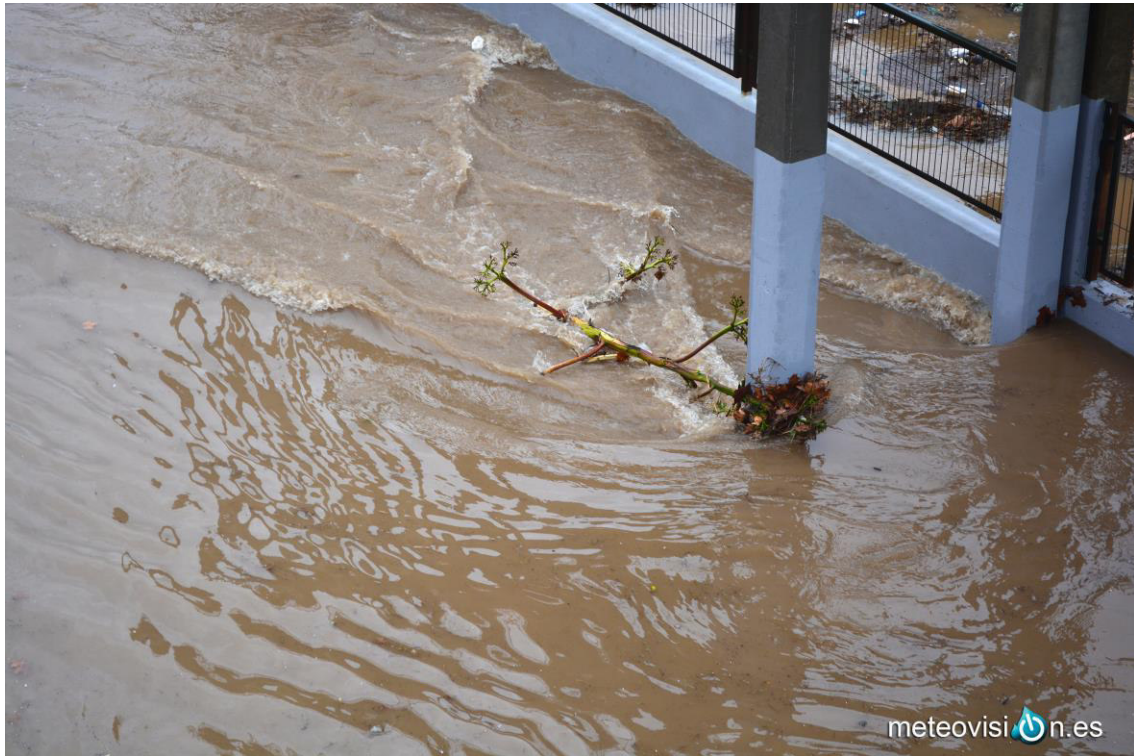
Análisis de la problemática de inundabilidad en el municipio del Aldaia y propuesta de soluciones.



Análisis de la problemática de inundabilidad en el municipio del Aldaia y propuesta de soluciones.



Análisis de la problemática de inundabilidad en el municipio del Aldaia y propuesta de soluciones.

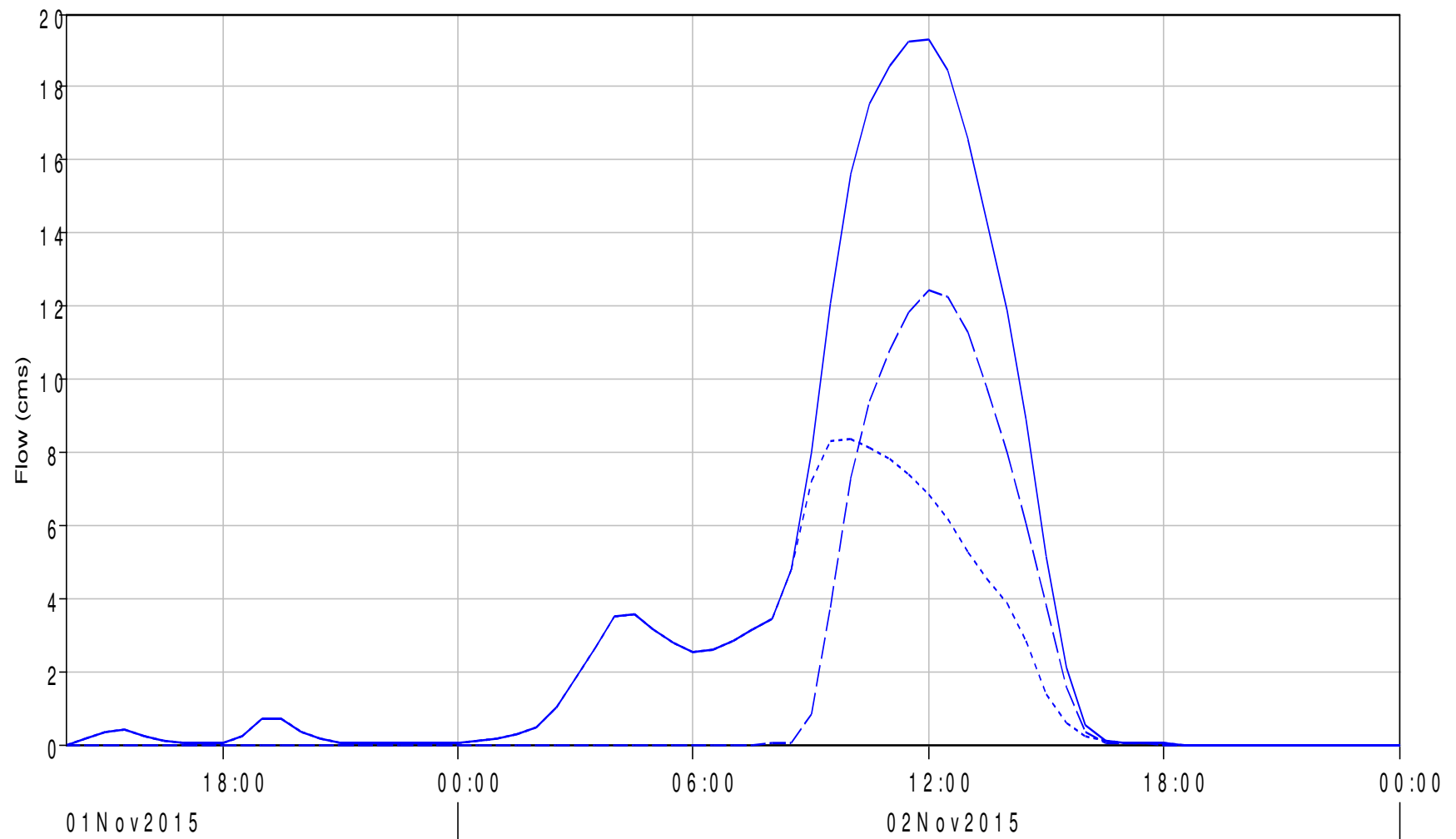


3. Análisis de la tormenta

3.1. Obtención caudal desagüe

En las siguientes 5 hojas podemos observar el hidrograma en el punto de desagüe y una tabla detallando y aclarándolo.

Sink "Desagüe" Results for Run "Lluvia real"



Run:Lluvia real Element:Desagüe Result:Outflow Run:Lluvia real Element:Saleta (3) Result:Outflow Run:Lluvia real Element:Cuenca Baja (3) Result:Outflow

Project: TFG_Mus_Cunge Simulation Run: Output
Sink: Desagüe

Start of Run: 01ene2000, 00:00 Basin Model: Cuenca Estudio
End of Run: 01ene2000, 17:00 Meteorologic Model: Output
Compute Time: 01sep2016, 18:39:54 Control Specifications: Output

Date	Time	Inflow from Saleta (M3/S)	Inflow from Cuenca (M3/S)	Total Inflow (M3/S)
01ene2000	00:00	0.0	0.0	0.0
01ene2000	00:10	0.0	0.0	0.0
01ene2000	00:20	0.0	0.1	0.1
01ene2000	00:30	0.0	0.2	0.2
01ene2000	00:40	0.0	0.4	0.4
01ene2000	00:50	0.0	0.6	0.6
01ene2000	01:00	0.0	0.7	0.7
01ene2000	01:10	0.0	0.9	0.9
01ene2000	01:20	0.0	1.0	1.0
01ene2000	01:30	0.0	1.1	1.1
01ene2000	01:40	0.0	1.1	1.1
01ene2000	01:50	0.0	1.2	1.2
01ene2000	02:00	0.0	1.3	1.3
01ene2000	02:10	0.0	1.4	1.4
01ene2000	02:20	0.0	1.5	1.5
01ene2000	02:30	0.0	1.6	1.6
01ene2000	02:40	0.0	1.7	1.7
01ene2000	02:50	0.0	1.9	1.9
01ene2000	03:00	0.0	2.1	2.1
01ene2000	03:10	0.0	2.3	2.3
01ene2000	03:20	0.0	2.6	2.6
01ene2000	03:30	0.0	3.0	3.0
01ene2000	03:40	0.0	3.4	3.4
01ene2000	03:50	0.0	4.2	4.2
01ene2000	04:00	0.0	6.0	6.0
01ene2000	04:10	0.0	8.7	8.7

Date	Time	Inflow from Saleta (M3/S)	Inflow from Cuencabaja (M3/S)	Total Inflow (M3/S)
01ene2000	04:20	0.0	11.8	11.8
01ene2000	04:30	0.0	13.8	13.9
01ene2000	04:40	0.2	14.4	14.6
01ene2000	04:50	1.9	13.6	15.5
01ene2000	05:00	6.5	12.0	18.6
01ene2000	05:10	9.0	10.1	19.2
01ene2000	05:20	9.9	8.6	18.5
01ene2000	05:30	9.8	7.3	17.1
01ene2000	05:40	9.1	6.2	15.3
01ene2000	05:50	7.9	5.3	13.2
01ene2000	06:00	6.6	4.7	11.3
01ene2000	06:10	5.5	4.1	9.6
01ene2000	06:20	4.4	3.6	8.1
01ene2000	06:30	3.6	3.3	6.8
01ene2000	06:40	2.8	2.9	5.7
01ene2000	06:50	2.1	2.6	4.7
01ene2000	07:00	1.4	2.4	3.8
01ene2000	07:10	0.8	2.2	3.0
01ene2000	07:20	0.3	2.1	2.4
01ene2000	07:30	0.1	1.9	2.0
01ene2000	07:40	0.0	1.8	1.8
01ene2000	07:50	0.0	1.7	1.7
01ene2000	08:00	0.0	1.6	1.6
01ene2000	08:10	0.0	1.5	1.5
01ene2000	08:20	0.0	1.4	1.4
01ene2000	08:30	0.0	1.1	1.1
01ene2000	08:40	0.0	0.9	0.9
01ene2000	08:50	0.0	0.7	0.7
01ene2000	09:00	0.0	0.5	0.5
01ene2000	09:10	0.0	0.3	0.3
01ene2000	09:20	0.0	0.2	0.2

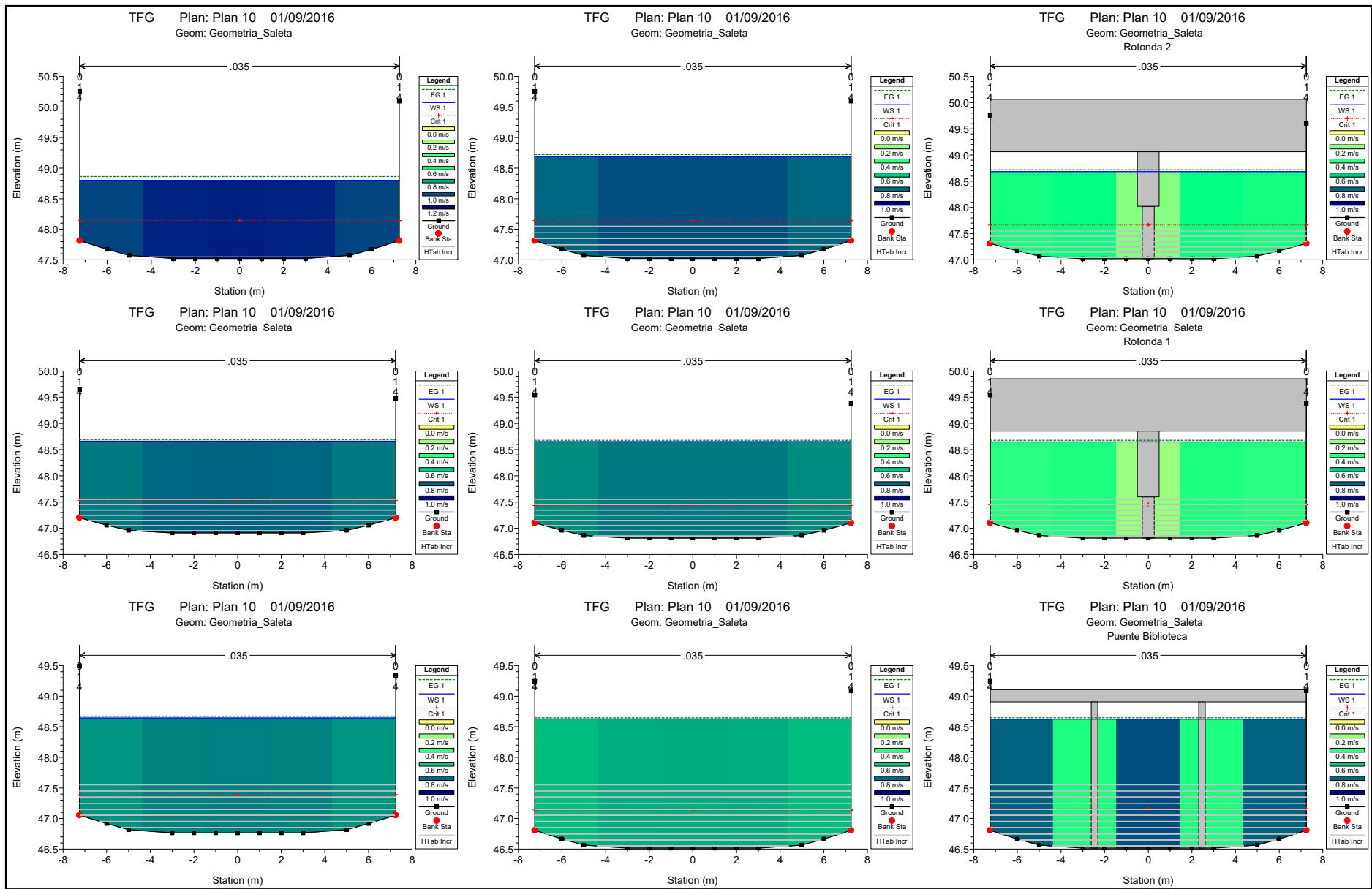
Date	Time	Inflow from Saleta (M3/S)	Inflow from Cuencabaja (M3/S)	Total Inflow (M3/S)
01ene2000	09:30	0.0	0.2	0.2
01ene2000	09:40	0.0	0.1	0.1
01ene2000	09:50	0.0	0.1	0.1
01ene2000	10:00	0.0	0.1	0.1
01ene2000	10:10	0.0	0.0	0.0
01ene2000	10:20	0.0	0.0	0.0
01ene2000	10:30	0.0	0.0	0.0
01ene2000	10:40	0.0	0.0	0.0
01ene2000	10:50	0.0	0.0	0.0
01ene2000	11:00	0.0	0.0	0.0
01ene2000	11:10	0.0	0.0	0.0
01ene2000	11:20	0.0	0.0	0.0
01ene2000	11:30	0.0	0.0	0.0
01ene2000	11:40	0.0	0.0	0.0
01ene2000	11:50	0.0	0.0	0.0
01ene2000	12:00	0.0	0.0	0.0
01ene2000	12:10	0.0	0.0	0.0
01ene2000	12:20	0.0	0.0	0.0
01ene2000	12:30	0.0	0.0	0.0
01ene2000	12:40	0.0	0.0	0.0
01ene2000	12:50	0.0	0.0	0.0
01ene2000	13:00	0.0	0.0	0.0
01ene2000	13:10	0.0	0.0	0.0
01ene2000	13:20	0.0	0.0	0.0
01ene2000	13:30	0.0	0.0	0.0
01ene2000	13:40	0.0	0.0	0.0
01ene2000	13:50	0.0	0.0	0.0
01ene2000	14:00	0.0	0.0	0.0
01ene2000	14:10	0.0	0.0	0.0
01ene2000	14:20	0.0	0.0	0.0
01ene2000	14:30	0.0	0.0	0.0

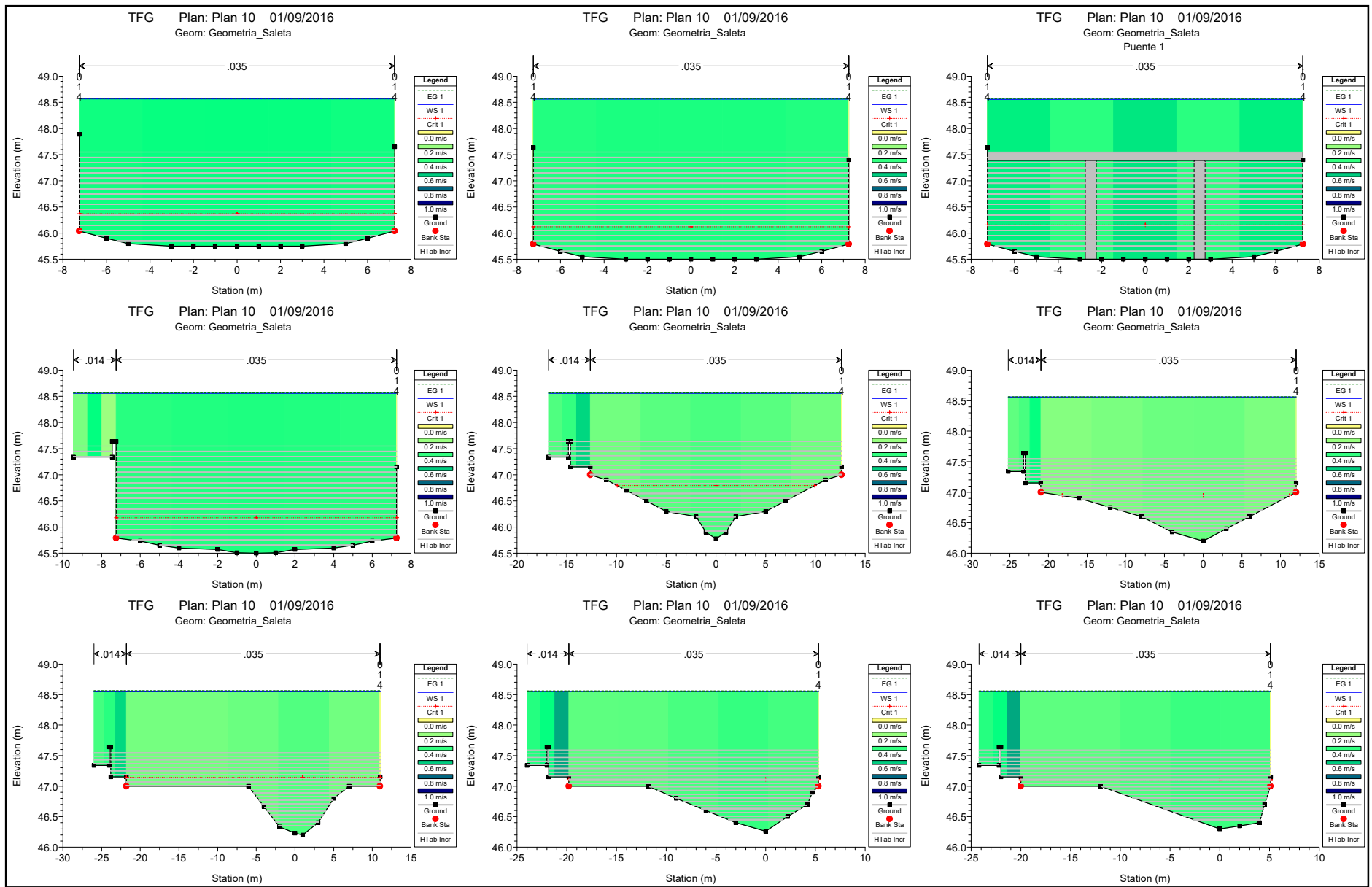
Date	Time	Inflow from Saleta (M3/S)	Inflow from Cuencabaja (M3/S)	Total Inflow (M3/S)
01ene2000	14:40	0.0	0.0	0.0
01ene2000	14:50	0.0	0.0	0.0
01ene2000	15:00	0.0	0.0	0.0
01ene2000	15:10	0.0	0.0	0.0
01ene2000	15:20	0.0	0.0	0.0
01ene2000	15:30	0.0	0.0	0.0
01ene2000	15:40	0.0	0.0	0.0
01ene2000	15:50	0.0	0.0	0.0
01ene2000	16:00	0.0	0.0	0.0
01ene2000	16:10	0.0	0.0	0.0
01ene2000	16:20	0.0	0.0	0.0
01ene2000	16:30	0.0	0.0	0.0
01ene2000	16:40	0.0	0.0	0.0
01ene2000	16:50	0.0	0.0	0.0
01ene2000	17:00	0.0	0.0	0.0

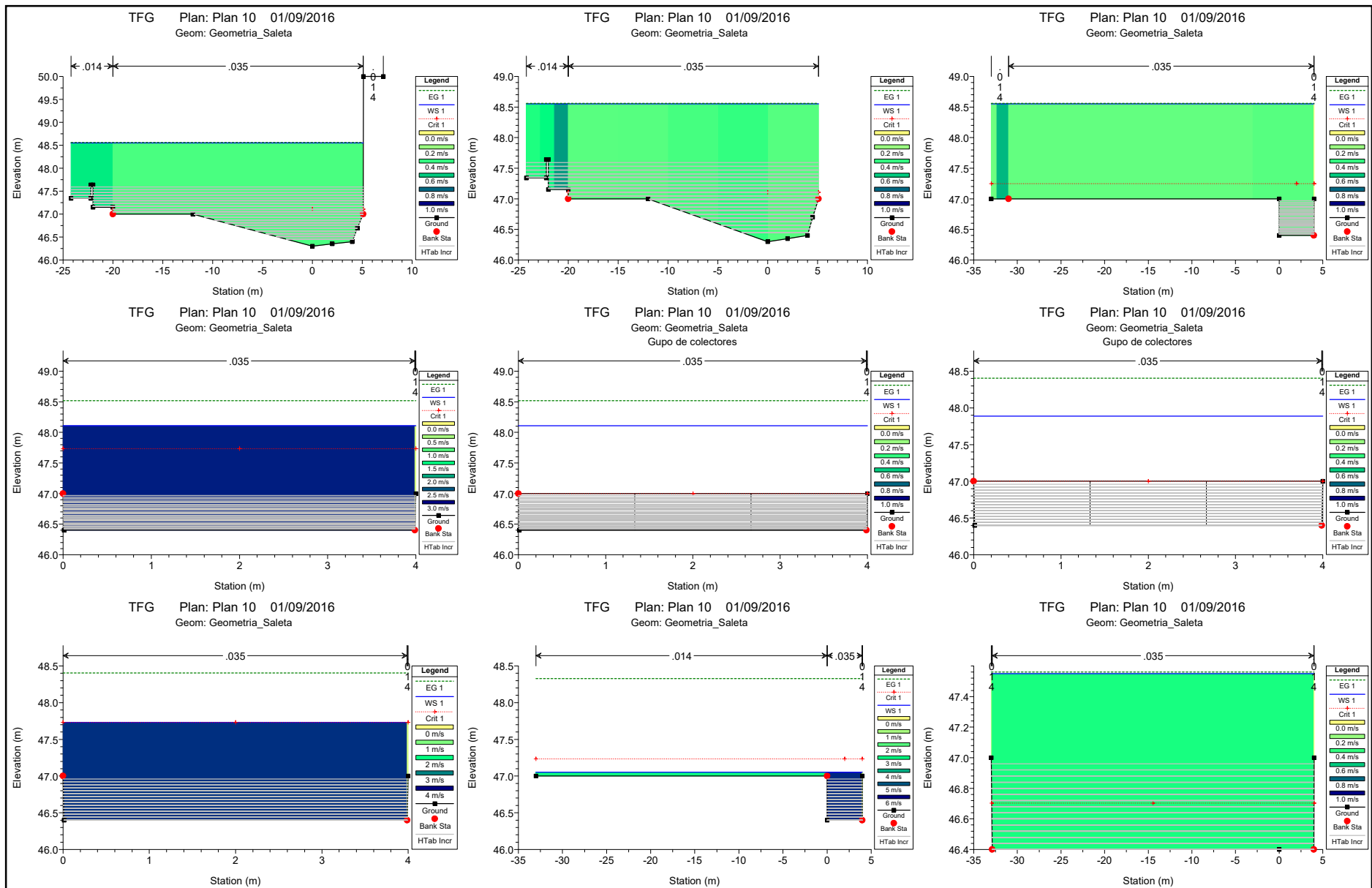
Análisis de la problemática de inundabilidad en el municipio del Aldaia y propuesta de soluciones.

3.2.Observación lámina libre

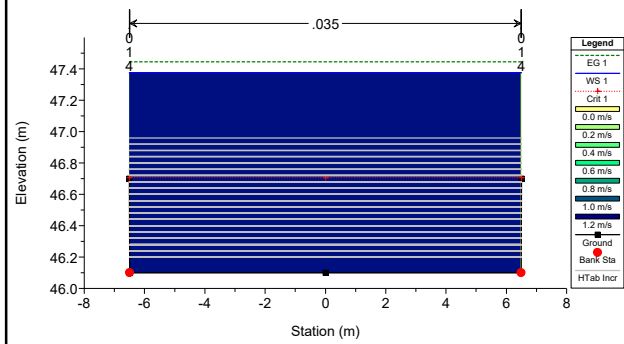
En las siguientes hojas veremos la situación de la lámina libre con un caudal de $19 \text{ m}^3/\text{seg}$, el caudal de desagüe en la tormenta, en la situación actual mediante las secciones principales y una tabla de todas las secciones calculadas. En la situación de solución propuesta observamos la tabla de las secciones calculadas.







TFG Plan: Plan 10 01/09/2016
Geom: Geometria_Saleta



HEC-RAS Plan: Plan 10 River: Saleta Reach: Saleta Profile: 1

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Saleta	22	1	19.30	47.52	48.80	48.14	48.86	0.001124	1.09	17.68	14.50	0.32
Saleta	21.889*	1	19.30	47.47	48.78	48.09	48.84	0.001017	1.06	18.21	14.50	0.30
Saleta	21.778*	1	19.30	47.41	48.76	48.03	48.82	0.000921	1.03	18.77	14.50	0.29
Saleta	21.667*	1	19.30	47.36	48.75	47.98	48.80	0.000830	1.00	19.36	14.50	0.28
Saleta	21.556*	1	19.30	47.30	48.74	47.92	48.78	0.000750	0.97	19.96	14.50	0.26
Saleta	21.444*	1	19.30	47.24	48.72	47.87	48.77	0.000676	0.94	20.59	14.50	0.25
Saleta	21.333*	1	19.30	47.19	48.71	47.81	48.75	0.000610	0.91	21.23	14.50	0.24
Saleta	21.222*	1	19.30	47.13	48.70	47.76	48.74	0.000550	0.88	21.90	14.50	0.23
Saleta	21.111*	1	19.30	47.08	48.69	47.70	48.73	0.000498	0.86	22.57	14.50	0.22
Saleta	21	1	19.30	47.02	48.69	47.64	48.72	0.000450	0.83	23.27	14.50	0.21
Saleta	20		Bridge									
Saleta	19	1	19.30	46.91	48.66	47.53	48.69	0.000376	0.79	24.54	14.50	0.19
Saleta	18.857*	1	19.30	46.90	48.66	47.52	48.69	0.000368	0.78	24.72	14.50	0.19
Saleta	18.714*	1	19.30	46.88	48.66	47.50	48.69	0.000358	0.77	24.92	14.50	0.19
Saleta	18.571*	1	19.30	46.87	48.66	47.49	48.69	0.000349	0.77	25.10	14.50	0.19
Saleta	18.429*	1	19.30	46.85	48.66	47.47	48.68	0.000341	0.76	25.28	14.50	0.18
Saleta	18.286*	1	19.30	46.84	48.65	47.46	48.68	0.000333	0.76	25.47	14.50	0.18
Saleta	18.143*	1	19.30	46.82	48.65	47.45	48.68	0.000325	0.75	25.65	14.50	0.18
Saleta	18	1	19.30	46.81	48.65	47.43	48.68	0.000317	0.75	25.84	14.50	0.18
Saleta	17		Bridge									
Saleta	16	1	19.30	46.77	48.64	47.39	48.67	0.000297	0.73	26.36	14.50	0.17
Saleta	15.750*	1	19.30	46.70	48.64	47.32	48.66	0.000267	0.71	27.21	14.50	0.17
Saleta	15.500*	1	19.30	46.64	48.63	47.26	48.66	0.000241	0.69	28.05	14.50	0.16
Saleta	15.250*	1	19.30	46.58	48.63	47.20	48.65	0.000218	0.67	28.91	14.50	0.15
Saleta	15	1	19.30	46.52	48.63	47.14	48.65	0.000198	0.65	29.76	14.50	0.14
Saleta	14		Bridge									
Saleta	13	1	19.30	46.51	48.63	47.13	48.65	0.000196	0.65	29.84	14.50	0.14
Saleta	12.750*	1	19.30	46.46	48.62	47.08	48.64	0.000182	0.63	30.52	14.50	0.14
Saleta	12.500*	1	19.30	46.41	48.62	47.03	48.64	0.000169	0.62	31.21	14.50	0.13
Saleta	12.250*	1	19.30	46.36	48.62	46.98	48.64	0.000157	0.61	31.90	14.50	0.13
Saleta	12	1	19.30	46.31	48.61	46.93	48.63	0.000146	0.59	32.59	14.50	0.13
Saleta	11		Bridge									
Saleta	10	1	19.30	46.27	48.59	46.89	48.61	0.000144	0.59	32.78	14.50	0.13
Saleta	9.9200*	1	19.30	46.21	48.59	46.83	48.60	0.000132	0.57	33.61	14.50	0.12
Saleta	9.8400*	1	19.30	46.15	48.58	46.77	48.60	0.000122	0.56	34.45	14.50	0.12
Saleta	9.7600*	1	19.30	46.09	48.58	46.71	48.60	0.000112	0.55	35.30	14.50	0.11
Saleta	9.6800*	1	19.30	46.03	48.58	46.65	48.60	0.000104	0.53	36.14	14.50	0.11
Saleta	9.6	1	19.30	45.97	48.58	46.59	48.59	0.000096	0.52	36.99	14.50	0.10
Saleta	9.5		Bridge									
Saleta	9.4	1	19.30	45.96	48.58	46.58	48.59	0.000095	0.52	37.07	14.50	0.10
Saleta	9.1250*	1	19.30	45.91	48.57	46.53	48.59	0.000089	0.51	37.78	14.50	0.10
Saleta	8.8500*	1	19.30	45.86	48.57	46.48	48.59	0.000084	0.50	38.49	14.50	0.10
Saleta	8.5750*	1	19.30	45.81	48.57	46.43	48.58	0.000079	0.49	39.20	14.50	0.10
Saleta	8.3	1	19.30	45.76	48.57	46.38	48.58	0.000074	0.48	39.91	14.50	0.09
Saleta	8.2		Bridge									
Saleta	8.1	1	19.30	45.75	48.57	46.37	48.58	0.000074	0.48	39.98	14.50	0.09
Saleta	8.0800*	1	19.30	45.70	48.56	46.32	48.58	0.000070	0.47	40.69	14.50	0.09
Saleta	8.0600*	1	19.30	45.65	48.56	46.27	48.57	0.000066	0.47	41.40	14.50	0.09
Saleta	8.0400*	1	19.30	45.60	48.56	46.22	48.57	0.000062	0.46	42.11	14.50	0.09
Saleta	8.0200*	1	19.30	45.55	48.56	46.17	48.57	0.000059	0.45	42.83	14.50	0.08
Saleta	8	1	19.30	45.50	48.56	46.12	48.57	0.000056	0.44	43.54	14.50	0.08
Saleta	7.5		Bridge									
Saleta	7	1	19.30	45.50	48.56	46.18	48.57	0.000055	0.43	45.27	16.70	0.08
Saleta	6.8750*	1	19.30	45.53	48.56	46.24	48.57	0.000051	0.41	48.02	18.30	0.08
Saleta	6.7500*	1	19.30	45.57	48.56	46.32	48.57	0.000048	0.39	50.47	19.89	0.07
Saleta	6.6250*	1	19.30	45.60	48.56	46.39	48.57	0.000046	0.37	52.60	21.48	0.07
Saleta	6.5000*	1	19.30	45.64	48.56	46.48	48.57	0.000045	0.35	54.41	23.08	0.07
Saleta	6.3750*	1	19.30	45.67	48.56	46.57	48.57	0.000044	0.34	55.90	24.67	0.07
Saleta	6.2500*	1	19.30	45.71	48.56	46.64	48.57	0.000045	0.33	57.09	26.26	0.07
Saleta	6.1250*	1	19.30	45.74	48.56	46.72	48.57	0.000045	0.32	57.96	27.86	0.07
Saleta	6	1	19.30	45.77	48.56	46.79	48.57	0.000047	0.32	58.52	29.45	0.07
Saleta	5.8750*	1	19.30	45.83	48.56	46.81	48.57	0.000045	0.31	59.93	30.42	0.07
Saleta	5.7500*	1	19.30	45.88	48.56	46.83	48.57	0.000044	0.30	61.31	31.39	0.07
Saleta	5.6250*	1	19.30	45.93	48.56	46.84	48.56	0.000042	0.30	62.66	32.36	0.07
Saleta	5.5000*	1	19.30	45.99	48.56	46.86	48.56	0.000041	0.29	63.98	33.33	0.07
Saleta	5.3750*	1	19.30	46.04	48.56	46.88	48.56	0.000040	0.29	65.27	34.30	0.06
Saleta	5.2500*	1	19.30	46.09	48.56	46.90	48.56	0.000039	0.28	66.53	35.27	0.06
Saleta	5.1250*	1	19.30	46.15	48.56	46.92	48.56	0.000038	0.27	67.77	36.24	0.06
Saleta	5	1	19.30	46.20	48.56	46.94	48.56	0.000037	0.27	68.97	37.21	0.06
Saleta	4.8333*	1	19.30	46.20	48.56	46.98	48.56	0.000039	0.27	68.07	37.18	0.06
Saleta	4.6667*	1	19.30	46.20	48.56	47.01	48.56	0.000041	0.28	67.12	37.14	0.06
Saleta	4.5000*	1	19.30	46.20	48.56	47.04	48.56	0.000043	0.28	66.08	37.11	0.07
Saleta	4.3333*	1	19.30	46.20	48.56	47.07	48.56	0.000045	0.28	64.96	37.08	0.07
Saleta	4.1667*	1	19.30	46.20	48.56	47.11	48.56	0.000048	0.29	63.77	37.04	0.07
Saleta	4	1	19.30	46.20	48.56	47.14	48.56	0.000051	0.29	62.50	37.01	0.07
Saleta	3.8333*	1	19.30	46.21	48.56	47.14	48.56	0.000053	0.30	60.80	35.73	0.07
Saleta	3.6667*	1	19.30	46.22	48.56	47.13	48.56	0.000056	0.31	59.03	34.44	0.07
Saleta	3.5000*	1	19.30	46.23	48.56	47.12	48.56	0.000058	0.32	57.21	33.16	0.08
Saleta	3.3333*	1	19.30	46.24	48.56	47.12	48.56	0.000062	0.33	55.34	31.88	0.08
Saleta	3.1667*	1	19.30	46.25	48.55	47.11	48.56	0.000065	0.34	53.39	30.59	0.08
Saleta	3	1	19.30	46.26	48.55	47.11	48.56	0.000070	0.36	51.40	29.31	0.08
Saleta	2.8750*	1	19.30	46.26	48.55	47.11	48.56	0.000070	0.36	51.41	29.31	0.08
Saleta	2.7500*	1	19.30	46.27	48.55	47.11	48.56	0.000070	0.36	51.43	29.31	0.08

HEC-RAS Plan: Plan 10 River: Saleta Reach: Saleta Profile: 1 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Saleta	2.6250*	1	19.30	46.28	48.55	47.11	48.56	0.000070	0.36	51.44	29.31	0.08
Saleta	2.5000*	1	19.30	46.28	48.55	47.11	48.56	0.000070	0.36	51.45	29.31	0.08
Saleta	2.3750*	1	19.30	46.29	48.55	47.11	48.56	0.000070	0.36	51.46	29.31	0.08
Saleta	2.2500*	1	19.30	46.29	48.55	47.11	48.56	0.000070	0.36	51.48	29.31	0.08
Saleta	2.1250*	1	19.30	46.29	48.55	47.11	48.56	0.000070	0.36	51.48	29.31	0.08
Saleta	2	1	19.30	46.30	48.55	47.11	48.56	0.000070	0.36	51.49	29.31	0.08
Saleta	1.99	1	19.30	46.30	48.55	47.11	48.56	0.000070	0.36	51.48	29.31	0.08
Saleta	1.9100*	1	19.30	46.30	48.55	47.11	48.56	0.000070	0.36	51.48	29.31	0.08
Saleta	1.8300*	1	19.30	46.30	48.55	47.11	48.56	0.000070	0.36	51.48	29.31	0.08
Saleta	1.7500*	1	19.30	46.30	48.55	47.11	48.56	0.000070	0.36	51.48	29.31	0.08
Saleta	1.6700*	1	19.30	46.30	48.55	47.11	48.56	0.000070	0.36	51.48	29.31	0.08
Saleta	1.5900*	1	19.30	46.30	48.55	47.11	48.56	0.000070	0.36	51.48	29.31	0.08
Saleta	1.51	1	19.30	46.30	48.55	47.11	48.56	0.000070	0.36	51.47	29.31	0.08
Saleta	1.5	1	19.30	46.30	48.55	47.11	48.56	0.000075	0.35	51.47	29.30	0.08
Saleta	1.4375*	1	19.30	46.31	48.55	47.13	48.56	0.000068	0.35	52.58	30.26	0.08
Saleta	1.3750*	1	19.30	46.33	48.55	47.16	48.56	0.000067	0.34	53.66	31.22	0.08
Saleta	1.3125*	1	19.30	46.34	48.55	47.17	48.56	0.000066	0.34	54.73	32.19	0.08
Saleta	1.2500*	1	19.30	46.35	48.55	47.19	48.56	0.000065	0.33	55.78	33.15	0.08
Saleta	1.1875*	1	19.30	46.36	48.55	47.20	48.56	0.000065	0.32	56.83	34.11	0.08
Saleta	1.1250*	1	19.30	46.38	48.55	47.21	48.56	0.000064	0.32	57.84	35.08	0.08
Saleta	1.0625*	1	19.30	46.39	48.55	47.23	48.56	0.000063	0.32	58.85	36.04	0.08
Saleta	1	1	19.30	46.40	48.55	47.25	48.56	0.000064	0.31	59.84	37.00	0.08
Saleta	0.99	1	19.30	46.40	48.11	47.73	48.52	0.007708	2.83	6.83	4.00	0.69
Saleta	0.9		Culvert									
Saleta	0.81	1	19.30	46.40	47.73	47.73	48.40	0.016146	3.63	5.32	4.00	1.00
Saleta	0.8	1	19.30	46.40	47.05	47.23	48.33	0.080319	5.55	4.33	37.00	2.20
Saleta	0.79000*	1	19.30	46.40	46.91	47.16	48.31	0.091658	5.25	3.68	7.29	2.36
Saleta	0.78000*	1	19.30	46.40	47.54	47.09	47.57	0.000281	0.51	27.81	37.00	0.15
Saleta	0.77000*	1	19.30	46.40	47.54	47.03	47.56	0.000244	0.48	30.37	37.00	0.14
Saleta	0.76000*	1	19.30	46.40	47.54	46.95	47.56	0.000220	0.46	32.72	37.00	0.14
Saleta	0.75000*	1	19.30	46.40	47.54	46.87	47.56	0.000204	0.44	34.85	37.00	0.13
Saleta	0.74000*	1	19.30	46.40	47.54	46.82	47.56	0.000195	0.43	36.77	37.00	0.13
Saleta	0.73000*	1	19.30	46.40	47.55	46.78	47.56	0.000191	0.43	38.49	37.00	0.13
Saleta	0.72000*	1	19.30	46.40	47.55	46.74	47.56	0.000193	0.43	40.02	37.00	0.13
Saleta	0.71000*	1	19.30	46.40	47.55	46.72	47.56	0.000200	0.44	41.36	37.00	0.13
Saleta	0.7	1	19.30	46.40	47.55	46.70	47.56	0.000210	0.45	42.50	37.00	0.14
Saleta	0.69412*	1	19.30	46.38	47.55	46.69	47.56	0.000218	0.47	41.39	35.59	0.14
Saleta	0.68824*	1	19.30	46.36	47.54	46.68	47.55	0.000228	0.48	40.19	34.18	0.14
Saleta	0.68235*	1	19.30	46.35	47.54	46.68	47.55	0.000239	0.50	38.98	32.77	0.15
Saleta	0.67647*	1	19.30	46.33	47.53	46.67	47.55	0.000251	0.51	37.72	31.35	0.15
Saleta	0.67059*	1	19.30	46.31	47.53	46.66	47.54	0.000266	0.53	36.39	29.94	0.15
Saleta	0.66471*	1	19.30	46.29	47.52	46.65	47.54	0.000283	0.55	35.04	28.53	0.16
Saleta	0.65882*	1	19.30	46.28	47.52	46.65	47.53	0.000303	0.57	33.63	27.12	0.16
Saleta	0.65294*	1	19.30	46.26	47.51	46.64	47.53	0.000328	0.60	32.16	25.71	0.17
Saleta	0.64706*	1	19.30	46.24	47.50	46.64	47.52	0.000357	0.63	30.66	24.30	0.18
Saleta	0.64118*	1	19.30	46.22	47.50	46.64	47.52	0.000393	0.66	29.08	22.88	0.19
Saleta	0.63529*	1	19.30	46.21	47.49	46.64	47.51	0.000436	0.70	27.48	21.47	0.20
Saleta	0.62941*	1	19.30	46.19	47.48	46.64	47.50	0.000490	0.75	25.82	20.06	0.21
Saleta	0.62353*	1	19.30	46.17	47.46	46.65	47.50	0.000560	0.80	24.09	18.65	0.23
Saleta	0.61765*	1	19.30	46.15	47.45	46.66	47.49	0.000651	0.87	22.32	17.24	0.24
Saleta	0.61176*	1	19.30	46.14	47.43	46.67	47.48	0.000772	0.94	20.49	15.82	0.26
Saleta	0.60588*	1	19.30	46.12	47.41	46.68	47.46	0.000945	1.04	18.57	14.41	0.29
Saleta	0.6	1	19.30	46.10	47.38	46.71	47.45	0.001201	1.17	16.58	13.00	0.33

HEC-RAS Plan: Plan 09 River: Saleta Reach: Saleta Profile: PF 15

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Saleta	22	PF 15	19.30	47.22	48.08	47.84	48.22	0.004700	1.68	11.51	14.50	0.60
Saleta	21.875*	PF 15	19.30	47.12	47.97	47.74	48.11	0.004689	1.68	11.52	14.50	0.60
Saleta	21.750*	PF 15	19.30	47.01	47.86	47.63	48.01	0.004679	1.67	11.52	14.50	0.60
Saleta	21.625*	PF 15	19.30	46.91	47.76	47.53	47.90	0.004651	1.67	11.54	14.50	0.60
Saleta	21.500*	PF 15	19.30	46.80	47.66	47.42	47.80	0.004568	1.66	11.61	14.50	0.59
Saleta	21.375*	PF 15	19.30	46.69	47.56	47.31	47.70	0.004457	1.65	11.69	14.50	0.59
Saleta	21.250*	PF 15	19.30	46.59	47.46	47.21	47.60	0.004272	1.63	11.84	14.50	0.58
Saleta	21.125*	PF 15	19.30	46.48	47.37	47.10	47.50	0.003989	1.60	12.09	14.50	0.56
Saleta	21	PF 15	19.30	46.37	47.29	47.00	47.41	0.003600	1.55	12.47	14.50	0.53
Saleta	20		Bridge									
Saleta	19	PF 15	19.30	46.19	47.06	46.81	47.19	0.004348	1.64	11.78	14.50	0.58
Saleta	18.750*	PF 15	19.30	46.14	47.02	46.77	47.15	0.004272	1.63	11.84	14.50	0.58
Saleta	18.500*	PF 15	19.30	46.10	46.98	46.72	47.12	0.004192	1.62	11.91	14.50	0.57
Saleta	18.250*	PF 15	19.30	46.06	46.95	46.68	47.08	0.004074	1.61	12.01	14.50	0.56
Saleta	18	PF 15	19.30	46.02	46.91	46.64	47.04	0.003964	1.59	12.11	14.50	0.56
Saleta	17		Bridge									
Saleta	16	PF 15	19.30	45.94	46.80	46.57	46.94	0.004634	1.67	11.56	14.50	0.60
Saleta	15.750*	PF 15	19.30	45.85	46.71	46.47	46.85	0.004568	1.66	11.61	14.50	0.59
Saleta	15.500*	PF 15	19.30	45.76	46.62	46.38	46.76	0.004483	1.65	11.67	14.50	0.59
Saleta	15.250*	PF 15	19.30	45.66	46.53	46.28	46.67	0.004353	1.64	11.78	14.50	0.58
Saleta	15	PF 15	19.30	45.57	46.45	46.19	46.58	0.004128	1.61	11.97	14.50	0.57
Saleta	14		Bridge									
Saleta	13	PF 15	19.30	45.56	46.42	46.18	46.56	0.004438	1.65	11.71	14.50	0.59
Saleta	12.875*	PF 15	19.30	45.51	46.38	46.13	46.52	0.004393	1.64	11.74	14.50	0.58
Saleta	12.750*	PF 15	19.30	45.47	46.34	46.09	46.48	0.004298	1.63	11.82	14.50	0.58
Saleta	12.625*	PF 15	19.30	45.42	46.30	46.04	46.44	0.004214	1.62	11.89	14.50	0.57
Saleta	12.500*	PF 15	19.30	45.38	46.26	46.00	46.40	0.004109	1.61	11.98	14.50	0.57
Saleta	12.375*	PF 15	19.30	45.34	46.23	45.96	46.36	0.003993	1.60	12.09	14.50	0.56
Saleta	12.250*	PF 15	19.30	45.29	46.19	45.91	46.32	0.003826	1.58	12.24	14.50	0.55
Saleta	12.125*	PF 15	19.30	45.25	46.16	45.87	46.28	0.003663	1.56	12.40	14.50	0.54
Saleta	12	PF 15	19.30	45.20	46.13	45.82	46.25	0.003484	1.53	12.59	14.50	0.53
Saleta	11		Bridge									
Saleta	10	PF 15	19.30	45.14	45.99	45.76	46.13	0.004705	1.68	11.51	14.50	0.60
Saleta	9.9600*	PF 15	19.30	45.09	45.94	45.71	46.08	0.004708	1.68	11.50	14.50	0.60
Saleta	9.9200*	PF 15	19.30	45.04	45.89	45.66	46.04	0.004712	1.68	11.50	14.50	0.60
Saleta	9.8800*	PF 15	19.30	44.99	45.85	45.62	45.99	0.004688	1.68	11.52	14.50	0.60
Saleta	9.8400*	PF 15	19.30	44.95	45.80	45.57	45.94	0.004686	1.68	11.52	14.50	0.60
Saleta	9.8000*	PF 15	19.30	44.90	45.75	45.52	45.90	0.004683	1.68	11.52	14.50	0.60
Saleta	9.7600*	PF 15	19.30	44.85	45.71	45.47	45.85	0.004681	1.67	11.52	14.50	0.60
Saleta	9.7200*	PF 15	19.30	44.81	45.66	45.43	45.80	0.004671	1.67	11.53	14.50	0.60
Saleta	9.6800*	PF 15	19.30	44.76	45.61	45.38	45.76	0.004666	1.67	11.53	14.50	0.60
Saleta	9.6400*	PF 15	19.30	44.71	45.57	45.33	45.71	0.004636	1.67	11.56	14.50	0.60
Saleta	9.6	PF 15	19.30	44.66	45.52	45.29	45.66	0.004624	1.67	11.56	14.50	0.60
Saleta	9.5		Bridge									
Saleta	9.4	PF 15	19.30	44.65	45.50	45.27	45.65	0.004620	1.67	11.57	14.50	0.60
Saleta	9.2429*	PF 15	19.30	44.60	45.46	45.23	45.60	0.004603	1.67	11.58	14.50	0.60
Saleta	9.0857*	PF 15	19.30	44.56	45.42	45.18	45.56	0.004570	1.66	11.61	14.50	0.59
Saleta	8.9286*	PF 15	19.30	44.52	45.38	45.14	45.52	0.004536	1.66	11.63	14.50	0.59
Saleta	8.7714*	PF 15	19.30	44.47	45.33	45.09	45.47	0.004517	1.66	11.65	14.50	0.59
Saleta	8.6143*	PF 15	19.30	44.43	45.29	45.05	45.43	0.004468	1.65	11.68	14.50	0.59
Saleta	8.4571*	PF 15	19.30	44.38	45.25	45.01	45.39	0.004414	1.65	11.73	14.50	0.58
Saleta	8.3	PF 15	19.30	44.34	45.21	44.96	45.35	0.004343	1.64	11.78	14.50	0.58
Saleta	8.2		Bridge									
Saleta	8.1	PF 15	19.30	44.32	45.20	44.95	45.33	0.004322	1.64	11.80	14.50	0.58
Saleta	8.0889*	PF 15	19.30	44.28	45.16	44.90	45.29	0.004244	1.63	11.87	14.50	0.57
Saleta	8.0778*	PF 15	19.30	44.24	45.12	44.86	45.25	0.004147	1.62	11.95	14.50	0.57
Saleta	8.0667*	PF 15	19.30	44.20	45.09	44.82	45.22	0.004033	1.60	12.05	14.50	0.56
Saleta	8.0556*	PF 15	19.30	44.15	45.05	44.77	45.18	0.003894	1.59	12.18	14.50	0.55
Saleta	8.0444*	PF 15	19.30	44.11	45.02	44.73	45.14	0.003737	1.57	12.33	14.50	0.54
Saleta	8.0333*	PF 15	19.30	44.07	44.99	44.69	45.11	0.003564	1.54	12.50	14.50	0.53
Saleta	8.0222*	PF 15	19.30	44.02	44.96	44.65	45.08	0.003377	1.52	12.71	14.50	0.52
Saleta	8.0111*	PF 15	19.30	43.98	44.93	44.60	45.05	0.003178	1.49	12.94	14.50	0.50
Saleta	8	PF 15	19.30	43.94	44.91	44.56	45.02	0.002969	1.46	13.21	14.50	0.49
Saleta	7.5		Bridge									
Saleta	7	PF 15	19.30	43.93	44.88	44.55	45.00	0.003128	1.48	13.00	14.50	0.50
Saleta	6.8750*	PF 15	19.30	43.91	44.87	44.54	44.98	0.003147	1.49	12.98	14.50	0.50
Saleta	6.7500*	PF 15	19.30	43.90	44.85	44.52	44.97	0.003175	1.49	12.95	14.50	0.50
Saleta	6.6250*	PF 15	19.30	43.89	44.84	44.51	44.95	0.003207	1.50	12.91	14.50	0.51
Saleta	6.5000*	PF 15	19.30	43.88	44.82	44.50	44.94	0.003224	1.50	12.89	14.50	0.51
Saleta	6.3750*	PF 15	19.30	43.86	44.81	44.48	44.92	0.003257	1.50	12.85	14.50	0.51
Saleta	6.2500*	PF 15	19.30	43.85	44.79	44.47	44.91	0.003299	1.51	12.80	14.50	0.51
Saleta	6.1250*	PF 15	19.30	43.84	44.77	44.46	44.89	0.003339	1.51	12.75	14.50	0.52
Saleta	6	PF 15	19.30	43.82	44.76	44.44	44.88	0.003373	1.52	12.71	14.50	0.52
Saleta	5.8750*	PF 15	19.30	43.81	44.74	44.43	44.86	0.003417	1.52	12.66	14.50	0.52
Saleta	5.7500*	PF 15	19.30	43.80	44.72	44.42	44.84	0.003476	1.53	12.60	14.50	0.52
Saleta	5.6250*	PF 15	19.30	43.78	44.71	44.40	44.83	0.003536	1.54	12.53	14.50	0.53
Saleta	5.5000*	PF 15	19.30	43.77	44.69	44.39	44.81	0.003586	1.55	12.48	14.50	0.53
Saleta	5.3750*	PF 15	19.30	43.76	44.67	44.38	44.79	0.003661	1.56	12.40	14.50	0.54
Saleta	5.2500*	PF 15	19.30	43.74	44.65	44.36	44.78	0.003749	1.57	12.32	14.50	0.54
Saleta	5.1250*	PF 15	19.30	43.73	44.63	44.35	44.76	0.003826	1.58	12.24	14.50	0.55
Saleta	5	PF 15	19.30	43.72	44.61	44.34	44.74	0.003940	1.59	12.13	14.50	0.56
Saleta	4.8333*	PF 15	19.30	43.71	44.60	44.33	44.73	0.003994	1.60	12.08	14.50	0.56
Saleta	4.6667*	PF 15	19.30	43.70	44.59	44.33	44.72	0.004051	1.60	12.03	14.50	0.56

HEC-RAS Plan: Plan 09 River: Saleta Reach: Saleta Profile: PF 15 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Saleta	4.5000*	PF 15	19.30	43.70	44.58	44.32	44.71	0.004114	1.61	11.98	14.50	0.57
Saleta	4.3333*	PF 15	19.30	43.69	44.57	44.31	44.71	0.004182	1.62	11.92	14.50	0.57
Saleta	4.1667*	PF 15	19.30	43.69	44.56	44.31	44.70	0.004261	1.63	11.85	14.50	0.58
Saleta	4	PF 15	19.30	43.68	44.55	44.30	44.69	0.004326	1.64	11.80	14.50	0.58
Saleta	3.8333*	PF 15	19.30	43.67	44.53	44.29	44.67	0.004532	1.66	11.64	14.50	0.59
Saleta	3.6667*	PF 15	19.30	43.65	44.50	44.27	44.64	0.004801	1.69	11.44	14.50	0.61
Saleta	3.5000*	PF 15	19.30	43.64	44.47	44.26	44.62	0.005175	1.73	11.18	14.50	0.63
Saleta	3.3333*	PF 15	19.30	43.62	44.43	44.24	44.59	0.005708	1.78	10.86	14.50	0.66
Saleta	3.1667*	PF 15	19.30	43.61	44.38	44.23	44.56	0.006660	1.86	10.37	14.50	0.70
Saleta	3	PF 15	19.30	43.59	44.22	44.22	44.50	0.014772	2.36	8.16	14.50	1.01
Saleta	2.8750*	PF 15	19.30	43.38	43.84	44.01	44.41	0.047017	3.35	5.77	14.50	1.69
Saleta	2.7500*	PF 15	19.30	43.18	43.60	43.80	44.27	0.061057	3.62	5.33	14.50	1.91
Saleta	2.6250*	PF 15	19.30	42.97	43.38	43.59	44.10	0.069656	3.77	5.13	14.50	2.02
Saleta	2.5000*	PF 15	19.30	42.76	43.16	43.38	43.92	0.074647	3.84	5.02	14.50	2.09
Saleta	2.3750*	PF 15	19.30	42.55	42.95	43.17	43.72	0.077687	3.89	4.96	14.50	2.12
Saleta	2.2500*	PF 15	19.30	42.34	42.74	42.96	43.52	0.079943	3.92	4.92	14.50	2.15
Saleta	2.1250*	PF 15	19.30	42.13	42.53	42.75	43.32	0.081541	3.95	4.89	14.50	2.17
Saleta	2	PF 15	19.30	41.92	42.32	42.54	43.12	0.082243	3.96	4.88	14.50	2.18
Saleta	1.9167*	PF 15	19.30	41.85	42.23	42.46	43.04	0.084399	3.99	4.84	14.50	2.20
Saleta	1.8333*	PF 15	19.30	41.77	42.14	42.37	42.96	0.085394	4.00	4.82	14.50	2.22
Saleta	1.7500*	PF 15	19.30	41.69	42.06	42.29	42.88	0.086266	4.02	4.81	14.50	2.23
Saleta	1.6667*	PF 15	19.30	41.61	41.97	42.21	42.80	0.086944	4.03	4.79	14.50	2.24
Saleta	1.5833*	PF 15	19.30	41.54	41.89	42.12	42.72	0.087366	4.03	4.79	14.50	2.24
Saleta	1.5000*	PF 15	19.30	41.46	41.81	42.04	42.63	0.087092	4.03	4.79	14.50	2.24
Saleta	1.4167*	PF 15	19.30	41.38	41.72	41.96	42.55	0.086910	4.03	4.79	14.50	2.24
Saleta	1.3333*	PF 15	19.30	41.31	41.64	41.88	42.47	0.087338	4.03	4.79	14.50	2.24
Saleta	1.2500*	PF 15	19.30	41.23	41.56	41.80	42.39	0.087073	4.03	4.79	14.50	2.24
Saleta	1.1667*	PF 15	19.30	41.15	41.49	41.72	42.31	0.086739	4.02	4.80	14.50	2.23
Saleta	1.0833*	PF 15	19.30	41.08	41.41	41.64	42.23	0.085672	4.01	4.81	14.50	2.22
Saleta	1	PF 15	19.30	41.00	41.91	41.56	42.02	0.003014	1.47	13.14	14.50	0.49
Saleta	0.9		Culvert									
Saleta	0.7	PF 15	19.30	41.00	41.73	41.56	41.90	0.006267	1.83	10.55	14.50	0.68
Saleta	0.69412*	PF 15	19.30	40.91	41.63	41.47	41.81	0.006298	1.83	10.53	14.50	0.69
Saleta	0.68824*	PF 15	19.30	40.81	41.54	41.38	41.71	0.006265	1.83	10.55	14.50	0.68
Saleta	0.68235*	PF 15	19.30	40.72	41.45	41.29	41.62	0.006294	1.83	10.54	14.50	0.69
Saleta	0.67647*	PF 15	19.30	40.63	41.36	41.19	41.53	0.006274	1.83	10.55	14.50	0.69
Saleta	0.67059*	PF 15	19.30	40.54	41.26	41.10	41.44	0.006289	1.83	10.54	14.50	0.69
Saleta	0.66471*	PF 15	19.30	40.45	41.17	41.01	41.34	0.006266	1.83	10.55	14.50	0.68
Saleta	0.65882*	PF 15	19.30	40.35	41.08	40.92	41.25	0.006276	1.83	10.54	14.50	0.69
Saleta	0.65294*	PF 15	19.30	40.26	40.99	40.82	41.16	0.006295	1.83	10.53	14.50	0.69
Saleta	0.64706*	PF 15	19.30	40.17	40.90	40.73	41.07	0.006275	1.83	10.54	14.50	0.69
Saleta	0.64118*	PF 15	19.30	40.08	40.80	40.64	40.97	0.006292	1.83	10.54	14.50	0.69
Saleta	0.63529*	PF 15	19.30	39.98	40.71	40.55	40.88	0.006270	1.83	10.55	14.50	0.69
Saleta	0.62941*	PF 15	19.30	39.89	40.62	40.45	40.79	0.006279	1.83	10.54	14.50	0.69
Saleta	0.62353*	PF 15	19.30	39.80	40.53	40.36	40.70	0.006248	1.83	10.56	14.50	0.68
Saleta	0.61765*	PF 15	19.30	39.71	40.43	40.27	40.60	0.006239	1.83	10.56	14.50	0.68
Saleta	0.61176*	PF 15	19.30	39.61	40.34	40.18	40.51	0.006180	1.82	10.59	14.50	0.68
Saleta	0.60588*	PF 15	19.30	39.52	40.25	40.08	40.42	0.006124	1.82	10.62	14.50	0.68
Saleta	0.6	PF 15	19.30	39.43	40.17	39.99	40.33	0.006001	1.81	10.69	14.50	0.67