Sewage Spill Reduction Action Plan Summary Progress Report Fiscal Year 2017-2018

Alto Sanitary District

In Response to

Docket No.: CWA-309(a)-08-030

10/15/18

Bill Hansell District Manager

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Date: 10/15/18

Bill Hansell District Manager Alto Sanitary District

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ATTACHMENT D

Alto Sanitary District Ordinance 2016-01 Alto Sanitary District FY2017-18 Budget

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List of Abbreviations

ADDWF Average Daily Dry Weather Flow

ADDF Also see ADDWF

ADWWF Average Daily Wet Weather Flow

Alto Alto Sanitary District
Almonte Almonte Sanitary District
CCTV Closed Circuit Television

District Alto Sanitary District (also see Alto)
EPA U.S. Environmental Protection Agency

GWDR Statewide General Waste Discharge Requirements

HDPE High Density Polyethylene

HVSD Homestead Valley Sanitary District

I/I or I&I Infiltration and Inflow Mill Valley City of Mill Valley

MH Maintenance Hole or Man Hole

NASSCO National Association of Sewer Service Companies

O&M Operations and Maintenance

OERP Overflow Emergency Response Plan

Order EPA Order for Compliance

PS Pump Station

RBSD Richardson Bay Sanitary District

RH Rod Hole

SASM Sewerage Agency of Southern Marin

SSO Sanitary Sewer Overflow

SSMP Sewer System Management Plan

SSRAP Sewage Spill Reduction Action Plan (Submitted October 15, 2008)

SSRAP – Volume II Sewage Spill Reduction Action Plan – Volume II

SWRCB State Water Resources Control Board TCSD Tamalpais Community Services District

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Section 1 Sewer System Cleaning and Root Control Program

1.1 Compliance Order Requirement

The Amended Order for Compliance (Docket No. CWA-309(a)-08-030) Paragraph III.A.3, Sewer System Cleaning and Root Control Program, states as follows:

"Beginning 2009, by October 15 of each year, SASM and the member agencies each shall submit an annual report to EPA documenting activities conducted under that agency's sewer cleaning and root control program during the previous annual cycle, including miles of pipe cleaned as part of the routine and hot spot cleaning programs and miles of pipe treated by each method used for controlling roots. SASM and the member agencies each shall include a description of the success of the sewer cleaning and root control program at preventing blockages and sewage overflows as well as any changes to be made to the program to further reduce spills".

1.2 Annual Report for Sewer System Cleaning and Root Control Program

1.2.1 Activities Completed During Previous Annual Cycle

Fiscal year 2017-2018 was the Alto Sanitary District's ninth year of an organized rotating cleaning program with a goal of cleaning a minimum of one third of the District's ~16,500 feet of sewers each year. This cleaning program was instituted as a comprehensive cleaning program starting in Fiscal year 2009-2010, as budget allowed, and has been revised annually to improve system reliability and reduce SSOs.

Additionally, hot spot sewers including several of the easement sewers known for repeated root intrusions and some of the flat sewer lines with poor grade known for grit accumulation were cleaned at a minimum of once a year. It was found that some of the most problematic pipes could not last one year so the cleaning frequency on these pipes was increased to six-month and, in some cases, four-month schedules. Root control is primarily performed using a combination of hydro flushing and rodding.

The Alto Sanitary District is divided into four cleaning criteria for cleaning purposes: A, B, C and D, with each letter assigned to a frequency. For example, pipes classified A are cleaned every three (3) years, while D is four (4) or six (6) months. This amounts to a three-year maximum cleaning cycle. Some sections of pipe, however, are cleaned on a two-year cycle while others, as stated above, are cleaned more frequently. The cleaning frequency for sections of pipe is revised after major CIP projects or spot repairs. Typically, the sections with newer plastic pipes were set up to be cleaned on a three year flushing schedule unless sag or grease conditions occur in the pipe.

The budget improved in 2016 due to a Proposition 218 rate increase. Completion of the FY16-17 and FY17-18 CIP projects (outlined in Attachment A) have replaced some very problematic sewers pipes. The FY17-18 maintenance reports show 11,580 feet cleaned or 70% of the District total. Cleaning tables for pipe segments are shown in Attachment B.

1.2.2 Description of Success of Sewer Cleaning and Root Control Program

Table 1-1 (below) shows the overall SSO statistics for Alto over the past ten fiscal years for data previously submitted.

Table 3-1: SSO Statistics

Fiscal Year	No. of SSOs	Volume of SSOs (total gallons)
2008-09	5	400
2009-10	6	170
2010-11	0	0
2011-12	1	200
2012-13	5	85
2013-14	2	10
2014-15	2	65
2015-16	2	60
2016-17	0	0
2017-18	1	75

Table 1-2 (below) shows the SSO statistics for root-related SSOs for the past 10 years.

Table 1-2:SSO Statistics for Root-Related SSOs

Fiscal Year	No. of SSOs from Roots	Volume of SSOs (total gallons)
2008-09	5	400
2009-10	6	170
2010-11	0	0
2011-12	0	0
2012-13	5	85
2013-14	2	10
2014-15	2	65
2015-16	2	60
2016-17	0	0
2017-18	0	0

The District has put procedures in place that ensure better consistency in documentation by the cleaning crews. Additionally, the paperwork is now submitted to the Engineer every month for review and entry into the GIS system. The Engineer also re-examines the SSO reports to confirm that they were reported correctly. This helps to ensure the reporting to the state is accurate. Table 1-3 (below) shows CCTV, cleaning, work order and SSO events and the paperwork submittals required.

Alto has converted the Implemented Structured Maintenance Management system to a GIS Database and Map System. The District has been tracking the results of sewer cleaning and has been able to use these results along with sewer inspections and smoke testing to clean, repair and maintain known problems and increase maintenance where on-going maintenance issues are identified. This effort is particularly important because there is not sufficient budget to repair every old sewer in the District at once.

Table 1-3: Paperwork Requirements for Cleaning Records and Emergency Response

ALTO SANITARY DISTRICT CLEANING RECORD and SSO FORM REQUIREMENTS SERVICE CONTRACTOR SUBMITTAL TO DISTRICT							
Cleaning Event	WORK REPORT (INVOICE)	CLEANING PROGRAM REPORT (TABLE)	STOPPAGE FORM	REPAIR REPORT	SSO REPORT-2 PAGES	DISTRICT ACT	TION
Special Cleaning/ CCTV	√	If Required				Review	Annual Summary
Cleaning Program (Seasonal)	√	√				Review	Annual Summary
Stoppage (Emergency)	✓	Check Hot List	✓	If Required	✓	Review	Annual Summary
Repair (Spot/ Emergency)	√	Check Hot List		√	If Required	Review	Annual Summary
SSO (Emergency)	√	Check Hot List	√	If Required	✓	Complete Report	Submit to State
Monthly Reports to District Engineer>	√	√	✓	√	√	GIS MAP Data Entry Quarterly	Verify State Data Correct Bi-Monthly

Alto has seen improvements to the cleaning efficiency as a result of having more effective scheduling maps and information for the field crews as evidenced by a reduced number of SSO's in recent years.

Alto has made significant reductions to I&I as a result of spot repairs and CIP projects targeting the worst lines found though CCTV and Smoke Testing. Many of these areas had significant root intrusion. By repairing these areas the risk of SSOs and major inflows will be significantly reduced.

1.2.3 Program Changes

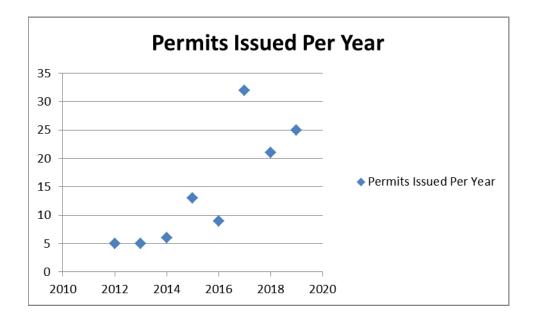
As discussed in Section 1.2.1, in an effort to reduce the spike in SSOs, the cleaning program was modified after the CIP replaced pipes so several pipes were removed from the hotspot. Other old pipes have increased cleaning and are moved to the Hot Spot list as required to ensure roots are removed to reduce SSOs. Also the CCTV of suspect pipes has been increased to monitor problem areas.

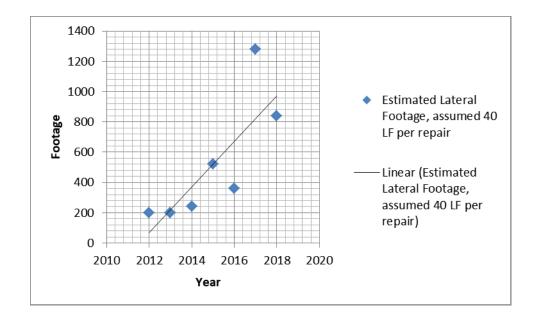
Starting in 2012, Alto Sanitary District implemented a <u>Lateral Repair Permit</u> which allows for more comprehensive tracking of pipe repairs and home remodels, and allows the District to work closely with the County of Marin Building Department to ensure quality pipe repairs are being performed.

In 2015, the Alto Sanitary District implemented a <u>Lateral Ordinance</u> that requires property owners to submit to the District a CCTV lateral inspection whenever homes are sold, remodels valued at \$50,000 or more over a three-year period are undertaken, when the District is repairing sewer mains, and when an overflow or malfunction of the sewer lateral occurs. In FY17/18, thirty-four (34) new Lateral Permits were issued and forty-two (42) Certificates of Compliance were issued for lateral repairs and replacements. Seven (7) lateral permits are pending completion. While laterals are privately owned from the main to the building connection point, the District chose to pro-actively repair all lower laterals as part of the FY17-18 CIP scope of work. This will likely reduce I & I into the collection system.

Previously, the District approved new Rate and Fee Structures to increase revenue to better fund the cleaning, CIP programs, and pending SASM treatment plant improvements. The Rates and Fee were approved by public hearing process, and Ordinances. Ordinance 2016-01 increasing Rates (also called Service Charge) was approved June 22, 2016. Attachment D includes the Ordinance and the FY2017-18 Budget.

Notices to Repair initiated by Home Sales, Remodels, and CIP projects have increased both the footage of repaired lateral pipes repaired each year, as shown in the following two graphs:





Section 2 Pump Station Reliability Certification

2.1 Compliance Order Requirement

The Amended Order for Compliance (Docket No. CWA-309(a)-08-030) Paragraph III.C.4, Pump Station Reliability Certification, states as follows:

"Beginning 2008, by October 15 of each year, SASM and the member agencies each shall submit an annual report to EPA documenting pump station and force main renovations, and upgrades during the previous year and describing projects to be completed in the coming annual cycle."

2.2 Annual Report for Pump Station Reliability Certification

This annual report does not pertain to Alto Sanitary District since Alto does not own or operate any pump stations.

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Section 3 Sewer Pipe and Maintenance Hole Inspection and Condition Assessment

3.1 Compliance Order Requirement

The Amended Order for Compliance (Docket No. CWA-309(a)-08-030) Paragraph IV.A.3, Sewer Pipe and Maintenance Hole Inspection and Condition Assessment, states as follows:

"By October 15, 2009, SASM and the member agencies each shall submit an annual progress report to EPA summarizing the inspection methods and findings of the sewer pipe condition assessments conducted during the previous year and the estimated miles of sewer pipe and number of maintenance holes to be inspected during the current year."

3.2 Annual Report for Sewer Pipe and Maintenance Hole Inspection and Condition Assessment

3.2.1 Sewer Condition Assessment Findings of FY2017-18

The FY 2017-18 cleaning and inspection crews worked on and submitted reports for approx. 11,580 lin. feet of pipe. This indicates 70% of the District's facilities were cleaned in this time period.

By keeping a consistent maintenance schedule and a consistent program of annual inspection through CCTV and Smoke Testing, the District is confident that it will continue to be in compliance with the original EPA Order recommendations.

This information is used on an annual basis as part of the criteria for defining the Capital Improvement Projects for the District short term and long term programs and budgets. See Attachment A.

Annual Cleaning and CIP projects trigger regular re-evaluations and changes to the CIP. Urgent problems are dealt with under emergency action.

3.2.2 Inspection Plan for Next Annual Cycle

Alto has inspected most of the gravity sewer pipes at least twice now. CCTV work is ongoing as a critical tool for minimizing SSOs.

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Section 4 Flow Monitoring Results

4.1 Compliance Order Requirement

The Amended Order for Compliance (Docket No. CWA-309(a)-08-030) Paragraph IV.B.2, Capacity Assessment, states as follows:

"By October 15, 2009 and each year thereafter, SASM and the member agencies each shall submit a report to EPA providing the results of collection system flow monitoring, including average dry weather flow and peak wet weather flow from each of the member agency collection systems."

4.2 Annual Report of Flow Monitoring Results

Flow monitoring was completed through a joint effort with SASM and documented in <u>The 2014-2015</u> Sewer Flow Data RDII Evaluation by ADS Environmental Services. The report is available directly from SASM.

Preliminary results from the flow studies and modeling have been used to guide CIP projects, including pipe repairs and the SASM owned Sutton Manor pump station on Lomita Drive. The Sutton Manor pump station pumps all the sewage from Alto Sanitary District to the treatment plant.

SASM has rebuilt the pump station on Lomita Drive now and installed a new flow meter, so Alto flows can be reviewed continuously now and into the future.

Assumed Condition	Gallons Flow Per EDU (Assumed - gal per day)	Method: EDUs Billed, Measured or Calculated	Volume of Flow (Total MGD)
Design Standard for New Pipes Average Usage	180	581 EDUs	0.1046
Observed Average Usage*	153.5	581 EDUs	0.0892
Estimated ADDWF	121	581 EDUs	0.0705
Observed Peak Flows**	132	Flow Meter	0.075
Calculated ADWWF-			
Storm Event**	464	Calculated	0.270

Table 4-1: Calculated and Tabulated Flow Statistics (Previously Reported)

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^(*) Flow measurements from Marin Municipal Water District SASM Bi-monthly report, converted from 13.25 CCF (hundred cubic feet) and estimated winter 10.0 CCF usage for Alto residents.

^(**) Data from the RDII report with 755 EDUs measured which includes approximately 187 Mill Valley EDUs resulted in the flow value of 0.10 measured and reported in the **2014-2015 Sewer Flow Data RDII Evaluation** is approximately 25% too high. ADWWF is a calculated value using the average Alto peaking factors of 3.5:1 as listed in the referenced flow evaluation.

Section 5 Infrastructure Renewal Program

5.1 Compliance Order Requirement

The Amended Order for Compliance (Docket No. CWA-309(a)-08-030) Paragraph VI.B, Infrastructure Renewal, states as follows:

Beginning 2008, by October 15 of each year, SASM and the member agencies each shall submit an annual report to EPA documenting sewer repair, rehabilitation or replacement activities completed in the previous year; describing projects to be completed in the coming annual cycle; and providing the current 10-year Capital Improvement Plan (CIP) and any updates to that CIP.

5.2 Annual Report for Infrastructure Renewal Program

As repairs are made to the District's infrastructure, progress is documented. Planning for the Infrastructure Renewal Program is determined by the number of feet of pipe that <u>have</u> been rehabilitated or replaced and by the number of feet that <u>will</u> be rehabilitated or replaced, as well as by the number of maintenance holes repaired, rehabilitated, or replaced. Project progress and plans are documented by Fiscal Year.

5.2.1 Sewer Repair, Rehabilitation and Replacement Activities Completed

Table 5-1 lists repairs and replacements completed in previous cycles totaling about 3,113 LF to date.

Fiscal Year	Structure ID	Location	Description
CIP 2015-16	MH110.03-MH111.01	Easement	Islamic Center Main
CIP 2016-17	MH111.11-MH111.01	Easement	Shell-Lomita Easement
CIP 2016-17	MH111.05-MH111.01	Easement	Shell-Lomita Easement
CIP 2016-17	MH211.01-MH211.03	Easement	Shell-Lomita Easement
CIP 2016-17	RH211.33-MH211.03	Easement	Shell-Lomita Easement
CIP 2016-17	RH211.03-MH211.03	Easement	Shell-Lomita Easement
CIP 2017-18	MH213.03-MH213.05	Street	Lomita Dr
CIP 2017-18	MH213.05-MH213.07- RH213.09	Easement	Lomita Dr
CIP 2017-18	MH300.05-MH301.11- RH301.15	Easement	Central Dr
CIP 2017-18	MH330.01-MH330.03- RH330.05	Street	Neila Wy
CIP 2017-18	MH330.03-RH330.11	Street	Crystal Ct

Table 5-1: Pipe and Structure Repairs Performed in Prior Years

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5.2.2 Projects Planned for Completion Next Annual Cycle

During FY 2017-18, the CIP budget was expanded to approx. \$326,750. The projected CIP budget for each of the next five years will be +/-\$350,000. This funding will go to sewer main replacements. Current fees will allow rehabilitation to be projected forward as a flat budget with annual costs of construction increasing each year.

The District has identified and prioritized the sewer repair, rehabilitation, and replacement projects that are required to restore the collection system to a sound status over the next 20 to 25 years. Currently, Alto has plans for sewer repair/rehabilitation ranging annually from 500 feet to 1000 feet of pipe. In FY17-18 Alto planned for approximately 525 feet of sewer pipes to be replaced but was actually able to complete over 1200 LF of repairs due to a favorable bid price.

Alto has prepared a CIP List of rehabilitation needs with a plan projected for the next 11 years (see Attachment A.) The prior replacement schedule was accelerated due to previous projects completing more than the anticipated footage.

5.2.3 Current Long-Term CIP for Gravity Sewers

The Alto CIP long-term plan and CIP budget projected costs presented here are for Alto capital needs only and do not include any details of the costs of the SASM treatment plan improvements proposed. These estimated costs were incorporated into the 218 rate increase completed previously.

The nature of how the Capital Improvement Project pipes are laid out in the district may require spending to increase or decrease in alternating fiscal years between 500 ft and 1000 ft replacement cycles. At that rate, the District pipe CIP schedule will have all the pipes replaced on a 50 year life cycle.

Since the FY2017-18 CIP bid price was better than expected, the District maximized the scope of the project. Lateral Ordinance administration time and costs were larger than expected, though. Therefore, more funding was spent on the CIP than previously planned. Fortunately, fees for private lateral permits seem to be covering the District's administration expenses. Next year, savings for reserves and SASM increases may result in adjustments to the CIP funding.

Finally, the District has begun paying for an estimated \$27M SASM treatment plant upgrade. By EDU count, Alto is 3.57% of SASM which results in a District liability of \$600,000 to \$1,000,000 for the proposed treatment plant improvements. The actual costs and the terms for repayment will be realized as the project proceeds.

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Attachments for Alto Sanitary District FY2017-18 Sewage Spill Reduction Action Plan

ATTACHMENT A

Alto Sanitary District Capital Improvement Project (CIP) List

Alto Sanitary District Pipe Table

Alto Sanitary District

Capital Improvement Project (CIP) Planning To FY2028/29

NOTES:

_Present Value Level Budgeting Projection

_District Total Pipe Footage ~ 16,500 LF

HISTORY:

_District previously replaced ~3,600 LF (~10 years or less new heavy guage plastic)

_Developer installed Central Court in 1986 ~29 years old ~2,150 LF (SDR 35 light guage plastic)

_Remaining pipe to replace: 9,229 LF (not counting Central Court)

GOALS:

_Replace 9,229 LF by 2029. Yearly average = 769 LF

_Estimated Pipe Cost/Ft + 30% Contingencies =

Easemment \$364 Street \$455

Fiscal Year	Sewer Segments	Easement/Street	Footage	Cost	Budget (including	Running	Action/Notes
				(estimate/ft)	35% contingencies)	Total	(Planned, Completed
							Hold)
2017/18	213.07-213.05	Easement	120	\$364	\$43,532		Completed 2017/18
2017/18	213.09-213.07	Easement	78	\$364	\$28,299		Completed 2017/18
2017/18	213.05-213.04	Easement	161	\$364	\$58,466		Completed 2017/18
2017/18	330.05-330.03	Street	173	\$455	\$78,544		Completed 2017/18
2017/18	330.03-330.01	Street	196	\$455	\$89,234		Completed 2017/18
2017/18	330.11-330.03	Street	132	\$455	\$59,851		Completed 2017/18
2017/18	301.11-300.05	Easement	84	\$364	\$30,487		Completed 2017/18
2017/18	301.15-301.11	Easement	226	\$364	\$82,415		Completed 2017/18
FY 2017/18 T	otal		1,168		\$470,828	\$470,828	
2018/19	330.01-300.07	Street	145	\$455	\$65,975		Planned 2018/19
2018/19	330.21-330.01	Street	86	\$455	\$39,149		Planned 2018/19
2018/19	211.01-SM17	Easement/SASM	341	\$364	\$124,124		Planned 2018/19
2018/19	310.01-300.07	Easement	150	\$364	\$54,600		Planned 2018/19
2018/19	310.03-310.01	Easement	240	\$364	\$87,381		Planned 2018/19
2018/19	310.05-310.03	Easement	35	\$364	\$12,629		Planned 2018/19
FY 2018/19 T	otal		997		\$383,857	\$854,686	
2019/20	323.01-320.01	Street	166	\$455	\$75,530		Planned
2019/20	323.03-323.01	Street	143	\$455	\$65,065		Planned
2019/20	321.01-320.01	Street	296	\$455	\$134,817		Planned
2019/20	322.01-320.01	Street	260	\$455	\$118,300		Planned
FY 2019/20 T	otal		865		\$393,712	\$1,248,398	
2020/21	301.05-301.03	Easement	79	\$364	\$28,753		Planned
2020/21	301.03-301.01	Easement	183	\$364	\$66,697		Planned
2020/21	301.01-300.01	Easement	23	\$364	\$8,493		Planned
2020/21	301.17-301.05	Easement	234	\$364	\$85,199		Planned
2020/21	301.19-301.17	Easement	167	\$364	\$60,863		Planned
2020/21	301.21-301.19	Easement	162	\$364	\$59,073		Planned
FY 2020/21 T		Lasement	849	730 1	\$309,077	\$1,557,475	riamica
1 2020, 22 1	ota.		0.13		4303,017	41,007,470	
2021/22	110.03-110.01	Street	307	\$455	\$139,541		Planned
2021/22	110.01-L18	Street	274	\$455	\$124,749		Planned
FY 2021/22 T		3	581	÷ 133	\$264,289	\$1,821,765	· .amica
					, - ,	. ,- ,	
2022/23	110.05-110.03	Street	349	\$455	\$158,810		Planned
2022/23	110.07-110.05	Street	161	\$455	\$73,262		Planned
2022/23	212.01-SM15	Street	344	\$455	\$156,668		Planned
FY 2022/23 T			854		\$388,739	\$2,210,504	
-					· ·		
	242 02 242 04	Street	248	\$455	\$113,004		Planned
2023/24	212.03-212.01	3000	240	7 - 733	\$113,00 4		i iaiiiicu
2023/24 2023/24	212.03-212.01 212.09-212.07	Street	126	\$455	\$57,188		Planned

Alto Sanitary District

Capital Improvement Project (CIP) Planning To FY2028/29

Y 2023/24 T	otal		550		\$250,056	\$2,460,559	
2024/25	213.03-213.01	Street	467	\$455	\$212,365		Planned
2024/25	213.01-212.09	Street	226	\$455	\$103,025		Planned
FY 2024/25 To	otal		693		\$315,389	\$2,775,949	
2025/26	300.07-300.05	Street	139	\$455	\$63,401		Planned
2025/26	300.05-300.03	Street	115	\$455	\$52,265		Planned
2025/26	300.03-300.01	Street	49	\$455	\$22,287		Planned
2025/26	320.01-300.07	Street	406	\$455	\$184,851		Planned
FY 2025/26 To	otal		709		\$322,804	\$3,098,753	
2026/27	211.21-211.01	Street	239	\$455	\$108,738		Planned
2026/27	211.31-211.01	Street	299	\$455	\$136,249		Planned
2026/27	211.33-211.31	Street	244	\$455	\$110,850		Planned
FY 2026/27 To	otal		782		\$355,838	\$3,454,591	
2027/28	200.19-200.15	Street	250	\$455	\$113,775		Planned
2027/28	200.15-SM12	Street	67	\$455	\$30,285		Planned
2027/28	200.25-200.23	Easement	142	\$364	\$51,846		Planned
2027/28	200.27-200.25	Easement	30	\$364	\$10,881		Planned
2027/28	200.23-200.21	Easement	216	\$364	\$78,788		Planned
2027/28	120.10-L17A	Street	179	\$455	\$81,394		Planned
FY2027/28 To	otal		884		\$366,971	\$3,821,562	
2028/29	300.01-200.27	Crossing	295	\$1,500	\$443,198		Dlannad
, -		Crossing		\$1,500		A4 264 772	Planned
FY 2028/29 T	otai		295		\$443,198	\$4,264,759	
Grand Total:			9,229			\$4,264,759	

Alto Sanitary District CIP Pipe Table

CIP TABLE							
ID	CIP_FY	Diameter	Material	Length			
322.39-322.33	1985/86	6	PVC	93			
322.28-322.27	1985/86	6	PVC	91			
322.03-322.01	1985/86	6	PVC	49			
322.35-322.36	1985/86	6	PVC	135			
322.05-322.03	1985/86	6	PVC	54			
322.07-322.05	1985/86	6	PVC	152			
322.11-322.05	1985/86	6	PVC	131			
322.13-322.11	1985/86	6	PVC	177			
322.23-322.11	1985/86	6	PVC	162			
322.15-322.11	1985/86	6	PVC	98			
322.17-322.15	1985/86	6	PVC	49			
322.34-322.33	1985/86	6	PVC	67			
322.19-322.17	1985/86	6	PVC	74			
322.21-322.15	1985/86	6	PVC	154			
322.09-322.07	1985/86	6	PVC	90			
322.25-322.01	1985/86	6	PVC	62			
322.27-322.25	1985/86	6	PVC	53			
322.37-322.28	1985/86	6	PVC	167			
322.29-322.27	1985/86	6	PVC	87			
322.31-322.29	1985/86	6	PVC	52			
322.33-322.31	1985/86	6	PVC	51			
322.36-322.34	1985/86	6	PVC	95			
220.05-220.13	2004/05	8	PVC	183			
220.03-220.13	2004/05	8	PVC	34			
220.13-220.11	2004/05	8	PVC	315			
220.11-SM12	2004/05	8	PVC	360			
220.15-220.03	2004/05	8	PVC	297			
220.17-220.15	2004/05	8	PVC	279			
220.21-220.19	2004/05	8	PVC	309			
220.19-220.17	2004/05	8	PVC	275			
213.21-213.04	2006/07	8	PVC	112			
213.04-213.03	2006/07	8	PVC	34			
213.31-213.03	2006/07	8	PVC	139			
200.21-200.19	2009/10	8	PE	281			
330.23-330.21	2013/14	6	PE	243			
213.41-213.40	2013/14	6	PE	237			
213.43-213.41	2013/14	6	PE	147			
120.11-120.10	2013/14	6	PE	201			
120.12-L19	2013/14	6	PE	73			
213.40-213.01	2013/14	6	PE	62			
111.01-110.03	2015/16	6	VCP & PVC	205			
	(Partial)		C-900				
211.03-211.01	2016/17	6	PE	213			
211.11-211.03	2016/17	6	PE	228			

Alto Sanitary District CIP Pipe Table

CIP TABLE							
ID	CIP_FY	Diameter	Material	Length			
211.13-211.11	2016/17	6	PE	46			
211.07-211.05	2016/17	6	PE	149			
111.05-111.03	2016/17	6	PE	218			
111.11-111.01	2016/17	6	PE	225			
111.03-111.01	2016/17	6	VCP	245			
211.05-211.04	2016/17	6	PE	70			
211.04-211.03	2016/17	6	PE	221			
213.07-213.05	2017/18	6	VCP	120			
213.09-213.07	2017/18	6	VCP	78			
213.05-213.04	2017/18	6	VCP	161			
330.03-330.01	2017/18	6	VCP	196			
330.05-330.03	2017/18	6	VCP	173			
330.11-330.03	2017/18	6	VCP	132			
301.11-300.05	2017/18	6	VCP	84			
301.15-301.11	2017/18	6	VCP	226			
330.01-300.07	2018/19	6	VCP	145			
330.21-330.01	2018/19	6	VCP	86			
211.01-SM17	2018/19	6	VCP	341			
310.01-300.07	2018/19	6	VCP	150			
310.03-310.01	2018/19	6	VCP	240			
310.05-310.03	2018/19	6	VCP	35			
323.01-320.01	2019/20	6	VCP	166			
323.03-323.01	2019/20	6	VCP	143			
321.01-320.01	2019/20	6	VCP	296			
322.01-320.01	2019/20	6	VCP	260			
301.05-301.03	2020/21	6	VCP	79			
301.03-301.01	2020/21	6	VCP	183			
301.01-300.01	2020/21	6	VCP	23			
301.17-301.05	2020/21	6	VCP	234			
301.19-301.17	2020/21	6	VCP	167			
301.21-301.19	2020/21	6	VCP	162			
110.03-110.01	2021/22	6	VCP	307			
110.01-L18	2021/22			274			
110.05-110.03	2022/23	6	VCP	349			
110.07-110.05	2022/23	6	VCP	161			
212.01-SM15	2022/23	6	VCP	344			
212.03-212.01	2023/24	6	VCP	248			
212.09-212.07	2023/24	6	VCP	126			
212.07-212.03	2023/24	6	VCP	176			
213.03-213.01	2024/25	6	VCP	467			
213.01-212.09	2024/25	6	VCP	226			
300.07-300.05	2025/26	6	VCP	139			
300.05-300.03	2025/26	6	VCP	115			
300.03-300.01	2025/26	6	VCP	49			

Alto Sanitary District CIP Pipe Table

CIP TABLE								
ID	CIP_FY	Diameter	Material	Length				
320.01-300.07	2025/26	6	VCP	406				
211.21-211.01	2026/27	6	VCP	239				
211.31-211.01	2026/27	6	VCP	299				
211.33-211.31	2026/27	6	VCP	244				
200.19-200.15	2027/28	8	VCP	250				
200.15-SM12	2027/28	8	VCP	67				
200.25-200.23	2027/28	8	VCP	142				
200.27-200.25	2027/28	8	VCP	30				
200.23-200.21	2027/28	8	VCP	216				
120.10-L17A	2027/28	6	VCP	179				
300.01-200.27	2028/29	8	PVC	295				

Total Length: 16,775

Attachments for Alto Sanitary District FY2017-18 Sewage Spill Reduction Action Plan

ATTACHMENT B

Alto Sanitary District Sewer Cleaning Map

Alto Sanitary District Pipe Cleaning Schedule

EXHIBIT: CLEANING MAP 101 <u> 24</u> <u>22</u> <u>20</u> 21 23 25 27 220.17 29 31 33 106 23 19 30 4 56 52 50 48 67 63 61 59 57 55 53 51 47 45 43 41 <u>74</u> <u>76</u> 36 34 32 30 28 26 24 22 20 18 16 14 37 35 33 31 29 27 25 23 21 19 17 15 ₇ <u>21</u> 81 815819 829₈₃₃839 849 855 Legend **ALTO SANITARY DISTRICT Nute Engineering** B - Two-years 907 Mission Avenue San Rafael, California 350 Feet SCALE: Drawn by: FGS TEL: 415-453-4480

FAX: 415-453-0343

Checked by: DS

Date: 10/15/2018

E - Five-months

Other Districts

Alto Sanitary District Cleaning Schedule

ID*	Length	Dia.	Material	Yr Replaced	Cleaning Code	Cleaning Freq	Page
111.03-111.01	245	6	HDPE	2017	А	Three-years	A2
111.05-111.03	218	6	HDPE	2017	А	Three-years	A2
111.11-111.01	225	6	HDPE	2017	Α	Three-years	A2
120.10-L17A	179	6	VCP		Α	Three-years	A2
120.11-120.10	201	6	HDPE		Α	Three-years	A2
120.12-L19	73	6	HDPE		Α	Three-years	A2
200.21-200.19	281	8	HDPE	2010	А	Three-years	В3
200.27-200.25	30	8	PVC		Α	Three-years	В3
211.03-211.01	213	6	HDPE	2017	Α	Three-years	A3
211.04-211.03	221	6	HDPE	2017	Α	Three-years	A2/B2
211.05-211.04	70	6	HDPE	2017	Α	Three-years	B2
211.07-211.05	149	6	HDPE	2017	Α	Three-years	B2
211.11-211.03	228	6	HDPE	2017	А	Three-years	A2
211.13-211.11	46	6	HDPE	2017	Α	Three-years	A2
213.04-213.03	34	8	PVC	2011	Α	Three-years	B2
213.05-213.04	161	6	HDPE	2018	А	Three-years	B2
213.07-213.05	120	6	HDPE	2018	Α	Three-years	B2
213.09-213.07	78	6	HDPE	2018	А	Three-years	B2
213.21-213.04	112	8	PVC		Α	Three-years	B2
213.31-213.03	139	8	PVC		Α	Three-years	B2
213.41-213.40	237	6	HDPE		А	Three-years	B2
213.43-213.41	147	6	HDPE		А	Three-years	B2
220.03-220.13	34	8	PVC		Α	Three-years	В3
220.05-220.13	183	8	PVC		Α	Three-years	В3
220.11-SM12	360	8	PVC		А	Three-years	A3/B3
220.13-220.11	315	8	PVC		А	Three-years	В3
220.15-220.03	297	8	PVC	2007	А	Three-years	В3
220.17-220.15	279	8	PVC	2007	А	Three-years	В3
220.19-220.17	275	8	PVC	2008	А	Three-years	B2/B3
220.21-220.19	309	8	PVC	2008	А	Three-years	B2
300.01-200.27	295	8	PVC		А	Three-years	В3
301.11-300.05	84	6	HDPE	2018	Α	Three-years	В3
301.15-301.11	226	6	HDPE	2018	А	Three-years	В3
322.03-322.01	139	6	VCP		Α	Three-years	B2
322.05-322.03	79	6	PVC		Α	Three-years	B2
322.07-322.05	152	6	PVC		А	Three-years	B2
322.09-322.07	90	6	PVC		Α	Three-years	B2
322.11-322.05	131	6	PVC		Α	Three-years	B2
322.13-322.11	177	6	PVC		Α	Three-years	B2
322.15-322.11	98	6	PVC		Α	Three-years	B2
322.17-322.15	49	6	PVC		Α	Three-years	B2
322.19-322.17	74	6	VCP		Α	Three-years	B2
322.21-322.15	154	6	PVC		А	Three-years	B2

Alto Sanitary District Cleaning Schedule

ID*	Length	Dia.	Material	Yr Replaced	Cleaning Code	Cleaning Freq	Page
322.23-322.11	162	6	PVC		А	Three-years	B2
322.25-322.01	44	6	PVC		А	Three-years	B2
322.27-322.25	53	6	PVC		А	Three-years	B2
322.28-322.27	91	6	PVC		А	Three-years	B2
322.29-322.27	87	6	PVC		А	Three-years	B2
322.31-322.29	52	6	PVC		А	Three-years	B2/B3
322.33-322.31	51	6	PVC		А	Three-years	B2/B3
322.34-322.33	67	6	PVC		А	Three-years	B2/B3
322.35-322.36	135	6	PVC		А	Three-years	B2
322.36-322.34	95	6	PVC		А	Three-years	B2
322.37-322.28	167	6	PVC		А	Three-years	B2
322.39-322.33	93	6	PVC		А	Three-years	B2/B3
322.40-322.01	75	6	PVC		А	Three-years	<null></null>
322.42-322.40	101	6	PVC		А	Three-years	<null></null>
330.03-330.01	196	6	HDPE	2018	А	Three-years	В3
330.05-330.03	173	6	HDPE	2018	А	Three-years	В3
330.11-330.03	132	6	HDPE	2018	А	Three-years	В3
330.23-330.21	243	6	HDPE	2013	А	Three-years	В3
300.03-300.01	49	6	PVC	1995	А	Three-years	В3
300.05-300.03	115	6	VCP		В	Two-years	В3
300.07-300.05	139	6	VCP		В	Two-years	В3
320.01-300.07	406	6	VCP		В	Two-years	В3
322.01-320.01	146	6	VCP		В	Two-years	B2/B3
213.40-213.01	62	6	VCP		С	One-year	B2
200.15-SM12	67	8	VCP		С	One-year	A3/B3
200.19-200.15	250	8	VCP		С	One-year	В3
200.23-200.21	216	8	VCP		С	One-year	В3
200.25-200.23	142	8	VCP		С	One-year	В3
211.01-SM17	341	6	VCP		С	One-year	A3
211.21-211.01	239	6	VCP		С	One-year	A3
211.31-211.01	299	6	VCP		С	One-year	A3/B3
211.33-211.31	244	6	VCP		С	One-year	B2/B3
212.01-SM15	344	6	VCP		С	One-year	A3/B3
212.03-212.01	248	6	VCP		С	One-year	В3
213.03-213.01	467	6	VCP		С	One-year	B2
301.01-300.01	23	6	VCP		С	One-year	В3
301.03-301.01	183	6	VCP		С	One-year	В3
301.05-301.03	79	6	VCP		С	One-year	В3
301.17-301.05	234	6	VCP		С	One-year	В3
301.19-301.17	167	6	VCP		С	One-year	В3
301.21-301.19	162	6	VCP		С	One-year	В3
321.01-320.01	296	6	VCP		С	One-year	B2/B3
323.01-320.01	166	6	VCP		С	One-year	В3

Alto Sanitary District Cleaning Schedule

ID *	Length	Dia.	Material	Yr Replaced	Cleaning Code	Cleaning Freq	Page
323.03-323.01	143	6	VCP		С	One-year	В3
330.01-300.07	145	6	VCP		С	One-year	В3
330.21-330.01	86	6	VCP		С	One-year	В3
110.05-110.03	349	6	VCP		D	Six-months	A2/A3
110.07-110.05	161	6	VCP		D	Six-months	A3
212.07-212.03	176	6	VCP		D	Six-months	В3
212.09-212.07	126	6	VCP		D	Six-months	В3
213.01-212.09	226	6	VCP		D	Six-months	B2/B3
310.01-300.07	150	6	VCP		D	Six-months	В3
310.03-310.01	240	6	VCP		D	Six-months	В3
310.05-310.03	35	6	VCP		D	Six-months	В3
110.01-L18	274	8	VCP		E	Five-months	A3
110.03-110.01	307	6	VCP		E	Five-months	A2/A3
111.01-110.03	205	6	VCP & PVC C-	2016	E	Five-months	A3
			900	Partial			

Attachments for Alto Sanitary District FY2017-18 Sewage Spill Reduction Action Plan

ATTACHMENT C

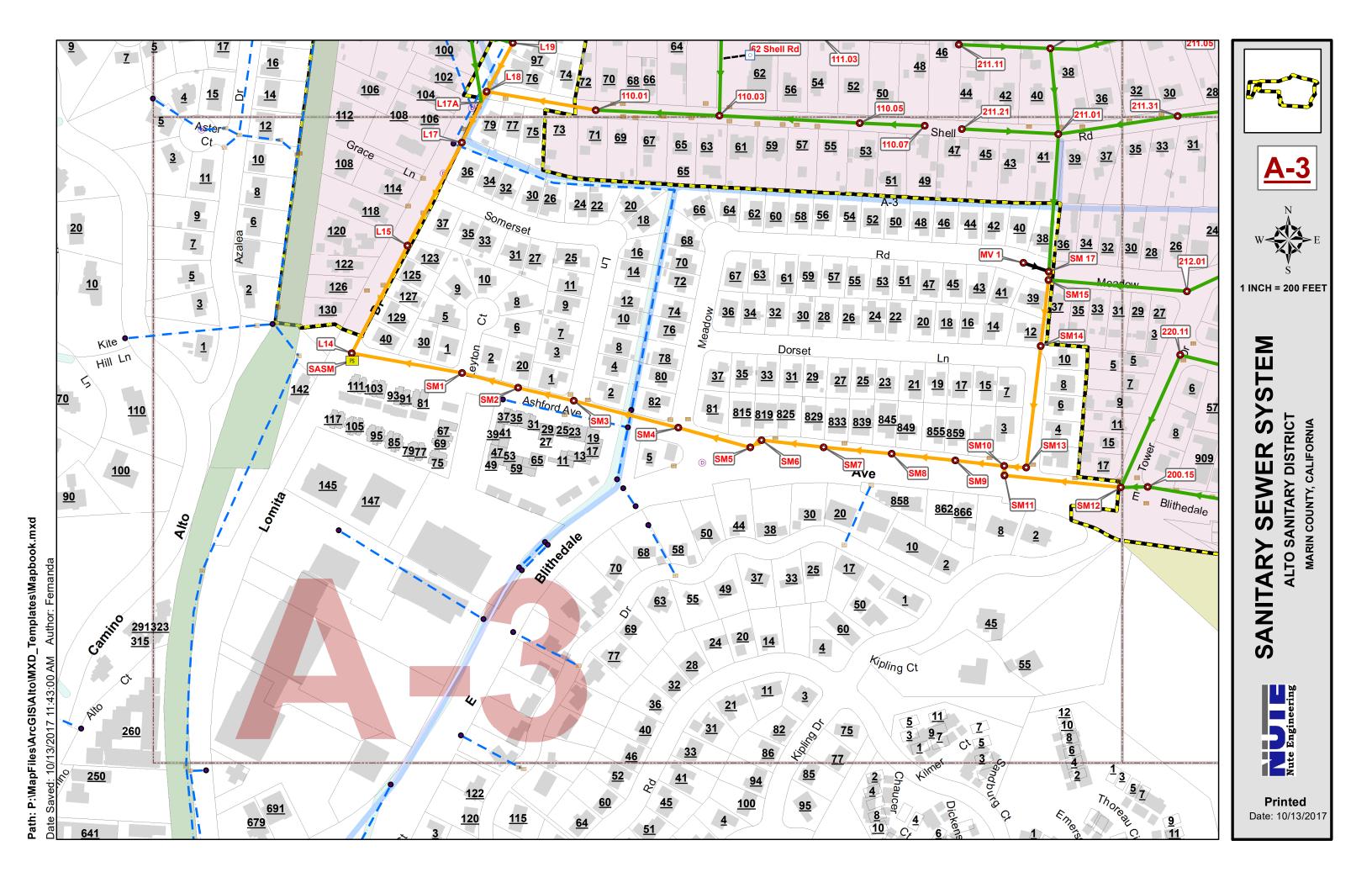
Sanitary Sewer System KEY Map

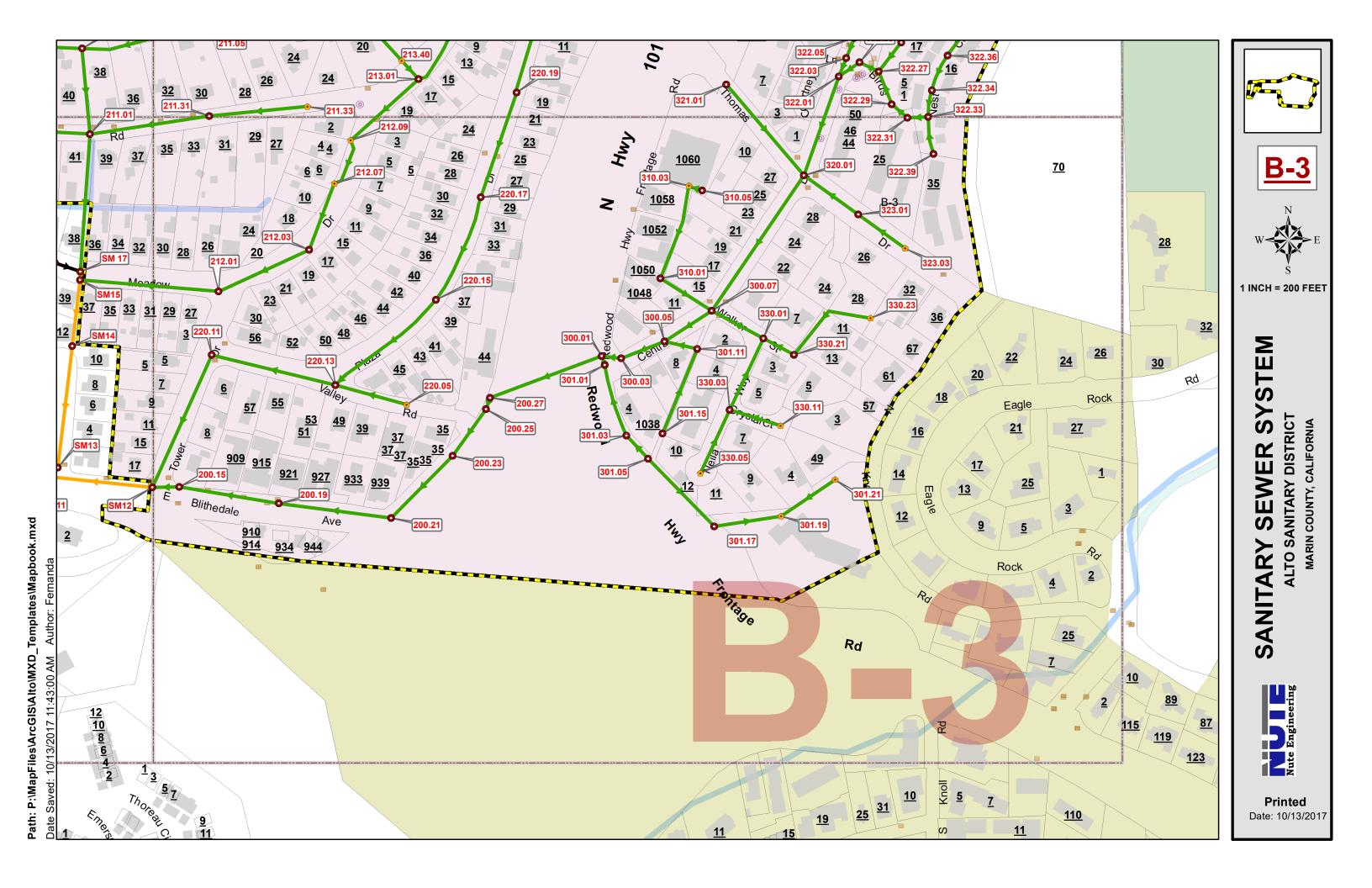
Sanitary Sewer System page A-2

Sanitary Sewer System page A-3

Sanitary Sewer System page B-2

Sanitary Sewer System page B-3





Attachments for Alto Sanitary District FY2017-18 Sewage Spill Reduction Action Plan

ATTACHMENT D

Alto Sanitary District Ordinance 2016-01

Alto Sanitary District FY2017-18 Budget

ORDINANCE NO. 2016-01

ORDINANCE OF THE ALTO SANITARY DISTRICT BOARD OF DIRECTORS ESTABLISHING THE RATE OF THE ANNUAL SEWER SERVICE CHARGE LEVIED ON IMPROVED PROPERTIES IN THE DISTRICT

SECTION I. FINDINGS:

WHEREAS, the Alto Sanitary District, operating as a public agency, provides services required to fulfill its mandate to operate and maintain an adequate wastewater collection system, to prevent sewer overflows and to pay for treatment and disposal of the wastes generated by that system;

WHEREAS, the District must pay for the administration, operation and maintenance of the District's wastewater collection system;

WHEREAS, the cost of wastewater treatment and disposal by the Sewerage Agency of Southern Marin (SASM) has dramatically increased and SASM has also added \$30 million dollars of planned capital improvements, which have resulted in increased costs to Alto;

WHEREAS, the District must fund the planned repair and replacement of the District's collection system;

and

WHEREAS, the District has a responsibility to provide sufficient reserves to fund unforeseen emergencies;

THEREFORE BE IT ORDAINED that the Board of Directors of the Alto Sanitary District ordain as follows:

SECTION II. Ordinance:

Based on the financial needs of the Sanitary District, the annual Sewer Service Charge levied per Equivalent Dwelling Unit (EDU) on improved properties in the District is hereby established to be;

> \$1,100 for the fiscal year beginning July 1, 2016; \$1,250 for the fiscal year beginning July 1, 2017; \$1,500 for the fiscal year beginning July 1, 2018;

And will remain at \$1,500 until such time that the Board of Directors ordains otherwise.

SECTION III. Compliance with Proposition 218

The Board of Directors hereby determine that the charge set forth above is reasonable and reflects the cost of providing services based on the following findings:

- 1. Revenues derived from the increase shall not exceed the funds required to provide the property related service;
- 2. Revenues derived from the increase shall not be used for any purpose other than for which the increase is imposed;
- 3. The amount of the increase imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel;
- 4. No charge shall be imposed for a service unless the service is actually used by, or available to the owner of the property in question; and
- 5. No charge may be imposed for general governmental services including but not limited to police, fire, ambulance or library services where the service is available to the public at large in substantially the same manner as it is to the property owners.

SECTION IV. Effective Date

This ordinance shall be and is hereby declared to be in full force and effect as of thirty (30) days from and after the date of its passage and shall be published once before the expiration of fifteen (15) days after its passage, with the names of the supervisors voting for and against the same in the MARIN INDEPENDENT JOURNAL, a newspaper of general circulation published in the County of Marin.

PASSED AND ADOPTED at a regular meeting of the Board of Directors of the Alto Sanitary District held on this **22nd** day of **June**, **2016**, by the following vote:

AYES: 5	-
NOES:	_ ·
ABSENT:	-
ATTEST:	President, of the Board
ATTEST:	Stanley Bransgrove Vocha - ornerva Secretary/Treasurer

Alto Sanitary District

Budget for Fiscal Year 2017-18 as Adopted 06/28/17

Revenue				
Item		FY16-17 Proj	FY17-18 Budget	%
Operating Revenue				
Program Revenues (Sewer Service C	harges)	539,126	695,870	129%
Franchise Fees (MVRS)		14,071	13,500	96%
Marin Housing Authority Sewer Fee		61,600	61,600	100%
Permits & Fees	_	35,804	10,000	28%
	Operating Revenue:	650,601	780,970	120%
Non-Operating Revenue				
Property Taxes		46,505	46,000	99%
Excess ERAF		20,841	16,500	79%
Aid from Govt Agencies (HOPTR)		164	250	152%
Interest		478	500	105%
	Non-Operating Revenue:	67,988	63,250	93%
	Total Revenue:	718,589	844,220	117%
Expenses				
Sewage Treatment				
Sewage Treatment SASM	_	202,314	258,764	128%
	Sewage Treatment:	202,314	258,764	128%
Sewer System Maintenance				
Cleaning		24,809	25,000	101%
Televising Program		208	1,600	769%
Repairs		402	9,500	2363%
Lateral Rehab Prog (Inspections)		0	1,000	
Underground Service Alert		9,523	7,500	79%
Unscheduled Services		5,107	0	
	Sewer System Maintenance:	40,049	44,600	111%
Professional Services	•	•	·	
Marin County Admin Fees		0	1,200	
LAFCO Dues		442	•	102%
Marin County Encroachment Fee		490		100%
CSDA Dues		0	2,000	
PO Box Fee		106	·	100%
SWRCB		2,088	2,100	
Underground Service Alerts Fees		2,000	263	101/0
Audit		6,000		100%
Bookkeeping		1,119	1,000	89%
· •				
Legal		1,443	•	170%
MarinMap Membership Share		0	3,875	1750/
Engineering (GIS,EPA,SSMP)		2,860	5,000	
Engineering (Lateral Oversight)		19,272	20,000	
Engineering (Other)	-	1,703		176%
Consulting (Former Mgr)	<u>-</u>	320	0	0%
	Professional Services:	35,843	47,934	134%

1 of 2 7/12/2017

Alto Sanitary District

Budget for Fiscal Year 2017-18 as Adopted 06/28/17

Administration Costs			
Insurance: CSRMA	886	886	100%
Election Notices and Fees	39	39	100%
Office Expenses (Postage, Printing, Supplies)	1,254	1,363	109%
Utilities (Cell Phone, Office Phone, Website)	1,219	1,211	99%
Miscellaneous (Parking, Mileage)	0	0	
Administration Costs:	3,398	3,499	103%
Payroll Expenses			
Payroll for Manager	34,500	36,000	104%
Stipends for Board (includes YTD Special Mtgs)	7,550	9,000	119%
Management of Special Projects		20,000	
Employer Taxes	3,780	4,252	112%
Payroll Service	1,005	1,100	109%
Payroll Bank Account Fees	48	50	104%
Payroll Expenses:	46,883	70,402	150%
Total Operating Expenses:	328,487	425,199	129%
Net Operations (Revenue - Expenses):	390,102	419,021	107%
CIP Program/Rehabilitation			
Line 111.01-110.03 (Islamic Cntr Parking Lot)	57,230	0	
Replacement of Main In Easements	49,303	318,386	
Capital Improvement Projects (TBD)	0	0	
CIP Expense:	106,533	318,386	299%
Net Operations - CIP Expense:	283,569	100,635	
Net Change to Fund Balances	283,569	100,635	
Contribution to Reserve Fund:	0	0	
Reserve Fund Balance: \$500K-\$800K Target (Year End Amount)	217,025	217,025	
Estimated Balance for Capital Improvement Projects:	283,569	384,204	

2 of 2 7/12/2017