

TO: BOARD OF DIRECTORS
FROM: BRUCE BUEL *BBS*
DATE: May 25, 2007

AGENDA ITEM

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MAY 30, 2007

EDIT WATER & SEWER MASTER PLAN PROJECT LISTING

ITEM

Receive recommended Water and Sewer Master Plan project priorities listings from Cannon Associates and edit listings [RECOMMEND ADOPTION].

BACKGROUND

Attached is Cannon's recommended listing of sewer system prioritized upgrades along with supporting maps illustrating the projects and zones of benefit.

Cannon is scheduled to submit their water listing prior to the Board Meeting and staff will distribute this listing as soon as it is available.

Larry Kraemer from Cannon will present both listings to your Board; discuss the logic for the various recommendations and review answer questions. Cannon will bring the calibrated water and sewer models so that they can illustrate problems under different scenarios.

RECOMMENDATION

Staff has worked closely with Cannon to develop the listings and believes that the listings are logical, however, staff recognizes that there are numerous potential solutions to solve the identified problems and encourages Board to edit the recommendations as appropriate. It is staff's expectation that the listings, as edited, will be inserted into the Draft Master Plan to be presented for consideration later this summer.

ATTACHMENT

- Sewer Projects Listing and supporting maps

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RECOMMENDED SEWER SYSTEM IMPROVEMENTS							
IMPROVEMENTS TO MEET EXISTING NEEDS							
COLLECTION SYSTEM		Diam. (in)	Unit	Quantity	Unit Cost ¹	Amount	Remarks
Town							
PRIORITY 1 - FRONTAGE TRUNK LINE							
	Upgrade Frontage Trunk Line - Southland to WWTP	21	LF	1160	\$375	\$435,000	100% at Peak Existing on 12"
	Upgrade Frontage Trunk Line - Story to Southland	18	LF	1780	\$330	\$587,400	74% at Peak Existing on 12"
	Upgrade Frontage Trunk Line - Division to Story	18	LF	1350	\$330	\$445,500	73% at Peak Existing on 12"
						Frontage Subtotal	\$1,467,900
PRIORITY 1 - REHABILITATION / REPLACEMENT							
	Lift Station Rehabilitation (25-year Net Present Value)		LS	1	\$440,000	\$440,000	
	(1 L.S. every two years of ~11 L.S.; 25-yr cycle)						
	(Unit Cost per L.S. Rehab in 2007 = \$50,000; inflation rate = 3%/yr)						
	Manhole Rehabilitation/Replacement (25-year Net Present Value)		LS	1	\$1,050,000	\$1,050,000	
	(4% per year of the ~500 manholes = 20 MH per year for a 25-yr cycle)						
	(Unit Cost per M.H. Rehab in 2007\$=\$3k; inflation rate = 3%/yr)						
						Rehab./Replacement Subtotal	\$1,490,000
PRIORITY 2 - DIVISION RELIEF							
	Upgrade Gravity Collector - Division from Beverly to Frontage	12	LF	1415	\$210	\$297,150	62% at Peak Existing on 8", 100% Peak Future
						Division Subtotal:	\$297,150
						Town Total:	\$3,255,050
Blacklake							
PRIORITY 1 - GOLF COURSE TRUNK LINE							
	Remove Sag/Belly from golf course mainline along 9th hole	10	LF	450	\$200	\$90,000	
PRIORITY 1 - REHABILITATION / REPLACEMENT							
	Lift Station Rehabilitation (25-year Net Present Value)		LS	1	\$150,000	\$150,000	
	(1 L.S. every eight years of ~3 L.S.; 25-yr cycle)						
	(Unit Cost per L.S. Rehab in 2007 = \$50,000; inflation rate = 3%/yr)						
	Manhole Rehabilitation/Replacement (25-year Net Present Value)		LS	1	\$210,000	\$210,000	
	(4% per year of the ~100 manholes=4 MH per year for a 25-yr cycle)						
	(Unit Cost per M.H. Rehab in 2007\$=\$3k; inflation rate = 3%/yr)						
						Blacklake Total:	\$450,000
						Total Collection System Costs:	\$3,705,050
WASTEWATER TREATMENT							
Southland WWTP							
PRIORITY 1 - WWTP IMPROVEMENTS							
	Influent Pump Station and Flowmeter Improvements ¹		LS	1	\$620,000	\$620,000	
	Spiral Screening System ¹		LS	1	\$468,000	\$468,000	
	Grit Removal System ¹		LS	1	\$560,000	\$560,000	
	Phase I Wave Oxidation System ¹		LS	1	\$4,080,000	\$4,080,000	
	Solids Handling Proposals		LS	1	TBD	TBD	
	Shop Upgrade		LS	1	\$400,000	\$400,000	
	Hazard, Security, and Safety Upgrades		LS	1	\$50,000	\$50,000	
						Subtotal:	\$6,158,000
PRIORITY 2 - WWTP IMPROVEMENTS							
	Shop Solar Panels		LS	1	\$30,000	\$30,000	
						Subtotal:	\$30,000
						Southland WWTP Total:	\$6,188,000
Blacklake WWTP							
PRIORITY 1 - WWTP IMPROVEMENTS							
	Solids Handling Proposals ²		LS	1	TBD	TBD	
	Hazard, Security, and Safety Upgrades		LS	1	\$25,000	\$25,000	
	Liner Replacements (25-year Net Present Value)		LS	1	\$300,000	\$300,000	
						Blacklake WWTP Total:	\$325,000
						Total WWTP Costs:	\$6,513,000
WATER RECLAMATION							
Southland WWTP							
PRIORITY 1 - WATER RECLAMATION							
	Southland Effluent Recharge/Reuse Feasibility Study		LS	1	\$75,000	\$75,000	
						Southland Reclamation Total:	\$75,000
						Total Reclamation Cost:	\$75,000
						TOTAL COST OF IMPROVEMENTS TO MEET EXISTING NEEDS	\$10,293,050
NOTES:							
1. Improvements and costs incorporated from Boyle Southland Wastewater Treatment Facility Master Plan 2007							
2. Cost Estimate derived from adjusting Boyle Master Plan Estimate April 2001 cost to May 2007 ENR CCL							
3. Telft Street Lift Station has major affect on this line, reducing flow rate or VFD may alleviate some issues.							

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RECOMMENDED SEWER SYSTEM IMPROVEMENTS							
IMPROVEMENTS TO MEET FUTURE NEEDS							
COLLECTION SYSTEM		Diam (in)	Unit	Quantity	Unit Cost ¹	Amount	Remarks
Town							
	PRIORITY 1 - OAKGLENN TRUNK LINE²						
	Upgrade Oakglenn Trunk Line - Amado to Freeway Crossing	15	LF	2,300	\$240	\$552,000	67% at Peak Existing on 12", 100% Peak Future
	Upgrade Oakglenn Trunk Line - Glory to Amado	15	LF	1,830	\$240	\$439,200	78% at Peak Future on 10"
	Upgrade Oakglenn Trunk Line - Mads Place to Glory	12	LF	965	\$210	\$202,650	72% at Peak Future on 10"
	Upgrade Oakglenn Trunk Line - Oakglenn at Tefft	10	LF	330	\$180	\$59,400	62% at Peak Future on 8"
						Subtotal	\$1,253,250
	PRIORITY 2 - FRONTAGE TRUNK LINE						
	Upgrade Frontage Trunk Line - Grande to Division	15	LF	1,150	\$240	\$276,000	94% at Peak Future on 10"
	Upgrade Frontage Trunk Line - Juniper to Grande	12	LF	3,515	\$210	\$738,150	73% at Peak Future on 10"
						Subtotal	\$1,014,150
	PRIORITY 3 - UPGRADES						
	Bypass Gravity Collector - Branch and Mallagh	8	LF	480	\$155	\$74,400	65% at Peak Future on 8" at Mallagh and Tefft
	Tejas Lift Station Upgrade to 150 gpm		LS	1	\$150,000	\$150,000	Model shows that slight upsize relieves Grande Ave
						Subtotal	\$224,400
	PRIORITY 4 - ORPHAN AREA IMPROVEMENTS						
	Project 1 - Upgrade Gravity Collector - Story from Peacock to Meredith	8	LF	875	\$155	\$135,625	If existing area required to connect
	Monarch Lift Station - 50 gpm		LS	1	\$150,000	\$150,000	If existing area required to connect
	Monarch Force Main	4	LF	800	\$140	\$112,000	If existing area required to connect
	Project 2 - Gravity Collector - Story from Orchard to Peacock	8	LF	1,970	\$155	\$305,350	If area is to be developed
	Sequoia Lift Station - 130 gpm		LS	1	\$150,000	\$150,000	If area is to be developed
	Sequoia Force Main	4	LF	1,225	\$140	\$171,500	If area is to be developed
	Project 3 - Frontage Trunk Line - Camino Caballo to Juniper	6	LF	1,300	\$155	\$201,500	If existing area required to connect
	Gravity Collector - Camino Caballo to Frontage	8	LF	2,685	\$155	\$416,175	Very deep gravity or lift station required to serve
	Project 4 - Widow Lift Station - 200 gpm		LS	1	\$150,000	\$150,000	If area is to be developed
	Widow Force Main	4	LF	325	\$140	\$45,500	If area is to be developed
	Gravity Collector - Southland from Honey Grove to Frontage	12	LF	2,840	\$210	\$596,400	74% at Peak Future on 8"
	Project 5 - Gravity Collector - Orchard and Southland to Drumm Lane	8	LF	915	\$155	\$141,825	If existing area required to connect
	Project 6 - Gravity Collector - Hill Street to Frontage	8	LF	1,475	\$155	\$228,625	If area is to be developed
						Orphan Area Subtotal	\$2,804,500
	PRIORITY 5 - AMADO LIFT STATION & FORCEMAIN						
	Amado Lift Station - 350 gpm		LS	1	\$300,000	\$300,000	If area is to be developed
	Amado Force Main	6	LF	920	\$155	\$142,600	If area is to be developed
	Gravity Collector - Sparks Bypass extension to Amado LS	8	LF	3,000	\$155	\$465,000	To reduce flows to Tefft Street LS
						Subtotal	\$907,600
						Town Total:	\$6,203,900
						Total Collection System Costs:	\$6,203,900
	WASTEWATER TREATMENT³						
	Southland WWTP						
	PRIORITY 1 - WWTP IMPROVEMENTS						
	Phase II Wave Oxidation System		LS	1	\$198,000	\$198,000	
						Southland WWTP Total:	\$198,000
						Total WWTP Costs:	\$198,000
	WATER RECLAMATION						
	Southland WWTP						
	PRIORITY 1 - WATER RECLAMATION						
	Tertiary Filtration		LS	1	\$1,898,000	\$1,898,000	
	Chlorination System		LS	1	\$1,546,000	\$1,546,000	
	Southland Effluent Discharge and Percolation Basin		LS	1	TBD	TBD	
	Lift Station		LS	1	\$300,000	\$300,000	
	New Effluent Force Main		LF	28260	\$115	\$3,249,900	
						Southland Reclamation Total:	\$6,993,900
						Total Reclamation Cost:	\$6,993,900
						TOTAL COST OF IMPROVEMENTS TO MEET FUTURE NEEDS:	\$13,395,800
						TOTAL COST OF IMPROVEMENTS:	\$23,688,850
	NOTES:						
	1. Improvements and costs incorporated from Boyle Southland Wastewater Treatment Facility Master Plan 2007						
	2. Cost Estimate derived from adjusting Boyle Master Plan Estimate April 2001 cost to May 2007 ENR CCI.						
	3. Tefft Street Lift Station has major affect on this line, reducing flow rate or VFD may alleviate issues.						



NIPOMO COMMUNITY SERVICES DISTRICT

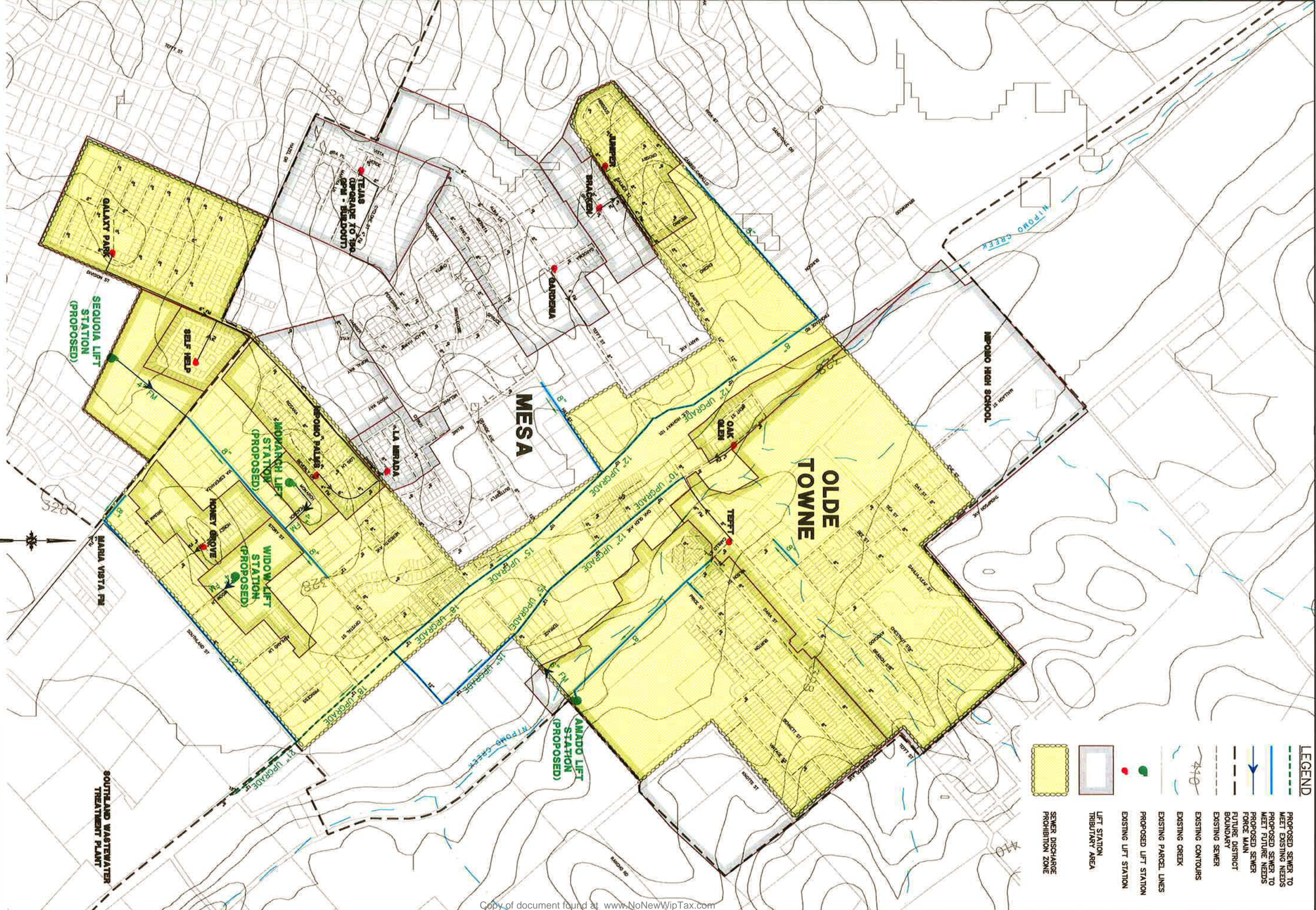
2006 WATER AND SEWER MASTER PLAN

FIGURE 4A
RECOMMENDED SEWER SYSTEM
IMPROVEMENTS

MAY 2007

DRAFT

0 1 INCH = 400 FEET



- LEGEND**
- PROPOSED SEWER TO MEET EXISTING NEEDS
 - PROPOSED SEWER TO MEET FUTURE NEEDS
 - PROPOSED SEWER FORCE MAIN
 - FUTURE DISTRICT BOUNDARY
 - EXISTING SEWER
 - EXISTING CONTOURS
 - EXISTING CREEK
 - EXISTING PARCEL LINES
 - PROPOSED LIFT STATION
 - EXISTING LIFT STATION
 - LIFT STATION TRIBUTARY AREA
 - SEWER DISCHARGE PROHIBITION ZONE

BOUNDARY DISCLAIMER
THIS SURVEY WAS COMPILED FOR MASTER PLANNING PURPOSES ONLY. THE BOUNDARY INFORMATION SHOWN HEREON IS INTENDED FOR ORIENTATION ONLY AND SUCH IS NOT INFERRED OR IMPLIED TO BE A BOUNDARY SURVEY.