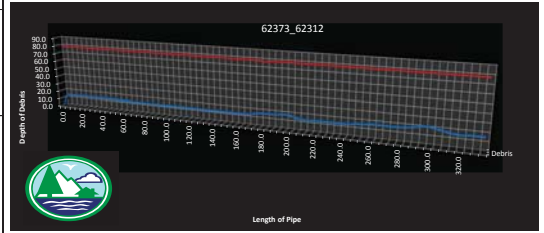


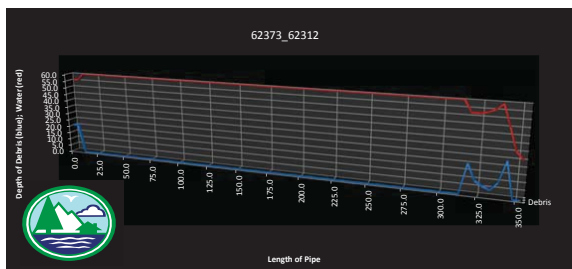
San Antonio Water System

Client: SAWS										Date: 3/16/2017										Summary Analysis									
Location: 12-6009_W035										Direction: Upstream										Volume of Debris: 1786.36 ft ³									
AssetID: 62373_62312										Pipe size: 78										Max Debris Height: 22.9 in									
USMH AssetID: 62373										Pipe type: Reinforced Concrete										Min Debris Height: 0 in									
DSMH AssetID: 62312										Weather: DRY										Percent Overall: 16.08 %									
Pipe Length: 3M7										Inspected Length: 334.7																			
Remarks: PARLINE 1																													
Pipe Size (in.)	Pipe Length ft.	Volume Pipe in ³	Debris in.	Water Level in	Adiff approx in ²	Volume approx in ³	Percent overall %	a in	Ztheta degrees	h in	Aaic in ²	2Atri in ²	Comments																
78	0.0	1919181.8	0.0	78	0.000	0.000	16.0842	0.000	0.000	6.000	0.000	0.000																	
78	5.0		16.2	78	718.042	43082.548		31.641	108.448	16.200	1439.460	721.417																	
78	10.0		16.2	78	718.042	43082.548		31.641	108.448	16.200	1439.460	721.417																	
78	15.0		16.2	78	718.042	43082.548		31.641	108.448	16.200	1439.460	721.417																	
78	20.0		16.2	78	718.042	43082.548		31.641	108.448	16.200	1439.460	721.417																	
78	25.0		16.2	78	718.042	43082.548		31.641	108.448	16.200	1439.460	721.417																	
78	30.0		16.2	78	718.042	43082.548		31.641	108.448	16.200	1439.460	721.417																	
78	35.0		16.2	78	718.042	43082.548		31.641	108.448	16.200	1439.460	721.417																	
78	40.0		16.2	78	718.042	43082.548		31.641	108.448	16.200	1439.460	721.417																	
78	45.0		16.2	78	718.042	43082.548		31.641	108.448	16.200	1439.460	721.417																	
78	50.0		16.2	78	718.042	43082.548		31.641	108.448	16.200	1439.460	721.417																	
78	55.0		16.0	78	705.415	42324.898		31.496	107.722	16.000	1429.824	724.409																	
78	60.0		16.0	78	705.415	42324.898		31.496	107.722	16.000	1429.824	724.409																	
78	65.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	70.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	75.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	80.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	85.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	90.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	95.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	100.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	105.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	110.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	115.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	120.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	125.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	130.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	135.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	140.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	145.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	150.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	155.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	160.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	165.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	170.0		15.6	78	680.336	40820.162		31.200	106.260	15.600	1410.416	730.080																	
78	175.0		18.0	78	834.195	50051.671		32.863	114.842	18.000	1524.325	690.130																	
78	180.0		18.6	78	873.858	52431.452		33.239	116.922	18.600	1551.936	678.078																	
78	185.0		18.6	78	873.858	52431.452		33.239	116.922	18.600	1551.936	678.078																	
78	190.0		18.6	78	873.858	52431.452		33.239	116.922	18.600	1551.936	678.078																	
78	195.0		20.0	78	968.093	58085.571		34.059	121.689	20.000	1615.210	647.117																	
78	200.0		20.0	78	968.093	58085.571		34.059	121.689	20.000	1615.210	647.117																	
78	205.0		18.0	78	834.195	50051.671		32.863	114.842	18.000	1524.325	690.130																	
78	210.0		16.0	78	705.415	42324.898		31.496	107.722	16.000	1429.824	724.409																	
78	215.0		16.0	78	705.415	42324.898		31.496	107.722	16.000	1429.824	724.409																	
78	220.0		16.5	78	737.092	44225.493		31.855	109.531	16.500	1453.832	716.741																	
78	225.0		16.5	78	737.092	44225.493		31.855	109.531	16.500	1453.832	716.741																	
78	230.0		16.5	78	737.092	44225.493		31.855	109.531	16.500	1453.832	716.741																	
78	235.0		16.5	78	737.092	44225.493		31.855	109.531	16.500	1453.832	716.741																	
78	240.0		16.5	78	737.092	44225.493		31.855	109.531	16.500	1453.832	716.741																	
78	245.0		16.5	78	737.092	44225.493		31.855	109.531	16.500	1453.832	716.741																	
78	250.0		18.0	78	834.195	50051.671		32.863	114.842	18.000	1524.325	690.130																	
78	255.0		18.0	78	834.195	50051.671		32.863	114.842	18.000	1524.325	690.130																	
78	260.0		19.0	78	900.546	54032.769		33.481	118.296	19.000	1570.173	669.627																	
78	265.0		19.0	78	900.546	54032.769		33.481	118.296	19.000	1570.173	669.627																	
78	270.0		19.0	78	900.546	54032.769		33.481	118.296	19.000	1570.173	669.627																	
78	275.0		19.0	78	900.546	54032.769		33.481	118.296	19.000	1570.173	669.627																	
78	280.0		19.0	78	900.546	54032.769		33.481	118.296	19.000	1570.173	669.627																	
78	285.0		20.0	78	968.093	58085.571		34.059	121.689	20.000	1615.210	647.117																	
78	290.0		21.0	78	1036.756	62205.335		34.998	125.027	21.000	1659.514	622.758																	
78	295.0		22.9	78	1170.023	70201.362		35.522	131.236	22.900	1741.922	571.899																	
78	300.0		22.9	78	1170.023	70201.362		35.522	131.236	22.900	1741.922	571.899																	
78	305.0		21.0	78	1036.756	62205.335		34.998	125.027	21.000	1659.514	622.758																	
78	310.0		19.5	78	934.175	56950.509		33.775	120.000	19.500	1592.787	658.612																	
78	315.0		18.0	78	834.195	50051.671		32.863	114.842	18.000	1524.325	690.130																	
			17.3	78	788.504	47310.234		32.405	112.384	17.300	1491.701	703.197																	
			18.2	78	847.365	50841.919		32.990	115.538	18.200	1533.564	686.198																	
			18.2	78	847.365	50841.919		32.990	115.538	18.200	1533.564	686.198																	
			18.2	78	0.000	0.000																							



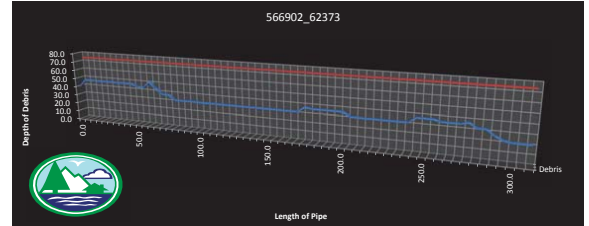
San Antonio Water System

Project Information												Sonom Analysis	
Client:	SAWS					Date:	3/16/2017					Volume of Debris:	162.72 ft ³
Location:	12-6009_W055					Direction:	Upstream					Max Debris Height:	25 in
AssetID:	62373_62312					Pipe size:	60					Min Debris Height:	0 in
[SMML AssetID:	62373					Pipe type:	Reinforced Concrete					Percent Overall:	2.38 %
[SMML AssetID:	62312					Weather:	Dry						
Pipe Length:	347.8					Inspected Length:	347.8						
Remarks:	PARLINE 2											Comments	
Pipe Size (in.)	Pipe Length ft.	Volume Pipe in ³	Debris in.	Water Level in	Adiff approx in ²	Volume approx in ³	Percent overall %	a in	Theta degrees	h in	Aarc in ²	2Ari in ²	
60	0.0	11800576.0	21.0	55.3	881.930	52915.783	2.38277	28.618	145.085	21.000	1139.493	257.564	
60	5.0		21.0	55.3	881.930	52915.783	2.38277	28.618	145.085	21.000	1139.493	257.564	
60	10.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	15.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	20.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	25.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	30.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	35.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	40.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	45.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	50.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	55.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	60.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	65.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	70.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	75.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	80.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	85.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	90.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	95.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	100.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	105.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	110.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	115.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	120.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	125.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	130.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	135.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	140.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	145.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	150.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	155.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	160.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	165.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	170.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	175.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	180.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	185.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	190.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	195.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	200.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	205.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	210.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	215.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	220.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	225.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	230.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	235.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	240.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	245.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	250.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	255.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	260.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	265.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	270.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	275.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	280.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	285.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	290.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	295.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	300.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	305.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	310.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING, DEBRIS MAY BE TOO HIGH
60	315.0		21.0	52	881.930	52915.783	2.38277	28.618	145.085	21.000	1139.493	257.564	
60	320.0		10.0	52	309.748	18584.892	22.361	96.379	10.000	756.962	447.214		
60	325.0		7.0	53	184.436	11066.132	19.261	79.889	7.000	627.447	443.011		
60	330.0		5.0	55	112.539	6752.333	16.583	67.115	5.000	527.117	414.578		LIMITED SONAR RING
60	335.0		10.2	59	318.728	19123.683	22.538	97.400	10.200	764.980	446.252		LIMITED SONAR RING
60	340.0		25.0	45	1115.111	66906.686	29.580	160.812	25.000	1263.013	147.902		LIMITED SONAR RING
60	345.0		0.0	30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	LIMITED SONAR RING
60	350.0		0.0	25	0.000	0.000							



San Antonio Water System

Client: SAWS										Date: 6/29/2016										Samar Analysis	
Location: 15-15074										Direction: Downstream										Volume of Debris: 4835.61 ft ³	
AssetID: 566902_62373										Pipe size: 78										Max Debris Height: 52 in	
ISMH AssetID: 566902										Pipe type: RCP										Min Debris Height: 22.9 in	
DSMH AssetID: 62373										Weather: DRY										Percent Overall: 47.18 %	
Pipe Length: 308.9										Inspected Length: 308.9										Comments	
Remarks: 0.0 PARLINE 1																					
Pipe Size (in.)	Pipe Length ft.	Volume Pipe in ³	Debris in.	Water Level in	Adiff approx in ²	Volume approx in ³	Percent overall %	θ in	2Theta degrees	h in	Aarc in ²	2Atri in ²									
78	0.0	17712433.8	40.1	74.1	2474.970	48498.190	47.1758	38.984	183.232	40.100	2432.087	-42.883									
78	5.0		48.3	74.1	3107.647	186458.790	37.875	207.592	48.300	2755.410	-352.237										
78	10.0		48.3	74.1	3107.647	186458.790	37.875	207.592	48.300	2755.410	-352.237										
78	15.0		48.3	74.1	3107.647	186458.790	37.875	207.592	48.300	2755.410	-352.237										
78	20.0		48.3	74.1	3107.647	186458.790	37.875	207.592	48.300	2755.410	-352.237										
78	25.0		48.3	74.1	3107.647	186458.790	37.875	207.592	48.300	2755.410	-352.237										
78	30.0		48.3	74.1	3107.647	186458.790	37.875	207.592	48.300	2755.410	-352.237										
78	35.0		48.3	74.1	3107.647	186458.790	37.875	207.592	48.300	2755.410	-352.237										
78	40.0		48.3	74.1	3107.647	186458.790	37.875	207.592	48.300	2755.410	-352.237										
78	45.0		48.3	74.1	3107.647	186458.790	37.875	207.592	48.300	2755.410	-352.237										
78	50.0		45.3	74.1	2878.436	172706.137	38.488	198.592	45.300	2635.963	-242.473										
78	55.0		45.3	74.1	2878.436	172706.137	38.488	198.592	45.300	2635.963	-242.473										
78	60.0		52.0	74.1	3384.077	203044.640	36.770	218.942	52.000	2906.073	-478.004										
78	65.0		45.3	74.1	2878.436	172706.137	38.488	198.592	45.300	2635.963	-242.473										
78	70.0		39.0	74.1	2389.181	143350.873	39.000	180.000	39.000	2389.181	0.000										
78	75.0		39.0	74.1	2389.181	143350.873	39.000	180.000	39.000	2389.181	0.000										
78	80.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	85.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	90.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	95.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	100.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	105.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	110.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	115.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	120.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	125.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	130.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	135.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	140.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	145.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	150.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	155.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	160.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	165.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	170.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	175.0		39.0	74.1	2389.181	143350.873	39.000	180.000	39.000	2389.181	0.000										
78	180.0		37.8	74.1	2295.596	137735.759	38.982	176.474	37.800	2342.374	46.778										
78	185.0		37.8	74.1	2295.596	137735.759	38.982	176.474	37.800	2342.374	46.778										
78	190.0		37.8	74.1	2295.596	137735.759	38.982	176.474	37.800	2342.374	46.778										
78	195.0		37.8	74.1	2295.596	137735.759	38.982	176.474	37.800	2342.374	46.778										
78	200.0		37.8	74.1	2295.596	137735.759	38.982	176.474	37.800	2342.374	46.778										
78	205.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	210.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	215.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	220.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	225.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	230.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	235.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	240.0		33.4	74.1	1953.887	117233.213	38.596	163.489	33.400	2170.024	216.137										
78	245.0		39.0	74.1	2389.181	143350.873	39.000	180.000	39.000	2389.181	0.000										
78	250.0		39.0	74.1	2389.181	143350.873	39.000	180.000	39.000	2389.181	0.000										
78	255.0		39.0	74.1	2389.181	143350.873	39.000	180.000	39.000	2389.181	0.000										
78	260.0		37.0	74.1	2233.250	133994.977	38.949	174.121	37.000	2311.147	77.897										
78	265.0		37.0	74.1	2233.250	133994.977	38.949	174.121	37.000	2311.147	77.897										
78	270.0		37.0	74.1	2233.250	133994.977	38.949	174.121	37.000	2311.147	77.897										
78	275.0		39.0	74.1	2389.181	143350.873	39.000	180.000	39.000	2389.181	0.000										
78	280.0		34.0	74.1	2000.252	120015.134	38.678	165.268	34.000	2193.643	193.391										
78	285.0		34.0	74.1	2000.252	120015.134	38.678	165.268	34.000	2193.643	193.391										
78	290.0		28.0	74.1	1542.697	92561.823	37.417	147.235	28.000	1954.279	411.582										
78	295.0		24.2	74.1	1263.120	75787.230	36.083	135.396	24.200	1797.144	534.024										
78	300.0		22.9	74.1	1170.023	70201.362	35.522	131.236	22.900	1741.922	571.899										
78	305.0		22.9	74.1	1170.023	70201.362	35.522	131.236	22.900	1741.922	571.899										
78	310.0		22.9	74.1	0.000	0.000															



San Antonio Water System

Client: SAWS										Date: 9/12/2016		Sonar Analysis	
Location: JS-15074										Direction: Downstream		Volume of Debris: 185.22 ft³	
AssetID: 566902_62373										Pipe size: 40		Max Debris Height: 10 in	
USMH_AssetID: 566902										Pipe type: RCP		Min Debris Height: 0 in	
DSMH_AssetID: 62373										Weather: DRY		Percent Overall: 3.11 %	
Pipe Length: 303.6										Inspected Length: 303.6			
Remarks: 0.0 PARLINE 2												Comments	
Pipe Size (in.)	Pipe Length ft.	Volume Pipe in³	Debris in.	Water Level in	Adiff in²	Volume approx in³	Percent overall %	a in	2Theta degrees	h in	Aarc in²	2Ari in²	
60	0.0	10300905.3	0.0	60	0.000	0.000	3.30715	0.000	0.000	0.000	0.000	0.000	
60	5.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING
60	10.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING
60	15.0		10.0	60	309.748	18584.892	22.361	96.379	10.000	756.962	447.214	447.214	
60	20.0		10.0	60	309.748	18584.892	22.361	96.379	10.000	756.962	447.214	447.214	
60	25.0		10.0	60	309.748	18584.892	22.361	96.379	10.000	756.962	447.214	447.214	
60	30.0		10.0	60	309.748	18584.892	22.361	96.379	10.000	756.962	447.214	447.214	
60	35.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	40.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING
60	45.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING
60	50.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	SONAR RING SIDEWAYS
60	55.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	SONAR RING SIDEWAYS
60	60.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	SONAR RING UPSIDE DOWN
60	65.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	SONAR RING UPSIDE DOWN
60	70.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	SONAR RING UPSIDE DOWN
60	75.0		4.0	60	80.951	4857.058	14.967	59.853	4.000	470.083	389.132	389.132	
60	80.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	NO SONAR RING
60	85.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	SONAR RING UNCLEAR
60	90.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	SONAR RING UNCLEAR
60	95.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	100.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	105.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	110.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	115.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	120.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	125.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	130.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	135.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	140.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	145.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	150.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	155.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	160.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	165.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	170.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	175.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	180.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	185.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	190.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	195.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	200.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	205.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	210.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	215.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	220.0		0.0	60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
60	225.0		10.0	60	309.748	18584.892	22.361	96.379	10.000	756.962	447.214	447.214	
60	230.0		10.0	60	309.748	18584.892	22.361	96.379	10.000	756.962	447.214	447.214	
60	235.0		10.0	60	309.748	18584.892	22.361	96.379	10.000	756.962	447.214	447.214	
60	240.0		10.0	60	309.748	18584.892	22.361	96.379	10.000	756.962	447.214	447.214	
60	245.0		10.0	60	309.748	18584.892	22.361	96.379	10.000	756.962	447.214	447.214	
60	250.0		10.0	60	309.748	18584.892	22.361	96.379	10.000	756.962	447.214	447.214	
60	255.0		10.0	60	309.748	18584.892	22.361	96.379	10.000	756.962	447.214	447.214	
60	260.0		8.0	60	224.112	13446.732	20.396	85.667	8.000	672.826	448.714	448.714	
60	265.0		8.0	60	224.112	13446.732	20.396	85.667	8.000	672.826	448.714	448.714	
60	270.0		9.0	60	265.949	15956.937	21.424	91.146	9.000	715.859	449.910	449.910	
60	275.0		8.0	60	224.112	13446.732	20.396	85.667	8.000	672.826	448.714	448.714	
60	280.0		8.0	60	224.112	13446.732	20.396	85.667	8.000	672.826	448.714	448.714	
60	285.0		8.0	60	224.112	13446.732	20.396	85.667	8.000	672.826	448.714	448.714	
60	290.0		6.5	60	165.478	9928.684	18.648	76.866	6.500	603.707	438.229	438.229	
60	295.0		6.0	60	147.151	8829.060	18.000	73.740	6.000	579.151	432.000	432.000	
60	300.0		6.0	60	147.151	8829.060	18.000	73.740	6.000	579.151	432.000	432.000	
60	305.0		0.0	60	0.000	0.000	0.000						

