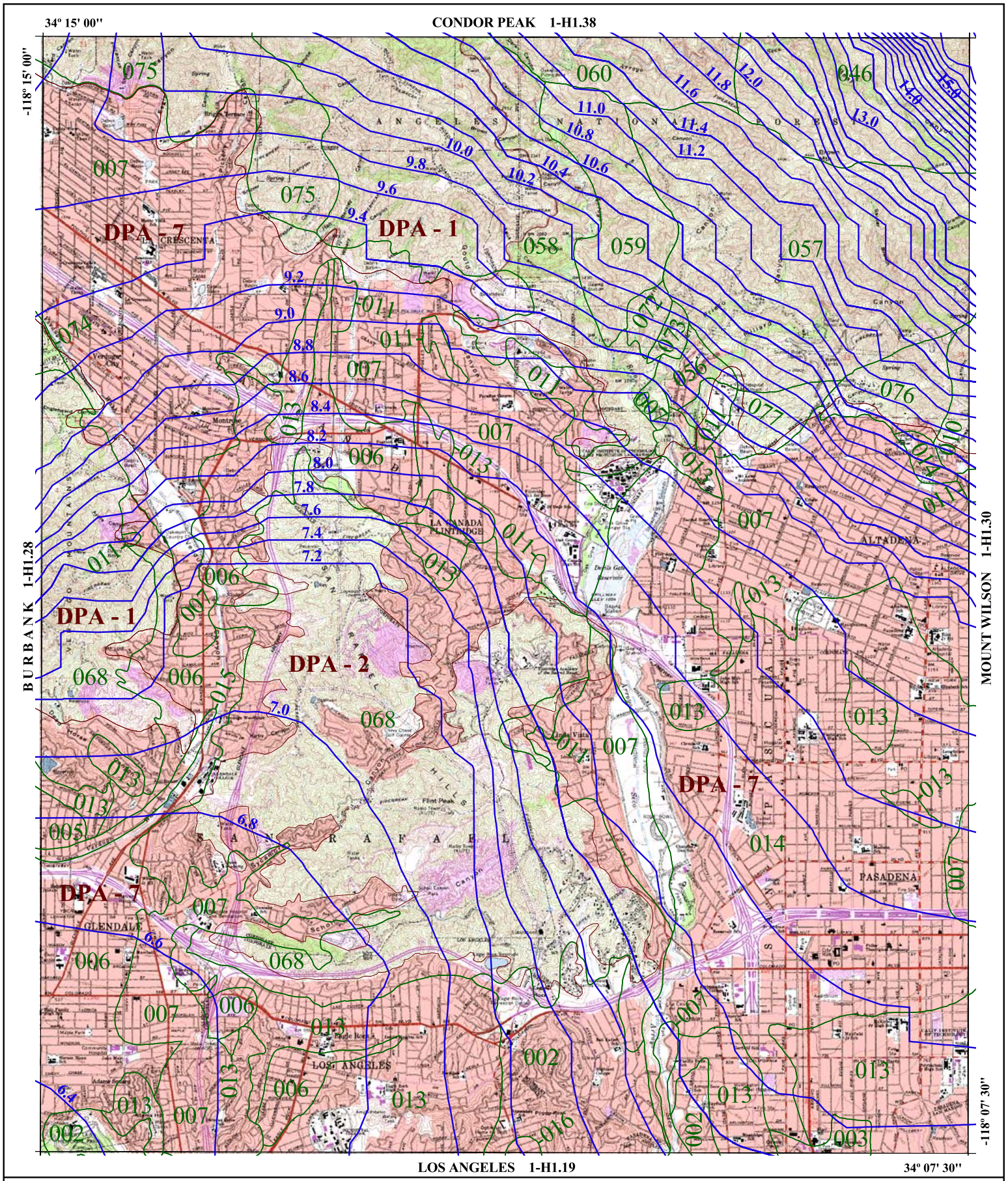
APPENDIX J
HYDROLOGY CALCULATIONS AND BACKUP DATA

Appendix 1.
Scholl Canyon Landfill
EIR Baseline 5/2010 Existing Condition
Hydrology

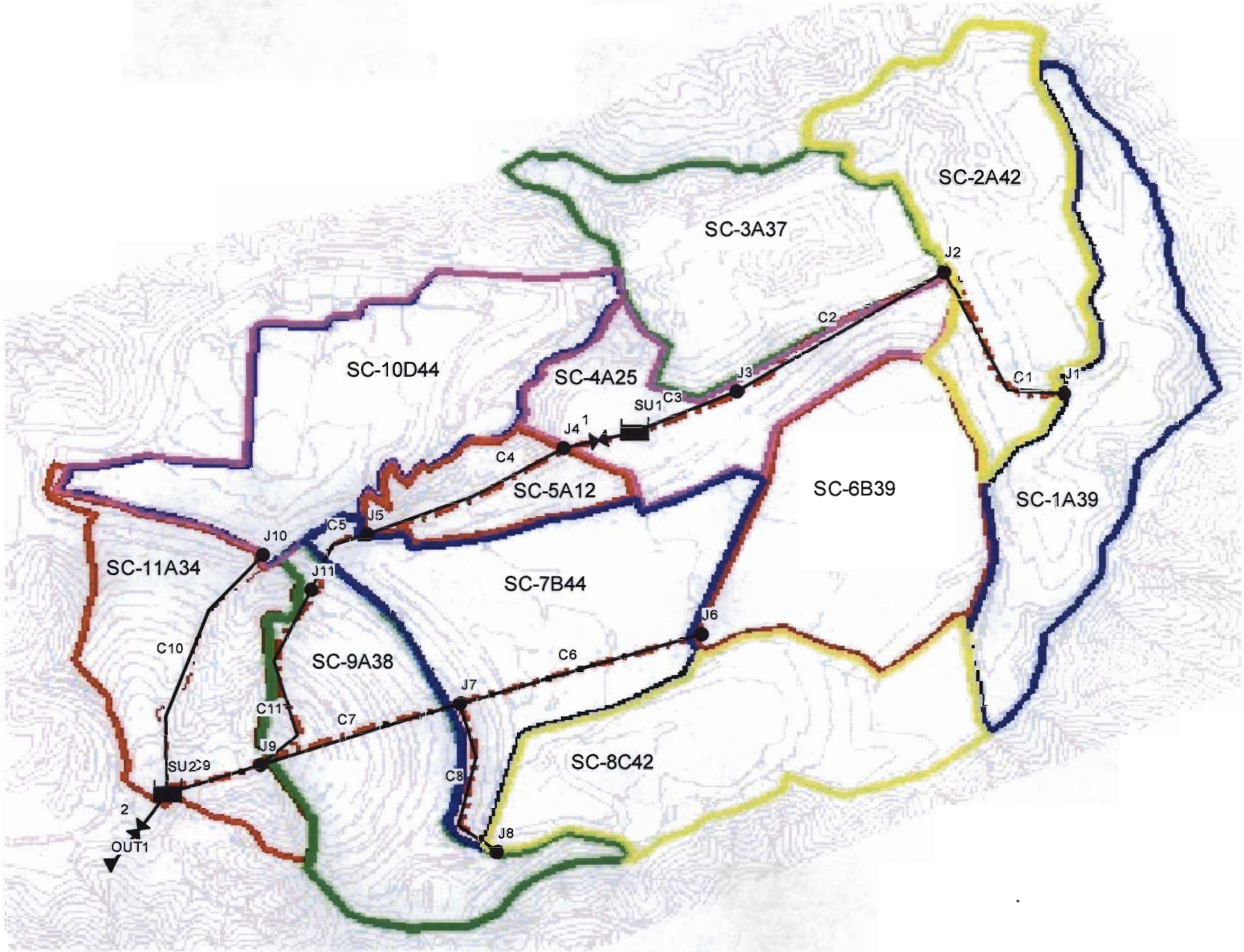

34° 15' 00"
CONDOR PEAK 1-H1.38
-118° 15' 00"
BURBANK 1-H1.28
MOUNT WILSON 1-H1.30
LOS ANGELES 1-H1.19
34° 07' 30"
-118° 07' 30"
DPA - 7
DPA - 1
DPA - 2
DPA - 7
DPA - 7
LA CRESCENTA
LA CANADA FLINTRIDGE
ALTADENA
PASADENA
GLENDALE
LOS ANGELES
SAN RAFAEL HILLS
Flint Peak
Eagle Rock
Verdugo City
Montrose
Devils Gate Reservoir
Lake Vista
Adams Square
Maple Park
Sycamore Canyon
Pickens Canyon
Quito Canyon
Brown Mtn
Brown Canyon
Arroyo Seco
Pasadena Freeway
Foothill Freeway
Ventura Freeway
Golden State Freeway
Glendale Freeway
Pasadena Freeway
Hospital
Cemetery
Spring
Water Tank
Water Tank
Water Tank

SCLF EIR Baseline 5/2010 Ex.Cond. Hydrology					Time of Concentration Calculations							Date:	1/10/11
Project	Sub area	Area (acres)	%imp	Freq. (yrs)	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
SCLF EIR Baseline 5/2010 Hydrology	1A	39	0.02	100	68	2182	0.057	8.5	12	3.34	0.70	0.70	91
SCLF EIR Baseline 5/2010 Hydrology	2A	42	0.02	100	68	1688	0.092	8.4	9	3.80	0.73	0.73	117
SCLF EIR Baseline 5/2010 Hydrology	3A	37	0.05	100	68	2641	0.113	8.1	12	3.22	0.69	0.70	83
SCLF EIR Baseline 5/2010 Hydrology	4A	25	0.15	100	68	2140	0.051	8.1	12	3.20	0.69	0.72	58
SCLF EIR Baseline 5/2010 Hydrology	5A	12	0.40	100	68	1517	0.066	8.0	9	3.63	0.72	0.79	34
SCLF EIR Baseline 5/2010 Hydrology	6B	39	0.02	100	68	1996	0.027	8.2	13	3.13	0.69	0.69	84
SCLF EIR Baseline 5/2010 Hydrology	7B	43	0.02	100	68	2142	0.079	8.0	12	3.18	0.69	0.69	94
SCLF EIR Baseline 5/2010 Hydrology	8C	42	0.15	100	68	3593	0.057	8.0	17	2.69	0.65	0.69	78
SCLF EIR Baseline 5/2010 Hydrology	9A	38	0.10	100	68	2757	0.178	8.0	12	3.15	0.69	0.71	85
SCLF EIR Baseline 5/2010 Hydrology	10D	44	0.10	100	68	2740	0.109	8.0	13	3.03	0.68	0.70	93
SCLF EIR Baseline 5/2010 Hydrology	11A	35	0.05	100	68	2856	0.153	7.9	12	3.12	0.69	0.70	76

Down Stream Conveyances SWMM model Input	Contributing Area	SWMM UpS J	UpS.J Inv.El	J Ht.	SWMM C	SWMM DwnS.J	DwnS.J Inv.El	L (ft)	Type	depth d or Dia.	b (ft)	z side slope	Man'ing's "n"
1A-2A soil cover trap	39	J1	1415	6	C1	J2	1400	975	Trap	10.00	10	3	0.020
2A-4A native soil trap	81	J2	1400	10	C2	J11	1395	868	Trap	10	15.00	2.00	0.020
3A-4A native soil trap	118	J3	1395	10	C3	SU1	1378	1192	Trap	10	15.00	2.00	0.020
4A-5A native soil trap	143	J4	1375	10	C4	J5	1355	1150	Trap	10	15.00	2.00	0.020
5A-9A 54 OD PE Conduit	155	J5	1355	12	C5	J11	1295	430	PE	4.42			0.011
5A-9A 36 OD PE Conduit	155	J11	1295	4	C11	J9	965	1148	PE	2.71			0.011
6B-7B deck V-ditch	39	J6	1435	2	C6	J7	1290	1200	V	2.00	T=40	10.00	0.020
8C-7B soil cover trap	42	J8	1318	6	C8	J7	1290	870	Trap	3.00	3.00	2.00	0.020
4' PE front downdrain	125	J7	1290	6	C7	J9	965	977	PE	4.00			0.011
9A-11A Concrete Box Culvert	317	J9	965	10	C9	SU2	954	538	Box	4.00	8.00		0.014
10C-11A Shotcrete Trap	44	J10	1330	4	C19	SU2	954	1311	Trap	5.00	4.00	1.00	0.017

Conveyance	Q_{100} cfs	s	d or h	b	z1	z2	d_c	d_n	Vel	FB,ft	C*L*h^1.5	required	OK?
C1	89	0.0154	10.0	10.0	2.8	2.8	1.20	0.93	7.57	9.07		needs TRM	OK
C2	198	0.0058	10.0	20.0	2.0	2.0	1.37	1.35	6.44	8.65	very close to dc, needs TRM		
C3	270	0.0143	10.0	20.0	2.0	2.0	1.68	1.26	9.55	8.74			
C4	172	0.0174	10.0	20.0	2.0	2.0	1.26	0.91	8.65	9.09			
	Q_{100} cfs	s	D, h	b	Hw	Hw req'd	Hw/D req'd	available					
C4	197	0.140	4.8		12.0	9.9	1.28						OK
C7	249		5.0		7.0	4.1							OK
C9 end submerged condition	522	0.020	4.0	8.0	12.0	13.1							
C9 open outfall condition	522	0.020	4.0	8.0	12.0	8.3							OK

SCLF EIR Baseline 5/2010 Ex.Cond. Hydrology



SCLF EIR Baseline 5/2010 Ex.Cond. Hydrology

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.011)

****
Analysis Options
****

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Flow Units ............... CFS
Flow Routing Method ...... DYNWAVE
Starting Date ............ NOV-03-2010 00:00:00
Ending Date .............. NOV-04-2010 00:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 00:15:00
Routing Time Step ........ 30.00 sec
```

********** Flow Routing Continuity **********	Volume acre-feet	Volume Mgallons
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.000	0.000
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	74.119	24.153
External Outflow	74.154	24.164
Surface Flooding	0.000	0.000
Evaporation Loss	0.000	0.000
Initial Stored Volume	2.098	0.684
Final Stored Volume	2.081	0.678
Continuity Error (%)	-0.025	

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min	Max Vol. Ponded acre-in	Total Minutes Flooded
J1	JUNCTION	0.16	0.92	1415.92	0 19:17	0	0
J2	JUNCTION	0.26	1.56	1401.56	0 19:16	0	0
J3	JUNCTION	0.32	1.79	1396.79	0 19:17	0	0
J4	JUNCTION	0.78	2.43	1377.43	0 19:19	0	0
J5	JUNCTION	0.59	1.97	1356.97	0 19:19	0	0
J6	JUNCTION	0.21	0.70	1435.70	0 19:14	0	0
J7	JUNCTION	0.48	1.96	1291.96	0 19:17	0	0
J8	JUNCTION	0.42	1.38	1319.38	0 19:17	0	0
J9	JUNCTION	0.61	3.00	968.00	0 19:17	0	0
J10	JUNCTION	0.12	0.64	1330.64	0 19:13	0	0
J11	JUNCTION	0.45	1.27	1296.27	0 19:19	0	0
OUT1	OUTFALL	0.00	0.00	0.00	0 00:00	0	0
SU1	STORAGE	1.93	4.28	1382.28	0 19:25	0	0
SU2	STORAGE	1.75	3.97	957.97	0 19:18	0	0

****
Node Flow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Maximum Flooding Overflow CFS	Time of Max Occurrence days hr:min
J1	JUNCTION	88.64	88.64	0 19:16	0.00	
J2	JUNCTION	116.34	198.05	0 19:14	0.00	
J3	JUNCTION	80.86	270.08	0 19:16	0.00	
J4	JUNCTION	34.29	170.98	0 19:19	0.00	
J5	JUNCTION	34.29	197.11	0 19:19	0.00	
J6	JUNCTION	81.66	81.66	0 19:13	0.00	
J7	JUNCTION	93.73	252.07	0 19:17	0.00	
J8	JUNCTION	78.52	78.52	0 19:17	0.00	
J9	JUNCTION	81.64	522.88	0 19:17	0.00	
J10	JUNCTION	92.49	92.49	0 19:13	0.00	

J11	JUNCTION	0.00	196.82	0	19:19	0.00
OUT1	OUTFALL	0.00	671.17	0	19:18	0.00
SU1	STORAGE	55.96	318.69	0	19:17	0.00
SU2	STORAGE	73.21	681.00	0	19:17	0.00

****
Storage Volume Summary
****

Storage Unit	Average Volume 1000 ft3	Avg Pcnt Full	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CFS
SU1	61.323	6	195.924	18	0 19:25	157.39
SU2	41.850	9	103.925	22	0 19:18	671.17

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS
OUT1	100.00	75.39	671.17
System	100.00	75.39	671.17

****
Link Flow Summary
****

Link	Type	Maximum Flow CFS	Time of Max Occurrence days hr:min	Maximum Velocity ft/sec	Max/ Full Flow	Max/ Full Depth	Total Minutes Surcharged
C1	CONDUIT	87.64	0 19:17	5.39	0.01	0.12	0
C2	CONDUIT	189.34	0 19:16	6.25	0.03	0.17	0
C3	CONDUIT	264.66	0 19:17	6.40	0.03	0.29	0
C4	CONDUIT	170.70	0 19:19	23.28	0.58	0.50	0
C5	CONDUIT	196.82	0 19:19	>50.00	0.88	0.60	0
C6	CONDUIT	81.27	0 19:14	5.03	0.02	0.44	0
C7	CONDUIT	248.66	0 19:17	30.39	0.48	0.62	0
C8	CONDUIT	78.29	0 19:17	16.40	0.26	0.42	0
C9	CONDUIT	521.28	0 19:18	18.74	0.89	0.87	0
C10	CONDUIT	92.00	0 19:13	6.40	0.02	0.46	0
C11	CONDUIT	196.75	0 19:19	25.04	0.03	0.21	0
1	DUMMY	157.39	0 19:25				
2	DUMMY	671.17	0 19:18				

****
Flow Classification Summary
****

Conduit	Adjusted /Actual Length	--- Fraction of Time in Flow Class ---- Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
C1	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.50	0.0000
C2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.48	0.0000
C3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.16	0.0000
C4	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	2.69	0.0002
C5	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	6.90	0.0004
C6	1.00	0.00	0.00	0.00	0.04	0.96	0.00	0.00	1.29	0.0000
C7	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	4.07	0.0002
C8	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	2.48	0.0001
C9	1.00	0.00	0.00	0.00	0.85	0.15	0.00	0.00	0.69	0.0004
C10	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.21	0.0000
C11	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	3.31	0.0000

```
***************************
Time-Step Critical Elements
***************************
Link C5 (53.66%)

********************************
Highest Flow Instability Indexes
********************************
All links are stable.

*************************
Routing Time Step Summary
*************************
Minimum Time Step           :     5.11 sec
Average Time Step           :    18.67 sec
Maximum Time Step           :    30.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.00

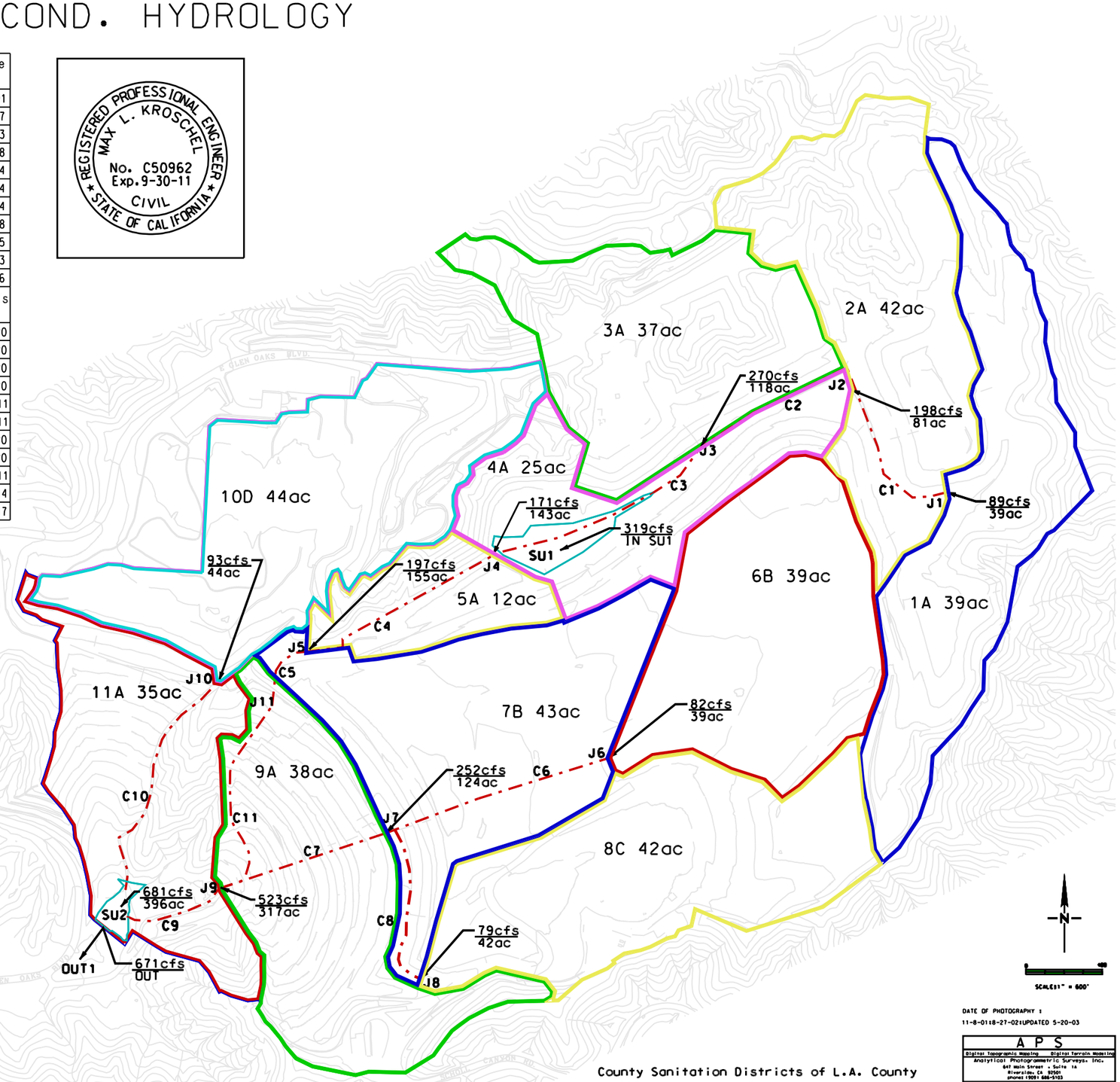
Analysis begun on:  Mon Jan 10 08:01:23 2011
Analysis ended on:  Mon Jan 10 08:01:23 2011
Total elapsed time: < 1 sec
```

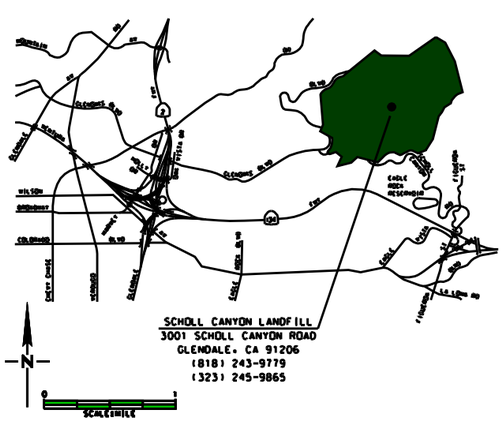
SCLF EIR BASELINE 5/2010 EX.COND. HYDROLOGY

Sub Area	Area (acres)	% imp	Freq. (yrs)	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc (min.)	Intensity (in./hr)	undevel'd Cu	devel'd Cd	Flowrate (cfs)
1A	39	0.02	100	68	2182	0.0570	8.5	12	3.34	0.70	0.70	91
2A	42	0.02	100	68	1688	0.0920	8.4	9	3.80	0.73	0.73	117
3A	37	0.05	100	68	2641	0.1790	8.1	12	3.22	0.69	0.70	83
4A	25	0.15	100	68	2140	0.0701	8.1	12	3.20	0.69	0.72	58
5A	12	0.40	100	68	1517	0.0659	8.0	9	3.63	0.72	0.79	34
6B	39	0.02	100	68	1996	0.0223	8.2	13	3.13	0.69	0.69	84
7B	43	0.02	100	68	2142	0.0238	8.0	12	3.18	0.69	0.69	94
8C	42	0.15	100	68	3593	0.0574	8.0	17	2.69	0.65	0.69	78
9A	38	0.10	100	68	2757	0.1780	8.0	12	3.15	0.69	0.71	85
10D	44	0.10	100	68	2740	0.1090	8.0	13	3.03	0.68	0.70	93
11A	35	0.05	100	68	2856	0.1530	7.9	12	3.12	0.69	0.70	76

Contrib Area ac	SWMM UpS J	UpS.J Inv.El	J Ht. (ft)	SWMM C	SWMM DwnS.J	DwnS.J Inv.El	Length	Conv. Type	depth d or Dia.	b (ft)	z side slope	Man'ing's "n"
39	J1	1415	6	C1	J2	1400	975	Trap	10.00	10	3	0.020
81	J2	1400	10	C2	J3	1395	868	Trap	10.00	15.00	2.00	0.020
118	J3	1395	10	C3	SU1	1378	1192	Trap	10.00	15.00	2.00	0.020
143	J4	1375	10	C4	J5	1355	1150	Trap	10.00	15.00	2.00	0.020
155	J5	1355	12	C5	J11	1295	430	PE	4.42			0.011
155	J11	1295	4	C11	J9	965	1148	PE	2.71			0.011
39	J6	1435	2	C6	J7	1290	732	Vee	2.00	T=40	10.00	0.020
42	J8	1318	6	C8	J7	1290	521	TRAP	3.00	3.00	2.00	0.020
124	J7	1290	6	C7	J9	965	925	PE	4.00			0.011
317	J9	965	10	C9	SU2	954	538	Box	4.00	8.00		0.014
44	J10	1330	4	C19	SU2	954	1311	Trap	5.00	4.00	1.00	0.017

REGISTERED PROFESSIONAL ENGINEER
MAX L. KROSCHEL
No. C50962
Exp.9-30-11
CIVIL
STATE OF CALIFORNIA





DATE OF PHOTOGRAPHY :
11-8-0118-27-021:UPDATED 5-20-03

APS
Digital Topographic Mapping Digital Terrain Modeling
Analytical Photogrammetric Surveys, Inc.
647 Main Street , Suite 1a
Riverside, CA 92501
phone:(909) 686-5103
This map compiled by digital photogrammetric methods from aerial photography
APS W.O. # 03-144

LAST UPDATED 05-11-2010 BY ADVANCED DIGITAL MAPS, INC.

County Sanitation Districts of L.A. County
1955 Workman Mill Road
Whitter, Calif. 90501

SCHOLL CANYON LANDFILL

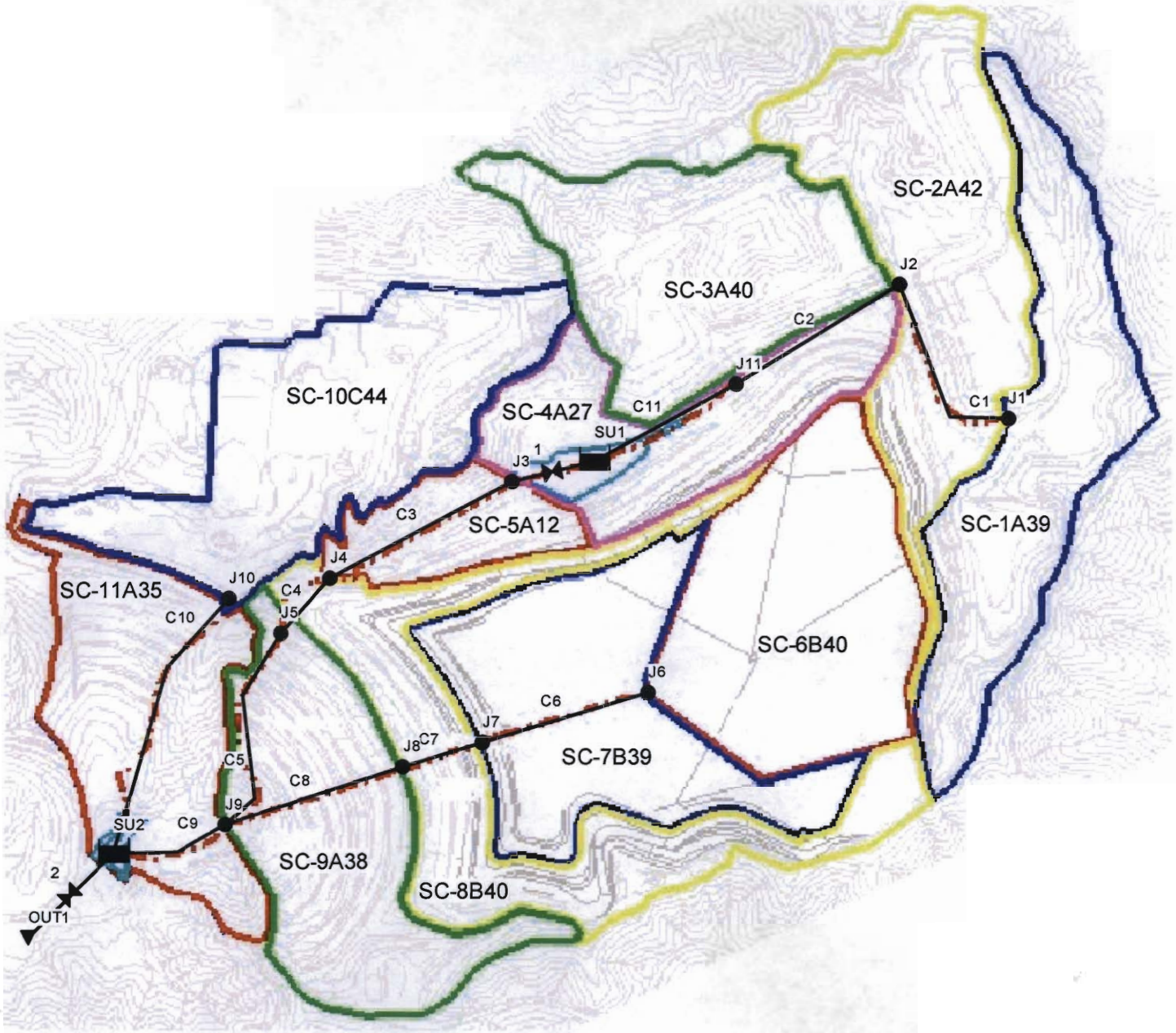
Appendix 2.
Scholl Canyon Landfill
Revised 7/2010 Fill Plan
Closure Hydrology

SCLF 2010 Rev.Fill Plan Closure Hydrology					Time of Concentration Calculations							Date:	1/11/11
Project	Sub area	Area (acres)	%imp	Freq. (yrs)	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
SCLF 2010 Rev.Fill Plan Closure Hydro	1A	39	0.02	100	68	2182	0.057	8.5	12	3.34	0.70	0.70	92
SCLF 2010 Rev.Fill Plan Closure Hydro	2A	42	0.02	100	68	1688	0.092	8.4	9	3.80	0.73	0.73	116
SCLF 2010 Rev.Fill Plan Closure Hydro	3A	40	0.05	100	68	2613	0.179	8.1	12	3.22	0.69	0.70	91
SCLF 2010 Rev.Fill Plan Closure Hydro	4A	27	0.15	100	68	2239	0.070	8.1	12	3.20	0.69	0.72	61
SCLF 2010 Rev.Fill Plan Closure Hydro	5A	12	0.40	100	68	1517	0.066	8.0	9	3.63	0.72	0.79	34
SCLF 2010 Rev.Fill Plan Closure Hydro	6B	40	0.02	100	68	2111	0.022	8.2	15	2.93	0.67	0.67	79
SCLF 2010 Rev.Fill Plan Closure Hydro	7B	39	0.02	100	68	1682	0.024	8.0	12	3.18	0.69	0.69	85
SCLF 2010 Rev.Fill Plan Closure Hydro	8B	40	0.15	100	68	4059	0.057	8.0	19	2.56	0.63	0.67	68
SCLF 2010 Rev.Fill Plan Closure Hydro	9A	38	0.10	100	68	2757	0.178	8.0	12	3.15	0.69	0.71	85
SCLF 2010 Rev.Fill Plan Closure Hydro	10C	44	0.10	100	68	2740	0.109	8.0	13	3.03	0.68	0.70	93
SCLF 2010 Rev.Fill Plan Closure Hydro	11A	35	0.05	100	68	2856	0.153	7.9	12	3.12	0.69	0.70	76

Down Stream Conveyances SWMM model Input	Contributing Area	SWMM UpS J	UpS.J Inv.El	J Ht.	SWMM C	SWMM DwnS.J	DwnS.J Inv.El	L (ft)	Type	depth d or Dia.	b (ft)	z side slope	Man'ing's "n"
1A-2A soil cover trap	39	J1	1415	6	C1	J2	1400	975	Trap	10.00	10	3	0.020
2A-4A native soil trap	81	J2	1400	10	C2	J11	1395	868	Trap	10	15.00	2.00	0.020
3A-4A native soil trap	121	J11	1395	10	C11	SU1	1378	1192	Trap	10	15.00	2.00	0.020
4A-5A native soil trap	148	J3	1375	10	C3	J5	1355	1150	Trap	10	15.00	2.00	0.020
5A-9A 54 OD PE Conduit	160	J4	1355	12	C4	J6	1295	430	PE	4.42			0.011
5A-9A 36 OD PE Conduit	160	J5	1295	4	C5	J9	965	1148	PE	2.71			0.011
6B-7B soil cover trap	40	J6	1488	2	C6	J7	1475	732	V	2.00	T=40	10.00	0.020
5' csp downdrain	79	J7	1475	6	C7	J8	1290	521	CSP	5.00			0.021
4' PE front downdrain	119	J8	1290	6	C8	J9	965	925	PE	4.00			0.011
9A-11A Concrete Box Culvert	317	J9	965	10	C9	SU2	954	538	Box	4.00	8.00		0.014
10C-11A Shotcrete Trap	44	J10	1330	4	C19	SU2	954	1311	Trap	5.00	4.00	1.00	0.017

Conveyance	Q_{100} cfs	s	d or h	b	z1	z2	d_c	d_n	Vel	FB,ft	C*L*h^1.5	required	OK?
C1	89	0.0154	10.0	10.0	2.8	2.8	1.20	0.93	7.57	9.07		needs TRM	OK
C2	198	0.0058	10.0	20.0	2.0	2.0	1.37	1.35	6.44	8.65	very close to dc, needs TRM		
C11	277	0.0143	10.0	20.0	2.0	2.0	1.71	1.29	9.55	8.71			
C3	166	0.0174	10.0	20.0	2.0	2.0	1.23	0.9	8.48	9.10			
	Q_{100} cfs	s	D, h	b	Hw	Hw req'd	Hw/D req'd	available					
C4	175	0.140	4.8		12.0	6.2	1.28						OK
C7	79		5.0		7.0	0.4							OK
C9 end submerged condition	468	0.020	4.0	8.0	12.0	11.1							OK
C9 open outfall condition	468	0.020	4.0	8.0	12.0	7.8							OK

SCLF Rev.7/2010 Fill Plan Closure Hydrology



SCLF Rev.7/2010 Fill Plan Closure Hydrology

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.011)

****
Analysis Options
****
Flow Units ..... CFS
Flow Routing Method ..... DYNWAVE
Starting Date NOV-03-2010 00:00:00
Ending Date NOV-04-2010 00:00:00
Antecedent Dry Days 0.0
Report Time Step 00:15:00
Routing Time Step ..... 30.00 sec

********** Flow Routing Continuity **********	Volume acre-feet	Volume Mgallons
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.000	0.000
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	69.955	22.796
External Outflow	70.022	22.818
Surface Flooding	0.000	0.000
Evaporation Loss	0.000	0.000
Initial Stored Volume	1.988	0.648
Final Stored Volume	1.940	0.632
Continuity Error (%)	-0.026	

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min	Max Vol. Ponded acre-in	Total Minutes Flooded
J1	JUNCTION	0.15	0.93	1415.93	0 19:17	0	0
J2	JUNCTION	0.25	1.58	1401.58	0 19:16	0	0
J3	JUNCTION	0.34	1.30	1376.30	0 19:26	0	0
J4	JUNCTION	0.45	1.37	1356.37	0 19:20	0	0
J5	JUNCTION	0.44	1.42	1296.42	0 19:20	0	0
J6	JUNCTION	0.35	1.09	1489.09	0 19:16	0	0
J7	JUNCTION	0.32	1.50	1476.50	0 19:17	0	0
J8	JUNCTION	0.32	1.28	1291.28	0 19:17	0	0
J9	JUNCTION	0.54	2.69	968.69	0 19:17	0	0
J10	JUNCTION	0.12	0.64	1330.64	0 19:13	0	0
J11	JUNCTION	0.67	3.13	1398.13	0 19:18	0	0
OUT1	OUTFALL	0.00	0.00	0.00	0 00:00	0	0
SU1	STORAGE	1.93	4.50	1382.50	0 19:26	0	0
SU2	STORAGE	1.58	3.85	957.85	0 19:18	0	0

****
Node Flow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Maximum Flooding Overflow CFS	Time of Max Occurrence days hr:min
J1	JUNCTION	89.32	89.32	0 19:17	0.00	
J2	JUNCTION	119.90	202.34	0 19:14	0.00	
J3	JUNCTION	0.00	164.04	0 19:26	0.00	
J4	JUNCTION	34.83	173.28	0 19:19	0.00	
J5	JUNCTION	0.00	173.02	0 19:20	0.00	
J6	JUNCTION	79.16	79.16	0 19:14	0.00	
J7	JUNCTION	82.44	159.84	0 19:16	0.00	
J8	JUNCTION	65.15	222.60	0 19:17	0.00	
J9	JUNCTION	81.64	467.83	0 19:17	0.00	
J10	JUNCTION	92.50	92.50	0 19:13	0.00	

J11	JUNCTION	88.07	281.22	0	19:16	0.00
OUT1	OUTFALL	0.00	618.01	0	19:18	0.00
SU1	STORAGE	59.32	328.49	0	19:17	0.00
SU2	STORAGE	73.20	627.90	0	19:17	0.00

****
Storage Volume Summary
****

Storage Unit	Average Volume 1000 ft3	Avg Pcnt Full	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CFS
SU1	62.100	6	213.698	19	0 19:26	164.04
SU2	37.656	8	100.414	22	0 19:18	618.01

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS
OUT1	100.00	69.51	618.01
System	100.00	69.51	618.01

****
Link Flow Summary
****

Link	Type	Maximum Flow CFS	Time of Max Occurrence days hr:min	Maximum Velocity ft/sec	Max/ Full Flow	Max/ Full Depth	Total Minutes Surcharged
C1	CONDUIT	88.30	0 19:17	5.36	0.01	0.13	0
C2	CONDUIT	193.28	0 19:16	4.30	0.03	0.23	0
C3	CONDUIT	163.93	0 19:26	9.75	0.02	0.13	0
C4	CONDUIT	173.02	0 19:20	41.71	0.21	0.32	0
C5	CONDUIT	173.02	0 19:20	>50.00	0.54	0.75	0
C6	CONDUIT	77.63	0 19:16	5.04	0.07	0.43	0
C7	CONDUIT	157.85	0 19:17	40.68	0.30	0.35	0
C8	CONDUIT	222.61	0 19:17	35.84	0.22	0.50	0
C9	CONDUIT	467.46	0 19:17	17.92	0.76	0.82	0
C10	CONDUIT	92.05	0 19:13	6.58	0.02	0.45	0
C11	CONDUIT	272.32	0 19:18	11.36	0.21	0.36	0
1	DUMMY	164.04	0 19:26				
2	DUMMY	618.01	0 19:18				

****
Flow Classification Summary
****

Conduit	Adjusted /Actual Length	--- Fraction of Time in Flow Class ---- Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
C1	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.46	0.0000
C2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.23	0.0000
C3	1.00	0.00	0.06	0.00	0.65	0.29	0.00	0.00	0.83	0.0000
C4	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	5.66	0.0001
C5	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	6.99	0.0003
C6	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	1.24	0.0000
C7	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	4.24	0.0002
C8	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	5.85	0.0001
C9	1.00	0.00	0.00	0.00	0.84	0.16	0.00	0.00	0.67	0.0004
C10	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.22	0.0000
C11	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.26	0.0001

```
***************************
Time-Step Critical Elements
***************************
Link C4 (19.89%)
Link C5 (8.58%)


********************************
Highest Flow Instability Indexes
********************************
All links are stable.


*************************
Routing Time Step Summary
*************************
Minimum Time Step           :     6.66 sec
Average Time Step           :    25.21 sec
Maximum Time Step           :    30.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.00

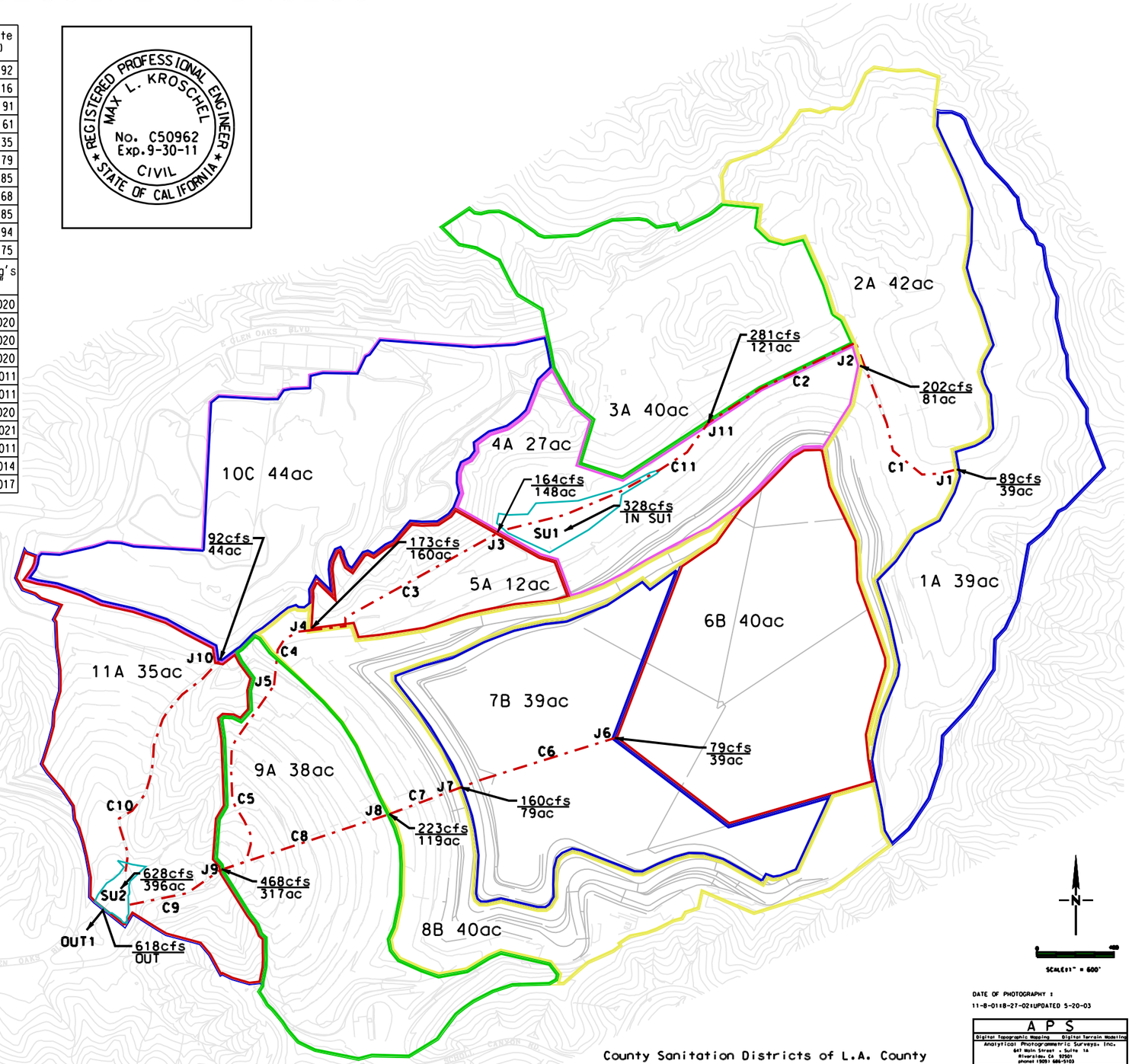

Analysis begun on:  Mon Jan 10 08:27:36 2011
Analysis ended on:  Mon Jan 10 08:27:36 2011
Total elapsed time: < 1 sec
```

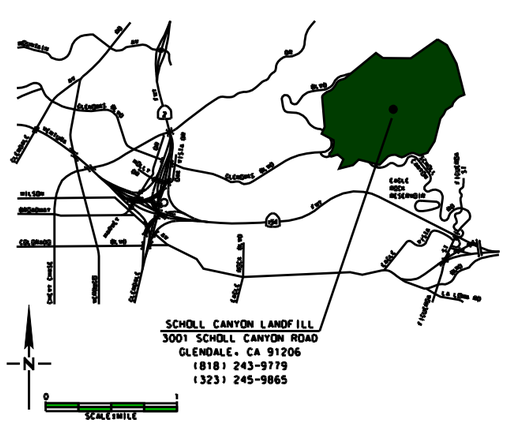
SCLF REV. 7/2010 FILL PLAN CLOSURE HYDROLOGY

Sub Area	Area (acres)	% imp	Freq. (yrs)	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc (min.)	Intensity (in./hr)	undevel'd Cu	devel'd Cd	Flowrate (cfs)
1A	39	0.02	100	68	2182	0.0570	8.460	12	3.34	0.70	0.70	92
2A	42	0.02	100	68	1688	0.0920	8.393	9	3.80	0.73	0.73	116
3A	40	0.05	100	68	2613	0.1790	8.135	12	3.22	0.69	0.70	91
4A	27	0.15	100	68	2239	0.0701	8.101	12	3.20	0.69	0.72	61
5A	12	0.40	100	68	1517	0.0659	8.011	9	3.63	0.72	0.79	35
6B	40	0.02	100	68	2111	0.0223	8.224	15	2.93	0.67	0.67	79
7B	39	0.02	100	68	1682	0.0238	8.045	12	3.18	0.69	0.69	85
8B	40	0.15	100	68	4059	0.0574	8.022	19	2.56	0.63	0.67	68
9A	38	0.10	100	68	2757	0.1780	7.955	12	3.15	0.69	0.71	85
10C	44	0.10	100	68	2740	0.1090	7.966	13	3.03	0.68	0.70	94
11A	35	0.05	100	68	2856	0.1530	7.899	12	3.12	0.69	0.70	75

Contrib Area ac	SWMM UpS J	UpS.J Inv.El	J Ht. (ft)	SWMM C	SWMM DwnS.J	DwnS.J Inv.El	Length	Conv. Type	depth d or Dia.	b (ft)	z side slope	Man'ing's "n"
39	J1	1415	6	C1	J2	1400	975	Trap	10.00	10	3	0.020
81	J2	1400	10	C2	J11	1395	868	Trap	10.00	15.00	2.00	0.020
121	J11	1395	10	C11	SU1	1378	1192	Trap	10.00	15.00	2.00	0.020
148	J3	1375	10	C3	J5	1355	1150	Trap	10.00	15.00	2.00	0.020
160	J4	1355	12	C4	J6	1295	430	PE	4.42			0.011
160	J5	1295	4	C5	J9	965	1148	PE	2.71			0.011
40	J6	1488	2	C6	J7	1475	732	Vee	2.00	T=40	10.00	0.020
79	J7	1475	6	C7	J8	1290	521	CSP	5.00			0.021
119	J8	1290	6	C8	J9	965	925	PE	4.00			0.011
317	J9	965	10	C9	SU2	954	538	Box	4.00	8.00		0.014
44	J10	1330	4	C19	SU2	954	1311	Trap	5.00	4.00	1.00	0.017

REGISTERED PROFESSIONAL ENGINEER
MAX L. KROSCHEL
No. C50962
Exp. 9-30-11
CIVIL
STATE OF CALIFORNIA





SCHOLL CANYON LANDFILL

County Sanitation Districts of L.A. County
1955 Workman Mill Road
Whitter, Calif. 90501

DATE OF PHOTOGRAPHY :
11-8-01:8-27-02:UPDATED 5-20-03

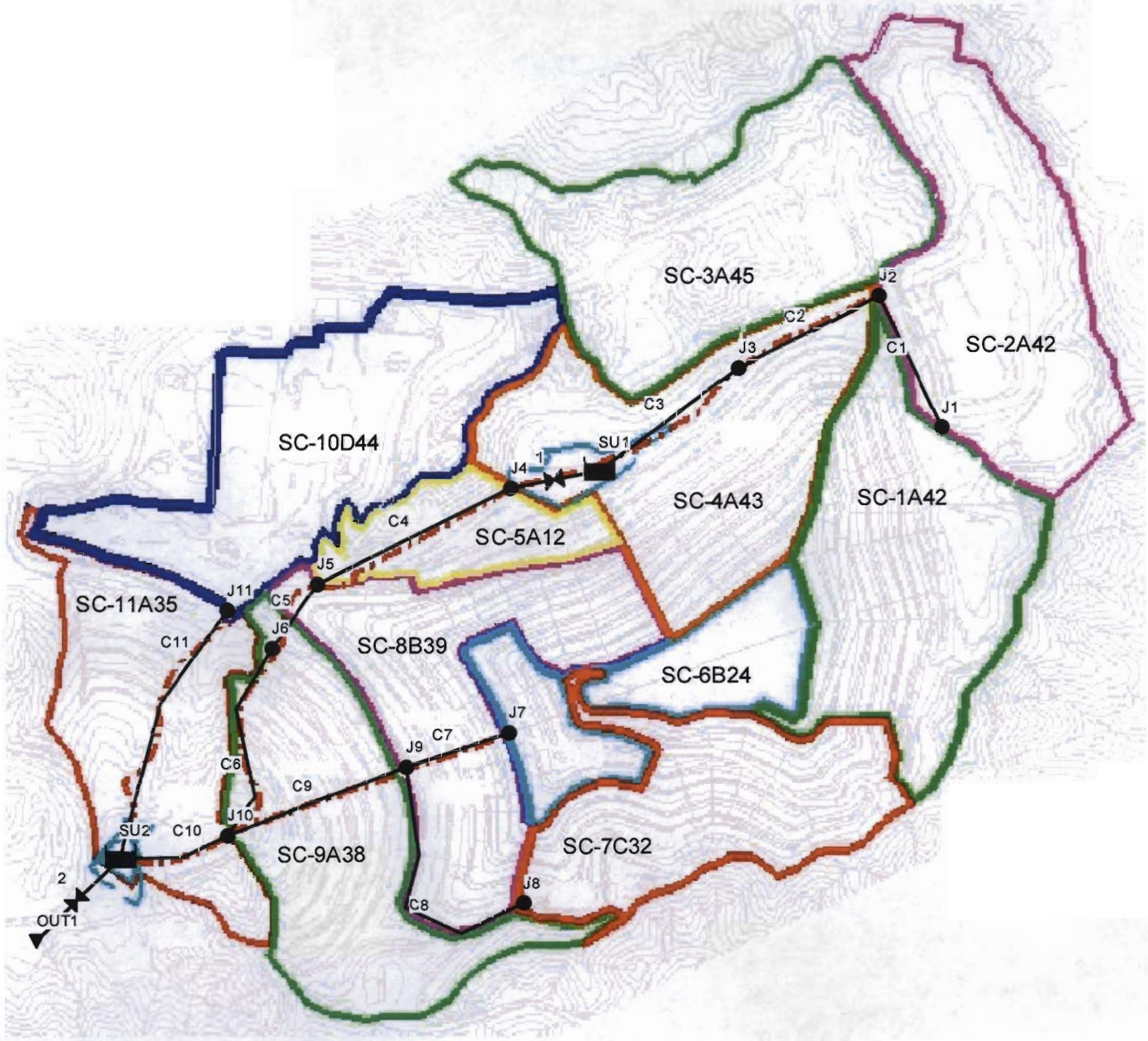
APS
Digital Topographic Mapping Digital Terrain Modeling
Analytical Photogrammetric Surveys, Inc.
647 Main Street - Suite 1a
Riverside, CA 92501
phone:(909) 686-5103
This map compiled by digital photogrammetric methods from aerial photography
APS M.D. # 03-144

LAST UPDATED 05-11-2010 BY ADVANCED DIGITAL MAPS, INC.

Appendix 3.
Scholl Canyon Landfill
EIR V2 Fill Plan
Closure Hydrology

SCLF V1 Fill Plan Closure Hydrology					Time of Concentration Calculations							Date:	1/11/11
Project	Sub area	Area (acres)	%imp	Freq. (yrs)	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
SCLF V1 FillPlan Closure Hydrology	1A	42	0.02	100	68	2081	0.064	8.4	12	3.3	0.70	0.70	97
SCLF V1 FillPlan Closure Hydrology	2A	42	0.02	100	68	3147	0.045	8.5	16	2.93	0.67	0.67	82
SCLF V1 FillPlan Closure Hydrology	3A	45	0.05	100	68	2246	0.127	8.2	11	3.37	0.70	0.71	108
SCLF V1 FillPlan Closure Hydrology	4A	43	0.10	100	68	2151	0.070	8.1	12	3.22	0.69	0.71	98
SCLF V1 FillPlan Closure Hydrology	5A	12	0.40	100	68	1517	0.066	8.0	9	3.63	0.72	0.79	34
SCLF V1 FillPlan Closure Hydrology	6B	24	0.02	100	68	1821	0.110	8.2	10	3.54	0.71	0.71	60
SCLF V1 FillPlan Closure Hydrology	7C	32	0.15	100	68	3135	0.098	8.0	14	2.96	0.67	0.70	66
SCLF V1 FillPlan Closure Hydrology	8B	39	0.15	100	68	3500	0.110	8.0	15	2.86	0.66	0.70	78
SCLF V1 FillPlan Closure Hydrology	9A	38	0.10	100	68	2757	0.178	8.0	12	3.15	0.69	0.71	85
SCLF V1 FillPlan Closure Hydrology	10C	44	0.10	100	68	2740	0.109	8.0	13	3.03	0.68	0.70	93
SCLF V1 FillPlan Closure Hydrology	11A	35	0.05	100	68	2856	0.153	7.9	12	3.12	0.69	0.70	76
Down Stream Conveyances SWMM model Input	Contributing Area	SWMM UpS J	UpS.J Inv.El	J Ht.	SWMM C	SWMM DwnS.J	DwnS.J Inv.El	L	Type	depth d or Dia.	b	z side slope	Man'ing's "n"
1A-2A soil cover trap	42	J1	1407	5	C1	J2	1400	620	TRAP	5.00	10.00	2.80	0.020
2A-3A native soil trap	84	J2	1400	10	C2	J3	1395	868	TRAP	10.00	12.00	2.00	0.020
3A-4A native soil trap	129	J3	1395	10	C3	SU1	1378	1191	TRAP	10.00	15.00	2.00	0.020
4A-5A native soil trap	172	J4	1375	10	C4	J5	1355	1154	TRAP	10.00	20.00	2.00	0.02
5A-1A 54 OD PE Conduit	184	J5	1355	12	C5	J6	1295	420	PE	4.82	-	-	0.011
5A-10A 36 OD PE Conduit	184	J6	1295	4	C6	J10	965	1148	PE	2.71	-	-	0.011
6B-8B CSP downdrain	24	J7	1505	6	C7	J9	1290	568	CSP	4.00	-	-	0.021
7C-8B roadside ditch trap chan.	32	J8	1360	3	C8	J9	1290	1368	TRAP	3.00	3.00	2.00	0.020
8B-9A 4' PE front downdrain	95	J9	1290	6	C9	J10	965	925	PE	4.00			0.011
9A-11A Concrete Box Culvert	317	J10	965	12	C10	SU2	954	538	BOX	4.00	8.00	-	0.014
10D-11A Shotcrete Trap	44	J11	1330	4	C11	SU2	954	1311	TRAP	5.00	4.00	1.00	0.017
Conveyance	Q_{100} cfs	s	d or h	b or L	z1	z2	C	d_n	Hw/d	FB,ft	C*L*h^1.5	required	OK?
C1	93	0.011	10.0	10.0	2.8	2.8	1.20	0.93	7.57	9.07		needs TRM	OK
C2	173	0.006	10.0	20.0	2.0	2.0	1.37	1.35	6.44	8.65	very close to dc, needs TRM		
C11	272	0.014	10.0	20.0	2.0	2.0	1.71	1.29	9.55	8.71			OK
C3	167	0.017	10.0	20.0	2.0	2.0	1.23	0.9	8.48	9.10			OK
	Q_{100} cfs	s	D, h	b	Hw	Hw req'd							
C4	177	0.143	4.8		12.0	8.56							OK
C7	60	0.10	5.0		7.0	3.19							OK
C9 end submerged condition	442	0.020	4.0	8.0	12.0	10.37							OK
C9 open outfall condition	442	0.020	4.0	8.0	12	7.51							OK

SCLF EIR V1 Fill Plan Closure Hydrology



SCLF EIR V1 Fill Plan Closure Hydrology

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.011)
--------------------------------------------------------------

****************
Analysis Options
****************
Flow Units ............... CFS
Flow Routing Method ...... DYNWAVE
Starting Date ............ OCT-07-2010 00:00:00
Ending Date .............. OCT-08-2010 00:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 00:15:00
Routing Time Step ........ 10.00 sec
```

********** Flow Routing Continuity **********	Volume acre-feet	Volume Mgallons
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.000	0.000
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	69.779	22.739
External Outflow	69.740	22.726
Surface Flooding	0.000	0.000
Evaporation Loss	0.000	0.000
Initial Stored Volume	2.166	0.706
Final Stored Volume	2.237	0.729
Continuity Error (%)	-0.044	

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min	Max Vol. Ponded acre-in	Total Minutes Flooded
J1	JUNCTION	0.13	1.03	1408.03	0 19:17	0	0
J2	JUNCTION	0.24	1.82	1401.82	0 19:17	0	0
J3	JUNCTION	0.19	1.47	1396.47	0 19:18	0	0
J4	JUNCTION	0.18	0.90	1375.90	0 19:27	0	0
J5	JUNCTION	0.38	1.39	1356.39	0 19:21	0	0
J6	JUNCTION	0.36	1.42	1296.42	0 19:21	0	0
J7	JUNCTION	0.14	0.89	1505.89	0 19:15	0	0
J8	JUNCTION	0.17	1.01	1361.01	0 19:15	0	0
J9	JUNCTION	0.24	1.21	1291.21	0 19:15	0	0
J10	JUNCTION	0.41	2.66	967.66	0 19:17	0	0
J11	JUNCTION	0.09	0.64	1330.64	0 19:13	0	0
OUT1	OUTFALL	0.00	0.00	950.00	0 00:00	0	0
SU1	STORAGE	1.79	4.62	1382.62	0 19:26	0	0
SU2	STORAGE	1.37	3.80	957.80	0 19:18	0	0

****
Node Flow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Maximum Flooding Overflow CFS	Time of Max Occurrence days hr:min
J1	JUNCTION	92.99	92.99	0 19:17	0.00	
J2	JUNCTION	82.11	172.98	0 19:17	0.00	
J3	JUNCTION	105.71	272.22	0 19:16	0.00	
J4	JUNCTION	0.00	167.11	0 19:26	0.00	
J5	JUNCTION	34.23	175.07	0 19:19	0.00	
J6	JUNCTION	0.00	174.55	0 19:21	0.00	
J7	JUNCTION	59.75	59.75	0 19:15	0.00	
J8	JUNCTION	66.02	66.02	0 19:14	0.00	
J9	JUNCTION	77.67	202.37	0 19:15	0.00	
J10	JUNCTION	81.66	442.46	0 19:16	0.00	

J11	JUNCTION	92.46	92.46	0	19:13	0.00
OUT1	OUTFALL	0.00	593.90	0	19:18	0.00
SU1	STORAGE	95.34	358.73	0	19:17	0.00
SU2	STORAGE	73.22	605.29	0	19:17	0.00

****
Storage Volume Summary
****

Storage Unit	Average Volume 1000 ft3	Avg Pcnt Full	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CFS
SU1	54.871	5	223.500	20	0 19:26	167.11
SU2	32.058	7	98.829	21	0 19:18	593.90

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS
OUT1	100.00	40.85	593.90
System	100.00	40.85	593.90

****
Link Flow Summary
****

Link	Type	Maximum Flow CFS	Time of Max Occurrence days hr:min	Maximum Velocity ft/sec	Max/ Full Flow	Max/ Full Depth	Total Minutes Surcharged
C1	CONDUIT	92.38	0 19:17	4.81	0.05	0.28	0
C2	CONDUIT	173.66	0 19:17	6.94	0.03	0.16	0
C3	CONDUIT	267.39	0 19:18	4.94	0.03	0.29	0
C4	CONDUIT	167.00	0 19:27	6.56	0.01	0.11	0
C5	CONDUIT	174.55	0 19:21	42.72	0.24	0.33	0
C6	CONDUIT	174.55	0 19:21	>50.00	0.54	0.75	0
C7	CONDUIT	59.73	0 19:15	22.73	0.11	0.26	0
C8	CONDUIT	65.16	0 19:15	11.42	0.10	0.37	0
C9	CONDUIT	200.71	0 19:15	33.73	0.20	0.48	0
C10	CONDUIT	442.19	0 19:17	17.18	0.75	0.81	0
C11	CONDUIT	92.04	0 19:13	6.69	0.00	0.22	0
1	DUMMY	167.11	0 19:26				
2	DUMMY	593.90	0 19:18				

****
Flow Classification Summary
****

Conduit	Adjusted /Actual Length	--- Fraction of Time in Flow Class ---- Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
C1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.46	0.0000
C2	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.50	0.0000
C3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.08	0.0000
C4	1.00	0.00	0.07	0.00	0.88	0.05	0.00	0.00	0.47	0.0000
C5	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	5.70	0.0001
C6	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	7.28	0.0001
C7	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	2.16	0.0000
C8	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	1.54	0.0000
C9	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	5.44	0.0000
C10	1.00	0.00	0.00	0.00	0.93	0.07	0.00	0.00	0.58	0.0002
C11	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.20	0.0000

```
**************************
Time-Step Critical Elements
**************************
Link C5 (10.06%)


*******************************
Highest Flow Instability Indexes
*******************************
All links are stable.


************************
Routing Time Step Summary
************************
Minimum Time Step           :     6.37 sec
Average Time Step           :     9.76 sec
Maximum Time Step           :    10.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.00

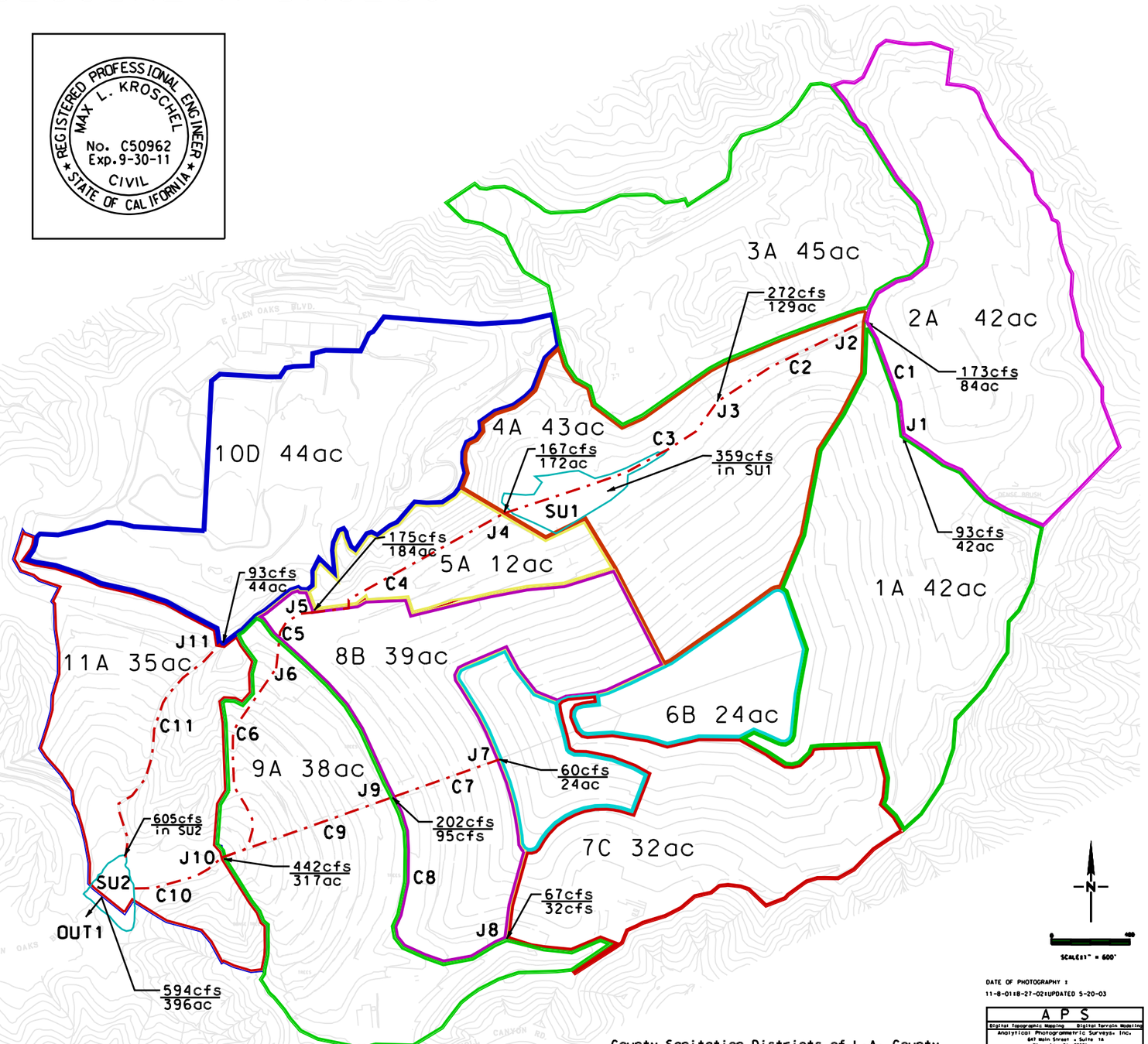

Analysis begun on:  Fri Jan 07 12:02:28 2011
Analysis ended on:  Fri Jan 07 12:02:28 2011
Total elapsed time: < 1 sec
```

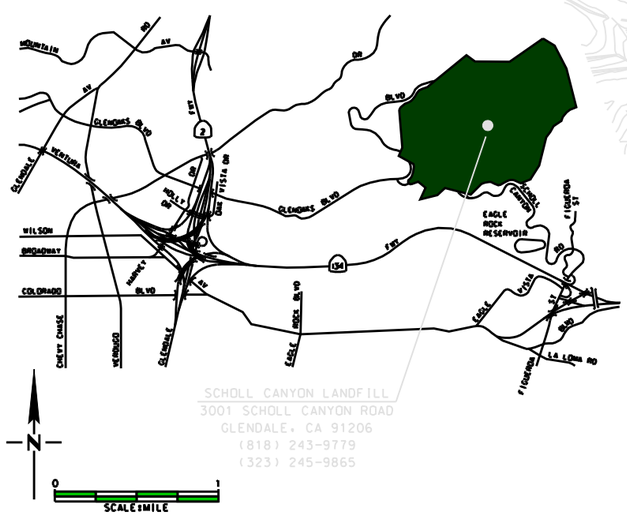
SCLF EIR V1 FILL PLAN CLOSURE HYDROLOGY

Sub Area	Area (acres)	% imp	Freq. (yrs)	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc (min.)	Intensity (in./hr)	undevel'd Cu	devel'd Cd	Q (cfs)
1A	42	0.02	100	68	2081	0.0639	8.4	12	3.30	0.7	0.7	97
2A	42	0.02	100	68	3147	0.0445	8.5	16	2.93	0.67	0.67	82
3A	45	0.05	100	68	2246	0.1269	8.2	11	3.69	0.7	0.71	108
4A	43	0.10	100	68	2151	0.0701	8.1	12	2.61	0.69	0.71	98
5A	12	0.40	100	68	1517	0.0659	8.0	9	3.63	0.72	0.79	34
6B	24	0.02	100	68	1821	0.1098	8.2	10	3.54	0.71	0.71	60
7C	32	0.15	100	68	3135	0.0982	8.0	14	2.96	0.67	0.7	66
8B	39	0.15	100	68	3500	0.1100	8.0	15	2.86	0.66	0.7	78
9A	38	0.10	100	68	2757	0.1780	8.0	12	3.15	0.69	0.71	85
10C	44	0.10	100	68	2740	0.1090	8.0	13	3.03	0.68	0.7	93
11A	35	0.05	100	68	2856	0.1530	7.9	12	3.12	0.69	0.7	76

Contrib. Area ac	SWMM UpS J	UpS.J Inv.El	J Ht. (ft)	SWMM C	SWMM DwnS.J	DwnS.J Inv.El	Length	Conv. Type	depth d or Dia.	b (ft)	z side slope	Man'ing's "n"
42	J1	1407	5	C1	J2	1400	620	TRAP	5.00	10.00	2.80	0.020
84	J2	1400	10	C2	J3	1395	868	TRAP	10.00	12.00	2.00	0.020
129	J3	1395	10	C3	SU1	1378	1191	TRAP	10.00	15.00	2.00	0.020
172	J4	1375	10	C4	J5	1355	1154	TRAP	10.00	20.00	2.00	0.02
184	J5	1355	12	C5	J6	1295	420	PE	4.82			0.011
184	J6	1295	4	C6	J10	965	1148	PE	2.71			0.011
24	J7	1505	6	C7	J9	1290	568	CSP	4.00			0.021
32	J8	1360	3	C8	J9	1290	1368	TRAP	3.00	3.00	2.00	0.020
95	J9	1290	6	C9	J10	965	925	PE	4.00			0.011
317	J10	965	12	C10	SU2	954	538	BOX	4.00	8.00		0.014
44	J11	1330	4	C11	SU2	954	1311	TRAP	5.00	4.00	1.00	0.017

REGISTERED PROFESSIONAL ENGINEER
MAX L. KROSCHEL
No. C50962
Exp. 9-30-11
CIVIL
STATE OF CALIFORNIA





SCHOLL CANYON LANDFILL

County Sanitation Districts of L.A. County
1955 Workman Mill Road
Whitter, Calif. 90501

DATE OF PHOTOGRAPHY :
11-8-01&8-27-02&UPDATED 5-20-03

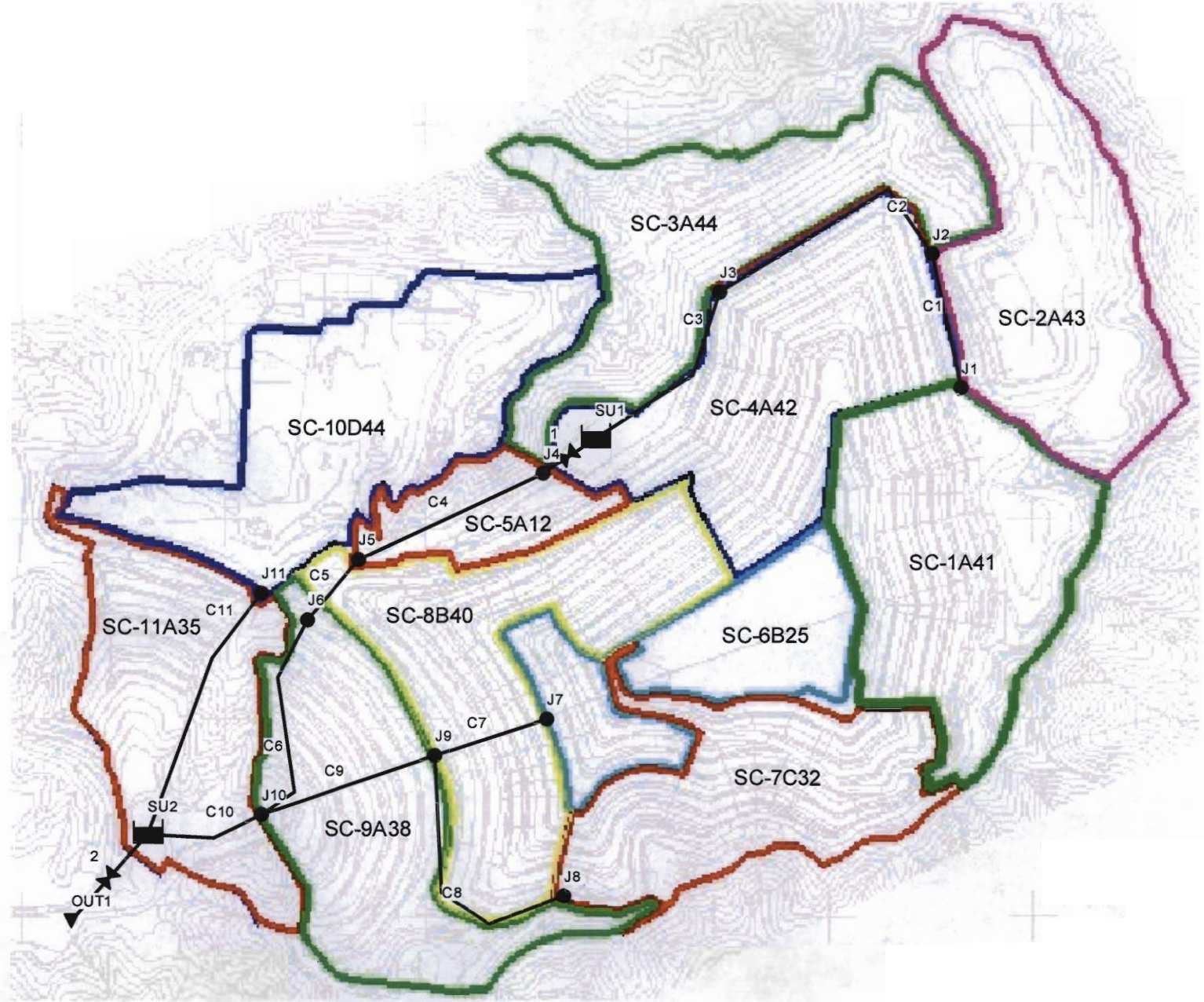
APS
Digital Topographic Mapping Digital Terrain Modeling
Analytical Photogrammetric Surveys, Inc.
647 Main Street • Suite 1A
Riverside, CA 92501
phone (909) 686-5103
This map created by digital photogrammetric methods from aerial photography
APS W.O. # 03-144

LAST UPDATED 05-11-2010 BY ADVANCED DIGITAL MAPS, INC.

Appendix 4.
Scholl Canyon Landfill
EIR V2 Fill Plan
Closure Hydrology

SCLF V2 Fill Plan Closure Hydrology					Time of Concentration Calculations							Date:	1/11/11
Project	Sub area	Area (acres)	%imp	Freq. (yrs)	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc (min.)	Intensity (in./hr)	undevel'd Cu	devel'd Cd	Flowrate (cfs)
SCLF V2 FillPlan Closure Hydro	1A	40	0.02	100	68	2124	0.063	8.348	12	3.30	0.70	0.70	92
SCLF V2 FillPlan Closure Hydro	2A	43	0.02	100	68	3438	0.067	8.471	16	2.93	0.67	0.67	84
SCLF V2 FillPlan Closure Hydro	3A	44	0.55	100	68	1817	0.138	8.146	9	3.69	0.72	0.82	133
SCLF V2 FillPlan Closure Hydro	4A	42	0.05	100	68	3378	0.029	8.191	19	2.61	0.64	0.65	71
SCLF V2 FillPlan Closure Hydro	5A	12	0.40	100	68	1517	0.066	8.011	9	3.63	0.72	0.79	34
SCLF V2 FillPlan Closure Hydro	6B	25	0.02	100	68	1860	0.107	8.224	10	3.54	0.71	0.71	63
SCLF V2 FillPlan Closure Hydro	7C	32	0.15	100	68	2912	0.075	8.045	14	2.96	0.67	0.70	66
SCLF V2 FillPlan Closure Hydro	8B	40	0.15	100	68	3500	0.110	8.022	15	2.86	0.66	0.70	80
SCLF V2 FillPlan Closure Hydro	9A	38	0.10	100	68	2757	0.178	7.955	12	3.15	0.69	0.71	85
SCLF V2 FillPlan Closure Hydro	10D	44	0.10	100	68	2740	0.109	7.966	13	3.03	0.68	0.70	93
SCLF V2 FillPlan Closure Hydro	11A	35	0.05	100	68	2856	0.153	7.899	12	3.12	0.69	0.70	76
Down Stream Conveyances SWMM model Input	Contributing Area ac	SWMM UpS J	UpS.J Inv.El	J Ht. ft	SWMM C	SWMM DwnS.J	DwnS.J Inv.El	Length ft	Conv. Type	depth d or Dia.	b ft	z side slope	Man'ing's "n"
1A-2A soil cover trap	41	J1	1407	5	C1	J2	1400	722	TRAP	5.00	10.00	2.80	0.020
2A-3A native soil trap	84	J2	1400	10	C2	J3	1392	1420	TRAP	10.00	40.00	2.00	0.020
3A-4A native soil trap	128	J3	1395	10	C3	SU1	1378	1090	TRAP	10.00	40.00	2.00	0.020
4A-5A native soil trap	170	J4	1375	10	C4	J5	1355	1154	TRAP	10.00	20.00	2.00	0.020
5A-J6 54 OD PE Conduit	182	J5	1355	12	C5	J6	1295	420	PE	4.82	-	-	0.011
J6-10A 36 OD PE Conduit	182	J6	1295	4	C6	J10	965	1148	PE	2.71	-	-	0.011
6B-8B CSP downdrain	25	J7	1505	6	C7	J9	1290	568	CSP	5.00	-	-	0.021
7C-8B roadside ditch trap chan.	32	J8	1360	3	C8	J9	1290	1368	TRAP	3.00	3.00	2.00	0.020
8B-9A 4' PE front downdrain	97	J9	1290	6	C9	J10	965	925	PE	4.00			0.011
9A-11A Concrete Box Culvert	317	J10	965	12	C10	SU2	954	538	BOX	4.00	8.00	-	0.014
10D-11A Shotcrete Trap	44	J11	1330	4	C11	SU2	954	1311	TRAP	5.00	4.00	1.00	0.017
Conveyance Capacity & FreeBoard	Q_{100} cfs	s	d or h	b or L	z_1	z_2	d_c	d_n	V, fps	FB,ft	com,ments		OK?
C1	91	0.010	10.0	10.0	2.8	2.8	1.22	1.06	6.64	8.94	needs TRM		OK
C2	173	0.006	10.0	20.0	2.0	2.0	1.27	1.25	6.15	8.75	dn= dc, needs TRM		OK
C3	286	0.016	10.0	20.0	2.0	2.0	1.74	1.26	10.08	8.74	very hi V, needs TRM		OK
C4	169	0.017	10.0	20.0	2.0	2.0	1.25	0.91	8.53	9.09	very hi V, needs TRM		OK
Conveyance Inlet Capacity	Q_{100} cfs	s	D, h	b	H_w	H_w req'd							
C5 54" OD PE SDR 32.5	175	0.143	4.82		12.0	6.18							OK
C7 60" CSP	62	0.10	5.0		7.0	0.41							OK
C10 end submerged condition	449	0.020	4.0	8.0	12.0	10.50							OK
C10 open outfall condition	449	0.020	4.0	8.0	12.0	7.55							OK

SCLF EIR V2 Fill Plan Closure Hydrology



SCLF EIR V2 Fill Plan Closure Hydrology

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.011)
--------------------------------------------------------------
```

****
Analysis Options
****

```
Flow Units ............... CFS
Flow Routing Method ...... DYNWAVE
Starting Date ............ OCT-07-2010 00:00:00
Ending Date .............. OCT-08-2010 00:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 00:15:00
Routing Time Step ........ 5.00 sec
```

********** Flow Routing Continuity **********	Volume acre-feet	Volume Mgallons
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.000	0.000
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	79.331	25.851
External Outflow	78.402	25.549
Surface Flooding	0.000	0.000
Evaporation Loss	0.000	0.000
Initial Stored Volume	2.166	0.706
Final Stored Volume	3.138	1.022
Continuity Error (%)	-0.052	

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min	Max Vol. Ponded acre-in	Total Minutes Flooded
J1	JUNCTION	0.12	1.02	1408.02	0 19:17	0	0
J2	JUNCTION	0.20	1.75	1401.75	0 19:17	0	0
J3	JUNCTION	0.24	1.52	1396.52	0 19:17	0	0
J4	JUNCTION	0.21	0.90	1375.90	0 19:29	0	0
J5	JUNCTION	0.41	1.33	1356.33	0 19:21	0	0
J6	JUNCTION	0.41	1.43	1296.43	0 19:21	0	0
J7	JUNCTION	0.14	0.91	1505.91	0 19:15	0	0
J8	JUNCTION	0.16	1.01	1361.01	0 19:15	0	0
J9	JUNCTION	0.24	1.23	1291.23	0 19:15	0	0
J10	JUNCTION	0.43	2.70	967.70	0 19:17	0	0
J11	JUNCTION	0.08	0.64	1330.64	0 19:13	0	0
OUT1	OUTFALL	0.00	0.00	950.00	0 00:00	0	0
SU1	STORAGE	1.85	4.69	1382.69	0 19:28	0	0
SU2	STORAGE	2.02	3.90	957.90	0 19:18	0	0

****
Node Flow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Maximum Flooding Overflow CFS	Time of Max Occurrence days hr:min
J1	JUNCTION	90.70	90.70	0 19:17	0.00	
J2	JUNCTION	84.13	172.60	0 19:17	0.00	
J3	JUNCTION	132.93	285.53	0 19:16	0.00	
J4	JUNCTION	0.00	169.00	0 19:28	0.00	
J5	JUNCTION	34.30	176.78	0 19:19	0.00	
J6	JUNCTION	0.00	176.24	0 19:21	0.00	
J7	JUNCTION	62.43	62.43	0 19:15	0.00	
J8	JUNCTION	66.07	66.07	0 19:14	0.00	
J9	JUNCTION	81.96	209.04	0 19:15	0.00	
J10	JUNCTION	81.69	451.42	0 19:16	0.00	

J11	JUNCTION	92.51	92.51	0	19:13	0.00
OUT1	OUTFALL	0.00	602.75	0	19:18	0.00
SU1	STORAGE	70.61	352.52	0	19:17	0.00
SU2	STORAGE	73.26	614.31	0	19:17	0.00

****
Storage Volume Summary
****

Storage Unit	Average Volume 1000 ft3	Avg Pcnt Full	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CFS
SU1	56.665	5	229.649	21	0 19:28	169.00
SU2	48.528	11	101.991	22	0 19:18	602.75

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS
OUT1	100.00	39.53	602.75
System	100.00	39.53	602.75

****
Link Flow Summary
****

Link	Type	Maximum Flow CFS	Time of Max Occurrence days hr:min	Maximum Velocity ft/sec	Max/ Full Flow	Max/ Full Depth	Total Minutes Surcharged
C1	CONDUIT	90.06	0 19:17	4.88	0.05	0.28	0
C2	CONDUIT	170.21	0 19:18	6.84	0.03	0.16	0
C3	CONDUIT	283.16	0 19:17	5.29	0.03	0.29	0
C4	CONDUIT	168.94	0 19:29	6.82	0.01	0.11	0
C5	CONDUIT	176.24	0 19:21	40.80	0.17	0.29	0
C6	CONDUIT	176.24	0 19:21	>50.00	0.55	0.75	0
C7	CONDUIT	62.22	0 19:15	23.10	0.11	0.27	0
C8	CONDUIT	65.13	0 19:15	11.27	0.10	0.37	0
C9	CONDUIT	207.21	0 19:15	34.14	0.21	0.49	0
C10	CONDUIT	451.16	0 19:17	17.15	0.77	0.82	0
C11	CONDUIT	91.99	0 19:13	6.42	0.02	0.45	0
1	DUMMY	169.00	0 19:28				
2	DUMMY	602.75	0 19:18				

****
Flow Classification Summary
****

Conduit	Adjusted /Actual Length	--- Fraction of Time in Flow Class ---- Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
C1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.48	0.0000
C2	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.43	0.0000
C3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.12	0.0000
C4	1.00	0.00	0.05	0.00	0.91	0.05	0.00	0.00	0.58	0.0000
C5	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	5.62	0.0000
C6	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	7.83	0.0001
C7	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	2.17	0.0000
C8	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	1.51	0.0000
C9	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	4.72	0.0000
C10	1.00	0.00	0.00	0.00	0.95	0.05	0.00	0.00	0.41	0.0001
C11	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.10	0.0000

```
***************************
Time-Step Critical Elements
***************************
None


********************************
Highest Flow Instability Indexes
********************************
All links are stable.


*************************
Routing Time Step Summary
*************************
Minimum Time Step           :     5.00 sec
Average Time Step           :     5.00 sec
Maximum Time Step           :     5.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.00


Analysis begun on:  Mon Jan 10 08:31:32 2011
Analysis ended on:  Mon Jan 10 08:31:32 2011
Total elapsed time: < 1 sec
```

SCLF EIR V2 FILL PLAN CLOSURE HYDROLOGY

Sub Area	Area (acres)	% imp	Freq. (yrs)	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc (min.)	Intensity (in./hr)	undevel'd Cu	devel'd Cd	Q (cfs)
1A	40	0.02	100	68	2124	0.063	8.348	12	3.30	0.70	0.70	92
2A	43	0.02	100	68	3438	0.067	8.471	16	2.93	0.67	0.67	84
3A	44	0.55	100	68	1817	0.138	8.146	9	3.69	0.72	0.82	133
4A	42	0.05	100	68	3378	0.029	8.191	19	2.61	0.64	0.65	71
5A	12	0.40	100	68	1517	0.066	8.011	9	3.63	0.72	0.79	34
6B	25	0.02	100	68	1860	0.107	8.224	10	3.54	0.71	0.71	63
7C	32	0.15	100	68	2912	0.075	8.045	14	2.96	0.67	0.70	66
8B	40	0.15	100	68	3500	0.110	8.022	15	2.86	0.66	0.70	80
9A	38	0.10	100	68	2757	0.178	7.955	12	3.15	0.69	0.71	85
10D	44	0.10	100	68	2740	0.109	7.966	13	3.03	0.68	0.70	93
11A	35	0.05	100	68	2856	0.153	7.899	12	3.12	0.69	0.70	76

Contributing Area ac	SWMM UpS J	UpS.J Inv.El	J Ht. (ft)	SWMM C	SWMM DwnS.J	DwnS.J Inv.El	Length	Conv. Type	depth d or Dia.	b (ft)	z side slope	Man'ing's "n"
41	J1	1407	5	C1	J2	1400	722	TRAP	5.00	10.00	2.80	0.020
84	J2	1400	10	C2	J3	1392	1420	TRAP	10.00	40.00	2.00	0.020
128	J3	1395	10	C3	SU1	1378	1090	TRAP	10.00	40.00	2.00	0.020
170	J4	1375	10	C4	J5	1355	1154	TRAP	10.00	20.00	2.00	0.020
181	J5	1355	12	C5	J6	1295	420	PE	4.82			0.011
181	J6	1295	4	C6	J10	965	1148	PE	2.71			0.011
25	J7	1505	6	C7	J9	1290	568	CSP	5.00			0.021
32	J8	1360	3	C8	J9	1290	1368	TRAP	3.00	3.00	2.00	0.020
98	J9	1290	6	C9	J10	965	925	PE	4.00			0.011
317	J10	965	12	C10	SU2	954	538	BOX	4.00	8.00		0.014
44	J11	1330	4	C11	SU2	954	1311	TRAP	5.00	4.00	1.00	0.017

REGISTERED PROFESSIONAL ENGINEER
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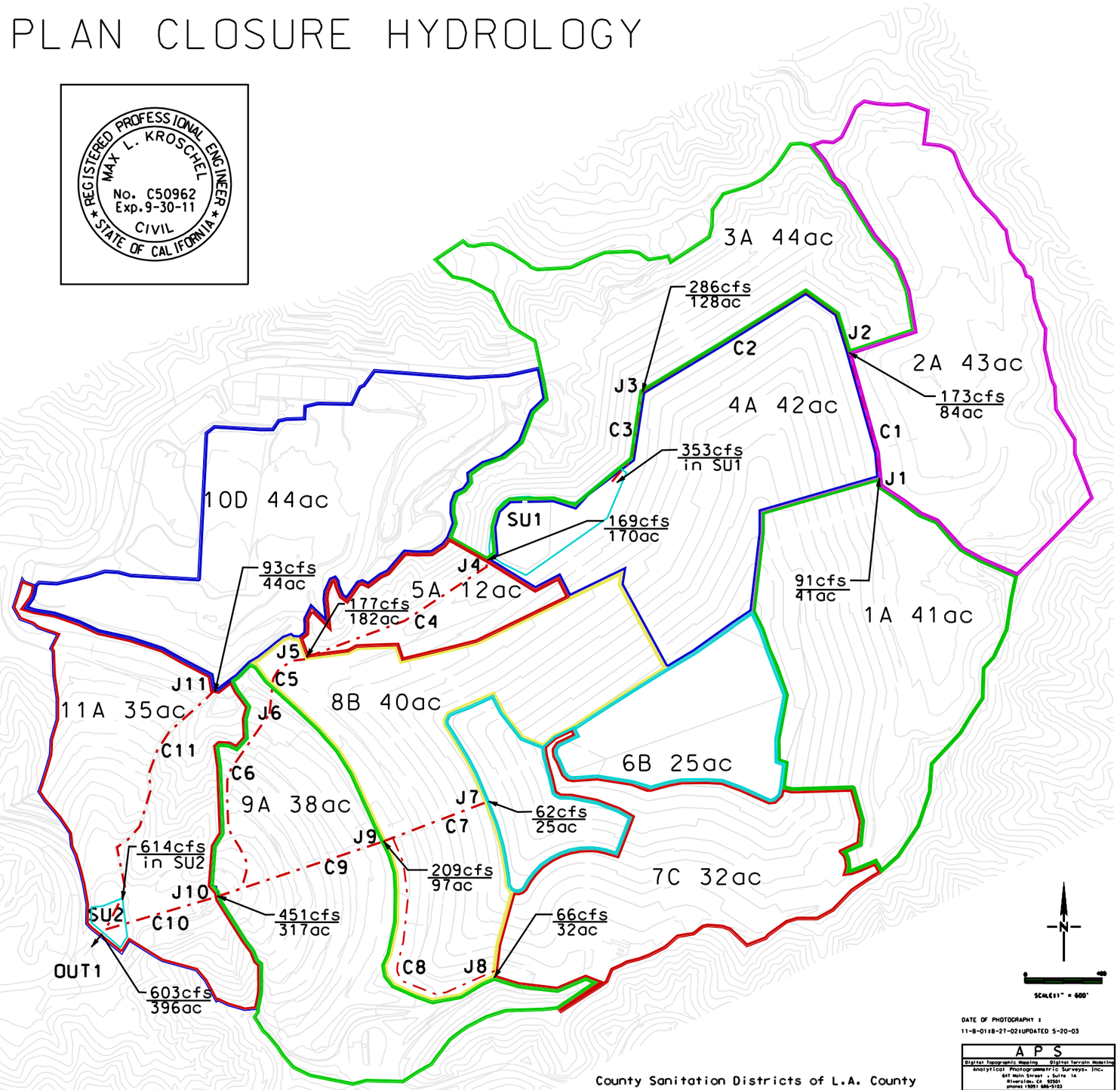

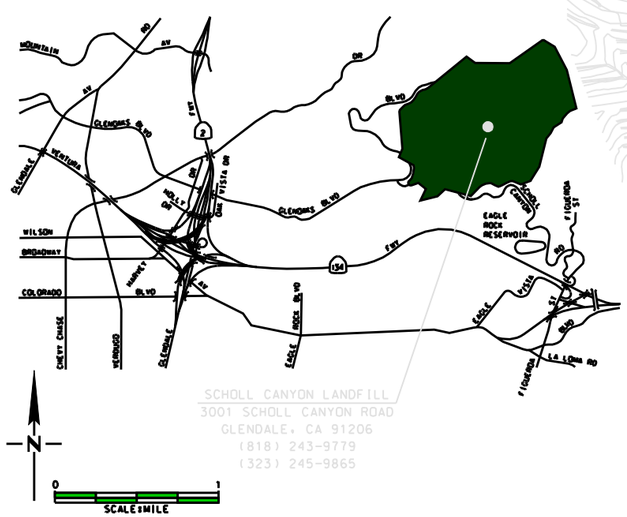

SCHOLL CANYON LANDFILL
3001 SCHOLL CANYON ROAD
GLENDALE, CA 91206
(818) 243-9779
(323) 245-9865

SCHOLL CANYON LANDFILL

County Sanitation Districts of L.A. County
1955 Workman Mill Road
Whitter, Calif. 90501

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APS
Digital Topographic Mapping Digital Terrain Modeling
Analytical Photogrammetric Surveys, Inc.
647 Main Street • Suite 1a
Riverside, CA 92501
phone: (909) 686-5103
This map compiled by digital photogrammetric methods from aerial photography
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